SHANLAX INTERNATIONAL JOURNALS
BETTER SOUND THROUGH COMPENDIUM

SHANLAX

INTERNATIONAL JOURNAL OF ARTS, SCIENCE AND HUMANITIES

(A Peer-Reviewed-Refereed/Scholarly Quarterly Journal Globally Indexed with Impact Factor)

Vol. 5 Special Issue 6 March, 2018 Impact Factor: 2.114

ISSN: 2321-788X UGC Approval No: 43960

National Conference on
SUSTAINABLE DEVELOPMENT: DIMENSIONS AND STRATEGIES

27th Tuesday, March 2018

Organised by

INDO ASIAN ACADEMY DEGREE COLLEGE & PG CENTRE
INDO ASIAN WOMEN'S DEGREE COLLEGE
Kalyan Nagar, Bangalore – 560 043

ABOUT THE INSTITUTION

Quality education is paramount to a nation's growth and sustenance. The Indo Asian Academy Group of Institutions was established to further this belief and translate it to action in 2007 under the aegis of Indo Asian Academy Education Trust. The institution constantly strives to deliver high quality education to its students and ensures that the students are churned out to be global citizens.

The Indo Asian Academy Group of Institutions has achieved tremendous success in the last decade of its existence and has excelled in the business of providing state-of-the-art technologies through its classrooms and has outdone itself in achieving newer heights. With cutting edge labs, smart classrooms, computer centres, well-equipped libraries and excellent student support the institution has made a name for itself among those seeking quality education in an intellectually stimulating environment.

True to its name and reputation, the institution has steadily reached out to students from over countries in Africa, Middle-East and South East Asia. The college has also signed a strategic MOU with Sprott Shaw College of Vancouver, British Columbia, Canada to create overseas learning and employment opportunities for the students. The outlook is thus truly international.

Research is a very important part of the campus culture at the Indo Asian Group of Institutions. We have a dedicated group of academicians and students who constantly endeavour to enquire and explore depths of subject matter, the text comes alive posing serious research questions that are answered by encouraging constant dialogue through conferences, seminars, consultations and gatherings. The college thus is a fertile ground for teaching, learning and enquiry making it a great place to be a part of in all capacities.

ABOUT THE CONFERENCE

Lakes burn, forests flatten, noxious fumes pollute air, industrial effluents contaminate water bodies, and flora and fauna extinguish - everything in the name of growth. The development trajectories cause serious concerns for natural resources with heavy social costs for the present and future. The paradigm shift we aim for is to move towards new contours of wellbeing without altering net gains to none. The path is to extend the welfare frontiers and sustainability in an inclusive manner. The strategies are manifold - knowledge, health, technology, innovation, equity, ethics and quality of life. Bold commitments to limit climate change remain only in treaties and much is left to be implemented. This conference intends to bring together think-tanks, academicians, researchers and policy makers to strategize different dimensions of sustainability and transform challenges to opportunities.

Objectives of the Conference

- Suggest alternative strategies to drive the society from disappointment to bliss
- Narrow down on the best ways of doing business without compromising health and environment hazards.
- Understand ways to optimize policy decisions that have opportunity costs.
- Model multiple dimensions of sustainability through a kaleidoscope of equity, inclusion, ethics and good governance.
- Deliberate on sustainability dimensions and strategies for twenty-first century.

Sub Themes

- Dimensions of Sustainability
- Strategizing Models for Sustainability: Poverty, Inequality and Unemployment
- Equity, Inclusion and Climate Change
- Endurance, Equity, and Environment
- Good Governance and Sustainability
- Honesty, Integrity and Ethics in Business
- Financial Sustainability,
- Indebtedness and Stress
- Sustainable and Inclusive Growth
- Capacity Building for Demography
- Corporate Governance and Social Responsibility

PREFACE

The United Nation Development Program (UNDP) has placed Sustainable Development as a module of high priority in its deliberations by releasing the 2030 Agenda for Sustainable Development. The approach adapted by the UN body is that of inclusion. This is the premise of Indo Asian Academy Degree College and Indo Asian Women's Degree College choosing to hold a national conference under the theme of *Sustainable Development: Dimensions and Strategies*.

Sustainable Development is a key concern in our society today and in this publication we attempt to highlight the strategies and dimensions that contribute to a holistic understanding of the concept and come up with concrete, well-researched recommendations to continuously redefine the paradigms of communities and nations in making sustainable development possible.

The module of Sustainable Development and related themes are of much interest to the academia and this national conference has generated a lot of discussion and debates among the participating faculty and their academic spaces. Papers have been produced on various topics ranging from eco-centric living, stress management, migration, climate change, corporate governance, displacement, city narratives, garbage management, town planning and sustainability in commerce and so on. It is imperative that these issues are viewed with objectivity and seriousness. The goal of the conference is to strengthen knowledge banks around the ideas of environmental considerations while discussing sustainable development.

The organisers express gratitude to Prof. Dr. T. Ekambaram Naidu, Chairman, Indo Asian Academy Group of Institutions, Bangalore; Prof. Supriyo Guharoy, Chief Executive Officer, Indo Asian Academy Group of Institutions, Bangalore; Dr. N. Bharathi, Principal, Indo Asian Academy Degree College, Bangalore; Dr. Rama. K. Principal, Indo Asian Women's Degree College, Bangalore; Dr. Xavier. V. K. Professor of Economics, Jain University Bangalore; the faculty, staff and students of Indo Asian Academy Group of Institutions, Bangalore for their support and encouragement in organising this National Conference.

We express our heartfelt gratitude to our resource persons: Dr. Deshpande - Director, BASE, Bengaluru, Dr.Abdul Aziz - Chairperson, NLSIU, Bengaluru, Dr. M.G. Chandrakanth - Director, ISEC, Bengaluru, Dr. Charan Singh - RBI Chair Professor, IIM, Bengaluru, Dr. Gayithri K - Professor, ISEC, Bengaluru, Dr. Xavier V. K - Professor, Jain University, Bengaluru, Dr. P. M. Mathew - Professor, Christ University, Bengaluru, Dr. A.V.Manjunatha - Professor, ADRTC, ISEC, Dr. Krishnaraj - Professor, CESP, ISEC, Dr. Sunil Nautiyal - Professor, CEENR, ISEC, Dr. K.Gayithri - Professor, CEENR, Dr.M.Shivamurthy - Professor and Head, UAS, Dr. P.S.Srikantamurthy - Professor, UAS, Dr.Mruthyunjaya - Former DDG, ICAR, Dr. Balachandra Patil - Professor, IISc, Bengaluru for accepting our invitation and agreeing to share their expertise with the delegates and organisers of the conference.

We are extremely grateful to all the members of the editorial board, advisory committee, technical committee and the session heads for having extended their valuable inputs to the deliberations of the National Conference. We appreciate the efforts and contributions of all those who were involved with all fidelity to make this conference a grand success.

CONTENTS

CORPORATE SOCIAL RESPONSIBILITY IN INDIA - DEVELOPING A FRAMEWORK FOR MEASUREMENT OF ACTION

Prof. Supriyo Guharoy
Chief Executive Officer, Indo Asian Group of Institutions, Bangalore

Abstract

Corporate Social responsibility (CSR) gained importance as an inevitable corporate activity towards the last decades of 20th Century. While Indian companies embraced CSR quite early and started reporting in their annual reports, consistent studies on CSR in Indian context have been sporadic. However, introduction of CSR as a mandatory activity in the new Companies Act 2013, led to very substantial growth in formal CSR activities in the country. Along with this, the need has arisen to measure and assess the effectiveness of the CSR spend of the companies by developing suitable framework. This paper attempts to assess the CSR spend performance for the top 10 spenders, from the available data for the Financial Year 2016-17 and develop an objective framework for relative rating of those companies.

Introduction

In classical economics, Social Cost is defined as the private cost (i.e. the direct, visible costs) plus the externalities (the indirect or invisible costs). The Rational Choice Theory suggests that individuals, in normal circumstances, would only consider private costs. Therefore, while defining the objective of a business, theorists have traditionally focused on shareholders' wealth maximization and tended to ignore the social and environmental "resources" consumed while achieving that goal. This concept was echoed by Friedman (1970) that "there is one and only one social responsibility of business to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game".

However, Friedman's insistence did not gain currency and was systematically countered by business theorists and researchers throughout the latter half of 20th Century. By the early years of 21st century, the responsibility of the corporates to compensate for the cost of the externalities has been firmly established. Corporate Social Responsibility (CSR) is not a new concept in India. As the country had industrialized in the early 20th century, the leading business houses namely Tata, Birla, Bajaj, Singhania etc. had set up educational institutions, hospitals, and choultries and also focused on welfare of workers. During the freedom struggle, several business houses were known to have donated large sums for schemes of Gandhiji and various other political outfits. After Independence, the concept of social responsibility took a very different meaning as the Nehru model of socialistic development aimed to create jobs and livelihood through the public sector enterprises (Mohan, 2001). Due to lack of any chronological study and the sporadic nature of the philanthropy, the early actions of social responsibility by corporations in India cannot be termed exactly as CSR as we know it today. Moreover, the state-controlled economy, strong unionism and limited growth during the first four decades after independence, had created a certain distrust among public and raised the question if Indian Companies, barring a few historical exceptions, will really contribute voluntarily to social good. With this backdrop, CSR was mandated under the Section 135 of the new Companies Act 2013. It states that every company with a net worth of more than Rs. 500 crores or turnover of more than Rs. 1000 crores or net profit of Rs. 5 crores needs to spend 2% of the average net profit after tax of the 3 immediately preceding financial years in certain areas to fulfill their social responsibility. The areas to spend the CSR budget has also been specified (Schedule VII).

Therefore, there is a need now to look closely at the CSR activities in the country. This paper aims to look in to the current level of CSR activities by Indian Corporates and find out, using statistical techniques, the degree of success of the mandate given in the new Companies Act and also develop a model to assess the "maturity" level of the Indian companies in conducting CSR.

The objective of the research is threefold:

- to find out, using secondary data, if there is significant evidence that the Indian companies are spending the prescribed amount on CSR;

- to look at the existing framework(s) for rating on CSR compliance and how an improvement can be suggested; and
- identify companies which have gone ahead beyond mere compliance and incorporated the CSR philosophy in its business plan/ strategy and recommend how and why other corporates can look at these CSR "Stars" and undertake the journey themselves

The current level of CSR research on Indian companies seems to be more descriptive and takes a case-study approach. There is a dearth of both critical assessment of CSR activities and performance ratings of the companies. Though there was a nearly attempt to develop a rating by Karmayog (www.karmayog.org) for the corporates but this was not done consistently and has been discontinued. The other serious attempt to look at the CSR performance of Indian companies is made by Futures cape in collaboration with Indian Institute of Management, Udaipur (www.fututescape.in). This study attempts to measure the CSR performance level on four dimensions, namely, Governance, Disclosure, Stakeholder and Sustainability and ranks the companies based on a composite score. The effort is substantial and quite scholarly. However, the scoring process appears subjective by assigning a binary approach (giving a score of 0 or 1) based on the assessment of the scorer for each of the sub-criterion under the above four major dimensions and focuses more on compliance rather than actual action on ground.

Through this research, the author will make an attempt to address this inadequacy and propose a framework to build a "CSR Maturity Model (CSRMM)" which can be used to develop a composite rating of the all Indian companies which qualify to take up CSR activities as per the criteria set forth in the Companies Act 2013.

This research assumes special importance for the fact that the individual CSR reporting by companies may be considered as either an image building exercise or simply "bluewashing" activity by general public. But a rating framework which is both transparent and auditable and vetted by either a Government Agency or any of the large Audit Firms would have far greater acceptability. Till date, no such effort was made and it is the right time that an effort is made in this direction. This paper will attempt to propose the basic framework and seek further research and concrete action on the part of the members of the CSR ecosystem in the country to take this forward to a logical conclusion.

Literature Review

The idea of businesses attempting to improve the community, society and a larger group of stakeholders was known to exist several centuries back (Carroll et al, 2012). In the modern era, the concept of Social Responsibility (SR) for business was mooted by Bowen (1953) and formally defined by Davis (1960) as "decisions and actions taken for reasons at least partially beyond the firm's direct economic or technical interest". He further broadened the concept of SR by introducing the issue of ethics and the need to go beyond compliance to the law. Due the immense contribution to the topic, Carroll (1999) crowned Bowen as the "Father of CSR" and Davis as the runner-up.

From the early definition of Social Responsibility of business, the research and literature grew in the next few decades to include broader issues like managing the multiplicity of interests of various stakeholders, the legal, ethical and philanthropic responsibilities of Corporates, Social License to Operate (SLO) and Corporate Citizenship. In their study of the various motivational theories for CSR, Ditlev-Simonsen and Midttun (2008) measured relative importance of the following motivational factors for CSR on a 1-5 Likert Scale:

- Profit maximization – solely to increase profit (Friedman, 1970)
- Value maximization – to create long-term value creation for the shareholders (Jensen, 2001)
- Stakeholdership – to satisfy different stakeholders (such as Employees, Customers, NGOs and Government/ Regulators) (Freeman, 1994)
- Cluster building – to build a strong cluster to provide a favorable business context for the company (Porter and Kramer, 2007)
- Branding – to build a positive reputation and brand image (Fombrun, 2005)

- Innovation – to develop new products and business concepts (Kanter, 2006)
- Copying/imitating – to resemble other companies (DiMaggio and Powell, 1983)
- Ethics/morals – to do the ‘‘right thing’’ (a moral issue) (Aristotle, 350 BC)
- Managerial discretion – to fulfil the personal preferences and interests of the manager or Person-in-charge of CSR (Williamson, 1964)
- Sustainability – to contribute to long-term sustainable development as argued by Brundtland (World Commission on Environment and Development, 1987)

They found that across three groups of respondents (200 Students, 79 Corporate Leaders and employees of 2 of the largest NGOs in Norway) Sustainability, Stakeholdership, Branding and Ethics/ Moral considerations were the top motivators and Profit Maximization, Managerial discretion and Copying/ imitating were the least motivators.

As from the empirical study cited above shows sustainability and ethical considerations have taken center-stage and studies have suggested that socially responsible companies continued to enjoy a better corporate identity and image management (Arendt, S., &Brettel, M. 2010). Their study showed that CSR positively affects corporate image attractiveness, company-stakeholder identification and organizational success.

Apart from the research, actions by a large number of global/ multilateral agencies including UN, OECD, ILO and ISO have brought out charters and standards that have irreversibly pushed corporates. The UN Global Compact is an international multi-constituent, voluntary initiative based on internationally accepted ten principles in pursuit of a more sustainable and inclusive global economy. The Global Reporting Initiative (GRI) is an international independent standards organization that helps businesses, governments and other organizations understand and communicate their impacts on issues such as climate change, human rights and corruption. As more and more corporations have realized the benefits of reporting the “triple bottom-line” of economic, social and environmental profits, the CSR – an essential part of the sustainable reporting – have taken its place of prominence and getting integrated in to the corporate strategic plans.

In keeping with the global trend, leading Indian companies started CSR much earlier than the mandate issued by the Government. Gautam and Singh (2010) reported that based on various surveys conducted in India as early as in 2001 and 2002, workers, company executives and general public showed high degree of awareness about CSR and its potential benefits and opined that that CSR is very much a part of the domain of corporate action and the passive philanthropy is no longer sufficient. Significant proportion of respondents recognized CSR as the mean to enhance long-term stakeholder value. However, Arora and Puranik (2004) concluded that that even though several companies in India have initiated CSR activities by early years of first decade of 21st Century and started contributing to areas like health care, education, empowerment of women, micro-credit and rural development, still CSR seems to be in a confused state in the country. Individual companies define CSR in their own ways, with the end result that activities undertaken in the name of CSR are merely philanthropy or an extension of it.

Arevalo and Aravind (2011), conducted a survey of CSR Managers in Indian Companies to understand the motivations and obstacles for CSR for Indian corporates and opined that values serve as the most important of the motivators while the lack of resources could be most critical of the barriers.

From the above discussion, it can be concluded that there is high level of awareness for CSR in India among all the stakeholders but the approach to implementation varies widely. This is why, there is a need to develop a more integrative approach to collect and disseminate information on the CSR activities, so that the early initiators and star performers get amply recognized and companies which are late entrants and/ or poor performers get actualized and start delivering better result on CSR front.

Methodology

In order to develop a framework for measurement of actions taken by the various corporates on CSR, the author has relied on secondary data compiled by NGOBOX (www.ngobox.org) in their India CSR

Outlook Report (ICOR) 2017. The reports covered top 370 companies for FY 2016-17, chosen by using the following criteria:

- The prescribed CSR spend was more than INR 1 Cr. (the prescribed CSR spend refers to the amount required to be invested as per the criteria specified in Section 135 of Companies Act, 2013)
- Listed companies and there are disclosures in their annual reports

These companies reported in both the years accounted for more than 1/3rd of total CSR spend in India, making it a big sample size for study and analysis.

Based on the available dataset, the first step was to find out if there is significant evidence that the Indian companies are spending the prescribed amount on CSR. In order to simplify the hypothesis testing, the author picked up the top 10 companies from the companies listed in the ICOR 2017.

The hypothesis was formed as below:

H_1: there is no significant difference between the prescribed and actual CSR spend for the top 20 CSR spenders in India in FY 2016-17

The second objective of this research paper is to develop a framework for rating Indian companies for their CSR compliance. In India, there is lack of formal rating system. Karmayog's6-point rating scale(0-5) attempted to rate the 500 top listed companies on their CSR activities using a set of necessary and negative criteria. The criteria used are shown in Exhibit 2 and 3. ON the other hand the ranking system used by Futurescape is presented in exhibit 4.

Close scrutiny of the models used by Karmayog as well as Futurescape establishes that the processesdid not deploy objective assessment techniques. A suitable rating system should have properly defined scales and any amount of subjectivity (and hence dependence of the judgment of the rater) should be minimized. On the other hand, as pointed out by Henry Schafer (2005), the international rating systems are quite complex and oriented towards capital market audiences. Hence the following framework is being proposed by the author to develop a composite rating for CSR performance.

Table 1 Proposed CSR Maturity Model

CSR Measurement Parameters	Scoring Plan	Score Assigned (out of 5)	Weight Assigned to the Parameter	Remarks
Ratio of CSR Spend to the Net profit	If ratio less than 1%	0	30%	As this is one of the most important parameters displaying the Corporate's commitment towards CSR, a higher weight has been proposed
	If ratio between 1- 1.5%	1		
	If ratio between 1.51 and 2%	2		
	If ratio between 2.01 and 2.5%	3		
	If ratio between 2.51 and 3%	4		
	If ratio above 3.01%	5		
Ratio of Actual CSR Spend over the Prescribed CSR Spend	If ratio below 0.8	0	15%	Actual data shows many companies spend lower than the prescribed value as per the Companies Act (2% of average Net Profit of previous 3 years), the score and weightage reflects the disincentive for not meeting the criteria
	Ratio between 0.8-1.0	1		
	Ratio between 1.0-1.1	2		
	Ratio between 1.1-1.2	3		
	Ratio between 1.2-1.3	4		
	Ratio above 1.3	5		
Year-on-year growth in CSR Spend	If no growth or negative growth	0	25%	This is an important criteria that denotes the commitment to CSR Spend; hence a higher weight has been assigned
	If growth is less than 5%	1		
	If growth is between 5 and 10%	2		
	If growth is between 10 and 15%	3		
	If growth is between 15 and 20%	4		
	If growth is more than 20%	5		
Targeted segment for CSR Spend	Eradicating extreme hunger and poverty	5	15%	The scores assigned can be further debated and refined; if a company is involved in more
	Promotion of education	5		

	Promoting gender equality and empowering women	4		than one of the areas, then an average of the final scores to be made. As all of these areas are prescribed in Companies Act 2013 and most of them are critical in Indian context, the weightage assigned has been lowered to reflect higher relative importance of the other measurement parameters in the Model
	Reducing child mortality and improving maternal health	4		
	Combating HIV, AIDS, malaria and other diseases	4		
	Ensuring environmental sustainability	5		
	Employment enhancing vocational skills	4		
	Social business projects	4		
	Contribution to the Prime Minister's National Relief Fund/ Other Govt. Funds for socio-economic development and relief and funds for the welfare of the Scheduled Castes, the Scheduled Tribes, other backward classes, minorities and women	3		
Conduit	Company's own departments	2	10%	The conduit through which the projects are implemented is also important and the scores assigned reflects the transparency desired in the system
	NGOs	4		
	Self-help Groups (SHGs)	5		
	Government agencies	3		
Reporting / Auditing	If the CSR Spend is audited and reported in the Annual Report	5	5%	Auditing may play an important role in ensuring transparency and hence included as a parameter
	If the CSR Spend is *not* audited and reported in the Annual Report	0		

This model attempts to use a scale of 0-5 on six assessment parameters, namely:

- Ratio of CSR Spend to Net Profit
- Ratio of actual CSR Spend over prescribed CSR Spend
- Year-on-year growth in CSR Spend
- Targeted sectors for CSR Spend (the sectors specified by Companies Act 2013)
- Conduit
- Reporting/ Auditing

As the scale used is 0-5 and there is a total weight of 100% allocated over the 6 parameters, the maximum score possible using this model would be 5. The CSR Maturity rating then can be calculated by using the following formula:

CSR Maturity of a company = (Actual Score/ Ideal Score)*100

The third objective of this research is to identify companies which have genuinely committed to the CSR philosophy and therefore embracing sustainability while taking care of all the stakeholders as its core value. There is a need for others to emulate these top rated CSR performers. The methodology used for identifying these companies would be the use of the CSR Maturity Model and then list down the best CSR practices followed by these companies. That list would act as a benchmark for other companies which are either clueless or simply not taken the leap.

Results and Discussions

Objective 1: To test if Indian companies spend the prescribed amount on CSR

While the sample size is only 10, the total CSR spend of these 10 companies in FY 2016-17 has been Rs. 3324 crores which accounted for more than 36% of the total CSR Spend in the country in 2016-17 (Rs. 9034 crores). Hence, the sample size was considered to be significant and representative of the total population. The analysis was done using Chi-square test with a confidence level of 5% and presented in

Exhibit 1. As the hypothesis is accepted, the conclusion is that there is no significant difference between the prescribed and actual CSR spend by the Indian companies in FY 17.

The interpretation of this test is that the top 10 CSR spenders have ensured that they keep up the compliance as required by the Companies Act 2013. A closer scrutiny of the actual CSR spend for these top 10 companies shows that 8 out of the 10 companies have spent equal to or more than the prescribed amount, with the actual to prescribed spend ratio for these 8 companies varying between 1 to 1.67. Out of the 2 companies which did not reach the prescribed spending level, the ratio varied between 0.85and 0.98 (Exhibit 5).

As the analysis pertains to just one financial year (FY17), it would be prudent not to draw any specific conclusion either for the companies which have exceeded or the ones who had fallen short. The author suggests collection of data for at least 5 consecutive years to determine the "Philanthropists" (those who consistently exceed the legal limit of CSR spend) and the "Chronic Offenders" (those who consistently fall below the legal limit of CSR spend).

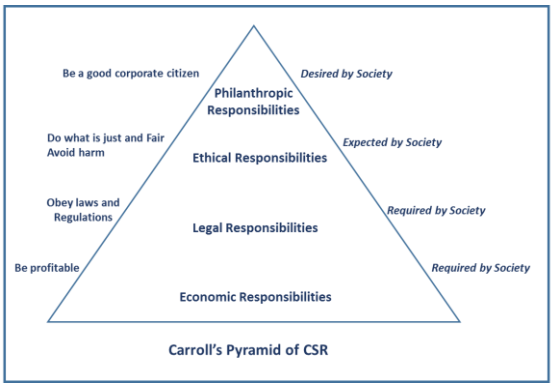


Figure 1: Carroll's Pyramid of CSR

Objective 2: To propose a framework for rating of CSR compliance

A very comprehensive and objective framework to work out the CSR Maturity of the companies have been suggested. The model takes in to account the four-part definitional construct of CSR as represented in Carroll's Pyramid of CSR (1991), as depicted in Figure 1, in a manner explained below.

CSR Measurement Parameters considered in CSR Maturity Model Framework	Responsibility
Ratio of CSR Spend to Net Profit	Economic responsibilities
Ratio of actual CSR Spend over prescribed CSR Spend	Legal responsibilities
Year-on-year growth in CSR Spend	Philanthropic responsibilities
Targeted sectors for CSR Spend	Legal/ Ethical responsibilities
Conduit	Ethical responsibilities
Reporting/ Auditing	Legal responsibilities

Therefore, the model has built in all the requisite dimensions with the objective measurement parameters and likely to be a very good representative model to assess the CSR maturity level of the companies. Using the model, the CSR Maturity rating for the 10 top CSR Spenders in the country for FY16 has been worked out and present in Exhibit 5. As can be seen from the Exhibit, there is wide variation in maturity rating for the Top 10 CSR Spenders in the country. Though Reliance Industries Ltd. (RIL) was the highest spender, it had a maturity rating of 57% which was lowest among the top ten, as it did not show any growth in the CSR spend over the previous year. Infosys, with a rating of 77% topped the chart. Several companies, namely, ONGC, Tata Steel, ITC, Wipro and HDFC Bank returned maturity rating figures varying between 71-74%. Among the top 10, only NTPC and Tata Steel had shown a decline in CSR spend compared to the previous year.

Objective 3: Identify the superior CSR performers for benchmarking

Though, the rating obtained by a single year's CSR performance figures may not be truly reflective of any company's long-term commitment for social responsibility and penchant for sustainable development, but the above analysis definitely, corroborates the extent and commitment of CSR policy and execution by Infosys, ONGC, ITC, Wipro and HDFC Bank. They are truly the "Star Performers" and a benchmark for the other corporates who wish to achieve prominence by establishing their commitment in CSR. Tata Steel needs to look in to the issue of arresting any fall in CSR spend compared to the earlier years as it may dent their reputation as champions of social responsibility.

Conclusion

Corporate Social Responsibility has become an essential part of corporate lexicon in 21st century as more and more companies have started realizing that their business strategy must include not only the objective of shareholders' wealth maximization but sustainable well-being for all stakeholders. Apart from earning economic profit, the corporations today need to equally account for social and environmental bottomline. Studies have suggested that socially responsible companies continued to enjoy a better corporate identity and image management (Arendt, S., &Brettel, M. 2010). Their research showed that CSR positively affects corporate image attractiveness, company-stakeholder identification and organizational success. In India, CSR has been embraced by a large number of corporations and they have instituted processes to disseminate the CSR projects to the targeted beneficiaries. The Ministry of Corporate Affairs, Government of India also introduced CSR as legally binding commitment for companies which meet certain financial criteria. Most of the major corporations have also started reporting their CSR policy and performance. A study was carried out using secondary data to find out if the top 10 CSR spenders in the country are spending the prescribed amount on their CSR using Chi-square test of hypothesis with 5% confidence level and conclusion was drawn that indeed there is significant evidence that they are doing so. A limited effort has been made in the past to rate the CSR performance. An effort has been made in this paper to develop a CSR Maturity Model for rating the various companies. The model would help in consolidating the various CSR related data in to a composite rating figure that could suggest the relative position of corporations.

Due to non-availability of data for a longer period, the CSR performance data for FY16 were analyzed and ratings of the top 10 CSR spenders in the country were prepared and presented in the paper. Therefore, this analysis is largely static in nature and need to be investigated further.

The weightage on various measurement parameters were assigned based on the Author's own judgment. The CSR maturity model can be further fine-tuned through further research and more parameters for measurement can be added to make it more robust and universally acceptable.

Exhibit 1: Hypothesis Testing

Top 10 Companies with Actual CSR Spend (INR Cr.) FY 2016-17

Sl. No.	Company	Prescribed CSR	Actual CSR	Ratio of Actual to Prescribed CSR = fo	fe	fo-fe	$(fo-fe)^2$	$(fo-fe)^2/fe$
1	Reliance Industries Ltd	620.00	674.00	1.09	1	0.09	0.008	**0.008**
2	Oil & Natural Gas Corp Ltd	536.00	526.00	0.98	1	-0.02	0.000	**0.000**
3	Tata Consultancy Services Ltd	446.00	380.00	0.85	1	-0.15	0.022	**0.022**
4	HDFC Bank Ltd	304.00	305.00	1.00	1	0.00	0.000	**0.000**
5	Infosys Ltd	287.00	289.00	1.01	1	0.01	0.000	**0.000**
6	NTPC Ltd	228.00	280.00	1.23	1	0.23	0.052	**0.052**
7	ITC Ltd	275.00	276.00	1.00	1	0.00	0.000	**0.000**
8	Indian Oil	213.00	214.00	1.00	1	0.00	0.000	**0.000**
9	Tata Steel	116.00	194.00	1.67	1	0.67	0.452	**0.452**
10	Wipro Ltd	176.00	186.00	1.06	1	0.06	0.003	**0.003**
				10.90				**0.537**

Σfo	10.90

$\Sigma(fo-fe)^2/fe$	0.537
χ^2Calculated	0.537
DoF	9.00
χ^2Critical$_{0.05,9}$	16.92
Hypothesis accepted	

Exhibit 2: The Necessary Criteria for CSR rating of Companies developed by Karmayog

Necessary Criteria	Explanation	Rating Level
If undertaking any CSR Activity	CSR activities that cover any kind of social, developmental or community work	**Level 1**
If CSR is also linked to reducing the negative impacts of company's own products or processes	CSR activities that aim to accordingly improve processes and products of the company.	**Level 2**
If CSR initiatives are also for the local community	CSR activities that are focused on those who are affected directly by the company	**Level 3**
If CSR is also embedded in the business operations	CSR activities that form a part of the daily business activities of the company.	**Level 4**
If innovative ideas and practices are also developed for CSR	CSR activities that enable sustainable and replicable solutions to problems faced by society.	**Level 5**

Exhibit 3: The Negative Criteria for CSR rating of Companies developed by Karmayog

Negative Criteria	Reason	Rating Level
Companies that make liquor, tobacco, genetically engineered / modified crops	These products are not needed by society, and cause harm to people and the environment. The best CSR to do is to stop making these products.	**Level 0**
Companies that violate laws/rules/regulations	CSR is not limited just to how a company spends its money, but also to how it makes that money in the first place	**Level 1**
Companies engaged in high impact processes	Processes that severely damage the environment require extraordinary efforts by the company to reduce and repair the damage, and require greater contributions to benefit society	**Level 1**
Companies that report the same CSR activities (even, verbatim) as for previous years	This indicates that the company does not take CSR seriously enough to be engaged in CSR initiatives every year, building on these, and reporting progress.	**One Level less than the previous year's rating**

Exhibit 4: Futures capes' methodology for ranking of CSR performance of Indian companies

Companies are ranked on their focus on responsible business by creating a combined score that weighs each of the four parameters.

The scores were arrived at by evaluating each company's sustainability/GRI reports, annual reports (including IR) and websites by an analyst who scored based on a number of dimensions under the four parameters. The scoring was kept objective by requiring the analyst to score based on the presence or absence of the dimension. For example, if the company's website provided a sustainability/GRI report on the website then it received a score of 1 on that dimension otherwise the analyst scored it 0. Thus, if the criteria disclosure had four sub criteria, then each of the four criteria would be scored as depicted in the table on the right.

Disclosure	Score
Sub criterion 1	1
Sub criterion 2	0
Sub criterion 3	1
Sub criterion 4	1

Thus this company has scored 3 marks out of 4 for disclosure. If the total marks assigned for disclosure are 15 then the score on disclosure for the company is taken as (3/4*15) or 11.25.

The criteria include:

Governance (20%) – How well is the governance for responsible business structured?

- Board oversight of CSR and sustainability issues
- Managerial accountability of responsible business issues
- Corporate policies and management systems, such as a signatory to the United Nations Global Compact (UNGC), a formal policy on sustainable practices, a formal CSR policy, etc.

Disclosure (15%) – How forthcoming are companies with respect to responsible business activities and performance?

- Sustainability reports as per standards, such as the GRI reports
- Disclosure in financial filings
- Participation in global projects such as the Carbon Disclosure Project

Stakeholders (30%) – How well are key stakeholders (employees, community, customers and suppliers) integrated within a company's responsible business framework?

- Employee-centric initiatives
- Customer-centric initiatives
- Community-centric initiatives
- Supplier-centric initiatives

Sustainability (35%) – How pervasive are sustainability practices of companies?

- Programmes related to waste, water and energy, and targets to reduce their impact
- Promoting sustainable products and services
- Programmes and targets to build sustainable supply chains
- Programmes and targets to build sustainable logistics

Exhibit 5: CSR Maturity Model for Top 10 CSR Spender in India FY 2016-17

	Weights					30%	15%	25%		15%		10%		5%		
Sl. No.	Company	Net Profit FY 16-17 (A)	Prescribed CSR FY 16-17 (B)	Actual CSR FY 16-17 (C)	Actual CSR - FY 15-16 (D)	C/A as %	C/B as ratio	C/D as %	Target Sector	Target Sector Score	Conduit	Conduit Score	Reporting / Auditing	Reporting/ Auditing Score	Total Weighted Score	CSR Maturity Rating
1	Reliance Industries Ltd	29833	620.00	674.00	652.00	2.26%	1.09	3%	Health, Education, Environment	5	Agencies, NGO, Direct	4	Yes	5	2.85	57%
2	Oil & Natural Gas Corp Ltd	21478	536.00	526.00	421.00	2.45%	0.98	25%	Health, Education, Environment	5	Agencies, NGO	4	Yes	5	3.70	74%
3	Tata Consultancy Services Ltd	34513	446.00	380.00	294.00	1.10%	0.85	29%	Environment, Education	5	Agencies, NGO	4	Yes	5	3.10	62%
4	HDFC Bank Ltd	15287	304.00	305.00	121.00	2.00%	1.00	152%	Education, Health, Skill development	5	Agencies, NGO	4	Yes	5	3.55	71%
5	Infosys Ltd	14353	287.00	289.00	202.00	2.01%	1.01	43%	Environment, Education	5	Agencies, NGO	4	Yes	5	3.85	77%
6	NTPC Ltd	10714	228.00	280.00	492.00	2.61%	1.23	-43%	Education, Health, Women empowerment	5	Agencies, NGO	4	Yes	5	3.20	64%
7	ITC Ltd	10471	275.00	276.00	248.00	2.64%	1.00	11%	Environment, Education	5	Agencies, NGO, Direct	4	Yes	5	3.65	73%
8	Indian Oil	20385	213.00	214.00	157.00	1.05%	1.00	36%	Health, Education, Environment, Skill development	5	Agencies, NGO, Direct	4	Yes	5	3.25	65%
9	Tata Steel	3445	116.00	194.00	213.00	5.63%	1.67	-9%	Poverty alleviation, Education, Health	5	Agencies, NGO	4	Yes	5	3.65	73%
10	Wipro Ltd	8518	176.00	186.00	159.80	2.18%	1.06	16%	Health, Education, Environment	5	Agencies, NGO	4	Yes	5	3.60	72%

References

1. Arendt, S., &Brettel, M. (2010). Understanding the influence of corporate social responsibility on corporate identity, image, and firm performance. Management Decision, 48(10), 1469-1492. http://dx.doi.org/10.1108/00251741011090289
2. Arevalo, J. A., & Aravind, D. (2011). Corporate social responsibility practices in India: approach, drivers, and barriers. Corporate Governance: The international journal of business in society, 11(4), 399-414. doi:10.1108/14720701111159244
3. Arora, B., &Puranik, R. (2004), ''A review of corporate social responsibility in India'', Society for International Development, 47(3), 93-100.
4. Bowen, H. (1953), Social responsibilities of the businessman. New York: Harper & Row
5. Carroll, A. B. (1999). Corporate Social Responsibility. Business & Society, 38(3), 268-295. doi:10.1177/000765039903800303
6. Carroll, A. B., Lipartito, K. J., Post, J. E., Werhane, P. H., & Goodpaster, K. E. (Eds.). (2012). *Corporate Responsibility: the American Experience. Cambridge:* Cambridge University Press
7. Carroll, A. B. (1991). The pyramid of corporate social responsibility: toward the moral management of organizational stakeholders. Business Horizons, 34(4)
8. Davis, K. (1960). Can Business Afford to Ignore Social Responsibilities? California Management Review, 2(3), 70-76. doi:10.2307/41166246
9. Ditlev-Simonsen, C and Midttun, A (2011), What motivates managers to pursue Corporate Social Responsibility (CSR)?. Corporate Social Responsibility and Environmental Management, 18, 25–38. doi: 10.1002/csr.237
10. Friedman, M. (1970, September), The social responsibility of business is to increase its profits. The New York Times Magazine, 122-124
11. Mohan, A. (2001), "Corporate citizenship: perspectives from India", Journal of Corporate Citizenship, 12(2)
12. Gautam, R., & Singh, A. (2010). Corporate social responsibility practices in india: A study of top 500 companies. Global Business and Management Research, 2(1), 41-56. Retrieved from https://search.proquest.com/docview/917181577?accountid=166436

CATASTROPHIC CRISIS TO WAKE UP CALL IN BENGALURU: CURATIVE AND PREVENTIVE MEASURES FOR FLOOD CONTROL

Dr.Xavier.V.K
Professor in Economics, Department of Economics, Jain University, Bangalore

Abstract

Rapidly growing urban population in an unplanned city like Bengaluru poses the problem from climate change patterns compounded with blockages of natural drains, reduced capacity of drains and tanks due to silt and decreased percolation from over-concretization. In August 2017 Bengaluru received 180 mm rain within an hour in that was enough to test the best of any city's drain planning system. The mixing of sewage to storm water drains adds a health dimension to the issue. Inundation and overflow during the last week was immediate due to escalated inflow (loss of upstream tanks, low percolation, high run off rates, and presence of sewage), low tank capacity, and slower outflow (loss of rajakaluve with encroachments and reduced storm water drain capacity).This paper attempts to analyse the causes for recent flooding in Bengaluru. The first section of the paper presents the picture of rains in Bangalore. The second section examines the consequences of the lost lakes and the encroachments in detail to draw the attention of policy makers to think seriously about these problems and plan some measures to overcome them. The third section analyses the storm water drainage system that has been implemented in Bengaluru. The paper concludes with suggestions for preservation of lakes, the solution for flood mitigation and prevention, particularly for conservation and ground water recharge of drinking water for future use. The argument is that the city planning should act proactively to fix the issue rather than wait for a catastrophic crisis to give the wakeup call.

Keywords: *Rajakaluve, Storm water drain, Over-concretisation, ground water recharge. Flood mitigation, encroachment*

Introduction

180 mm rain within an hour in Bengaluru in August 2017 was enough to test the best of any city's drain planning system. For an unplanned, rapidly growing urban city like Bengaluru the problem from climate change patterns is compounded with blockages of natural drains, reduced capacity of drains and tanks due to silt and decreased percolation from over-concretization. The mixing of sewage to storm water drains adds a health dimension to the issue. Inundation and overflow during the last week was immediate due to escalated inflow (loss of upstream tanks, low percolation, high run off rates, and presence of sewage), low tank capacity, and slower outflow (loss of *rajakaluve* with encroachments and reduced storm water drain capacity). Rain in August - September 2017 threw the city of Bengaluru out of gear. Huge swathe of south and east Bengaluru were waterlogged, leading to traffic snarls on arterial roads. Residents from several localities made panic calls as water entered the basement while in Hongasandra, Begur lake overflowed flooding nearly 800 houses in two layouts. Residential localities in HSR layout, Begur, Dolar's Colony in J P Nagar, Gottegere, Majestic and Anugraha layout in Bommanahalli were flooded and many houses in basement were submerged in muddy water. Angry residents in HSR Layout took to the streets and formed a human chain to protest BBMP's failure to prevent inundation. Flooding has become a perennial problem despite BBMP promised a permanent solution to the issue. Rainwater mixed with sewage entered some houses in sector 6 and 7 and the basement of many apartments was flooded. Shoddy non-existent desilting work, increased heights of main roads and increased encroachment of drains were to blame. Many residents had to wade through knee-deep water as there were no adequate motor pumps to drain out water. Residents in Gottegere are worried about possible break out of diseases due to stagnant water turns into a breeding ground for mosquitos so that dengue and malaria could be a threat. Residents depend on private tankers for drinking water as sewage mixed rain water entered their sumps. In this background this paper attempts to present the characteristics of lake encroachment issues, rejuvenation of lakes and tank maintenance measures. The consequences of the lost lakes and the encroachments is discussed in detail to draw the attention of policy makers to think seriously about these problems and plan some measures to overcome them. The paper concludes with suggestions for preservation of lakes, particularly for providing drinking water and ground water recharge. The argument

is that the city planning should act proactively to fix the issue rather than wait for a catastrophic crisis to give the wakeup call.

Literature Review

Rapid urbanisation has posed a serious threat to natural resources around urban areas including green lands, parks and water bodies (Thippaiah, P., 2009). The worst victims have been tanks and ponds in and around urban areas as ownership was easily maneuverable. All this resulted in the disappearance of most of urban lakes. The vanishing of lakes has caused loss of irrigated lands, drinking water sources as well as threatened agricultural activities, the fisher folk, greenery and recreation activities even existing lakes have become unfit as sources of drinking water due to growth of water hyacinth ad other aquatic weeds and encroachments. These have lost flood-absorbing capacity leading to new phenomenon of urban floods. The urban floods are playing havoc in the cities due to loss of natural drainage activities and the low lying areas which were earlier under tank irrigation, having come under various human activities. Human beings and livestock living around these lakes are prone to severe vulnerable and disease vectors. The city of Bengaluru is no exception to these developments and is even worse when compared to many other cities in the country.

Analysis of Data

Two official sources provide some data on lakes/tanks in Bengaluru urban district. The Minor Irrigation Census 1986-87 by the Department of Minor Irrigation, accounts for 608 tanks of all size classes in Bengaluru Urban district with a culturable command area of 12, 827 ha (having a command area up to 2000 ha) and gross irrigation potential created of 13,004 ha. The data provided by the Directorate of Economics and Statistics show that around 652 tanks existed in the same year in Bengaluru Urban district. In contrast to the above data , there is another source which claims that the city of Bengaluru has 261 lakes till 1961 (GoK 2002-2003) and their number reduced to 81 as per the Lakshman Rau Committee Report (1986) a decline of 35.09 percent and watershed area by 8.66 percent. According to this report there were 389 lakes/tanks in Bangalore Metropolitan area (1279 sq. km). Out of the 389 lakes, 262 were in green belt area (839.72 sq. km) and remaining 127 lakes/ tanks were in con-urban area (449 sq. km). Out of 127 tanks in con-urban area, 81 were live tanks and 46 disused tanks. Out of 81 live tanks, 79 had a water spread area of 1,079.08 ha and 38 of 46 disused lakes had a water spread area of 346.74 hectors. Altogether, 113 lakes/tanks had a water spread area of 1425.82 ha which worked out 12.62 ha per tank as against the state average of 11.98 ha and 24 lakes/tanks had an irrigated area of 506.90 ha which worked out to 21. 12 ha per lake/tank as against the State average 18 ha. This means the city lakes were bigger in size as compared to rural tanks in the State. The bigger tanks had been built around the city with a view to provide irrigation and drinking water to the growing population of Bangalore city as there were no perennial rivers around the city.

Table 1 Distribution of lakes/tanks by Bengaluru Urban District

S.No.	Name of Tank	No. of Lakes/Tanks
1	Bangalore North	61
2	Bangalore south	98
3	Anekal	44
4	Hoskpte	23
5	Magadi	11
6	Nelamangala	13
7	Devanahalli	14
	Total	**262**
Source: Thipaiah P. (2009)		

Indian Space Research Organisation (ISRO) satellite images coupled with topo sheet of survey of India Information found 2789 tanks/lakes of all size-classes in Bengaluru with a water spread area of 18, 260.48 ha in BMRDA area of 8,800 sq.km (Urban and Rural districts (2298 tanks), and Malur Taluk (491 tanks) of Kolar district (GoK, LDA and INEP 2002). The estimate of ISRO was more than the total number of lakes 2091 as per the Minor Irrigation Department data in 2000-2001 and 1888 tanks/lakes as per DES in 2005-2006. According to ISRO, in BDA area was 608 with 4572.73 ha of water spread area which was equal to Minor Irrigation Census data at 608 in 1986-87.

Discussion

Long before Bengaluru was a city interconnected with lakes. If one lake overflowed, it automatically connected to another lake through channels now known as *Raja Kaluve* or storm water drains. Water was needed to irrigate fields and tanks served as great feeders. Rain water would collect in them and flow down over bundh through *raja kaluve* into other tanks. These days most of them are used to transport sewage by BBMP. Tanks have been encroached on or dried out (see GIS Agara lake and Belandur lake), mostly by real estate. As a result nothing flows in the kaluves apart from sewage from people occupying this real estate space and rain water. The survey conducted by Bruhat Bengaluru Mahanagara Palike (BBMP)and the Revenue Department on drain network found a whopping 1923 encroachments across 400 KM in many prominent areas of the city. The BBMP has already razed off 854 properties while the remaining properties an on the anvil. Properties of popular builders, government officers, martyrs and popular tech parks also feature in the list. The supreme Court is in a relentless mood while the BBMP has approached the High court to file caveats against people obtaining sty orders. Today a few of these *kaluves* are missing due to illegal encroachment. The excess water now has no place to go and result in flooding. The best solution for BBMP was to demolish people's houses built using hard earned money. Compelling cases can be made for both sides. These are all layouts which were sanctioned by BBMP and have all the papers. You wouldn't know it's is illegal until one fine day you get a notice. BBMP officers were hand in glove with real estate mafia to falsify the surveyor report and then proceeded to issue proper paper work. This land was then sold as a proper layout. Its legal because there are papers and the papers were made in contravention of the rules by corrupt *babus* conniving with bribing developers. Since the process was illegal, the product is illegal but you won't know it till someone investigates. You won't know the land you are buying was actually a lake. The BBMP is the only and final authority to assess the validity of a site. So the is already BBMP authorized and approved. The people won't worry. The most of the babus that approved these building are in hiding. Bangalore lakes are under threat from the land mafia. Many have been filled up and sold to property developers and the storm water drains leading to them have been encroached. The government has been complicit in providing clearances and letting people register the properties. Most people who bought the property and houses down the line have no idea that this property is on encroached land because government has given all clearances.

Raja kaluves are massive storm water drains that linked the lakes around Bangalore. Their objective was to let the water flow between lakes in a controlled manner during non-rain seasons and also to ensure that rai water could flow to these lakes very fast. Over time people started linking sewage lines ad drains from houses small industries ad apartments complexes to these kaluves, no one did anything to stop them. So eventually they turned into massive drains. As lakes got encroached a lot of these Kaluves were also cut off. Most of them ended up at a brick wall making them pointless. In some places, contractors put slabs on top of these massive canals and build on top of them. The Real Estate Research Initiative of Indian Institute of Management Bangalore (IIMB-RERI, 2017), has enabled the citizens of Bengaluru to know if their property is situated on a storm water drain or *'raja kaluve'.* The website is optimized for mobile viewing and enables searches in Kannada as well. The portal enables people ease of access to find details about storm water drains in one place. Citizens need to have the survey number, village, Hobli and taluk as per the schedule in the registration document to be able to use this portal.

Table 2 Public Encroachment details of Rajakaluve (SWD) in Bengaluru

Zone Name	Name of constituency	Ward		Villages
		No.	Name	
East	Hebbala	22	VishwanathaNagenahalli	Cholanayakanahalli
		33	Manorayanapalya	
	Pulikeshinagara	32	Kaval Byrasandra	Shyampura
	Sarvagnanagara	49	Lingarajapura	Lingarajapura
West	Mahalakshmi layout	43	Nandini Layout	Laggere
	Malleshwaram	36	Mathikere	Mathikere

South (A)	Basavanagudi	155	Hanumanth Nagar	Kempambudikere
		156	Srinagar	Gavipura
Koramangala (B) (South Additional)	Chikkapete	118	Sudhamanagar	Kalasipalya Mavalli Wilson Garden
		119	DharmarayaDevasthana	Kalasipalya
Yelahanka	Byatarayanapura	4	Yelahanka Satellite town	Veerasagara
		5	Jakkur	Thirumenahalli Kogilu Bellahalli Agrahara Chokkanahalli Jakkuru Venkateshpura Sampigehalli Shreerampura Kattigenahalli
		8	Kodigehalli	Kothi Hosahalli
		10	DoddaBommasandra	Ramachandrapura Narasipura
		11	Kuvempunagara	Singapura
Mahadevapura	K R Puram	25	Horamavu	Horamavu
				HoramavuAgara
				Byrathi
				B Narayanapura
		52	K R Pura	Bhattarahalli
				Sannathammanahalli
		53	Basavanapura	Medahalli
				Devasandra
				Kodigehalli
	Mahadevapura	150	Bellandur	Amani BellandurKhane
				Ambalipura
				Bellandur
				Challaghatta
				Chikkakanneli
				BelurNagasandra
				Boganahalli
				Kariyammana Agrahara
		84	Hagadur	Hagadur
				Nagagondanahalli
				Siddapura
		54	Hoodi	Sadaramangala
		85	DoddaNekkundi	Thubarahalli
		83	Kadugodi	Channasandra
Bommanahalli	Bommanahalli	193	Arakere	Nyanappanahalli
R R Nagar	RR Nagar	160	R R Nagara	Halagevaderahalli
		73	Kottigepalya	Malagala Malagala
		160	R R Nagara	BEML Layout
Dasarahalli	Dasarahalli	12	Shettihalli	Abbigere Chikkasandra Kammagondanahalli Shettyhalli Nagasandra Chokkasandra Nelakadharanahalli
		14	Bagalakunte	
		39	Chokkasandra	Chokkasandra Nelakadharanahalli
Source: http://164.100.133.91/rajkalve				

Ownership of Lakes

Prior to 1986, the lakes in the city were under the jurisdiction of nearly 16 departments including Defense, Zila Panchayats, Horticulture and HAL. The Lakshman Rao Committee had identified 81 live lakes and 46 disused lakes in the city and 90 per cent of them had been transferred to forest departments and the rest were owned jointly by forest and other departments.

An efficient network of lakes and tanks were built by Kempagowda who was the founder of Bengaluru city in the 15th century to provide water for drinking, household uses, agriculture, fisheries and also for religious and cultural purposes during his time. The tanks have been built to recharge ground water and prevent water logging and flooding. Some of them were Dharmambudhi (supplied drinking water till 1895, presently Kempagowda Bus stand), Sampangi presently Kanteerava stadium), Siddikatte (presently city market), Karanchi(presentlyChamarajpet and Gandhi Bazar) (Agarwal and Narain, 1997) and Millers Tanks (presently Hospitals, GurunanakBhavan, IT Companies, Schools and residential buildings. In addition,

Conclusion

Climate changing patterns along with delay in storm water drain (*rajakaluv)* project implementation, lake encroachment and over-concretization are driving Bengaluru city to flooding and water clogging. What are the contours for the solution to avoid or mitigate flooding? The policy decisions involve a mix of short term measures that are curative and long-term measures that are preventive in nature. The policy intervention in the short term must increase run off concentration time and increase percolation opportunity. This can be done by small wet lands, swales, appropriate design of storm water drain (including removing encroachments) and redesign of roads, traffic islands to have some soft marshy spaces. The policy interventions must not allow STP plants to be located near lakes while decentralized STPs and urban agriculture must be encouraged. Desilting and preventing sewage from entering storm water drain is also essential.The design change for the long term preventive measures must redesign and reclaim the network to ensure higher capacity for higher order streams. Relinking the network based on new terrain profile to avoid alteration for road and rail networks. At the policy level the sub water sheds must be strengthened as a single watershed rather than piecemeal measure at one tank or another in isolation. If we increase more permeable land we will be better off in managing the flooding situations. The government must put out GIS maps covering tanks, storm water drains and road networks. We need to fix the problem having zero tolerance for any future violation that impact water resilience. We need to respect nature's lines and realise that low lying areas will always be at greater risk. We will need government to buy in for the solution set and citizens too need to do their bit to resolve this issue.

References

1. Thippaiah P., Vanishing Lakes: A Study of Bangalore City, D.Rajashekar (Ed.). Social and economic change Monographs 17, Institute for Social and Economic Change, Bangalore, 2009.
2. The Real Estate Research Initiative of Indian Institute of Management Bangalore (IIMB-RERI), 12 January, 2017.
3. K.C. Smitha Urban Governance and Bangalore Water Supply & Sewerage Board (BWSSB) PDF.
4. Suresh, T S (2001) An urban water scenario: a case study of the Bangalore Metropolis, Karnataka, India. In Regional Management of Water Resources. IAHS Publication no 268. pages 97-104 Google books.
5. Gowda K., Sridhara M.V.: Conservation of Tanks/Lakes in the Bangalore Metropolitan Area in Proceedings of the 2006 Naxos International Conference on Sustainable Management and Development of Mountainous and Island Areas. University of Crete 122-130 PDF.
6. http://articles.timesofindia.indiatimes.com/2012-11-04/bangalore/34908256_1_n-sivasailam-bmrc-metro-path.
7. http://www.dnaindia.com/bangalore/report_bmrcl-plans-to-rejuvenate-lakes-starting-with-kengeri_1759957.
8. A farewell to Hebbal lake? The Hindu July 25, 2007.

MICRO FINANCE AND WOMEN ENTREPRENEURSHIP WITH SPECIAL REFERENCE TO KANYAKUMARI DISTRICT, TAMIL NADU

Dr.Vinodha Devi.K
Assistant Professor, Kristu Jayanti College, Bangalore

Abstract

Corporate Social responsibility (CSR) gained importance as an inevitable corporate activity towards the last decades of 20th Century. While Indian companies embraced CSR quite early and started reporting in their annual reports, consistent studies on CSR in Indian context have been sporadic. However, introduction of CSR as a mandatory activity in the new Companies Act 2013, led to very substantial growth in formal CSR activities in the country. Along with this, the need has arisen to measure and assess the effectiveness of the CSR spend of the companies by developing suitable framework. This paper attempts to assess the CSR spend performance for the top 10 spenders, from the available data for the Financial Year 2016-17 and develop an objective framework for relative rating of those companies.

Introduction

Women entrepreneurship has been recognised as an important source of economic growth. Gender equality is guaranteed under the constitution of India but even after the decades of independence women has been excluded from the mainstream of development; in some ways development processes have enhanced male domination over women. In addition to economic factors, the rigidity of socially ascribed gender roles and women's limited access to power and productive resources are considered as important factors that have led to insecurity of women. A number of Women Development programming has laid the foundation for the progress of women entrepreneurship in rural areas but still a large group of rural women has been excluded from the workforce of the country.

Scope of the Study

The study examines the factors motivates rural women to start microenterprises. The areas of concern, however, are the economic, socio-cultural and political factors which influence women entrepreneurship. The research also focuses on how far the SHG programme has helped the women to start micro enterprises in rural areas.

Objectives of the Study

The present study has been carried out with a primary objective of analyzing the factors motivating the SHG members to start micro enterprises.

1. To identify the factor motivates the SHG members to start microenterprise in Kanyakumari District.

Methodology

The study is descriptive in nature pursuing with an aim to analyse the motivational factors which influence women to start micro enterprise in Kanyakumari District. The analysis is based on primary data collected through semi-structured questionnaire consisting of a mix of factual and attitudinal questions. To analyse the collected data and thereby to draw inference factor analysis was used.

The Area of Study

Kanyakumari is situated in the southernmost part of the Indian peninsula surrounded by Kerala state in the west and north-west, Tirunelveli district in the north and east, Gulf of Mannar in the south-east, Indian Ocean in the south and Arabian Sea in the south-west. It is the smallest district in Tamil Nadu and has a total area of 1,684 sq km which is 1.295 percent of the total area of the state. Administrative set-up of the district includes two revenue divisions, four taluk and nine blocks. The District has four Municipalities, six Assembly Constituencies and One Parliamentary Constituency. There are 97 village panchayats and 56 town panchayats. Nagercoil is the headquarters of Kanyakumari District.

Sample Design

As the research focus on the microenterprises in rural areas the study excludes the microenterprises belong to town panchayats and municipalities. The list of microenterprises belong to village panchayat was collected from Mahalir Thittam office of Kanyakumari District.

Factors Motivates SHG Members To Start Micro-Enterprises

The opinion about the factors motivates SHG members to start micro-enterprises are discussed through factor analysis below. The influence of these factors on the women entrepreneurs is measured on the basis of a five-point scale.

Factor Analysis

In this study Factor Analysis is applied for identifying the factors motivates SHG members to start micro-enterprises and the results are given below. The technique of Factor Analysis is used to reduce the number of variables into smaller and manageable number by combining related ones into factors. 'Principal Component Analysis' method is used to extract factors in Eigen Value of one or more. In order to assign variables 'Rotated Factor Matrix' is used.

In order to find out the appropriateness of this analysis Kaiser Meyar Olkin (KMO) and Bartlett's Test of Sphericity are used and the results are shown in Table 5.61.

Table 1 KMO and Bartlett's Test

Description	Value
KMO Measures of sampling adequacy	.618
Bartlett's test of Sphericity	
App. Chi-square value	1747.182
df	171
Sig.	.000

The KMO value is very high (0.618). Similarly, the Bartlett's test rejects the null hypothesis i.e., the variables are not related as the approximate chi-square value is 1747.182 at 171 degrees of freedom which is significant at 1 per cent level of significance. Thus, factor analysis may be considered as an appropriate technique. The results of Principal Component Analysis to extract the number of variables are given in Table 2.

Table 2 Principal Components Analysis

Components	Extraction Sums of Squared Loading			Rotated Sums of Squared Loading		
	Total	Percentage of Variable	Cumulative Percentage	Total	Percentage of Variable	Cumulative Percentage
1	5.587	23.509	23.509	4.981	20.958	20.958
2	3.649	15.355	38.864	2.809	11.822	32.780
3	2.837	11.937	50.801	3.219	13.545	46.325
4	1.965	8.269	59.070	2.806	11.806	58.131
5	1.779	7.486	66.556	2.002	8.425	66.556

From Table 2 shown, it is clear that five factors can be extracted together which account for 66.56 per cent of the total 19 variables. Hence 19 variables are summated to five factors by losing nearly 74 per cent of data. Table 3 presents the Rotated Component Matrix table by using Varimax Method which is used to assign factors which have higher loadings.

Table 3 Factor Analysis - Factors motivates SHG members To start Micro-enterprises

Factors	Component				
	Job Attraction	Social Empowerment	Self Confidence	Family Help	Own Initiative
Self-Motivation	**.793**	-.145	-.109	.288	.038
Success Stories of other Women Entrepreneurs	**.778**	-.044	-.162	-.110	-.239
Previous Experience in the same line	**.708**	-.402	-.019	-.032	-.185
Financially Sounded Area	**.673**	.053	-.102	.105	.031
Assistance offered by Govt. Agencies / NGOs	**.649**	.146	-.237	-.311	-.327
To Utilize the Financial Assistance Offered	**.617**	.135	.191	.036	.270
To canalize surplus Financial Resources	.021	**.819**	.003	.269	.102
Utilize idle time Purposely	-.066	**.660**	.053	-.074	-.005

To earn more money for a Comfortable Living	.353	**.620**	.105	-.240	-.150
Response to Favorable Business Opportunities	-.185	**.561**	.193	.541	.296
Dissatisfied with the Previous Job	.250	**.550**	-.365	.131	-.166
To make use of the Acquired Skills	-.140	.151	**.862**	.059	-.127
Confidence gained from Higher Educational Qualifications	-.021	-.240	**.821**	-.172	.037
As an Alternative to her Unemployed Situation	.098	.092	**.537**	-.095	.149
Encouragement of Friends and Relatives	-.642	-.095	.080	**.675**	-.079
Support of Husband	.051	-.198	.072	**.607**	-.260
To support her Family	-.042	.046	-.157	**.523**	.024
To derive Satisfaction from one's own Initiative and Prove one's worth	.055	-.211	.122	**.511**	.017
To be her Own Master	.016	-.044	.057	-.098	**.914**

Table 3 clearly shows that in the first column the variables namely, ''Self-Motivation', 'Success Stories of other Women Entrepreneurs', 'Previous Experience in the same line', 'Financially Sounded Area', 'Assistance offered by Govt. Agencies / NGOs', and 'To Utilize the Financial Assistance Offered', 'have higher loadings of 0.793, 0.778, 0.708, 0.673, 0.649 and 0.617 respectively and it can be suggested that factor one is the combination of these six factors and have the variance of 20.958 per cent and it can be named as 'Job Attraction'. From the second column it can be seen that the variables of 'To canalize surplus Financial Resources', 'Utilize idle time Purposely', 'To earn more money for a Comfortable Living', 'Response to Favorable Business Opportunities', 'Dissatisfied with the Previous Job' and To make use of the Acquired Skills have higher loadings with a variance of 11.822 and it can be combined and called as 'Social Empowerment'. The third column shows that the factors 'To make use of the Acquired Skills ' 0.862, 'Confidence gained from Higher Educational Qualifications' 0.821, and 'As an Alternative to her Unemployed Situation' 0.537 have high loadings and are summated and named as 'Self Confidence'. The fourth factor namely 'Encouragement of Friends and Relatives', 'Support of Husband' 'To support her Family' and 'To derive Satisfaction from one's own Initiative and Prove one's worth' are combined together to be called as 'Family Help'. In the last column only one variable i.e. 'To be her Own Master' which have loading (8.425%) are included and named as 'Own Initiative'.

Conclusion

The study concludes by reducing the 19 factors into five variables and given different names by using factor analysis. Thus 'Job Attraction', 'social Empowerment', 'Self Confidence', 'Family Help' and 'Own Initiative' have been identified as the factors motivates SHG members to start micro-enterprises in Kanyakumari district. Hence job attraction is the factor which initiates the process of microenterprises in the study area.

References

1. Annual Report, Ministry of Women and Child Development, 2014-2015
2. Roa.V.M,Women Self Help Groups profiles from Andhra Pradesh and Karnataka', Kurushetra, April 2002,Vol.50,No.6
3. Puhazhendi.V,(1995),'Transaction costs of lending to the rural poor' NGOs and SHGs of the poor as Intermediaries for Banks in India' The foundation for Development Corporation, Australia, Brisbane
4. Srinivasan, Girija and Satish(1999),'Impact of SHG lending on the profitability of Branches', Rural Banker,No.21,p.22
5. SukumarBasu, Women and Economic Development', Deep and Deep publication Pvt, New Delhi,2000,pg.100
6. Subbiah, A., and Navaneeth, K.K., 2006, Linking Self Help Groups (SHGs) with banks, Kisan World. 33(5): 55-56.
7. Joseph, L., and Easwaran, K., 2006, SHGs and tribal development in Mizoram. Kurukshetra, 5(3): 37-48.

WATER ACCESSIBILITY AND SUSTAINABILITY IN BANGALORE

Dr. Xavier.V.K

Professor and Head, Department of Economics, School of Humanities & Social Sciences, Jain University, Bangalore

Abstract

This paper investigates the current status of water supply in Bengaluru focusing on growing inefficiency, increasing unaccounted-for water and non-revenue water supply, institutional capability to meet the water needs, water pricing, reliability, accessibility and strategies for improving economic efficiency through institutional reforms in Bangalore city. Urban water management policy have clearly identified the lack of recognition of water as a scarce resource, and failure of market pricing to account for full economic costs of water production and supply. It is essential to include opportunity costs related to alternate uses of water, user costs, cost of externalities such as ground water depletion, pollution of water bodies etc. If cost recovery is based merely on water production and supply, it may lead to under pricing of water and result in inefficiency in operation and also inadequate investment on new projects and even in operation and maintenance. Higher water pricing have remarkably reduced household water consumption levels and promoted awareness about water conservation. High market price signals the scarcity value and opportunity cost of water, which helps in efficient allocation of water among various competing sectors. Economic efficiency depends on evolving effective water pricing mechanism taking into account the ability of households to pay. Water pricing needs to recover the full cost of production and supply of water, and provide reliable water supply service to consumers.

Keywords: *Water Accessibility, Efficiency and Sustainability*

Introduction

Several studies have investigated to portray the current status of water supply in Bengaluru focusing on growing inefficiency, increasing unaccounted-for water and non-revenue water supply, institutional capability to meet the water needs, water pricing, reliability, accessibility (Krishna Raj, 2013) and strategies for improving economic efficiency through institutional reforms in Bangalore city. Urban water management policy have clearly identified the lack of recognition of water as a scarce resource, and failure of market pricing to account for full economic costs of water production and supply. It is essential to include opportunity costs related to alternate uses of water, user costs, cost of externalities such as ground water depletion, pollution of water bodies etc. If cost recovery is based merely on water production and supply, it may lead to under pricing of water and result in inefficiency in operation and also inadequate investment on new projects and even in operation and maintenance. Higher water pricing have remarkably reduced household water consumption levels and promoted awareness about water conservation. High market price signals the scarcity value and opportunity cost of water, which helps in efficient allocation of water among various competing sectors.

A number of cities of the world have been afflicted with water distress. Water-related problems in cities are already enormous, and further degradation is expected. Water shortage is a growing problem and delivery of safe drinking water cannot be assured (Niemczynowicz, 1996). However, efficiency depends on short-term and long-term institutional capability to address the main water supply indicators such as reliability, financial sustainability, environmental sustainability and affordability. Economic efficiency should also reflect the goal of supplying clean and quality of water for 24-hours by providing universal access to water for all. Economic efficiency depends on evolving effective water pricing mechanism taking into account the ability of households to pay. Water pricing needs to recover the full cost of production and supply of water, and provide reliable water supply service to consumers.

Increasing water tariffs have reduced substantial water consumption particularly the waste of water in cities (Oliver, 2010). This has positive impacts on the water supply agency as well as households. While reduction in water consumption helps in conserving water and reduces water uncertainty and accessibility, increased revenue collection helps to build new infrastructure, maintenance, water networks and cross-subsidy from rich to poor. Charging for consumption of water other than drinking such as car washing, gardening will help to conserve water while revenue augmentation will help to effect cross-subsidization

in favour of poor consumers. However, water tariffs should have the objective of ensuring affordability, equity and economic efficiency.

Bengaluru, the capital city of Karnataka is the third largest city and the fifth largest metropolitan area in India is one of the fastest growing metropolitan cities. It is a center of education, IT and BT industries and many MNC industries which are attracting people to the city. The population of the city is over 13 million. Bangalore Water Supply and Sewerage Board is an autonomous body formed by the State legislature on 1964 for water supply and sewerage disposal in Bruhat Bengaluru MahanagaraPalike that covers an area of 800 Sq. km consisting of Bengaluru core area of 245Sqkm, 8 Urban local bodies of 330 Sq. km (7 city municipal corporations and 1 Town municipal corporation and 110 villages of 225 Sq. km. The BWSSB has the mandate to supply adequate water to meet demand and create sewerage network and safe disposal of sewage; prepare and implement plans and schemes for augmenting water supply and safe disposal of sewage; levy and collect water charges on no loss no profit for sustainability of the urban system. Since the inception in 1964, BWSSB has executed several supply and sewage schemes for the city including Cauvery Water supply Scheme (CWSS) in various stages (I- IV) and phases (I-II) and sewerage system improvement projects concentrating on sewage collection, conveyance and treatment works. The existing system covers an area of 265 km^2 of core area of the city in which three major Sewerage Treatment Plants (STP) are constructed at Vrishabhavathi, K&C and Hebbal Valleys (major and Minor)

Water Supply System Scenario

Till 1896, unfiltered water was supplied to Bangalore city in the kalyani system from a number of tanks such as Dharmambudhi, Sampangi, Ulsoor, Sankey etc., supplemented by local wells and stepped ponds. The supply was inadequate from these tanks. Hence, Arkavathi river was identified as the first large reliable source in the year 1884 and filtered water supply was started in the year 1896. To supply filtered water to Bangalore city, Arkavati source was identified in the year 1884. A reservoir was created at Hessarghetta about 18 kms to the North West of the city. An open masonry duct, 7 km long conveyed 29.5 MLD of raw water from source Tarabanahalli and Sladevanahalli. From Tarabanahalli 7 MLD of water is supplied to Military. From Soladevanahalli 22.5 MLD water was pumped to city at a head of 125 m through, two 375 mm CI rising mains to combined Jewel Filters (CJF), Malleshwaram where the water was treated. Treated water was first supplied after completing treatment plants at CJF on 7th august 1896. Modification took place at Hessaraghata source by replacing masonry duct by 1050 mm diameter RCC Hume Pipe with a carrying capacity of about 36 MLD. One more rising main of 375 mm diameter was laid from Soladevenahalli. These three pipelines can carry 22.5 MLD water under normal conditions out of which 13.5 MLD was supplied to the city and the balance water was supplied to enroute industries. Due to failure of monsoon, there is scarcity of water at source, only about 4 MLD of water available was supplied to Military and industries enroot in Peenya layout. This water is supplied as raw water because the treatment plant at CJF is not functioning and the receiving units such as HMT, Peenya layout and defense establishments are having their own treatment facilities to treat this raw water. However, no water is being drawn at present from this source.

Thippagondanahalli (T.G.Halli)

With the growth of the city the supply fell short of demand. Hence a new reservoir ChamarajaSagar near Thippagondanahalli (T.G. Halli) was constructed in the year 1933 across the river Arkavati, downstream of Hessarghetta reservoir about 26 km to the west of Bangalore. Water treatment plant is situated at the foot of the dam at TG Halli. The first phase of the scheme was completed during March 1933 to augment the then supply aby about 28 MLD. Subsequently, the abstraction was increased to 149 MLD by providing additional infrastructure such as increasing the capacity of the dam, providing additional treatment and pumping facility.

This improvement is done by providing two stage pumping, the head being 158 m at TGhalli and 168 m at Tavarakere which is the intermediate pumping station. Transmission system consists of 3pumping mains of 600, 675 and 900 mm diameter pipes from T G Halli to CJF. Due to failure of monsoons and constraints in the existing pumping system only about 117 MLD is available most of the times and is supplied to West of Chord Road, Beggars Colony, Kethamaramanahalli (KMH) and CJF after implementation of Cauvery stage III project. Due to continuous failure of monsoon, the reservoir last got filled in the year 1988. Presently there is no flow available. Because of these reasons Arkavati zone reservoirs are also being fed with Cauvery water.

Cauvery Water Supply Scheme

Due to the continuous expansion of the city and rapid growth of population, it became necessary to find and develop new sources. Cauvery River was identified for water supply and allocation of water from Cauvery River was done by GoK. Since 1974, the Cauvery source has been developed in stages for water supply. A total supply of about 185 MLD from Arkavati scheme was grossly inadequate to meet the demand of about 16 lakh population in the late sixties. Due to the continuous expansion of the city and the rapid growth of population it was necessary to identify new water supply sources. Cauvery River, which is about 86 km south of the city, is perennial and GoK allocated drinking water to BWSSB. Cauvery source is being developed in stages since 1974. Cauvery water supply scheme (CESS) stage- I was commissioned in 1974 to further augment the supply by 135 MLD. CWSS Stage – II followed and was commissioned in 1982 to further augment the supply by 135 MLD. CWSS Stage III was commissioned in 1994-95 which augmented supplies by 270 MLD. Cauvery water supply stage- IV Phase I was commissioned in 2012 to further augment supply by 500 MLD.

Catering water supply to an area of 800 Sq. km is the responsibility of BWSSB. Government of Karnataka allocated 19 TMC of water from Cauvery River for water supply requirements of the Bangalore city. In 2012, with commissioning of CWSS Stage IV, Phase II, the allocated water from Cauvery River has been exhausted. At present BWSSB is supplying treated Cauvery water to Bangalore City under the Cauvery Water Supply Scheme (CWSS) Stage I, II, II and Stage IV Phase I and II with total installed capacity of 1310 MLD. This quantity of water provided to the core areas of BBMP including he erstwhile 7 CMCs and 1 TMC area covering total area of 575 Sq. km but excluding 110 village areas of BBMP covering 225 Sq. km. In order to provide water supply to the newly added 110 villages which are part of BBMP, BWSSB is finding it difficult to meet the water requirements even after implementation of CWSS Stage IV, Phase II scheme. Subsequently, the Urban Development Department, Gov. of Karnataka allocated an additional 10 TMC (775 MLD) of Cauvery water for Bangalore city. It is now necessary to formulate the CWSS Stage V scheme for Bangalore city and detailed project report has been prepared for getting the financial assistance from funding agencies such as (Japan International cooperation Agency (JICA). Considering the technical aspects and water demand it is proposed to take up the stage V scheme in two phases i.e., Phase I of 500 MLD (6.45 TMC) capacity and Phase II of 275 MLD (3.55 TMC) Capacity.

Water Treatment Plants

Construction of 300 MLD Water Treatment Plant (WTP) at T.K.Halli In lieu of old I & II Stage water treatment plants which includes Complete overhauling of stage III 300 MLD treatment works, converting to fully automated plant at a cost of project Rs.148 crore to be completed in 2017

Greater Bengaluru Water Supply & Sanitation Project (GBWASP)

For providing water supply and sewerage facilities to erstwhile 8 ULBs, Government of Karnataka approved this project in December 2003. Under this project water supply to 256 sq km area of erstwhile 8 ULBs are provided covering a population of more than 27 lakhs at a project cost of Rs 500 crores. The distribution network provided is 2713 km (Dia 100mm to 150mm) with feeder mains of 195 km (Dia 200mm to 450mm) and Trunk Mains of 85 km (Dia 600mm to 1300mm). The number of house service connections provided are more than 1.35 lakhs and much of the Project was completed in 2012.

Water Supply Improvement Works

For proper water accounting and loss reduction with the aims of improvement in water distribution system, reduction in unaccounted for water and leakage control three major works are taken covering about 50% of the core area (133 Sq.km) wherein it is envisaged to reduce the overall water losses to 16%. The number of connections that will be attended are more than 3.0 lakhs covering a total length of 3325 kms at a total project cost of Rs 655 crores. Works are expected to be completed by 2017. The benefits of these works are: improvement in supply hours, pressure and assets condition; improvement in water quality; reduction in customer complaint; total water accountability and increase in revenue.

Exclusive Leak Detection Works

- Disseminating Japanese Technologies for Water Leakage Detection and Monitoring Technology in Bengaluru (E-1).
- Taken up under MRI technology and JICA grant.
- Necessary equipment arrived from Japan (free of cost).
- L-sign leakage detection and monitoring system by Suido Technical Services.
- Work going from last one year.
- Helium Gas Based Hidden Leak Detection Technology in Four subdivisions which are not covered under current UFW projects.
- Work started in 4 subdivisions at a cost of Rs 25 crores.
- Results are encouraging with detecting leaks being detected precisely.

KMRP: UGD Facilities to Erstwhile 8 ULBS

Providing UGD infrastructure, taken up under the World Bank Funded KMRP and with JnNURM to the newly added areas i.e., erstwhile 8 ULBs. The works started in February 2010 at a project cost of Rs 1192 crores. The Sewerage system comprises 2000 Km of lateral network and 300 Km of Sub-mains/ main sewers. The component of Road restoration of the cut / damaged portion is also included. Works are taken up in 24 packages and 95% work is completed. The works will be completed by March 2016.

Slum Development Component

Implementation of Water Supply and Sanitation Facilities to slums were taken up in two phases under JICA Funds. Under this project total number of slums identified are 362. The number of Slums taken up under Phase-1 and Phase-2 are 96 and 68 respectively at a total cost of Rs 91 crores. Providing individual house service connections water supply with MDPE pipes and sanitary connections with HDPE pipes were also the part of the programme apart from bulk supply and disposal of sewage. Phase I component is 100% completed and Phase II is 92% complete.

Proposed Water Supply Works

During the last two decades the city of Bangalore has been experiencing unprecedented growth in the field of Industrial, Commercial and Institutional sectors. This phenomenal growth has resulted in unplanned urban activities surrounding Bangalore and increase in population and construction activities. As per the census the population of Bangalore city was 4.08 million in 1991, 5.8 million in 2001 and increased to 8.5 million in 2011. This fast growth in population is posing tremendous pressure on infrastructure especially on water supply and under ground drainage system. The projected water supply requirements for the city of Bangalore and population projections are shown in the table below:

Rain Water Harvesting, Rejuvenation of Lakes

Rain water and ground water are important components of the hydrological cycle. At an average rainfall of 750mm per year the total available rain water will be 33TMC in 1250 sq.km. area of Greater Bangalore. The Board can utilize 5 to 10 TMC of rain water that falls in and around the city by utilizing the benefits of the complete remodeled storm water drains by BBMP, ensuring collection of all the sewage in the sewerage network so that all the sewage is taken to the treatment plants. The rain water collected in shafts, galleries and lakes through the storm water drain network will help in revival of the depleted groundwater level. About 30% of the treated effluent from the sewage treatment plants is led to

the Lakes for dilution with rain water. Water that percolates into ground from these lakes increases the ground water level in vadose and phreatic zones.

Conclusion

Cape Town in South Africa was the first city globally to face Ground Zero and shut down water connections for homes and businesses. This has turned the spotlights on other metro cities which might have to face the reality in the near term. The water-starved Bengaluru might make this infamous cut as it is seen as edging towards a crisis of epic proportion. With natural water bodies becoming victims of concretization and rain water harvesting being a low priority, the State capital's future appears grim in terms of meeting the water requirements of its one-crore-plus people. In fact alarm bell rand loud to this effect when BBC reported based on UN-endorsed projections listed Bengaluru in the second position after Brazil's Sao Paulo among the 11 global cities that are likely to run out of drinking water. This paper investigates the problem of water scarcity in Bengaluru and possible solution to the problem.

The availability of water per person in Bengaluru will be 88 liters per day when the population is expected to touch 20 million in 2031. Currently the norm for domestic water usage is 135 liters per capita per day as prescribed by the Central Public Health and Environmental Organisation. The state government claims that it will spend Rs. 5500 crores by 2023 to increase water availability for Bengaluru to 2,175 million liters per day (MLD) from the current 1391 MLD that comprises of 687 MLD of Cauvery river water, 672 MLD of ground water and 41 MLD of recycled water.

Bengaluru has faced a harsh drinking water crisis in the past four summers. Bengaluru gets enough rainfall but the problem is harvesting it. The lakes that used to have a storage capacity of 35 tmcft of water in 1800 has reduced to 2 tmcft. A lot could have been learnt and the situation could have been improved but for political determination and bureaucratic vision with regard to water for the city.

When the state government is not providing proper drainage line for all the sewage to flow, you will find a lot of unwanted waste going into natural water bodies across the city, thereby leading to water crisis. The Centre has given Rs. 890 crores towards cleaning of lakes in the city, including Bellandur Lake which was frothing at that point of time (Javedkar, Union Minister of Environment). However, Karnataka government did not utilize the funds and the situation has now worsened. When you are killing your natural resources of water supply, it will obviously create a scarcity of drinking water. The city has interconnectivity of 1000 lakes. The government never utilized the funds for building a strong lake network.

Overexploitation of ground water resources will lead to a major crisis in 2015 and people may have to be evacuated. Bengaluru's water crisis is a result of mismanagement of resources by policy makers. Bengaluru gets enough rainfall to quench its thirst, but the problem is with rainwater harvesting. Another disturbing fact is on lakes. Its lake had a storage capacity of 35 tmcft of water in 1800 and the lakes had been interlinked in such a way that water was available throughout the year. Now the majority of lakes have disappeared and the current storage capacity is less than 2 tmcft of water, while the city currently requires 1.5 tmcft of water per month. One tmcft of water is equal to 2816 crore liters and can cater to the needs of six lakh people per year. The revitalization of lakes and increase in state's share of Cauvery river water will help tide over the crisis.

Annexures

Table 1 Water Supply System

Present supply from Cauvery source	1350 MLD
Present population served	8.5 millions
Area of water supply served	570 Sqkm
House services connections	8.65 lakhs
Total length of water supply pipelines	8646 kms
Pipe diameter range	100 to 1888 mm
Number of ground level reservoirs	57 (885 ML)

Number of overhead tanks	36 (33ML)
Booster pumping stations	62 nos
Public taps providing free water	7477 nos
Water tankjer lorries	62 numbers
Quantity of water supplied / month	42,200 ML
Average per capita consumption	65 L / day
Average cost of water	28 Rs/KL

Table 2 Consumption category wise water consumption and revenue generation

Consumption Type	No of Connections	Consumption ML	Water accounted %	Demand, Lakhs	Revenue share%	Revenue yield, per ML
Domestic	7,40,000	16,992	44.67	4,718	53.98	0.28
Non Domestic	42,100	1,623	3.84	1,961	22.44	1.21
Partial Non Domestic	36,300	2,194	5.20	1,291	14.78	0.59
Industries, BIAL, and others	2641	618	1.56	715	8.18	1.16
Sanitary Connections	49,100	0	0	54	0.62	-
Total	8,70,141	21,427	50.75	8,740	100.00	0.41
Total Water Receipts		42,223				
Gap		20,796				
NRW%		49.25	49.25			
			100.00			

Table 3 Population and Water supply requirements

Year	Population (Million)	Water Demand (MLD)	Water Demand (TMC)	Present Supply		Shortfall in Demand	
				MLD	TMC	MLD	TMC
2011	8.499	1400	18.05	950	12.25	450	5.80
2021	10.581	2100	27.1	1450	26.7	650	0.4
2031	14.296	2900	37.39	2070	26.7	1450	10.69
2041	17.085	3400	43.84	2070	26.7	1950	17.14
2051	20.561	4100	52.86	2070	26.7	2650	26.16

References

1. Annamraju, S., Calaguas, B., & Gutierrez, E. (2001). Financing water and sanitation. Key issues in increasing resources to the Sector, Water Aid briefing paper.
2. Briscoe, J. (1996). Financing water and sanitation services: the old and new challenges. Water Supply, 14(3), 1-17.
3. Budds, J., &McGranahan, G. (2003). Are the debates on water privatization missing the point? Experiences from Africa, Asia and Latin America. Environment and Urbanization, 15(2), 87-114.
4. BWSSB/AusAID. (2002). Baseline Socio-Economic Survey Report, IMRB/ Bangalore Water Supply and Environmental Sanitation Master Plan Project (BWSESMP). Bangalore, India.
5. CAG. (2012). Performance Audit of Jawaharlal Nehru National Urban Renewal Mission. New Delhi: Comptroller and Auditor General.
6. Cairncross, S., Blumenthal, U., Kolsky, P., Moraes, L., &Tayeh, A. (1996). The public and domestic domains in the transmission of disease. Tropical Medicine & International Health, 1(1), 27-34.

7. Celio, M., & Giordano, M. (2007). Agriculture–urban water transfers: a case study of Hyderabad, South-India. Paddy and water environment, 5(4), 229-237.
8. Census of India. (2011a). Houselisting and Housing Census Data.
9. Census of India. (2011b). Rural-urban distribution of population (provisional population totals). New Delhi: Government of India.
10. CGWB. (2008). Groundwater Information Booklet: Bangalore Urban District. Bangalore: Ministry of Water Resources.
11. CGWB. (2010). Ground Water Scenario of India: 2009-10. Faridabad: Central Groundwater Board.
12. CGWB. (2011). Ground Water Scenario in Major Cities of India. Faridabad: Ministry of Water Resources, Government of India.
13. CGWB. (2012). Ground Water Year Book - India. Faridabad: Central Ground Water Board.
14. CPCB. Coastal Ocean Monitoring and Prediction System. 2014, from http://www.cpcb.nic.in/comaps.pdf
15. CPCB. (2009). Status of Water Supply, Wastewater Generation and Treatment in Class-I Cities & Class-II Towns of India. New Delhi: Central Pollution Control Board.
16. CPHEEO. (1999). Manual on water supply and treatment. New Delhi: Ministry of Urban Development and Poverty Alleviation, Govt. of India.
17. Gaur, A., &Amarasinghe, P. (2011). A River Basin Perspective of Water Resource Challenges. In P. Tiwary& A. Pandey (Eds.), INDIA INFRASTRUCTURE REPORT (pp. 3-17): Oxford University Press.
18. Gosain, A. K., Rao, S., & Arora, A. (2011). Climate Change Impact Assessment of Water Resources of India. Current Science, 101(3), 356-371.
19. Grönwall, J. T., Mulenga, M., &McGranahan, G. (2010). Groundwater, self-supply and poor urban dwellers: A review with case studies of Bangalore and Lusaka: IIED. Hollingham, M. (2008). Artificial Recharge and Water Quality around Hubli and Dharwad.
20. Iyer, R. R. (2007). Towards water wisdom: limits, justice, harmony: Sage Publications India Pvt Ltd.
21. Jat, M. K., Khare, D., & Garg, P. (2009). Urbanization and its impact on groundwater: a remote sensing and GIS-based assessment approach. The Environmentalist, 29(1), 17-32.
22. Jensen, P. K., Ensink, J. H., Jayasinghe, G., Van Der Hoek, W., Cairncross, S., & Dalsgaard, A. (2002). Domestic transmission routes of pathogens: the problem of in-house contamination of drinking water during storage in developing countries. Tropical Medicine & International Health, 7(7), 604-609.
23. Kakar, Y. P., & Bhatnagar, N. C. (2008). Ground Water Pollution Due to Industrial Effluents in Ludhiana, India Studies in Environmental Science (Vol. Volume 17, pp. 265-272): Elsevier.
24. Kozhisseri, D. (2005). Groundwater dip: quantum, quality. Down to Earth. Kumar, C. (2014). Contaminated water proves a quiet killer, Times of India.
25. Kumpel, E., & Nelson, K. L. (2013). Comparing Microbial Water Quality in an Intermittent and Continuous Piped Water Supply. Water Research.
26. Lalchandani, N. (2011). Groundwater levels falling at alarming levels, Times of India. Retrieved from http://articles.timesofindia.indiatimes.com/2011-06-21/delhi/29682808_1_groundwater-levels-groundwater-resources-central-groundwater-authority
27. Mahadevia, D. (2011). Tenure Security and Urban Social Protection in India. Centre for Social Protection Research Report 05. 44 SUSTAINING POLICY MOMENTUM IIHS RF Paper on Urban Water Supply and Sanitation in India.

SUSTAINING HIV PREVENTION PROGRAMME BY REDUCING EXPENSES OF AFFECTED COMMUNITIES - A STUDY

Dr.Bodapati Lilly Grace Eunice
Assistant Professor, Department of Economics, Andhra University, Visakhapatnam

Introduction

Sustainable development is for the well-being of the citizens and for public good. The end result is to make people happy and healthy and sustain it over a life time and to pass it on to the generations to come. 'The road to hell is paved with good intentions' may be an aphorism but is true with many of the development works India has taken up. Poverty, illiteracy and inequality are the three of the biggest enemies of development. Many a time the development process for tribals, poor marginalised communities have not yielded expected results. And many of the developmental programmes are not able to bridge the gap between the rich and poor. One of the reasons is the non-involvement of the communities that are affected and for whose development it is intended for, in designing and implementing the development programmes. Many good intentions, when acted upon, may have unintended consequences. Unintended consequences, a word popularised by American sociologist Robert K. Merton is used in social sciences to mean outcomes that are not the ones foreseen and intended by a purposeful action. As such, the saying is an admonishment that a good intention is meaningless unless followed through.

Harm done by bad policies and poor implementation may be justified because of moral certainty. Likewise, sometimes the harm done is clearly seen, and acknowledged, but is written off as a 'price worth paying'. This paper looks into the HIV intervention by the Indian government for hidden communities like female sex workers and sexual minorities where morals, behaviours, gender identities play a crucial role in determining the outcomes. A popular slogan heard among the communities is 'nothing about us without us'. This aspect is taken care of effectively by the National AIDS Control Programme which made sex workers, sexual minorities, many of whom were termed as MSM (men who have sex with men) in HIV parlance, as peer educators, who became the foot soldiers of the programme effectively leading a community-led HIV intervention. They changed their roles and an attempt was made to change or modify high-risk behaviours thereby leading to an improved self-esteem of these communities whose very existence is criminalised by some of the laws of the land. These hidden communities came over ground and took up the responsibility of spearheading the HIV programme, thanks to the government's efforts of a participatory bottom-up approach. Some of the sustainable factors in the National HIV prevention programme that helped reduce the public health expenditure of India is the focus on prevention along with a basic intervention for care, support and treatment of people living with HIV. Thus the programme is appropriately called Targeted Intervention (TI) by NACO. "To be effective and sustainable, HIV-prevention interventions need to be sufficiently powerful to counteract prevailing social norms and diffuse through the targeted community to provide social reinforcement for behaviour change".

The Indian programme made efforts to counter the social norms and social reinforcement for behaviour change was effective to a certain extent. However, the reduced funding for the HIV programme after the departure of major funders like Bill and Melinda Gates Foundation (BMGF) is affecting the current phase. The HIV prevention programme was transitioned for over three years from 2009 and the burden was taken up by the Indian government through its arm NACO and its State units, the State AIDS Control Societies. But due to financial constraints and lack of administrative cohesiveness, the programme has shown weak spots and the effectiveness is believed to be reducing. Any complacency that shifts focus from the affected communities and their reduced participation in the programme is likely to affect the overall efficiency and in turn increase the Public Health expenditure. The increased out-of-pocket

expenses by the sex workers and sexual minorities who are the beneficiaries of the HIV programme is also likely to affect their access to medicines other services, and adherence levels, adversely affecting the programme.

HIV and TB continue to provide a challenge to the Health Ministry and Public Health experts. The focus on prevention rather than treatment, helped allay the fears of many of the impending disaster of the HIV epidemic in the first decade of the new Millennium. A robust prevention programmed for a decade or so from 2003 to 2013 helped reduce 57 per cent (over 6 lakh) of new HIV infections but still over 2 million people are living with the virus in India. And, every fifth new TB case in the world is from the Indian sub-continent and the indiscriminate use of antibiotic drugs led to drug-resistant Tuberculosis. Reduced funding leads to increased out of pocket expenses and other expenditures which in turn will affect the adherence to drugs and intake of nutrition among patients who are living with HIV and TB.India was not as severely affected by the HIV epidemic like many of the South African nations due to the effective and systematic programme supported by different funding agencies and, designed and implemented by the communities, for over a period of 10 years or so. In 2004, the combined Andhra Pradesh (along with Telangana) and Karnataka too, implemented the HIV prevention programme of *Avahan Project* funded by BMGF. However, by 2012 the funding for HIV began to fall by over 40 per cent and foreign donors like BMGF transitioned the programme to the Government. The unique feature of the program is the involvement of the stigmatized and marginalized communities of FSW and MSM in the programme. Peer Educators from affected communities became the front-line health workers spreading messages on safe sex, distribute condoms and encourage sex workers to visit health facilities and test for HIV; they became the heart of the programme. Community members (FSW, MSM) also worked as counselors, supervisors and project coordinators. Theprogramme offers a core package of prevention services, including condoms and lubricants, clinic services for STI, Behaviour Change Communication services through peer outreach, referrals for HIV testing, and linkages to antiretroviral treatment. The programme also works to reduce the stigma they face. While HIV prevalence declined in AP and Karnataka, in the general population and among sex workers, HIV prevalence among sex workers is still relatively high. Health experts feel the need to continue these programmers for at least a decade but the study will focus on the impact of reduced funding on the future burden on public finance.

Conceptual Framework

The Indian HIV programme has effectively brought out the concepts of Targeted Intervention among High Risk Groups as effective tools to prevent the spread of the epidemic and hence focused on prevention along with treatment, care and support of those infected patients. The study aims to record the socio-economic factors like poverty and illiteracy on ‘Out of Pocket’ expenses of people who face fervent stigma and discrimination, are hidden and survive on the margins of society because of their work, or because of their identity. Accessing treatment and medicines and its impact on nutrition, adherence to medicines and their overall health depends on their economic and class status and in return, the health of these groups also affects the health of the public health programme due to the nature of the infectious diseases. Poverty increases the risk behavior of these communities and then the health-seeking behavior after testing and coming in touch with the government hospitals or TI centers for accessing health care and free ART, DOTs and the impact of HIV and TB on the person and family as a whole in a socio-economic cultural scenario among non-English speaking, marginalized communities both in urban and rural areas. Public Health expenditure proposes to benefit huge populations at a low cost and reaching out to high risk groups and inculcating health-seeking behavior improves the adherence rates which reduces transmission and new infection rates. Reduced out of pocket expenses also increase the access to medicines, again reducing new transmissions and improving the effective use of public finances. It also reduces future treatment costs on public health burden.

Objectives

1. Laws of the land like IPC s377 and ITPA affect marginalized groups increasing their risk and vulnerability.
2. To study effect of stigma and out-of-pocket expenditure of PLHIV, some of whom are co-infected with Band how it adversely affects their adherence and access to medicines.

Review of Literature

The study of previous literature is important for all researchers. It helps to provide a comprehensive and explicit picture of the related studies and show how the present study contributes **in *extending the fruits of social welfare measures reach the minorities in India and especially in Andhra Pradesh.*** Further, it helps to identify the gaps, if any, in the research and serves as a backdrop to interpret the results of the study. The topic selected for the study is of paramount importance for attaining Millennium Development Goals.

World Health Organization (2017) reported that the way health care is financed varies considerably across countries. Middle-income and high-income countries tend to have a higher share of health spending that is funded from compulsory prepaid sources, such as government budgets (from various types of taxes) and social health insurance contributions. Public funding has increased slightly over the past 15 years from an average of 48 percent to 51 percent of current health spending in middle-income countries and from 66 percent to 70 percent in high-income countries. In low-income countries domestic government sources have declined from 30 percent to 22 percent as aid increased from 20 percent to 30 percent. Out-of-pocket spending (OOPS), associated with a higher risk of financial hardship and impoverishment, has declined only modestly. Today, there are 1 billion fewer people living in countries where out-of-pocket spending is 50 percent or more.

N. Kumarasamy et.al., (2007) reviewed the financial consequences of HIV care and treatment on individuals and their households by examining current treatment options, HIV monitoring, the clinical course of HIV disease, and the roles of the private and public sector in providing HIV care in India. This study suggested the future studies should more thoroughly examine the financial impact of HIV-related costs incurred by households over time and examine household responses to these costs.

Ramya Ananthakrishnan et.al., (2012) made an attempt to study about the Tuberculosis (TB) patients registered in the government clinics under the DOTS (Directly Observed Treatment, Short Course) program in Chennai city catering to about 4.3 million population. The study aimed to estimate the pattern and overall costs incurred by the new patients (who have never had treatment for tuberculosis or have taken anti-tuberculosis drugs for less than one month) registered under DOTS program in the treatment of tuberculosis in Chennai city. The study has reiterated the fact that DOTS helps in reducing out-of-pocket expenses to patients with tuberculosis and hence is a cost-effective health intervention.

Bach X. Tran (2013) in their study made an attempt to assess the out-of-pocket (OOP) payments for health-care services of HIV/AIDS patients, and identify associated factors in Vietnam. Cross-sectional multisite survey of 1016 HIV/AIDS patients attending 7 hospitals and health centers in Ha Noi, Hai Phong and Ho Chi Minh City in 2012. The study found that the HIV/AIDS patients in Vietnam frequently use medical services and incur OOP payments for health care. Hence they suggested to provide scaling up free-of-charge ART services, earlier access to and initiation of ART, and decentralization and integration of HIV/AIDS-related services which could reduce their financial burden.

Barennes H, et.al., (2015) in their study focused on the scaling up of antiviral treatment (ART) coverage in the past decade has increased access to care for numerous people living with HIV/AIDS (PLWHA) in low-resource settings. Out-of-pocket payments (OOPs) represent a barrier for healthcare access, adherence and ART effectiveness, and can be economically catastrophic for PLWHA and their family. They evaluated OOPs of PLWHA attending outpatient and inpatient care units and estimated the financial burden for their households in the Lao People's Democratic Republic. The study assumed that such OOPs may result in catastrophic health expenses in this context with fragile economical balance and

low health insurance coverage. Shukla M et.al., (2015) in their study aimed to estimate the out of pocket expenditure incurred and the various factors determining catastrophic health expenditure while receiving ART services. A hospital based cross sectional study was conducted at two tertiary care hospitals of Lucknow for a period of six months. The study concludes that the Decentralization of ART programme up to grass root level, integration of HIV/AIDS-related services into primary health care services and bridging of the loop holes like effective convening of various government benefit schemes to patients during their visit to ART centre and there by promoting utilization could reduce their financial burden for care and treatment.

Varun Sharma, Divya Krishnaswamy &Sanjeevanee Mulay (2015) in their paper examines the stigma and discrimination faced by the marginalised communities more than the general community, patterns among households, comments on the economic impoverishment resulting from OOP spending while accessing free medical treatment provided by the Central Government, through its health arm, NACO. Analysis studies that households with HIV members spend a major portion of their monthly consumption expenditure on Nutritional food items, travel and expenditure on Medical investigations constitutes a large portion of their total consumption spending. Poverty increases by 20percent among the HIV households under study when OOP spending is adjusted. It increases 18percent among male-headed households and 26 percent among female-headed households. The results reiterate the need of greater support from the government in terms of accessibility and affordability of health care to save households with HIV members from economic catastrophe.

Etiaba E et.al., (2016) in their study stated that a gap in knowledge exists regarding the economic burden on households of subsidized anti-retroviral treatment (ART) programs in Nigeria. This is because patients also incur non-ART drug costs, which may constrain the delivery and utilization of subsidized services. ART subsidization is not enough to eliminate economic burden of treatment on HIV patients. Service decentralization to reduce travel costs, and subsidy on other components of HIV treatment services should be introduced to eliminate the persisting inequitable and high cost burden of ART services. Full inclusion of ART services within the benefit package of the National Health Insurance Scheme should be considered.

KedarG.Mehta et.al., (2016) tried to assess the drug adherence rate and loss to follow-up (LFU) among PLWHA attending ART centre of a tertiary care hospital in Western India. The current cross-sectional study was carried out using medical records of all patients registered at ART Centers. Education status of the participant showed independent and significant association with drug adherence. This study showed 57.3percent were adherent to ART among PLWHA, whereas 17.22percent were lost to follow-up. Hence, there is a need to emphasize on increasing drug adherence rate and on outreach activities to combat LFU.

Case Studies

The study is based on individual case studies and secondary data collected from community leaders and their experiences in the last five years in some of the districts of Karnataka. At the outset, the communities of sex workers and sexual minorities in India are affected by stigma and discrimination because of the conservative Indian Culture and because of the morals and ethics. The main occupation of both these communities is sex work besides begging for sexual minorities and sex work is the main source of their income and livelihood. Both the communities exist underground and are not easily available for public health intervention until the early 2000s. Due to some of the laws of the land like Section 377 of the Indian Penal Code and the Immoral Traffic Prevention Act, the existence of these communities is criminalized. As such, it was a herculean task for the health department of the Government to reach them with HIV prevention services. NGOs have recruited members from these communities, trained them as Peer Educators and they in turn mobilized the community to come out and collectivism to seek better health and access HIV prevention services like condoms, During this period, the Delhi High Court in 2009 read down Section 377 which helped the community to ‘come out’ and that in turn helped

mobilization and the programme reach has expanded. However, a few years later the Supreme Court struck down the judgment and said that it for the parliament to come up with a law. Though the community was disappointed, it was not easy for many who became open to go back into the 'closet'. Thus the police cases against the community have increased. RajeshUmadevi, director of Sangama, a pioneering NGO for sexual minorities in Bangalore, said: "The insidious danger of Section 377 lies in the fact that it permeates different social settings ... It also expressed the deep societal repugnance towards sexual minorities and provided the flag leaf of legitimacy for the harassment of sexual minorities," he said.

In the same way, the sex workers are badly affected by different dimensions of the ITP Act. The Act per se, does not say that sex work is illegal, or legal, but many aspects around sex work are criminalized making it difficult for sex workers who remain in the profession out of their own will. The conflation between trafficking and sex work is one area which is affecting the communities and the rights activists feel that it would adversely affect the HIV prevention programme. As Manohar Elavarthi, a Bangalore-based human rights activist who has been working for the rights and entitlements of traditionally excluded people like sexual and religious minorities, sex workers and delis (untouchables), once asked in reference to the Immoral Traffic (Prevention) Act, 1956 (ITPA) said: "Is there a kind of trafficking that is moral?" What clearly emerges is that irrespective of whether coercion is a factor or not, it is important to decriminalize sex work," says an article in Asia Sentinel. All these aspects which drive the sex worker community underground make it difficult for the HIV prevention programme to reach them with condoms and services.

Case Study 1

However, after the reduced funding the burden of the Peer Educators has increased. "Earlier I used to reach out to only 50 to 60 MSMs. Now I have more than 100. Outreach becomes difficult. The community also has to spend a lot of money on travel, food and expenses of care taker if they happen to be living with HIV. Many a time this extra burden prevents them from accessing STI services and even miss the monthly quota of ART," says Usha, a Peer Educator, who is living with HIV in Bangalore for the last 12 years. Though a female sex worker, Usha, name not changed, currently works with Samara Society Yashwanthpur, which implements the TI for Transgender in Bangalore Urban district. She is open about her status and given her informed consent to reveal her name.

Case Study 2

Parveen Ahmed, a community leader of People Living with HIV (PLHIV) said: "We are happy with the latest Test-and-Treat policy where all those who are HIV positive get immediate ART treatment unlike in the past. However, the person who visits to the District ART Centre spends a lot of money on travel and food, including for caretaker, lab tests which used to be very minimal in earlier days. And sometimes due to shortage of tablets, many PLHIV are asked to stay back or come after a week. For some the ART combination is being changed. All these issues increase the out-of-pocket expenses of the patient and affect the adherence to daily medication which in turn develops resistance.".

"The scaling up of antiviral treatment (ART) coverage in the past decade has increased access to care for numerous people living with HIV/AIDS in low-resource settings. Out-of-pocket payments (OOPs) represent a barrier for healthcare access, adherence and ART effectiveness, and can be economically catastrophic for PLHIV and their family," says a study.

Case Study 3

Vimalakshi is a HIV positive lady who is living with the virus for over 20 years in Bangalore. She has property in her native place but lost it to her siblings who think that she does not need the property as she has acquired AIDS. Immediately after she became pregnant, she came to know that she is HIV positive and soon her husband died. Unfortunately, her son too is born with HIV as mother to child preventive treatment in government hospitals was not available before 2002. Her son Somasekhar is an young adult and living with HIV.

Vimalakshi life is a miracle and a testimony to the good services that are available at the Bowring Hospital in Bangalore. “Dr Sapna is god for me. She saved my mother from the death bed a couple of years back,” says Somasekhar, Vimalakshi's son. Vimala has acquired many opportunistic infections a PLHIV can get. She got breast cancer and was cured. She was infected by meningitis, a fungal infection to the brain and survived. She was a TB patient for long and had to miss both the ART tablets (for HIV treatment) and TB tablets due to several reasons and gets the infection repeatedly. Hence, she is now forced to move to the second line ART treatment.

“The last time I was in Bowring was about a couple of months. On the day I was supposed to be discharged, I slipped and fell in the bathroom. So I had to extend my stay. Then unable to cook at home, my son moved me to ‘Accept’, a paid care centre. But we could not survive for a long time as our other expenses increased and I am back to Bowring,” says Vimalakshi brooding from her female ward, which has become a second home for her.

Some of the reasons that increase the Out of Pocket Expenses of People Living with HIV:

1. With the PPP model many facilities and lab tests, which were free earlier are being charged and PLHIV have to shell down from their pocket.
2. linking of Aadhar has affected access to medicines and other services for many PLHIV, sex workers and sexual minorities.
3. Drug Stock-outs increase out of pockets expenses which in turn affect adherence.
4. Due to stigma, sometimes PLHIV, sex workers and MSM prefer taking ART in neighboring districts and they end up spending more, thus compromising on food and nutrition.
5. Difficulties in Access to medicines affects their regularity and adherence to medicines pushing them to second line or short bouts of discontinuation of medication. It increases the chances of getting Opportunistic Infections and more expenses as a result.

Research Question or Hypotheses

With the government keen to reverse the HIV epidemic and halt the spread of TB the specific questions to be answer are how increased out of pocket expenses would increase the public health expenditure due to not only the socio-economic status of the marginalised communities but because of the stigma, denial and discrimination they face from the public.

1. There are social and economic reasons for marginalised groups to exist as hidden communities.2. There is an impact of collectivization and community mobilization on behaviour modification and creating a health-seeking behavior.

Suggestions

1. Providing travel for PLHIV who come to the ART centers to collect their monthly quota of ART. Many centers are providing some allowance but it is not uniform and regular.
2. Making lab investigations free at government ART centers and other health facilities operated under PPP for PLHIV, sex workers and sexual minorities.
3. Building bridges between foot soldiers implementing the programme on the ground and experts in public health, public finance, researchers and policy makers to share the best practices in the field to build dreams like Swarna Andhra Pradesh.

References

1. Etiaba E, Onwujekwe O, Torpey K, Uzochukwu B, Chiegil R (2016) What Is the Economic Burden of Subsidized HIV/AIDS Treatment Services on Patients in Nigeria and Is This Burden Catastrophic to Households? PLoS ONE 11(12): e0167117. https://doi.org/10.1371/journal.pone.0167117
2. Bach X. Tran, Anh T. Duong , Long T. Nguyen, Jongnam Hwang, Binh T. Nguyen, Quynh T. Nguyen, Vuong M. Nong, Phu X. Vu and ArtoOhinmaa , Financial burden of health care for

HIV/AIDS patients in Vietnam, Tropical Medicine and International Health, volume 18 no 2 pp 212–218 February 2013, doi:10.1111/tmi.12032

3. Barennes H, Frichittavong A, Gripenberg M, Koffi P (2015) Evidence of High Out of Pocket Spending for HIV Care Leading to Catastrophic Expenditure for Affected Patients in Lao People's Democratic Republic. PLOS ONE 10(9):e0136664. https://doi.org/10.1371/journal.pone.0136664
4. Don Mudzengi Sedona, Sweeney Piotr Hippner TendesayiKufa Katherine FieldingAlison D Grant Gavin Churchyard Anna Vassall, The patient costs of care for those with TB and HIV: a cross-sectional study from South Africa, *Health Policy and Planning*, Volume 32, Issue suppl_4, 1 November 2017, Pages iv48–iv56,https://doi.org/10.1093/heapol/czw183
5. Kedar G. Mehta, Rajendra Baxi, Sangita Patel, and Mahendra Parmar, Drug adherence rate and loss to follow-up among people living with HIV/AIDS attending an ART Centre in a Tertiary Government Hospital in Western India, J Family Med Prim Care. 2016 Apr-Jun; 5(2): 266–269. doi: 10.4103/2249-4863.1923255.
6. N. Kumarasamy, K.K. Venkatesh,* K.H. Mayer,* and Kenneth Freedberg*, Financial burden of health services for people with HIV/AIDS in India, Indian J Med Res. Author manuscript; available in PMC 2008 May 2, Published in final edited form as: Indian J Med Res. 2007 Dec; 126(6): 509–517.
7. Ramya Ananthakrishnan, M. Muniyandi, Anita Jeyaraj, Gopal Palani, and B. W. C. Sathiyasekaran, Expenditure Pattern for TB Treatment among Patients Registered in an Urban Government DOTS Program in Chennai City, South India, Tuberculosis Research and Treatment, Volume 2012 (2012), Article ID 747924, 6 pages, http://dx.doi.org/10.1155/2012/747924
8. Shukla M, Monika Agarwal M, Singh J, Tripathi A, Srivastava A, Singh VK. Catastrophic Health Expenditure amongst People Living with HIV/AIDS Availing Antiretroviral Treatment Services at Two Tertiary Care Health Facilities in District of Northern India. NTL J of Community Med 2015; 6(3):323-328.
9. SjoerdEuser, Dennis Souverein, Pushpalatha Rama Narayana Gowda, Chandra Shekhar Gowda, Diana Grootendorst, Rajendra Ramaiah, SnehalBarot, Sunil Kumar, Françoise Jenniskens, Shiv Kumar &JeroenW. Den Boer (2012) Pragati[§]: an empowerment programme for female sex workers in Bangalore, India, Global Health Action, 5:1, DOI: 10.3402/gha.v5i0.19279
10. Varun Sharma, Divya Krishnaswamy &SanjeevaneeMulay (2015) Consumption patterns and levels among households with HIV positive members and economic impoverishment due to medical spending in Pune city, India, AIDS Care, 27:7, 916-920, DOI: 10.1080/09540121.2015.1015482
11. World Health Organisation (2017), Working Paper on New Perspectives on Global Health Spending for Universal Health Coverage.
12. https://www.wikiwand.com/en/The_road_to_hell_is_paved_with_good_intentions#/citenote8, retrieved 11 March 2018.
13. Robert K. Merton, Versatile Sociologist and Father of the Focus Group, Dies at 92, Michael T. Kaufman, The New York Times
14. Bowden, Charles L., editor; Burstein, Alvin George, editor (1983). Psychosocial Basis of Health Care. Williams & Wilkins. p.
15. Latkin CA & Knowlton AR, Micro-social structural approaches to HIV prevention: a social ecological perspective. John Hopkins Bloomberg School of Public Health, Baltimore, USA. 2006, Retrieved 11 March 2018. https://www.tandfonline.com/doi/abs/10.1080/09540120500121185
16. http://www.dnaindia.com/india/report-mps-unite-to-defeat-bill-to-amend-section-377-2157359
17. https://www.asiasentinel.com/society/fighting-for-the-rights-of-sex-workers/
18. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4556637/

ANALYSIS ON DRIVING FACTORS OF INVESTMENT PREFERENCES AMONG URBAN HOUSEHOLDS

Dr. Viswanath.P
Post Doctoral Fellow, CESS, Hyderabad

Abstract

Households save money to meet their socio-psychological and economic needs and requirements in their lives for current and future period. After saving, next stage is the decision involving to invest savings by choosing suitable investment avenues. But investment activity is not a game but a serious subject that can have a major impact on investor's future well being. Moreover, the investment preferences of investors and the driving factors in preferring a particular investment avenue have been the issues for discussion in the subject of investors behavior. This research paper tried to analyze the driving factors of investment preferences among urban households in Hindupuram urban area in Ananthapuramu District of Andhra Pradesh. The study statistically found that risk minimizing factors i.e are the major driving households to invest followed by Policy induced factors and returns on investment factors at the time of choosing investment avenue.

Introduction

India needs very high rates of investments to make leap forward in her efforts of attaining high levels of sustainable growth. Since the beginning of planning, the emphasis has been on investment as the primary instruments of economic growth and increase in national income. In order to have production as per target, investment is considered the crucial determinant and capital formation had to be supported by appropriate volume of saving (Sonali Pail et.al.). The activity of saving is a two stage process. In the initial stage individuals motive is to save so as to meet their socio-psychological and economic needs and requirements in their lives for current and in the future period. After saving their hard earned money, next stage is the decision involving to invest or to park their saved money in suitable investment avenues, either in the form of physical or financial, so as to realize their motives of savings. However, investing activity is not a game but a serious subject that can have a major impact on investor's future well being. The choice of investment decision is influenced by various factors, as literature evidenced, viz., family's net worth, family income, stage in life cycle, employment status of spouse, size of family, risk tolerance levels as well as the factors like safety, liquidity & marketability, regularity in returns, capital appreciation, tax benefits, interest rate, social security and net work, frequency and time horizon to invest etc. Exploring investment behaviour of household sector would help policy makers in designing appropriate financial instruments to cater to the needs and preferences of household sectors.

Review of Literature

National Council of Applied Economic Research (NCEA) (1961) 'Urban Saving survey' noticed that desire to make provision for emergencies were a very important motive for saving for old age. Securities and Exchange Board of India (SEBI) and NCEAR (2000) 'Survey of Indian Investors' had been report that Safety and Liquidity were the primary considerations which determined the choice of an investment asset. Awais et al. (2016) tried to explore the factors which influence the decision-making process of investors and found that the degree of the risk factors, increased level of knowledge about financial information and the increased ability of analyzing that information, investor could improve the capacity jump into risky investments for earning high returns by managing investment efficiently. Vikram.S (2008) records that majority of the investors have moderate knowledge and have less exposure towards the financial market. Kasilingam.R and Jayabal.G (2009) observe that the funds invested in small savings schemes will yield good results, not only to individual investors but also to the nation. Selvatharangini P.S (2009) concludes that generally people differ in their taste and preference. Mathivannan.S and Selvakumar.M (2011) observe that the teachers are saving their money for the purpose of their children's education, marriage and other welfare expenses. Manish Sitlani, Geeta Sharma & Bhoomi Sitlani (2011) observe that there is no relationship between demographic variables and investment choices of occupants

of financial services industry. Parimalakanthi. K and Dr. M. Ashok kumar (2015) in their study have found that investors prefer to invest in banks to enjoying the maximum safety. Shukla (2016) attempted this research paper, about investor's preference towards investment avenues and the study focused on the salaried person only. The author concluded that majority of the respondents invested their money based on education background and they invested in purchasing home and long-term investment. Respondents have the criteria of investment as safety and low risk. Amudhan et al. (2016) analyzed the performance investment behaviour concerned with choices about purchases of small amounts of securities, deposits, mutual fund, insurance, Chit Funds. Researcher confirmed that there looks to a positive degree of correlation between the factors that behavioral finance theory and previous empirical evidence identified the average investor. The result described investment offer to a person's money to gain future income in the form of interest, dividends, rent, premium, pension profit or approval of the value of their standard capital. Vaidehi et al. (2016) argued that because of different investment strategies as motives and styles by different needs, there is a behavioral pattern and the behaviour pattern would aid the investment advisors to envision how the investors respond to market schedule, and would allow them to developed suitable allotment approaches for their customers. Among the selected factors the investment motives, attained the long-term gain, which established to an essential factor chased by dividend and growth prospects and balancing of short-term and long-term gain. Educational qualification, occupation, age, income and amount of equity investments choose the investing styles of the investors notably. Thus, the literature clearly evidenced that studies on households sector focusing on investment preferences and driving factors to invest in a particular avenue are less in number particularly on urban households. This study sought to fill the gap in studying the investors investment behaviour focusing urban households in Ananthapuramu City of Andhra Pradesh.

Statement of the Problem

Much of economic and financial theories presume that individuals act rationally and consider all available information in the investment decision-making process. However, studies done by Evans (2006), Gao and Schmidt (2005), Statmand (1995,99) Tversky and Kahneman (1974) and Thaler (1994) suggest that this is not always. The case of Bernstein (1996) states that there is evidence to show repeated patterns of irrationality, inconsistency and incompetence in the way human beings arrive at decisions and choices when faced with uncertainty. Moreover, any changed external environment either saving or investment impacts individual's saving behavior and choice of investment form. A vice-versa situation is also expected to impact the external environment. Investment decisions need to undergo a thorough analysis of the situations prevailing based on a number of factors. It is against this background that this study investigate the investment preferences of household sector and there is need to determine the driving factors that appear to influence investment preference decisions of household sector, which is the major surplus sector of the economy, particularly pure urban households.

Objectives of the Study

1. To study the urban household's current and future investment preferences.
2. To examine the driving factors of investment preference decision.

Research Methodology

The present study is carried on using judgmental non-random sampling method in selecting sample units as the study relates to financial aspects of the individuals. However, utmost care has been taken while selecting sample units. Both primary and secondary data as been collected. Primary data is collected through structured questionnaire, consisting questions pertaining to profile of the individual and investment preferences of present as well as for the next 3 to 5 years period, from a sample of 150 urban households residing in the urban agglomeration Municipality Corporation of Ananthapuramu, Andhra Pradesh. Secondary data is gathered from various journals, magazines, books, unpublished theses, newspapers, reports of government and other organizations, websites to review the literature. The study

carried out during March to April, 2013 and collected data has been analyzed in SPSS (17.0) package. Interpretation of data has been made by averages, percentages, charts, and factor analysis.

Profile of the Sample Respondents

The study revealed that majority are younger household heads (39.25 per cent) with higher educational (degree & above degree) qualifications (73.25 per) consisting equal number of small, medium and large families surviving with one dependent (69.63 per cent) member having marginable age children and not having marriageable children in equal proportions. On the other hand economic characteristics shows that majority households are middle income group (Rs.23,500/- p.m) (44.5 per cent) following moderate expenditure pattern with Rs. 15,000/- p.m (43.5per cent) as well as high and very high expenditure (41.5 per cent) enabling them to have 0.36 savings ratio though having moderate debts i.e Rs. 79,000/- to RS. 2,74,000/- (62.75 per cent). Thus, the present study shows the investment beaviour this profile households in the selected area.

Analysis and Interpretation

It is tried first to assess the reliability of the instruments i.e., the Cronbach (1981) alpha coefficients for the total questionnaire. The Cronbach alpha is the most widely used index for determining internal consistency (Kerlinger 1986).It has been generally accepted that in the early stages of the research on hypothesized measure of construct, reliabilities of 0.50 or higher are needed, while for widely used scales, the reliabilities should not be below 0.6 (Nunnally, 1978). In the current survey, all variables alpha coefficients exceed 0.5. Furthermore, the standard deviations were found to range from 0.67 indicating a relatively high degree of consensus among the respondents in their perception of the rating of variables in the questions and also confirms the homogeneity of the items comprising them, and indicates acceptable level of reliability.

Table 1 Reliability Statistics

Cronbach alpha
0.713

Investment preferences: The following section tries to know the investment preferences of urban households in the selected area.

Table 2 Investment Preferences of Urban Households N= 150

Conventional Investment Avenues	Present Preference (%)	Future Preference (%)
Bank Deposits	38.25	1.25
Postal Deposits	78.5	2.75
Small Saving Schemes	19.5	15.75
Provident Funds	84.25	3.25
Savings With Individual	4.5	2
Life Insurance	73	17.75
Chits	89.25	17
Gold, Silver And Ornaments	9	55
Land, Building And Plots	5.5	63.25
Finance	3.75	9.75
Modern Investment Preferences		
Mutual funds	13.75	27
SHG	4.25	2.75
Shares	5	1
Debentures & Bonds	5	12.75
Stock Markets	0	1
Derivative market	0	0
Commodity market	0	0
Note: Responses are in multiple and hence percentages will not be equal to 100		

Table – 2 exhibits that out of the ten conventional investment avenues, the present preferences are Chits as the highest preference (84.25 per cent) followed by Provident fund (84.25 per cent), Postal Deposits (78.5 per cent), LIC (73 per cent), bank deposits (38.25), small saving schemes (19.5 per cent), gold, jewllary and other metals (9 per cent), land, building and plots (5.5 per cent), and finance (3.75 percent) . It is surprised that chits (private institutional and non-institutional) come out as their highest preferred avenue and it may be because of, easy access to cash i.e liquidity facility in emergency and a feeling of social security and network. On the other hand the investors' major future preferences shows that 63.25 per cent would invest in land, building and plots, followed by gold, jewellary and metals with 55 per cent and next to them is LIC (17.75 per cent) and small saving schemes (15.75 per cent). It may be because of the reason that there has been a boom to the values of lands, buildings and

plots all over the country because of rapid urbanization and particularly the study area of Anantapur has got the status of Corporation from municipality. Further, as it is headquarters of the district recently all major educational institutions has opened their outlets and resulted in demand for the buildings, plots from the side of parents who migrated to city. As per latest data Anantapur district is one of the first district in our state to collect 123 per cent stamp fees through registration of plots, lands and buildings and approximately there is 40 major apartments are under constructions. This highlights the emerging importance of real estate in the coming period. On the other hand, the value of gold has been increasing continuously since 2003 with slight fluctuations in the country. Following the same trend, in the study area also gold, silver and ornaments business reached approximately 30 crores by the end of December,2010 and it has been still increasing in the selected area. All these may be because of the more marketable facility of gold i.e not only at gold market shops but also in various major commercial as well as private banks. Moreover, Indians are more influenced by demonstration effect in the society.

Among modern avenues mutual funds are the highest present preferred Investment avenue though the percentage is less (13.75 per cent) following Shares, Debentures & Bonds with equal percentage (5 per cent. Self Help Groups are the last preferred avenues with 4.25 per cent. It could also be clear that stock markets, derivative and commodity markets have not preferred by any one investor in their portfolio. In case of future preferences of the investors, it is clear that 27 per cent would prefer mutual funds as first avenue and debentures & bonds (21.75 per cent) as their second preferred avenues in their portfolio. It is true as economic liberalization policies have activated the mutual funds industry in mobilizing the savings of small investors and paved the way for the growth of other finance companies in the field of mutual funds in order to mobilize the household savings. Avenues like shares and stock markets account very less percentage (1 Per cent) where as derivative and commodity markets are preferred by no one in their future portfolio. As a whole, only mutual funds, share, debentures & bonds are preferred in their portfolio at present and in coming period and no one have preferred the derivative and commodity markets.

On the whole it may be concluded that households still preferring unorganized sector investment avenues even though many new instruments are tailored to suit the individuals in the financial market. Further, with reference to near future commitment of funds, physical assets are occupying major preferences. Thus, it is evidenced that preferring modern investments like shares, trading in shares, commodities and derivative market seems to be very negligible. This highlights the need to take more efforts towards the increasing financial literacy programmes and knowledge on financial planning among the urban households.

Driving factors to choose an investment avenue: In the previous sections it has been tried to investigate the preferences of urban household for the present and future period in various available avenues. However, reasons, are unearthed for preferring a particular avenue. It is thought off to investigate into the reasons which influence their decision to prefer a particular avenue assuming that these varies with different available avenues. At the outset, researcher placed ten reasons which drived them to choose a particular avenue. These are safety, liquidity, marketability, regular/high income, capital appreciation, tax benefits, interest rates, social security and social network and the last the other reasons. In order to identify most influencing factors, factor analysis has been used to reduce variables into smaller number of manageable variables by exploring common dimensions available among the variables.

The variable which had common response and high correlation were grouped under a common factor. The results of KMO(Kaiser-Meyer-Olkin Measure) also satisfies that the data is suitable for analysis as its value is 0.672 > 0.50. For factor analysis, the rule of thumb is applied to choose the number of factors for which “Eigen values” with greater than one is taken by using Principal component analysis method. The component matrix so formed is further rotated orthogonally using varimax rotation algorithm.

Table 3 Factor Analysis with percentage of variance explained

Factor	Eigen	% Variance Explained	% Cumulative Variance
Risk Minimizing Factors	3.654	39.623	39.949
Return on investment factors	2.734	26.752	66.701
Policy Induced Factors	1.782	11.421	**78.122**

Table 4 Factor Loading for Drivers to chose an investment avenue

Variables (Drivers)	Factors Loading
Risk Minimizing Factors	
safety	.923
Liquidity	.856
Marketability	.784
Social Security & Network	.697
Return on Investment factors	
Capital appreciation	.825
Regular income	.629
Policy Induced factors	
Tax benefits	.821
Interest rates	.774
Note: remaining two are not considered as values are less than 0.5	

Tables 3 & 4 clearly reveals that by performing factor analysis for 10 variables, reduced into four component factors (table.3). Each component factor includes some driving factors represents major reason to chose investment avenue. These three factors which have Eigen value more than unity alone is taken for consideration and explains about 78 per cent of total variance which are very significant in explaining the variances in the driving factors to invest in a particular avenue among urban households. The remaining variance is explained by other factors whose values are less 0.5 indicating no impact in influencing the investment preference of the households.

Further, it is clear that safety, liquidity& marketability and Social security & Network variables grouped under one component labeled as "Risk Minimization Factors". Thus, households are influenced majorly by these aspects. This shows the risk nature attitude of the households in investing their savings. With regard to second component factor, it is labeled as "Return on Investment Factor" which includes capital appreciation and regular income factors are the forcing factors. Similarly, third group labeled as Policy induced factors i.e. tax benefits and interest rates as these are the factors relating to the policies of fiscal and monetary policies of the government which influenced the respondents in choosing an investment avenue.

Conclusion

To sum up, urban households are preferring less unorganized investment avenues in spite of the phenomenal growth in the financial markets with innovative financial instruments as their major driving factors are risk minimizing factors comparing to return on investment and policy induced factors. This highlights the need to put efforts to channelize the surplus funds from un organized to organized sector as well as awareness programmes on financial literacy, risk management aspects in order to utilize the savings of the households in effective and efficient way for achieving sustainable growth and development in the country.

References

1. Amudhan S, Poornima J, Senthilkumar (2016) A Study on Individual Investors Satisfaction Level of Existing Investment Schemes in Salem Districts. 2: 1239-1245.
2. Awais M, Laber F, Rasheed N, Khursheed A (2016) Impact of Financial Literacy and Investment Experience on Risk Tolerance and Investment Decisions: Empirical Evidence from Pakistan. International Journal of Economics and Financial 6: 73-79.
3. Dr.Mathivannan.S&Dr.M.selvakumar (2011), Indian Journal of Finance-"Savings and Investment Pattern of School Teachers – A Study with Reference to SivakasiTaluk, Tamil Nadu", Vol 5, No 4, April 2011, Pp.12-26.
4. Kaboor.A (2010), "Determinants of investor's financial literacy".

5. Kasilingam.R & G.Jayabal (2009), southern economist- "Alternative Investment Option to Small Investors", Vol 48, No 9, September 1, 2009, Pp. 18-20.
6. Manish Sitlani, Geeta Sharma & BhoomiSitlani (2011), The IUP Journal of Behavioral Finance- "Investment choice of occupants of financial services industry", Vol 8, No 1, 2011, Pp. 29-39.
7. Mishra R (2015) Perceptions of Investors towards Mutual Funds: An Analytical Study in Odisha. International Journal on Recent and Innovation Trends in Computing and Communication 3: 4889-4892.
8. Ms. K. Parimalakanthi and Dr. M. Ashok kumar (2015) "A Study Pertaining to Investment Behaviour of Individual Investors in Coimbatore City" International Journal of Advance Research in Computer Science and Management Studies Volume 3, Issue 6, June 2015, Pp.149-157
9. Schmidt,Lucie & Sevak,P.(2006)."Gender, Marriage, and Assets Accumulation in the United States". Feminist Economics,12(1-2),139-166.
10. Shukla N (2016) Investors' Preference towards Investment Avenues with Special Reference to Salaried Personnel in North Gujarat Region 2: 2395-1052 www.ijsart.com
11. Statman Meir (1988), "Investor Psychology and Market Inefficiencies", in Katrina F Sherrerd (Ed.), Equity Markets and Valuation Methods, The Institute of Chartered Financial Analysts, Charlottesville, Virginia.
12. StatMan, M.,"A century of Investors", Financial Analyst Journal, May/June,Vol.59No.3(2002);52-59
13. Vaidehi J, Vijayakumar G (2016) A Study on Equity Investment Motives and Styles of Individual Investors. Journal of Exclusive Management Science 5: 1-10.
14. Sonali Patil, Dr.Kalpana Nandawar "A Study on Preferred Investment Avenues Among Salaried People With Reference To Pune, India".
15. Vikram.S (2008), "Investor perception and preferences towards stock market investments".
16. www.sebi.com
17. www.investopedia.com
18. www.cso.com
19. www.rbi.com

A KEY TO SUSTAINABLE DEVELOPMENT IN GLOBAL ENVIRONMENT

Dr.Vikram.K
Assistant Professor, Department of Commerce, LBS Government First Grade College, Bangalore

Dr.Surappa Naik
Assistant Professor, Department of Economics, LBS Government First Grade College, Bangalore

Abstract

We have only one planet and the Earth's resources are finite. But we are using these resources much faster than they can be replenished. Some resources, like unpolluted land, fossil fuels and thousands of plant and animal species are going extinct every year, will never be replenished. The Aim of this paper is to review the literature on Sustainable emerging marketing practices and sustainable development with an emphasis on sustainable marketing practices related to environmental problems facing the world today. This is a conceptual paper and it explores information largely through secondary data source. The review indicates that individuals and organizations can benefit from sustainable marketing practices and at the same time protect the environment to achieve sustainable development. The weaknesses and the future of sustainable marketing as a discipline and future directions for researchers are also reviewed. Thepaper concludes that marketing, like other functional areas of a business, contributes to environmental concerns facing the world today. The developed economies have already done the damage and they have to undo them now. But this is an opportunity for the emerging economies; there still is scope for preventing further damage to the environment.

Keywords: *Emerging Marketing Practices, Ecological Marketing, Environmental Marketing, Emerging Marketing and Sustainable Development, Emerging Economies.*

Introduction

Until recently, sustainability has been the key focus of an organization's CSR department. But as the world wide population struggles with the issues of increasing pollution, over population, depleting resources, increasing energy demands, loss of bio-diversity, various social threats and the wide-ranging impacts of climate change, the sustainability question is now a main global concern. Fuller defines sustainable marketing as: "The process of planning, implementing and controlling the development, pricing, promotion and distribution of products in a manner that satisfies the following three criteria: (1) customer needs are met (2) organizational goals are attained, and (3) the process is compatible with ecosystems." *According to Jonathan Porritt, "Sustainable development is a process which enables all people to realize their potential and improve their quality of life in ways which protect and enhance the Earth's life-support systems".*

Objectives

- To develop a conceptual framework/model showing role of sustainable emerging marketing practices towards sustainable development.
- To review the literature to study that sustainable emerging marketing practices are must for emerging economies.

Sustainable Marketing

Sustainable marketing requires a consideration of environmental, economical and social issues in all elements of marketing strategy planning, from objective setting to target market selection to strategic and tactical decisions regarding each of the marketing mix variables. Sustainable marketing is a holistic, integrative approach that puts equal emphasis on environmental, social equity, and economic concerns in the development of marketing strategies, but as earlier mentioned, the focus in this study is on the ecological aspect due to limitation reasons. Business activities, including marketing practices, have a detrimental impact on planetary ecosystems.

Sustainable Development

It seems reasonable to interpret sustainable development as development that can continue "forever" or at least for a very long time; say, for several generations. It is clear that the time dimension is crucial in

sustainable development; it is a dynamic concept. It is a development path that can or cannot be continued over a very long time. However, simply being sustainable does not make a development path desirable. It also matters whether it is the sort of development path society wants to follow and this depends on what determines well-being for its members.

Emerging Marketing Practices and Sustainable Development

The marketing mix

The term "marketing mix" denotes the various development and promotion operations used to determine the commercial attributes of a product/service with a view to attaining the best possible performance.

Integrating sustainable development into every level of the marketing strategy

- Product: what are the social and environmental impacts of the product over its whole life cycle (production, use, waste)?
- Price: what is the production cost of the product? Is the social cost of production shared out fairly?
- Place: are the methods used to transport and distribute the product environmentally appropriate?
- Promotion: is the sales message based on fact and is information transparent? Does the message encourage responsible consumption and behavior?
- People: is staff trained in-house? Does the company ensure equal treatment for its employees? Does it protect them against discrimination?
- Processes: do production processes and management systems make the best use of the natural and human resources mobilized?
- Physical evidence: do the communication tools developed to give the product or brand a physical and visual presence tend to generate unjustifiable amounts of waste?

(a) Sustainable Product Practices

Sustainability is budding as a market driver with the prospective to develop earnings and current opportunities for worth construction - a spectacular progress from its traditional focus on efficiency, cost, and supply chain risk. Many organizations have not focused on capitalizing on products that may be apparent by their end consumers to recommend better ecological and societal attributes, even though assess able facts that their product is better than the alternative in its impact in production or use and equal on other grounds. Organizations also find it difficult to measure the economic value of a product's sustainability attributes because the precise sustainability needs of their customers can be intangible.

Actions for Sustainable Product

Actions companies can take include:

- Review the value chain and determine where there is potential customer demand for sustainability attributes.
- Become knowledgeable of the specifics where demand exists and work backward to identify the suppliers within the product's value chain who may make good partners.
- Forge business relationships within the value chain of products with high customer demand and find ways to use accelerators to create demand.
- Concentrate your company's product development on where there is a demonstrable consumer demand that is tied to an economic benefit.
- To drive innovation based unsustainability attributes, companies might also consider actions that build on existing products. By rebranding or categorizing existing sustainable products, it might be possible to develop a larger-scale portfolio transformation.

(b) Sustainable Price Practices

As worldwide downturn fast approaches, cost controls persistent to the top of the executive agenda. Various organizations are frustrating but failing to sustainably contain their costs—typically due to an inability to translate ideas into practical interventions applied tithe underlying activities behind the cost.

A simple, practical approach can help organizations avoid the lots of pitfalls of cost suppression. The world's developed economies are drifting into recession; confidence is low and credit is nowhere to be seen. These organizations are focusing on price control. The need to manage cost is nothing new, yet a surprising number of organizations struggle to successfully control them in service operating cost.

Actions for cost control

- **Applying blanket cuts across the board** Blind cuts often do more harm than good, as both core and non-core activities suffer.
- **Repeatedly tweaking the operating model** Organization is one lever for change—but only one of many.
- **Looking only at "what I do," but not "what I spend"** Total cost of activities is often poorly understood.
- **Balking at hard decisions** Tough calls on cost tend to be avoided because of an inability to prioritize risk.
- **Failing to challenge budgeting** Budget systems should not make it easy for managers to hide their spending or play the system.

(c)Sustainable Promotional practices

The success of sustainable development with public opinion and decision-makers has had major implications for social communication in its different forms, from public communication activities intended to reach citizens/users to marketing tools developed by businesses for consumers.

Sustainable Development and Public Communication

Sustainable development seeks to lay down principles for better management of the communities. It therefore needs to be treated as a genuine political project whose first priority is the informed support and active participation of citizens.

Turning principles into practice requires communication and mediation efforts driven by the public authorities: informing, raising awareness, influencing perceptions and behavior, and relaying and legitimizing the implementation of public policies are all among the objectives for the communication efforts of institutional actors.

Sustainable Development and Corporate Communication

Businesses also communicate in many different ways. Administrative, managerial and information and communication sciences are all disciplines that can be mobilized for the purposes of analysis and learning. Marketing, which is both a discipline and a set of practices, is nevertheless rooted very firmly in the fundamental logic of the company as organized in a market economy.

(d) Sustainable Consumption Practices

- Rising costs: increasing competition for scarce raw materials in the supply chain will drive up costs and squeeze margins.
- Uncertainty: as the global climate warms, and the stocks of some resources approach collapse, crises become less predictable and more chaotic. The same may be said of their consequences, including market reforms and cultural shifts. Uncertainty causes inertia in markets and businesses, stifling investment and innovation.
- Increasing regulation: resource and environmental crises can cause overwhelming pressure from voters to introduce more and stronger regulations.
- Friction: the debate over sustainable consumption could become polarized and deadlocked. Innovation, productivity, brand value and sales would all suffer from the tensions between corporate objectives, consumer behavior, and sustainability.

Discussion and Conclusion

Now this is the correct time to accept "Sustainable emerging marketing practices" worldwide. It will come with extreme transform in the world of business if all nations will make firm rules because sustainable marketing may become a tool in the journey towards sustainable development. With the

danger of global warming, climate change social and economic crises alarming large, it is tremendously significant that sustainable marketing becomes the custom rather than an exclusion or just a craze. Recycling of materials like paper, metals, plastics, etc., in a protected and environmentally nontoxic mode should become much more systematized and widespread. It has to become the general norm to use energy-efficient lamps and other electrical goods, to avoid discrimination on any grounds, child and forced labor, bribe, corruption and non payment of taxes etc. Marketers also have the accountability to make the consumers know the requirement for and profit of sustainable products as compared to unsustainable ones.

References

1. Donald Fuller, Sustainable Marketing, Managerial-Ecological Issues, 1999
2. http www.csreurope.orgdatafilessustainablemarketingguide.pdf
3. P.K.Sharma, sustainable marketing strategies, Indian journal of marketing –IJM vol : ix ,2014.
4. httpwww.unep.frsharedpublicationspdf
5. www.undp.org

AN ECONOMIC ANALYSIS OF TRANSPORTATION INFRASTRUCTURE IN BANGALORE URBAN

Dr.Jennifer Wilson Fernandes
Assistant Professor, PG Department of Economics, Jain University, Bangalore

Abstract

Transport is essential for widening of the market. It helps for the easy movement of resources, raw materials, fuel and machinery to different places of production. The state's road network consists of National Highways (NH), state Highways (SH), Major District Roads (MDR), Municipal roads and other roads including village connectivity roads. As per 2011 Census, the total number of habitations in Bangalore urban stands to 12599 while the total habitations access to all weather roads (1086). The increasing volume of traffic, haphazard parking of vehicles, lack of proper infrastructure, low fines, and bad roads are few of the factors responsible for road transport problems in Bangalore Urban. Inner and outer ring roads, carpooling are some of the ways to overcome the problems of road transportation in Bangalore Urban. The first section of the paper gives the brief introduction of the present study. The second section identifies the factors responsible for road transportation congestion in Bangalore Urban, the third section studies the study the respondent perspectives with regard to road transportation in Bangalore Urban. The fourth section analyzes the measures to overcome the problems of road transportation in Bangalore Urban and concludes.

Keywords: *Road Transportation & Widening of the Market*

Introduction

Transportation refers to movement of either persons or goods or both from one place to another, thereby creating time utility and place utility. Karnataka provides efficient, convenient and easy accessible public transport to people of different income groups across the state as well as in neighboring states. The state's road network consists of National Highways (NH), state Highways (SH), Major District Roads (MDR), Municipal roads and other roads including village connectivity roads. State Highways Development programme is initiated for the improvement and strengthening of the existing State Highways (SH) based on the criteria of District headquarter to district headquarter connectivity, District headquarter to taluk headquarter connectivity, Taluk headquarter to Taluk headquarter connectivity. Road widening projects taken up by PWD have resulted in widening of carriage way width of state highways and National highways to reduce traffic congestion. As per 2011 Census, the total number of habitations in Bangalore urban stands to 12599 while the total habitations access to all weather roads (1086). Roads & Transportation Mobility is what distinguishes an urban area from a rural area. Road and rail are the two important forms of mass transportation used in today's cities. Bengaluru City has an extensive road and rail network. The rail network for transportation within the City is primarily in the form a metro, which is a recent introduction into the City's landscape, with services being run in one part of the City which have been recently extended to one more part of the City. There are metro feeder services run by the Bengaluru Metropolitan Transport Corporation (BMTC) to metro stations

Objectives

The following are the objectives of the present study

1. To identify the factors responsible for road transportation congestion in Bangalore Urban
2. To study the respondent perspectives with regard to road transportation in Bangalore Urban.
3. To analyze the measures to overcome the problems of road transportation in Bangalore Urban.

Methodology

Primary and Secondary data is used in this study. Interview cum questionnaire method were designed to collect the primary data in Bangalore Urban district that consist of Bangalore North, Bangalore South, Bangalore East and Anekal. From each taluk in the sample district, two areas were identified by Simple random sampling; further ten households from each area were selected. On the whole primary data is collected from 80 respondents. Secondary data is based on various government reports, journals and research articles.

Factors Responsible for the Road Transportation Problem in Bangalore Urban

The main factor for increasing congestion is exponential growth in the registration of vehicles with more than 40 lakh vehicles being registered in the City. Given the increasing volume of traffic, it can be said that no amount of road network would be enough. The haphazard parking of vehicles further reduces the road width, which decreases the speed of traffic. Lack of footpaths is another reason for the slow traffic. Other factors include: poor traffic management, lack of proper infrastructure, low fines, and bad roads and also due to the lack of awareness among the residents of the City.

Analysis of Transportation in Bangalore Urban

Bangalore Urban district mainly consist of Bangalore North, Bangalore South, Bangalore East and Anekal but for the administrative purpose Bangalore North is further divided into two taluks namely Bangalore North and Bangalore North (Addl). This classification is primarily done for smoothing administrative purpose and classification of the Gram Panchayats areas under Bangalore North. About 111 neighborhood villages have been integrated in to the city; consequently the erstwhile Bangalore Corporation is now rechristened as Bruhat Bangalore Mahanagara Palike (BBMP).For the present study primary data is collected from Yashwanthpur and Peenya of Bangalore North, Jayanagar and Kormangala of South Bangalore, Whitefield and Kadugodi of Bangalore East and Attibele and Ramnagar of Anekal. From each taluk in the sample district, two areas were identified by Simple random sampling; further ten households from each area were selected. In total 80 households are studied in this particular district.

In the fig.1 out of 80 sample size in Bangalore Urban, 74(92.5 percent) respondents have own vehicle and 6(7.5 percent) respondents do not have vehicles. It is found that in Bangalore urban majority have their own vehicles as they earn sufficient income to purchase it. Table.2 below clearly shows that majority of the respondent households in the study area do have two wheeler as well as car. This is due to sufficient income earned as many are employed in IT and BT. Table.3 states that the respondent households in the study area of about 45(56.25 percent) prefer public transport while 35(43.75) as there is very good frequencies of public transport prefer private transport to reach their workplace.

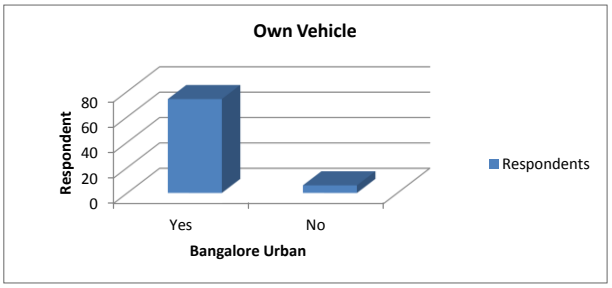


Fig. 1 Own Vehicle in Bangalore Urban
Source: Derived from Table.1

It is observed in Table.4 that majority of about 74(92.5 percent) respondents stated that bus fare is not affordable whereas 6(7.5 percent) respondents stated that bus fare is affordable. We can observe the respondents in the study area complain frequent hike in the bus make it further difficult as the existing fare is already not affordable for the few respondents.

Table.5 we can observe that majority of the respondents 59(73.75 percent) take 1-2 hours to reach their workplace and this is due to heavy traffic, incomplete roads, improper construction of roads, potholes and manholes lying untouched and due to metro construction.

Table 6 states that the majority 74(92.5 percent) respondents said they do feel tired after travelling 1-2 hours and more than two hours to reach their workplace and this have also led to reduce in productivity and lost the chance of getting promotions, few even lost jobs and even health is affected.

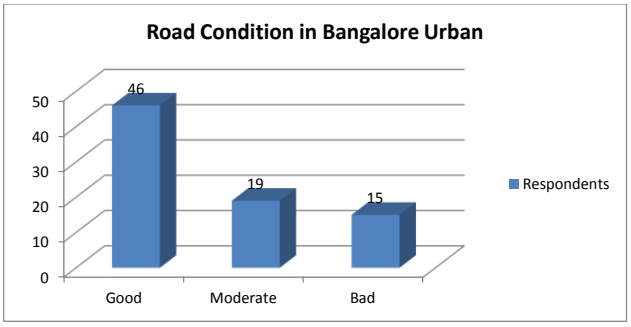


Fig.2 Road Condition in Bangalore Urban
Source: Derived from Table.7

Fig.2 we can observe that out of 80 sample size of Bangalore urban, 46(57.5 percent) respondents states that roads are 'good' whereas 19(23.75 percent) respondents termed condition of road as considered 'moderate' and 15(18.75 percent) respondents stated the condition of road as 'bad'. In some areas of Bangalore urban there is complete absence of metallic roads. We find lot of Kaccha and semi-kaccha roads, incomplete roads, improper construction of roads, potholes and manholes lying untouched. The roads are not repaired nor maintained well even after various schemes like Bharat Nirman; Pradhan Mantri Gram sadak yojana Government should construct all weather good quality roads.

In the Table.8 we can observe that out of 15 sample respondents households who said that the roads are in bad condition,9 (60perecnt) complained about the grievances to the government officials further it is also complained that the officials take long time to rectify the issues.

Measures to overcome the problems of road transportation in bangalore urban

One way lining system should be followed to reduce the traffic, there should not be cross roads, circular roads should be constructed, inner and outer ring roads should be made, there should be frequent connectivity to metros, and metro stations, Individual transport parking should be prohibited near metro stations. Staggering of time for school children and office bearers, School and College timings should be from 9 AM to 3 PM and for office goers it should be from 10 AM to 5 PM. Carpooling is another best option to reduce the traffic congestion in Bangalore Urban.

Conclusion

The long travel time and congestion needs to be reduced so that the residents can achieve their human development potential, more awareness programmes about the traffic congestion should be conducted by the by the government as well as by citizen initiatives.

Annexure

Table 1 Own Vehicle

Bangalore Urban	Respondents	%
Yes	74	92.5
No	6	7.5
Total	**80**	**100**
Source: Primary Data		

Table 2 Possession of Vehicles by households

Districts	Possession of Vehicles by households					
	Bicycle		Two Wheeler		Car	
	Yes	No	Yes	No	Yes	No
Bangalore Urban(80)	10 (12.5)	70 (87.5)	74 (92.5)	6 (7.5)	45 (56.25)	35 (43.75)
Source: Primary Data						

Table 3 Regular means of transport to the workplace

Regular means of transport preferred to reach work place/other places		
Bangalore Urban	**Respondents**	**%**
Public transport	45	56.25
Private transport	35	43.75
Total	**80**	**100**
Source: Primary Data		

Table 4 Bus fares affordable

Bangalore Urban	Respondents	%
Yes	6	7.5
No	74	92.5
Total	**80**	**100**
Source: Primary Data		

Table 5 Travel Time to reach workplace

Feel tired after reaching workplace		
Bangalore Urban	**Respondents**	**%**
Yes	74	92.5
No	6	7.5
Total	**80**	**100**
Source: Primary Data		

Table.6: Feel tired after reaching workplace

Bangalore Urban	Respondents	%
Less than 1 hour	6	7.5
1-2 hour	59	73.75
2 & above	15	18.75
Total	**80**	**100**
Source: Primary Data		

Table 7 Road condition in the city

Response/Criteria	Respondents	%
Good	46	57.5
Moderate	19	23.75
Bad	15	18.75
Total	**80**	**100**
Source: Primary Data		

Table 8 Complained about the bad condition of roads to the officials

Complained about the grievances faced due to bad condition of roads		
Complained about the grievances	**Respondents**	**%**
Yes	9	60
No	6	40
Total	**15**	**100**
Source: Primary Data		

References

1. BBMP Report,2017
2. Bangalore Urban District at Glance (2017), District Statistical officer, Bangalore Urban
3. Economic Survey of 2018, Ministry of Finance, Government of India, New Delhi.
4. Karnataka Economic Survey (2017).

ANTIBIOTICS & ITS RESISTANCE – GOODBYE TO ANTIBIOTICS

Anitha.S
Assistant Professor, Department of Computer Science, Indo Asian Academy Degree College, Bangalore

Dr.Venkatesh.S
Assistant Professor, Department of Biotechnology, MS University, Tirunelveli

Abstract

Money makes wonders everywhere that too more in medicine in present scenario. But how it affects our health in a negative manner, without knowing our life style is moving on. Antibiotics have been one of the major breakthroughs in modern medicine. Our grandparents lived in a different world. Today we are living entirely different in an exact opposite to them. Many of the bacterial infections that affect humans are often not seen as being too serious as they can be treated successfully with antibiotics. However, some types of bacteria that are commonly found in our environments can cause very serious, if left untreated. We don't worry about taking a course of antibiotics to get rid of them. Yet we must continue to come up with new drugs to kill the bacteria that cause these infections. By examining the whole picture of antibiotic use, we can all see that this outcome was inevitable and that we need to look toward a different future. Now we are urged to say goodbye to them for good as antimicrobial resistance increases. Today if we get a bacterial infection – even a serious one, we feel confident an antibiotic will cure us. If this is allowed to continue, definitely we will face significant problems in our future. We have to take more social responsibility for our own actions and behaviors, and then we will move forward without great difficulty. Misusing and overusing antibiotics puts us all a risk. Taking antibiotics when they are not needed accelerates emergence of antibiotic resistance, one of the biggest threats to global health. Everyone has a role to play, the choice is clear, what happens next is up to us.

Keywords: *Antibiotics, infectious diseases, action of antibiotics and resistance, social responsibility, global health.*

Introduction

In current environment we are leading a life where the next moment is never promised. Just like how dirt is hidden in corners of our home there is unwanted substances which would come out when we are affected with fever or common cold which is actually considered healthy. But nowadays we don't give chance to these things as soon as we get fever or cold, we take antibiotics which give us only temporary relief. The unwanted substances get accumulated in our body itself which in near future give raise to a bigger health problem. The origins of antibiotics were introduced to cure the diseases such as cholera, chicken pox, pneumonia, typhoid which were considered incurable in an ancient time. But the evolution of antibiotic in the medicinal field is boon that period. In global public health, we are facing one of the biggest challenge is to resist antibiotics. We can save our life by taking drugs but can't extend our life. Due to poor sanitary condition, starving, malnutrition, ignorance, civilization, and bad governance and inadequate to drugs limited the benefits of drugs in controlling infectious diseases. The emergence of antibiotics for some disease like cholera, typhoid but now we habituated to use for common disease also.

Medicine today

During 90's, medicine field doesn't have much sub divisions. There were only homeopathy, allopathic, and Auer Vedic. Wide ranges of divisions are now in the medicine. Depends our anatomy, each and every part of the body has specialist in the medicine field. That too these days' people are more worried about the medical expenses than the diseases. Earlier system people used to cure themselves by using the natural things available at home or at manageable cost. But now for common fever or cold people tend to spend thousands of amounts to get relieve from that. In addition to these factors we are worried about the side effects of the medicine and treatment given to us. If people spend thousands of amount for common fever medical expenses for a family ,If they are affected with major disease it is unimaginable so millions and millions of people are spending these much of money for common disease it effects on the whole economy , which will be the main factor of sustainability development .

Considering health issue, we should aware about courses will be up to how many days, when to stop medicine and when to continue, based on that we have to react or else the effect will be more. As mentioned above fig shows this if someone affected with bacterial infection. Two decades before, if any health issue were there, in home itself they tried to cure. In case it prolonged, the diagnosis gave by doctor and the remedy took by sufferers based on physicians' advice. But now the entire system got changed into various dimensions. These make us to scare. From getting an appointment it started and consulting, writing for scan, tests and so and so on then treatment that too with antibiotic course which push us in to hell.

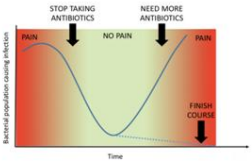


Fig: courtesy - Jonathan Cox from Conversation

Misuse of Antibiotics

In most developing countries, people purchase antibiotics without prescription, even when it is considered illegal. In many African, Asian, and Latin American countries, antibiotics are available in hospitals, pharmacies, patent medicine stalls (drugstores), roadside stalls, and hawkers. A study shows that, in rural Bangladesh, 95% of drugs consumed for 1 month by more than 2,000 study participants came from local pharmacies; only 8% were prescribed by physicians. People encourage buying drugs from unofficial distributors because drugs often are not available in government hospitals. But people don't understand that these drug vendors are not practicing Physicians and they have no knowledge about the dosage and contraindications of the drugs. In markets and public transport in West African countries such as Cameroon and Nigeria (Okeke and Lamikanra, pers. obs.), the vendor (usually a medically untrained salesman) tries to convince potential buyers to purchase the drug, even if they are not ill. To save time and keep drug-hunting to minimum, a patient may start at a source more likely to stock the desired drug, forgoing the expertise of a doctor. And it is true that unofficial sources are generally more accessible than official sources. For example, it is seen that in Nepal, retail drug outlets are four times as numerous as government health posts and hospitals. People mostly go for alternate sources because it offers the option of purchasing small quantities of medicines, while hospitals require purchase of the complete 5- or 7-day antibiotic regimen. The purchase of small samples is common, particularly among customers, who buy without prescription. Antibiotics provide pressure favoring resistant bacterial strains; inappropriate use increase the risk for antibiotic-resistant bacteria, which are placed at a competitive advantage. Antibiotics are particularly meant to be taken in particular dosage. Excess dosage of antibiotics would have an adverse effect on our health. But, common people are unaware of these side effects and they are just keen on completing the dosage prescribed by the Physician. On the other hand, Physicians prescribe antibiotics because it is expensive and they see this as a addon to their profit. People don't understand this and completely rely on the prescribed medicines. And people don't understand that a child developing a respiratory problem due to climate change or getting diarrhea because of eating an inappropriate food substance is very common, and they end up taking the child to Physician where he prescribes a huge dosage of antibiotics. People should learn that few problems could be solved without spending a huge sum of money for it. Several strategies have been proposed for combating the inappropriate use of antibiotics by clinicians. Antibiotic monitoring systems and hospital formularies are often tying to reduce antibiotic prescription rates. Adoption of a national essential drug list can actually limit the antibiotics available to prescribers. However, implementation of these strategies does not guarantee optimal antibiotic use by clinicians in developing countries because the irregular drug supply, availability of drugs from unofficial sources, and financial constraints also affect antibiotic choices.

Poor Quality of Antibiotics

In most developing countries it is found that a drug has many subsidies and there are substandard drugs too. The quality of many antibiotics and other drugs is often below the standards in the formulary. This is because there are many unofficial sources producing drugs that act as subsidy for the original government produced drugs. For example, in Nigeria substandard ampicillin, ampicillin/floxacillin,

tetracycline, and ox tetracycline capsules have been detected. In many cases, therapeutic failure is the only indication of substandard drugs. There are no analytic laboratories to detect substandard drugs are uncommon, and when they exist, health workers, distributors, and consumers are often unaware of them.

Risk Factors

The emergence of antibiotic resistance is essence today. There are number of risk factors that are inherent within organisms themselves and other environmental factors also strengthen this issue. This is actually a complex driven program by some interconnected factors such as given below:

Inadequate Resources

Still we are in developing stage and not under developed nation. We are poor in health because we are poor in wealth it meant we don't have adequate resources and even if we have we couldn't access properly. We are aiming to avoid premature death happen due to preventive measures. Essential primary health care services also couldn't get in some rural areas.

Poverty

Poverty got more attention especially in developing countries. Lack of money combines with other factors such as ignorance, lack of education, poor health and diagnostic facilities. Due to this poor economic condition they don't have provisions to take proper food and show that they have to face some medical issues unnecessarily. Most of our people are live in poor hygiene even they are rich they don't bother about their street. Sometimes water may stay and doesn't have a path to go and due to these mosquitoes will increase and spreading accidental harms like cholera and typhoid to human beings.

Natural Calamities

Occasionally or unexpectedly due to heavy rains and bad weather conditions effect the cause of infectious diseases such as cholera and malaria. Civil wars also encountered in this picture and have resulted disaster.

Population Growth

There was a rapid population growth and urbanization without increase in resources and services has resulted in overcrowding and poor hygiene and sanitation which will be the reason to spread diseases.

Prescription Slip

Nowadays medical industry is running based on profit basis. Without doctor's prescription people habituate to get drugs and using without knowing cause and effect. Other factors relating to health care providers include, lack of proper training, unprofessional conduct, lack of diagnostic facilities, wrong section of agents.

Health Service Center's Condition

Hospitals are a critical component today. From child to aged people all are coming into this scene. Our hospital environment even in private also makes us to turn back to home. Even though we are paying huge amount we didn't get proper facility.

Many health centers are overcrowded and limited capacity compared with the inflow of patients. Patents are in the situation to share bed and the chances of spreading infection are increased. In some health units are running without basic needs such as gowns and cloves for surgeons. Recently they attract mass by introducing free medical checkup and care. But we can see now health care units flooded with patients. Drug supplies are limited which are insufficient for current strength and rural areas nullified in that aspect.

Antibiotics in Other Fields

In food industry to make one into plenty and some artificial things are injected for rapid growth. Focusing animal sector also they are using antibiotics and preserving and destroying our environment,

Conclusion & Recommendations

Today we are giving importance to style rather than health, we are crazy about junk food which should be strictly prohibited, obviously we are in safe state. In our real life we had a chance to experience people one who suffered due to antibiotics severely. So I highly recommended the suggestions that, if we

drink water in bronze container it will reduce weight. To cold, if we take tulsi, pepper, cumin and turmeric powder mixture boiled in water and drink that syrup will give very good remedy for cold relief. To regularize periods we should take dates, fruits, and vegetables and minimize white content. Cardamoms, ginger are real antibiotics which will be a very good fighter against disease. An apple a day keeps the doctor away. Disease won't near to our body when we conscious about food chart. Undoubtedly saying that, especially this message and awareness about antibiotics has to reach students and that seed will make more wonders in society.

Like, so many points we can list to prevent from disease which will be the outcome of avoiding antibiotics. Even though we are well known about all lath logically we are moving. We should strongly oppose antibiotics and try to change everyone to say goodbye to antibiotics and change our environment to be healthy only with healthy food and not by drugs. In future we may expect that, breakfast four tablets, lunch two tablets with one syrup and dinner ended with sleeping tablet. No wonder in this. Our imagination comes to true one day. But before that we should take steps to stop all. This is the right time to say GOODBYE to antibiotics that yields a very good positive response in global economy and we youngsters take an initiative in this matter more and make history that medicine is not a business and it's a noble profession. With this I concluded by saying, the best life journey should make us to feel in a heaven and not in hell at present all depends our health.

References

1. Kunin CM. Resistance to antimicrobial drugsa worldwide calamity. Ann Intern Med 1993;118:557-61.
2. Murray BE, Alvarado T, Kim KH, Vorachit M, Jayanetra P, Levine MM, et al. Increasing resistance to trimethoprim-sulfamethoxazole among isolates of Eschericha coli in developing countries. J Infect Dis 1985;147:724-8.
3. Sack RB, Rahman M, Yunus M, Khan EH. Antimicrobial resistance in organisms causing diarrheal disease. Clin Infect Dis 1997;24 Suppl1:S102-5.
4. Rahal K, Wang F, Schindler J, Rowe B, Cookson B, Huovinen P, et al. Reports on surveillance of antimicrobial resistance in individual countries. Clin Infect Dis 1997;24 Suppl1:S169-75.
5. Bennish ML, Salam MA, Hossain MA, Myaux J, Khan EH, Chakraborty J, et al. Antimicrobial resistance of Shigella isolates in Bangladesh, 1983-1990: increasing frequency of strains multiply resistant to ampicillin, trimethoprim-sulfamethoxazole, and nalidixic acid. Clin Infect Dis 1992;14:1055-60.
6. Guyon AB, Barman A, Ahmed JU, Ahmed AU, Alam MS. A baseline survey on use of drugs at the primary health care level in Bangladesh. Bull World Health Organ 1994;72:265-71.
7. Bojalil R and Calva JJ. Antibiotic misuse in diarrhea. A household survey in a Mexican community. J Clin Epidemiol 1994;47:147-56.
8. Nizami SQ, Khan IA, Bhutta ZA. Drug prescribing practices of general practitioners and paediatricians for childhood diarrhoea in Karachi, Pakistan. Soc Sci Med 1996;42:1133-9.
9. Paredes P, de la Pena M, Flores-Guerra E, Diaz J, Trostle J. Factors influencing physicians' prescribing behavior in the treatment of childhood diarrhoea: knowledge may not be the clue. Soc Sci Med 1996;42:1141-53.

A STUDY ON THE BEHAVIOUR OF INVESTORS AND THEIR RESPONSES TO THE CHANGE IN FACTORS THAT AFFECTS INVESTMENT IN MUTUAL FUND

Brijesh Singh
Research Scholar, VTU, Belagavi

Dr.Babitha Thimmaiah.N
Research Guide, VTU, Belagavi

Abstract

A mutual fund represents a collective investment vehicle. When you participate in a scheme of a mutual fund, you become a part –owner of the investments held by that fund under that scheme to the extent of your unit holding in that fund. The main objective of the paper was to identify the objective of the investor for investing in a mutual fund, to identify the factors affecting investors response and to identify the investment patterns of investors. For collection of research data, convenience sampling method is used where most of them are general public and judgment-sampling technique's also was used, as they are good prospect for accurate information and some of them were mutual fund investors. 50 respondents from Bangalore are randomly selected for the study. The main finding of the study is that, there is no dependency of income level over investment in Mutual Funds. Therefore income being high or low is not the major criteria for Mutual Fund investments. The awareness towards Mutual Fund is good, but not excellent. Increased deregulation of the financial markets in the country coupled with the introduction of derivative products offers tremendous scope for the industry to design and sell innovative schemes to suit individual customer needs.

Keywords: *Investor, financial assets, awareness, customer needs, investment pattern, etc.*

Introduction

A mutual fund represents a collective investment vehicle. When you participate in a scheme of a mutual fund, you become a part –owner of the investments held by that fund under that scheme to the extent of your unit holding in that fund. The pool of money collected from the individual investors by the mutual fund unit is invested in financial assets such as shares, government securities, debentures and money market instruments like commercial paper's certificate of deposit's and treasury bills.From these assets, the mutual fund unit receives dividends, if it is a share or an interest if it is a debenture or government securities. Therefore, it receives either dividends or interest and the same interest or dividends are given to the individual investors by the mutual fund unit. Therefore, it is known as a collective investment vehicle.

Need for the Study

Importance of the study is that the Mutual Fund is generally not popular like Shares and Bond's. so this study will give an idea about how many people are aware about Mutual Funds and their response affecting to mutual bonds. To know what are the factors that they take in to account while investing in any kind of securities. It gives an idea about Brand Image required for Mutual Fund Company to collect more corps.

The main importance or need of this study is that Mutual Funds are not old as shares in India. So to know overall perception of customers in Bangalore and also some affords where made to existing mutual fund investor opinion and what is there expectation, opinion and performance of some funds. In this research some efforts where made regarding modern day investments and transparency in disclosing of accounting information and to compare it with older days.

Objectives of the Study

- To identify the objective of the investor for investing in a mutual fund.
- To identify the factors affecting investors response.
- To identify the investment patterns of investors.
- To know the Brand and Advertisement influence on customer about Mutual Funds.
- To know the best scheme in mutual fund based on the risk factors.

Scope of the Study

The study includes investors, financial institutions, who have invested in various assets management company of mutual funds and also the individuals who are interested in the investment on the mutual fund. Thus the overall effort is to know customers or investors Perception about mutual funds and their reaction towards securities market in India and their faith towards Mutual Funds.

Research Methodology

Study is mainly based upon primary and secondary data. Primary data was collected from direct personal interview with the help of structured and unstructured questionnaires and secondary data are collected from news paper, magazines, internet etc.

Sampling Procedure

How should the respondent be chosen? To obtain a representative sample and non-probability sample can be drawn, they are

- **Convenience sample:** The researcher selects the most accessible population members.
- **Judgment sample**: The researcher selects population numbers who are good prospects for accurate information.

For collection of research data, convenience sampling method is used where most of them are general public and judgment-sampling technique's also was used, as they are good prospect for accurate information and some of them were mutual fund investors.

Sampling Plan

The researcher now decides on the sampling plan. Here the following needs to be taken care of:

- **Population:** Who is to be surveyed? The researcher must define the target population that will be sampled. Here survey is made to both mutual fund investors and general public.
- **Sample unit:** Once the population is determined, a sampling unit must be developed, then the sampling frame, so that everyone in the target population has an equal chance of being sampled.

The target population for the research is business people, high-income groups, professionals, housewives and students.

Sampling Method: The selection of sample includes probability sampling and non-probability sampling (chance), random sampling.

Random sampling method is used for this research purpose.

- **Sample size:** How many people should be surveyed? It is not necessary to sample the entire target population. The selection of sample size depends on accuracy of data required.
- 50 respondents from Bangalore are randomly selected for the study.

Literature Review

Woerheide (1982), conducted a study on "investor response to suggested criteria for mutual funds" in which he tested the effect of different factors. It was proved that factors like size of fund, effectiveness of marketing programme and past return of funds have great impact. Among these the effectiveness of marketing programme has strong impact**. Shanmugam (1990)** studied a group of 90 investors to examine the factors affecting investment decisions. The study focused its analysis on investment objectives and the extent of awareness of factors affecting investment decisions. The study concluded that the investors were high risk takers, then interested in capital gains and current dividend income. Investors possessed adequate knowledge of govt. regulations, monetary and fiscal policy. **Singh (2004)** has established that middle class salaried investors and professionals perfected to have disclosure of net asset value on a day today basis and wanted to invest in MFs in order to get higher tax rebates. Further, it is evidenced that small investors perceived MFs to be better investment alternative and public sector investments to be less risky. **Ramamurthy and Reddy S (2005)** conducted a study to analyze recent trends in the MF industry and draw a conclusion that the main benefits for small investors" due to efficient management, diversification of investment, easy administration, nice return potential, liquidity, transparency, flexibility, affordability, wide range of choices and a proper regulation governed by SEBI.

Pandurangan G (1993) concluded that the investors rate this mode of investment as excellent and they want only capital appreciation and dividend and for this they are ready to take calculated risk also. This mode of investment is urban oriented till today. **Noel Capon (1994)** in a study "Affluent investors and mutual fund purchases" stated that there are many evidences that supports that in spite of risk and return other factors also effect on mutual fund selection, for example a consumer survey 1990 on mutual fund it was founded that past performance and level of risk are two aggregate important factors but other factors also effect like management fee, amount of sales charges, reputation of fund family, funds already owned in family, recommendation from magazine and newsletter and clarity of accounting statements Investor showed different behavioral trait and they prefer different factors while selecting fund because of different demographic background.

Analysis and Discussions

Table 1 Correlations between Income Profile of Respondents and Investment Profile of Respondents

		Income Profile of Respondents	Investment Profile of Respondents
income profile of respondents	Pearson Correlation	1	.901**
	Sig. (2-DWtailed)		.000
	N	50	50
investment profile of respondents	Pearson Correlation	.901**	1
	Sig. (2-DWtailed)	.000	
	N	50	50

**. Correlation is significant at the 0.01 level (2-tailed).

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	78.877a	12	.000
Likelihood Ratio	84.419	12	.000
Linear-by-Linear Association	39.735	1	.000
N of Valid Cases	50		

Interpretation

Most of the respondents have invested in Mutual funds with bonds and stocks coming second. This means the awareness about Mutual funds have prompted more and more persons to invest in Mutual funds, since it has a high return. Stocks and Mutual funds are high risk areas with high returns. So people are ready to take more risks for more returns. The more they earn the more they can invest and vice versa. People earning less can invest in small amounts, whereas people earning more can go for higher investments and take higher risks for higher returns. The significance level is 0.000 which is less than 0.05 at 95% confidence level, hence reject the Null Hypothesis and accept the Alternative Hypothesis. Therefore, we can conclude that there is a significant relation between income profile and investment profile.

Table 2: Popular Mutual Fund Products among the respondents

Mutual Fund Products	No. of Respondents	%
Prudential ICICI	29	88
Kotak Mahindra	15	45
HDFC Mutual Fund	19	57
Birla Sun life	17	51
SBI Mutual Fund	09	27
LIC Mutual Fund	08	24
Canbank Mutual Fund	08	24
Franklin Templeton M.F	21	63

The most popular mutual funds among the respondents are, Prudential ICICI with 88%, Franklin Templeton mutual funds with 63%, HDFC mutual funds 57%, Birla Sun Life 51%, Kotak Mahindra mutual funds 45%, and rest of them are with average of around 24%and 27%. This is applicable for only mutual investors. From the above it's clear that ICICI and Franklin Templeton are popular among investors. This is because of the aggressive advertisements they employ. Advertisements help a company to have a brand image which is very important in the field of Mutual funds.

Table 3: Ranking of factors for Investment

Factors	Simple Average	Ranks
Assured Return	6.6	2
Risk Cover	3.6	5
Government Guarantee	5.2	4
High Return	7.4	1
Voting right	1.8	6
Liquidity	5.4	3

This table is designed to study the most important factors for investors to invest in various investment options. Investors have ranked High Return, Assured Return, Liquidity, Government Guarantee, Risk Cover and Voting Right as the important factors for investments

respectively. Returns are the most sought after criteria for investment. In other words, returns are the key for investments. The investors are not worried about the risk involved. Mutual funds are high risk areas with high returns. People are ready to take more risks for more returns. They are not bothered about voting powers or taxation aspect either.

Table 4: Correlations between performance of funds & market risk in various scheme

		Income Profile of Respondents	Investment Profile of respondents
Performance of funds	Pearson Correlation	1	.942**
	Sig. (2-DWtailed)		.000
	N	50	50
market risk in various scheme	Pearson Correlation	.942**	1
	Sig. (2-DWtailed)	.000	
	N	50	50
**. Correlation is significant at the 0.01 level (2-tailed).			

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	116.850[a]	16	.000
Likelihood Ratio	105.238	16	.000
Linear-by-Linear Association	43.492	1	.000
N of Valid Cases	50		

Interpretation: The significance level is 0.000 which is less than 0.05 at 95% confidence level, hence reject the Null Hypothesis and accept the Alternative Hypothesis. Therefore, we can conclude that there is a significant relation between market risk and performance of funds. From the above Chi-Square test we can conclude that performance is related to various scheme has a market risk. There is a significant relation between performance and effect to its risk and returns involved. Understanding which schemes are more popular and works better with investors is crucial for any company, as they can introduce schemes relating to those, if not already there. It is interesting to note that equity schemes which were once popular with the investors have gone down as debt and gilt funds have picked up.

Findings

The main finding of the study is that, there is no dependency of income level over investment in Mutual Funds. Therefore income being high or low is not the major criteria for Mutual Fund investments. The awareness towards Mutual Fund is good, but not excellent. For this study the collected sample size was 50. out of them 33 are mutual fund investors. Next finding is that the brand name of investment firm is very important to gain or attract customers. Out of 50-sample size 44 respondents said that brand name is required. Only 6 respondents said that brand name is not required. From investors point, the popular mutual fund companies are Prudential ICICI, and Franklin Templeton mutual funds.

Most common advertisements of Mutual Funds Companies from investors' point of view are Prudential ICICI with 71.79% and Franklin Templeton with 66.66%. This shows that aggressiveness on advertisements in Mutual Funds could make the company a hit, as these two companies are the two popular one's as well. Investors have ranked High Return, Assured Return, Liquidity, Government Guarantee, Risk Cover and Voting Right as the important factors for investments respectively. Tax benefit, surprisingly, doesn't find place in the top five. The transparency is the order of the day. The overall perception about this matter is that 72% of the respondents say that these days' firms are more transparent than in old days.

People always go for equity and debt scheme then others because it incudes high returns although those includes more market risk. From existing mutual fund investors it is found that the equity funds and funds are performing better than last year. Investors are worried and confused about the legal formalities of the Mutual Fund as it is complicated compared to other investment avenues like bank deposits. The launching up of new schemes by Mutual Fund companies has increased the number of investors. Mutual

Fund has become the buzz word currently. More and more people are investing in Mutual Funds lately. Shares, Real Estate, and Insurance are presently other hot areas for investment.

Conclusion

A perceptible change is sweeping across the mutual Fund landscape in India. Factors such as changing investor's needs and their appetite for risk, emergence of internet as a powerful platform, and above all the growing commoditization of mutual fund products are acting as major catalysts putting pressure on industry players to formulate strategies to stay the course. Building and sustaining a powerful brand is also becoming an issue of paramount importance. With investor today having a range of products to choose from, effective communication is required to reach a wider audience. The success of marketer in future would depend upon his ability to use 360-degree compounding effect of media through a presence in all media interfaces with the investors. Increased deregulation of the financial markets in the country coupled with the introduction of derivative products offers tremendous scope for the industry to design and sell innovative schemes to suit individual customer needs. As it is being increasingly felt, with the commoditization of products looking imminent, service to investors and performance would be the major differentiators in the years to come.

Scope for Further Research

Efforts were made to see that the data collected and analysed were as accurate as possible. In spite of all precautions taken, certain scope for the further study is

- The sample size taken for research may not give exact figure or may not cover the entire population. Therefore, it doesn't be the entire perception of investors in Bangalore.
- The respondent may behave artificially or that the respondent may be biased.

References

1. www.moneycontrol.com
2. http://business-standard.com/india/news/qa-sandesh-kirkire-kotak-mutual-fund/459181/
3. http://economictimes.indiatimes.com/Mutual_funds
4. Brown & Goetzmann (1997) Mutual fund styles. Journal of Financial Economics, Volume 43, Issue 3, March 1997, Pages 373-399.
5. Bergstresser, Daniel B., Chalmers, John and Tufano, Peter, Assessing the Costs and Benefits of Brokers in the Mutual Fund Industry (October 1, 2007). AFA 2006 Boston Meetings; HBS Finance Working Paper No. 616981. Available at SSRN: http://ssrn.com/abstract=616981 or doi:10.2139/ssrn.616981
6. Fama, Eugene F. and French, Kenneth R., Luck versus Skill in the Cross Section of Mutual Fund Returns (December 14, 2009). Tuck School of Business Working Paper No. 2009-56; Chicago Booth School of Business Research Paper; Journal of Finance, Forthcoming. Available at SSRN: http://ssrn.com/abstract=1356021
7. Ivković & Weisbenner (2009) studied the research paper on Individual investor mutual fund flows Journal of Financial Economics, Volume 92, Issue 2, May 2009, Pages 223- 237.

WOMEN EMPOWERMENT: A KEY TO SUSTAINABLE DEVELOPMENT

Salma Bano
Assistant Professor, Dr. S. Gopalaraju Govt. First Grade College, Anekal

Abstract

Women empowerment is a key factor for achieving sustainability. Sustainable development depends on an equitable distribution of resources and it cannot be achieved without gender equality. Sustainable development has been defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. There are three core elements that need to be harmonized in order to achieve sustainable development: economic growth, social inclusion and environmental protection. Sustainable development aims at eradicating poverty through creating greater opportunities for all, reducing inequalities, raising basic standards of living and fostering equitable social development and inclusion. Sustainability cannot exist without equity in the distributional process. Women are crucial contributors, implementers and beneficiaries of sustainable development. At the Sustainable Development Summit on 25 September 2015, UN Member States adopted the 2030 Agenda for Sustainable Development, which includes a set of 17 Sustainable Development Goals (SDGs) to end poverty, fight inequality and injustice, and tackle climate change by 2030. Women empowerment through gender equality is a cross-cutting development issue and unless addressed in multidimensional way, gender equality will not become a reality. This article focuses upon the role of women in sustainable development and highlights the need for empowerment to ensure equitable distribution of resources.

Keywords: *Empowerment, sustainable development, gender inequality, inclusion.*

Introduction

Today women have better access to education, health services and jobs as well as a greater voice in parliaments. However, progress in women empowerment has been slow and uneven. Growth and development gains have not been shared equally, both across the globe and within regions, with development gaps wider for poor and ethnic groups and those at the lower end of the income strata. Violence, conflicts and climate adversities have disproportionately impacted women, magnifying gender injustice and vulnerabilities. Greater integration of women in the labour market – at all levels and in all sectors – is key to equitable, inclusive and sustainable development and is a legitimate right of women. Gender-based discrimination is pervasive and goes beyond labour force participation, as social and cultural taboos perpetuate discriminatory and restrictive traditional gender roles in different aspects of women's and men's lives. While the world has achieved progress towards gender equality and women empowerment under the Millennium Development Goals (including equal access to primary education between girls and boys), women and girls continue to suffer discrimination and violence in every part of the world. Gender equality is not only a fundamental human right but a necessary foundation for a peaceful, prosperous and sustainable world. Providing women and girls with equal access to education, health care, decent work and representation in political and economic decision-making processes will fuel sustainable economies and benefit societies and humanity at large. The Sustainable Development Goals (SDGs) raised the need for a measure of women empowerment so that it can be monitored and compared between contexts and stakeholders made accountable. Sustainable development depends on an equitable distribution of resources for today and for the future. It cannot be achieved without gender equality. Women empowerment is a key factor for achieving sustainable economic growth, social development and environmental sustainability. Sustainable development is broadly defined as development which meets the requirements of the present without compromising the ability of future generations to meet their own needs. Sustainable development should be a key principle of all policies and actions, which are broadly designed to create a society which is based on freedom, democracy and respect for fundamental rights, fostering equality of opportunity and solidarity within and between generations.

Objectives of the Study

This article looks at role of women empowerment on various facets of sustainable development. It is an attempt to analyze the role of women empowerment in sustainability, economic development & inclusive growth.

Sources of Data

The methodology adopted in the study is descriptive in nature. The study is based on secondary sources of information drawn from various publications. An extensive use of secondary data collected from various journals, books, reports & other published materials.

Conceptualization of Terms

Empowerment can be defined as a multi-dimensional social process that helps people gain control over their own lives. It is a process that fosters power in people, for use in their own lives, their communities and in their society by acting on issues that they define as important (Page and Czuba, 1999). Women empowerment means women gaining more power and control over their own lives. This entails the idea of women continued disadvantages compared to men which is apparent in different economic, socio-cultural and political spheres. Therefore, women empowerment can also be seen as an important process in reaching gender equality, which is understood to mean that the rights, responsibilities and opportunities of individuals will not depend on whether they are born male or female. Women empowerment is all about allowing and equipping women to make life-determining choices across different issues in the country.

What is Sustainable Development?

Sustainable development is development which meets the needs of the present without compromising the ability of future generations to meet their own needs (WCED, 1987). It calls for attention to be paid to the interest of future generations while attempting to satisfy our present needs. The most frequently cited definition of sustainable development is development which meets the needs of the present without compromising the ability of future generations to meet their own needs (WCED, 1987). It calls for attention to be paid to the interest of future generations while attempting to satisfy our present needs. Sustainable development is also understood to have three interrelated pillars: economic development, social development and environmental protection. It is further noted that the goaland indeed the ultimate test of sustainable development is the convergence among the three trajectories of economic growth, social development and environmental protection (Warth&Koparanova,2012). This shows that sustainable development can be achieved if and only if those three elements are satisfied cumulatively.

Sustainable Development Goals

The UN General Assembly on 25 September 2015 adopted in New York the resolution on the post-2015 development agenda entitled "Transforming our world: the 2030 Agenda for Sustainable Development, the SDGs are built on the Millennium Development Goals (MDGs). However, contrarily to the MDGs that were intended for action in developing countries only, the SDGs apply to all countries. They cover the three dimensions of sustainable development: economic growth, social inclusion and environmental protection. Sustainable development of human society has environmental, material, ecological, social, economic, legal, cultural, political and psychological dimensions. The new SDGs go much further than the MDGs, addressing the root causes of poverty and the universal need for development that works for all people. The specific targets of each SDG are to be achieved by 2030.

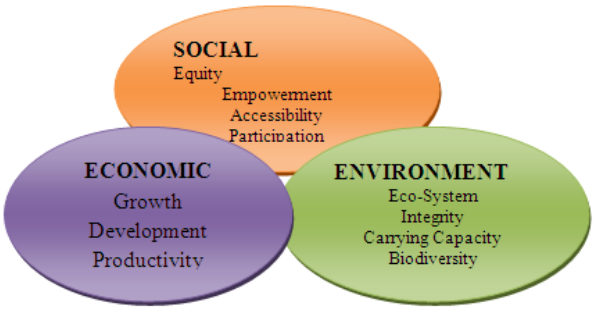
The sustainable development should be based on balanced economic growth and price stability, a highly competitive social market economy, aiming at full employment, a high level of education and social progress and a high level of protection and improvement of the quality of the environment. Sustainable development should be a key objective for all national policies, and should aim at the continuous improvement of the quality of life on earth of both current and future generations. It is about safeguarding the earth's capacity to support life in all its diversity. It is based on the principles of democracy and the rule of law and respect for fundamental rights including freedom and equal opportunities for all. It brings about solidarity within and between generations. It seeks to promote a dynamic economy with a high level of employment and education, of health protection, of social and territorial cohesion and of environmental protection in a peaceful and secure world, respecting cultural diversity. Viewed in a broad spectrum, women have played a vital role in the global environmental

movement. The World Commission on Environment and Development, in its report entitled Our Common Future, published in 1988, linked the environmental crisis to unsustainable development and financial practices that were worsening the North-South gap, with women a majority of the world's poor and illiterate. Over the years, women have continued to speak out for policies and practices that do not threaten the health and well-being of future generations. They continue to fight for improved living standards and protection of the environment. In almost all countries, women are disproportionately represented among the poor. And studies have found that the poor, in urban and rural areas of rich and poor countries, bear the greatest burden of environmental degradation and pollution.

Gender equality is both a human rights issue and a precondition for and indicator of sustainable development. It is also affirmed that gender disparity is prevalent across the cultures of the world and that without serious steps to tackle it, sustainable development cannot be achieved (Stevens, 2010). Furthermore, UN Women (2014) rightly outlined that to create a just and sustainable world and to enhance women's roles in sustaining their families and communities, achieving gender equality is paramount. On the other hand, if gender equality is not maintained, it will retard the country's development. Without the equal inclusion of women in all areas of development initiatives, all the above-mentioned components of sustainable development cannot be achieved. However, gender inequalities across economic, social and environmental dimensions remain widespread and persistent

The SDGs are built on the Millennium Development Goals (MDGs). However, contrarily to the MDGs that were intended for action in developing countries only, the SDGs apply to all countries. “They seek to realize the human rights of all and to achieve gender equality and the empowerment of all women and girls”. The SDGs cover the three dimensions of sustainable development: economic growth, social inclusion and environmental protection. (Fig. 1)

Figure: 1 Model for Sustainable Development



According to UN World Survey (2014) on the ‘Role of Women in Development 2014’, there are proven synergies between women's empowerment and economic, social and environmental sustainability. Women's active participation in decision-making facilitates the allocation of public resources to investments in human development priorities, including education, health, nutrition, employment and social protection. In fact, according to UN World Survey on the Role of Women in Development 2014, there are proven synergies between women's empowerment and economic, social and environmental sustainability. Women's active participation in decision-making facilitates the allocation of public resources to investments in human development priorities, including education, health, nutrition, employment and social protection. For example, as female education levels rise, infant and child mortality rates fall and family health improves. Education also increases women's participation in the labour force and their contributions to household and national income. Women's increased earning capacity, in turn, has a positive effect on children's nutrition, health and educational prospects.

The European Union New Gender Action Plan 2016-2020

On 21 September 2015, the European Union (EU) released its new framework, *Gender equality and women’s empowerment: transforming the lives of girls and women through EU external relations 2016-2020* – the new EU Gender Action Plan (GAP) for 2016-2020. This succeeds the 2010-2015 GAP, which suffered from weak institutional leadership, accountability and capacity. The new GAP outlines an ambitious approach to gender equality, women’s and girls’ empowerment, and the promotion, protection and fulfillment of women’s and girls’ human rights, thus meeting the mandate outlined in the 2014. It

seeks to concentrate the efforts of all EU actors (EEAS, Delegations, Commission services and Member States) and taking action and transforming lives through four pivotal areas:

- Ensuring girls' and women's physical and psychological integrity.
- Promoting the economic and social rights / empowerment of girls and women.
- Strengthening girls' and women's voice and participation.
- Shifting the Commission services' and the EEAS' institutional culture to more effectively deliver on EU commitments.

Social development is a key pillar of sustainable development and social transformation as a component of sustainable development is unthinkable without the involvement of women, where the gender-based problem is still very much prevalent and impedes social development. Beyond the Millennium Development Goals (MDGs) that emphasized only equality of opportunity, the 2030 (SDGs) Agenda acknowledges that equality must be based on both *opportunity and outcome*. Many other targets of Sustainable Development Goals (SDGs) are linked to women empowerment: there are targets on gender dimensions of poverty, health, education, employment and security. These goals are the showcase that how women are affected by 17 proposed SDGs as well as how women and girls can — and will — be key to achieving each of these goals. The United Nations has accepted 17 Sustainable Development Goals (SDG) with specific targets to achieve within stipulated time. The common goal of SDGs that no one will be left behind is a move towards equitable, egalitarian and inclusive society for all. It is a global call to end poverty, protect the planet and ensure that people enjoy peace, get justice and prosper. The United Nations has accepted 17 Sustainable Development Goals (SDGs) with specific targets to achieve within stipulated time. The common goal of SDGs that no one will be left behind is a move towards equitable, egalitarian and inclusive society for all. It is a global call to end poverty, protect the planet and ensure that people enjoy peace, get justice and prosperity. The 17 Sustainable Development Goals are:

1. End poverty in all its forms everywhere
2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture
3. Ensure healthy lives and promote well-being for all at all ages
4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
5. Achieve gender equality and empower all women and girls
6. Ensure availability and sustainable management of water and sanitation for all
7. Ensure access to affordable, reliable, sustainable and modern energy for all
8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster Innovation
10. Reduce inequality within and among countries
11. Make cities and human settlements inclusive, safe, resilient and sustainable
12. Ensure sustainable consumption and production patterns
13. Take urgent action to combat climate change and its impacts
14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development
15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification and halt and reverse land degradation and halt biodiversity loss
16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
17. Strengthen the means of implementation and revitalize the global partnership for sustainable development

Conclusion

The low level of women's participation in decision-making activities is seen as one of the greatest barriers to improving gender balance, which consequently hinders economic development. Women's empowerment can be a crucial driver of economic growth and sustainability. The contribution of women in all fields needs to be enhanced by ensuring their full economic growth. Gender bias is still deeply embedded in culture, economic, political and social institutions around the world. Women empowerment must not mean simply adding to their burdens of responsibilities or building expectations of women as 'sustainability saviors'. To mainstream the involvement of women and girls in sustainable development, it demands a change in attitudes and behaviour towards women and girls across all levels. All 17 SDG's will collectively help to achieve gender equality through women empowerment. Thus, the concept of sustainable development is a multidimensional concept. It embraces economic and social development as well as environmental protection.

References

1. Amartya Sen, (1999). Development as Freedom. Oxford University Press, Oxford.
2. Kevin Murphy, (2012). The social pillar of sustainable development: a literature review and framework for policy analysis. Sustain. Sci. Pract. Policy 8 (1), 15e29
3. Lisa WarthKoparanova, Malinka, (2012). Empowering Women for Sustainable Development, Discussion Paper Series, and No. 2012.1. United Nations Economic Commission for Europe, Geneva, Switzerland.
4. Nanette Page, Czuba, Cheryl E, (1999). Empowerment: what is it? J. Ext. 37 (5).
5. Stevens, Candice, (2010). Are Women the Key to Sustainable Development? Sustainable Development Knowledge Partnership (SDKP), USA.
6. Transforming Our World: The 2030 Agenda for Sustainable Development, The United Nations Summit, for the adoption of the post-2015 development agenda.
7. Women, U.N, (2014). World Survey on the Role of Women in Development 2014: Gender Equality and Sustainable Development. United Nations, New York.
8. World Commission on Environment and Development (WCED), 1987, Report of the World Commission on Environment and Development: Our Common Future.

SUSTAINABLE DEVELOPMENT THROUGH RESEARCH & HIGHER EDUCATION IN INDIA

Prameela.R
Assistant Professor, Oxford College of Arts, Bangalore

Abstract

Research and Higher Education is well acknowledging fact that plays an important role in Economic growth of an every country. Moreover sustainable development policies highlight the role of education which had become the need of the day to create the awareness among the students, Researches as well as local communities for environmental protection. The significance of research arises from its promotion of creative thinking, finding solutions to impending problems in well determined ways. Sustainable development based on research and education is the backbone of every nation. Education for sustainable development is an idea of which aims to empower the individuals to assume liability to build a sustainable future. The presents studies also challenges for sustainable development .The main objective of the study in to build a clear vision of teaching and Research in higher education for sustainable development. The present paper given an overview reading the role of research& higher education in the development of a Country in Sustainable manner. This study also attempt to summarize the states of Higher Education system in country and various state, National finding Agencies which are working for the R&D program in the country.

Keywords: *Sustainable development, Research & Higher education and Research bodies in India.*

Introduction

Higher Education sector has witnessed a tremendous increase in the number of Universities /University level Institutions & Colleges since Independence. The number of Universities has increased 34 times from 20 in 1950 to 677 in 2014. The sector boasts of 45 Central Universities of which 40 are under the purview of Ministry of Human Resource Development, 318 State Universities, 185 State Private universities, 129 Deemed to be Universities, 51 Institutions of National Importance (established under Acts of Parliament) under MHRD (IITs - 16, NITs – 30 and IISERs – 5) and four Institutions (established under various State legislations). The number of colleges has also registered manifold increase of 74 times with just 500 in 1950 growing to 37,204, as on 31st March, 2013. In India, "University" means a University established or incorporated by or under a Central Act, a Provincial Act or a State Act and includes any such institution as may, in consultation with the University concerned, be recognized by the University Grants Commission (UGC) in accordance with the regulations made in this regard under the UGC Act, 1956. Every year, millions of students from within the country and abroad, enter these portals mainly for their graduate, post graduate studies while millions leave these portals for the world outside. Higher Education is the shared responsibility of both the Centre and the States. The coordination and determination of standards in Universities & Colleges is entrusted to the UGC and other statutory regulatory bodies.

India has played an important role in shaping the Sustainable Development Goals (SDGs). Therefore, it is no surprise that the country's national development goals are mirrored in the SDGs. As such, India has been effectively committed to achieving the SDGs even before they were fully crystallized. Reflecting the country's commitment to the SDG agenda at the highest levels of Government, the Indian Parliament organized several forums including the South Asian Speakers' Summit in February 2017. These forums have focused on the elimination of poverty, gender equality, climate change and resource mobilization for SDGs. Additionally, the Speaker's Research Initiative has been launched for providing SDG-related insights to Members of Parliament. At present, the main categories of University/University-level Institutions are: - Central Universities, State Universities, Deemed-to-be Universities and University-level institutions. These are described as follows:

Central University: A university established or incorporated by a Central Act.

State University: A university established or incorporated by a Provincial Act or by a State Act.

Private University: A university established through a State/Central Act by a sponsoring body viz. A Society registered under the Societies Registration Act 1860, or any other corresponding law for the time being in force in a State or a Public Trust or a Company registered under Section 25 of the Companies Act, 1956.

Deemed-to-be University: An Institution Deemed to be University, commonly known as Deemed University, refers to a high-performing institution, which has been so declared by Central Government under Section 3 of the University Grants Commission (UGC) Act, 1956.

Institution of National Importance: An Institution established by Act of Parliament and declared as Institution of National Importance.

Institution under State Legislature Act: An Institution established or incorporated by a State Legislature Act.

MSDI →

1. Gross National Happiness (GNH): The four pillars of GNH
   (i) Sustainable socio-economic development promotion
   (ii) Conservation and promotion of cultural values
   (iii) Environmental conservation
   (iv) Good governance
2. Human Development Index (HDI): Measurement of
   (i) Life expectancy
   (ii) Literacy and education
   (iii) Standard of living
3. Ecological Footprint (EF): Comparison of human consumption of natural resources with Earth's ecological capacity to rejuvenate them
4. Happy Planet Index (HPI): An innovative measure of human well-being and environmental impact

Objectives of the Study

- To identify and c0mmunicate good practice case studies in HEI teaching and research, community relations and institutional management.
- To develop visions of higher education and to optimize its contribution to sustainable development.
- To look at areas where policy solutions may be needed to support higher education's c0ntribution to sustainable development.

Challenges for Sustainable Development:

Sustainable development has become a key issue at state, national and international level concerning education policy since last decade. Various stakeholders recognize the sustainable development in different ways and search for different outcomes. There are some specific challenges in the implementation of sustainable development in higher education and can be understood as:

- Lack or poor communication skills in higher educational institutes for the term sustainable development and also in its application.
- Lack of trained professionals in higher educational institutes.
- Requirement of inter-disciplinary research in sustainable development manner.
- Collaboration, networking and coordination among different educational institutes.

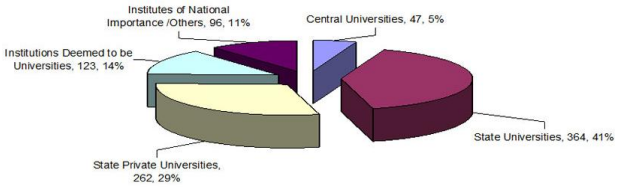
Growth in Higher Education and Research

Diagram1: Education in India

Interpretation: The basic mode of education in India is supposed to be the education given at school, so as per the above statistics the number of schools in India is1.4 million, but on today's date the statistics shows us that even with higher education the count is not poor, its about 712 universities giving adequate preference to higher education and research. Apart from the above data under the universities we have 36.7 K colleges and 11.5 K stand-alone institutions providing higher education.

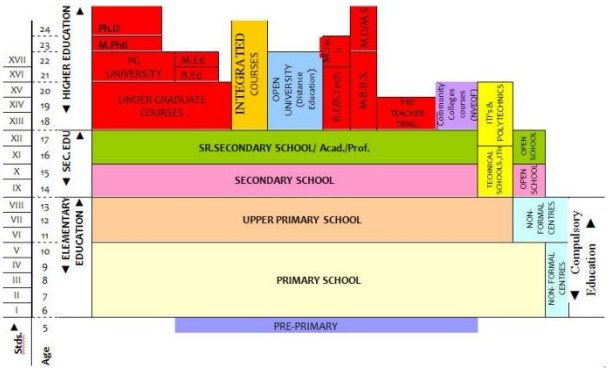
Interpretation: The education system in India has its reference in history throughout the world, we have been known for our gurukuls mentioned since ages and the pattern of education followed since then. The above diagram shows the percentage distribution of the different categories of higher education and research, the data shows that out of 100%, central universities are 5%, in number - 47. State universities caring a percentage of 11 and number 96.

Diagram 2: Total number of universities in India



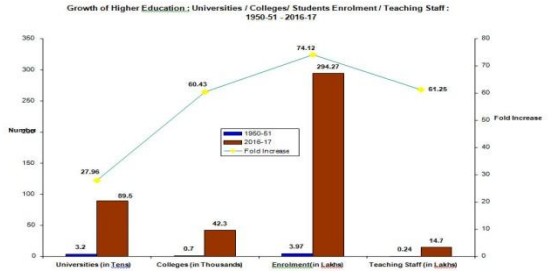
The state private universities are 29% having 262 as the record. 14% are institutions deemed to be universities, with 123 as the count. Institutions of national importance /others are 11% out of the total universities in India having a number of 96 providing higher education and research.

Diagram 3: Age and Education system in India



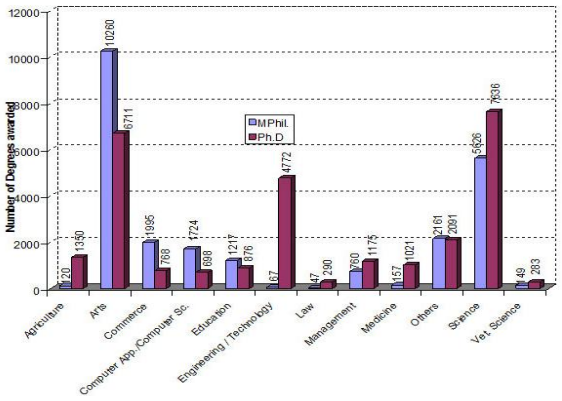
Interpretation: From the age group of 6-10, schools in India are providing primary education, above 6 its secondary education and only after the age of 17 years as mentioned in the above data we have shown the universities providing us with higher education. The courses provided by these universities are either in regular or distance learning mode as per the conveniences of the students. The basic courses in universities begin from the under graduate courses, post-graduation, M. Phil & PhD

Diagram 4: Growth of Higher education



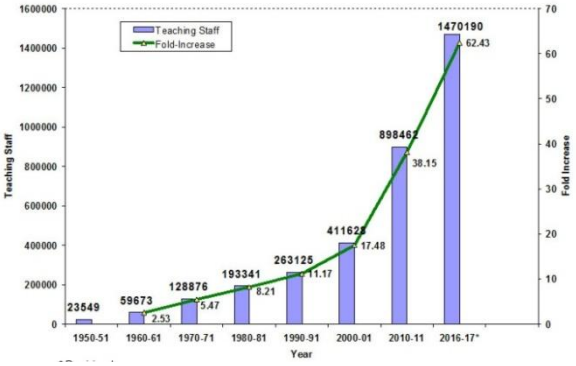
Interpretation: The above diagram represents a comparative picture of the growth in higher education: universities / colleges / students Enrollment /Teaching staff w.r.t 1950-51 and 2016-17 statistics. There are 895 universities in the current year compared to the base year having 32 universities, having a growth percentage of 2798. And the enrollment record states that 297.27 lakhs compared to the base year 3.97 lakhs with a massive growth of 7362%.

Diagram 5: Number of degree Awarded in M.Phil and PhD



Interpretation: The education system shows a variable change in research with the graph depicted above. Universities ranked as the supreme educational institution offers research programmes such as M.phil and Ph D in various streams. Out of 12 streams we have selected 3 streams in our study. 10,200 research scholars had been awarded M.pil and 6,711 Ph D degree in Arts stream which is the highest as per our study, the second highest degree awarded from the science stream holds 5626 M. Phil and 7636 Ph D. as the record and with Engineering & Technology it is 67 M Phil and 4772 Ph D

Diagram 6: Escalation of Teaching Staff



Interpretation: The escalation of the teaching staff is 62.43 times higher as compared to the base year. As per the data the base year shows 23549 teaching staff with the current year has 1470190. the data shows a massive increase of teaching staff (898452) in the year 2010-11 is 38.15 times compared to the base year.

Conclusion

So far as the higher education system in India and abroad is concerned, in the last decade, the HE institutions have intensified their efforts to support sustainable development. Significant efforts were made by the stakeholders of HE from policy makers to students, to support the cause of sustainable development. Higher Education could create a sense of responsibility in young adults to address sustainability by introducing sustainability in Institutional operations, by maintaining green campuses, by offering educational programmes and courses to spread awareness of sustainable development, by introducing creative programmes to involve youth in becoming change agents‟, and by extending the value and impact of educational research to the local communities. After this brief survey on education and research in the country, it can be concluded that a lot of scientific programmes are being implemented by Govt. of India as well as state governments to promote the research and higher education standard. Since, the environmental protection has become an essential part of the curriculum of a country therefore national policies on environmental education have been made.

References

1. Towards Sustainable Development in Higher Education – Reflections, (2007), Department for Education and Science Policy, Ministry of Education, Finland, p.6.
2. Sustainable Development: An Introduction, Internship Series, Volume-1 (2007). Centre for Environment Education, Ahmadabad.
3. Ghanchi, D.A. (2013). Sustainable development through designated research: An innovative mission for Indian Higher Education System, University News, 51, 89-97.
4. Higher education for sustainable development, Final Report of International Action. Research Project, http://www.oecd.org/education/countrystudies/centreforeffectivelearningenvironmentscele/ 45575516.pdf accessed on 01 /04 /2013.

A STUDY ON "END HUNGER TO ACHIEVE FOOD SECURITY AND IMPROVE NUTRITION TO PROMOTE SUSTAINABLE AGRICULTURE FOR PRESENT AND FUTURE GENERATIONS

Ravi Kiran
Assistant Professor, Department of Commerce and Management, Indo Asian Academy Degree College, Bangalore

Prem Immanuel
I MBA, Indo Asian Academy Degree College & PG Centre, Bangalore

Abstract

There is enough food in the world to go around but almost billion people go hungry every day and further billion people are undernourished not getting enough of vitamins and minerals they need live healthy and productive lives. 160Million hectares of cultivated land in India. At present some 11% (1.5 billion hectares) of the globe land surface (13.5 billion hectares) is used in crop production. Sustainable food production and resilient agricultural practices. "Food security is a key component of the 2030 agenda for sustainable development."3000 children in India die every day from poor diet related illness. The present study about end hunger so the secondary research conducted on the above for considering hunger deaths vs. food preserves in INDIA at present and future generations. This study tries to represent about present and future what are the preservatives are taken to avoid hunger and the agriculture resources to get good nutrition and food securities.

Keywords: *Hungry, food security, nutrition and sustainable agriculture*.

Introduction

Nutrition is the science that interprets the interaction of nutrients and other substances in food in relation to maintenance, growth, reproduction, health and disease of an organism. It includes food intake, absorption, assimilation, biosynthesis, catabolism, and excretion. The diet of an organism is what it eats, which is largely determined by the availability and palatability of foods. For humans, a healthy diet includes preparation of food and storage methods that preserve nutrients from oxidation, heat or leaching, and that reduce risk of food borne illness. Food security can be visualized in four stages:

1. Making an adequate quantity of cereals available to all to ensure survival.
2. Adequate availability of cereals and pulses.
3. Food security to include cereals, pulses, milk and milk products.
4. Food security to include cereals, pulses, milk and milk products, vegetables and fruits, (fish, egg and meat in case of non-vegetarians).

Sustainable Agriculture

Human population is growing at an enormous amount. We have billions of stomach to be fed and on top of that climate change factor which may destroy more crops each coming year. Also due to present agricultural practices we are doing more harm to land and nearby water resources. Only way to get out of this and survive is sustainable agriculture. According to Wikipedia: Sustainable agriculture is the act of farming using principles of ecology, the study of relationships between organisms and their environment. Sustainable agriculture may

- Satisfy human food and fiber needs
- Enhance environmental quality and the natural resource base upon which the agricultural economy depends
- Make the most efficient use of non-renewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls
- Sustain the economic viability of farm operations
- Enhance the quality of life for farmers and society as a whole.

Hunger in India

India, with a population of over 1.3 billion, has seen tremendous growth in the past two decades. Gross Domestic Product has increased 4.5 times and per capita consumption has increased 3times.

Similarly, food grain production has increased almost 2 times. However, despite phenomenal industrial and economic growth and while India produces sufficient food to feed its Population, it is unable to provide access to food to a large number of people, especially women and children.

State of Hunger in India

According to FAO estimates in 'The State of Food Security and Nutrition in the World, 2017" report, 190.7 million people are undernourished in India. By this measure 14.5% of the population is undernourished in India. Also, 51.4% of women in reproductive age between 15 to49 years are anemic. Further according to the report 38.4% of the children aged fewer than five in India are stunted (too short for their age), while 21% suffer from wasting, meaning their weight is too low for their height. Malnourished children have a higher risk of death from common childhood illnesses such as diarrhea, pneumonia, and malaria. The Global Hunger Index 2016ranks India at 97 out of 118 countries on the basis of three leading indicators -- prevalence of wasting and stunting in children under 5 years, under 5 child mortality rates, and the proportion of undernourished in the population.

Government of India Programmes and Initiatives

With a five-fold increase in food grain production from 50 million tons in 1950-51 to about 250 million tons in 2014-15, India has moved away from dependence on food aid to become a net food exporter. In 2016, the government launched a number of programmed to double farmers' incomes by 2022. These seek to remove bottlenecks for greater agricultural productivity, especially in rain-fed areas. as well as a massive irrigation and soil and water harvesting programme to increase the country's gross irrigated area from 90 million hectares to 103 million hectares by 2017. The government has also taken significant steps to combat under- and malnutrition over the past two decades, such as through the introduction of mid day meals at schools, *anganwadi* systems to provide rations to pregnant and lactating mothers, and subsidised grain for those living below the poverty line through a public distribution system The NFSA 2013, aims to ensure food and nutrition security for the most vulnerable through its associated schemes and programmes, making access to food a legal right.

Key Facts about Hunger in India

Largest India is home to the largest undernourished population in the world

- 14.5% of our population is undernourished
- 190.7million people go hungry everyday
- 21.0% of children under 5 are underweight
- 38.4% of children under 5 years of age are stunted
- 1 in 4 children malnourished
- 3,000 children in India die every day from poor diet related illness
- 24% of under-five deaths in India
- 30% of neo-natal deaths in India

India's Food Security

Food security, at both the national and household levels, has been the focus of agricultural development strategy in India ever since mid-1960s when import dependence for cereals had gone up to 16 per cent and the country faced severe droughts continuously for two years. The new strategy launched at that point of time was aimed at 'maximizing the production of cereals', and involved building a solid foundation of food security on three key elements, viz. (a) provision of an improved technology package to the farmers; (b) delivery of modern farm inputs, technical know-how and institutional credit to the farmers; and (c) assurance of a remunerative marketing and pricing environment for farmers. For achieving these objectives, several policy instruments were used that influenced production potential, and marketing system of agricultural commodities in general and food products in particular.

Food Problems in India

India has been facing food problems since long period. During Second World War India experienced a severe food crisis leading to a phenomenal increase in the prices of food grains. Again in 1943, Bengal

faced a serious Agriculture and its Development in India famine where nearly 3.5 million people died out of starvation. In order to meet the situations, the rationing system was introduced and about 45 million people were covered by this rationing system. But due to corrupt and inefficient administrative structure, the entire system failed leading to a widespread hoarding and speculation of food grains causing huge suffering of millions of people of the country.

Food Problem and Food Policy in India since Independence

To meet the situation, the First Five Year Plan accorded highest priority to agriculture. During the First Plan period, the country experienced a series of good harvests leading to an improvement in the food supply situation, curtailment of imports and a consequent fall in the prices of food grains by 23 per cent.

Considering the situation, the planners became very much optimistic and an impression was created that the food problem was finally solved. But the situation was short-lived because whatever improvement in food situation was achieved that was mainly due to better climatic conditions and timely arrival of monsoons.

Food problem in India bas the following three different aspects

(i) Quantitative Aspect: Supply of food grains in India is totally inadequate as the per capita calorie intake in India is very low in comparison to other developing countries. The report of the Food Advisory Committee (1958) states that in India a normal working adult person requires 2300 calories and 62 grams of protein daily. But unfortunately, only 35 per cent of the Indian population is provided with this minimum consumption standard.

(ii) Qualitative Aspects: There is a deficiency in the nutrient content of the diet of average Indian and this deficiency is mostly marked in respect of sugar, fish and milk.

(iii) High Prices of Food grains: In India, the prices of food grains have been increasing rapidly and prices were double in 1970-71 as compared to that of 1960-61. The index of food grains prices (1970-71 = 100) has increased from 108 in 1971-72 to 390 in 1988-89. Again, the new index of prices of food grains (1981-82 = 100) again increased from 118 to 179 in 1990-91.

This continuous rise in the prices of food grains has eroded the purchasing capacity of the Indian people and thus aggravated the food problem severely.

Policy Measures Adopted by the Government to Solve the Food Problem:

- Measures to increase output,
- Measures to improve the distribution system,
- Import of food grains, and
- Price incentive to agricultural producers.

Hypothesis

This Study is mainly Representing about whether the food grains produced in India is properly fulfill our Hunger or not, for this purpose the hypothesis is framed as follows;

H0: policy measures adopted by government is not effective to avoid hunger

H1: policy measures adopted by government is effective to avoid hunger

Research Methodology

Based on the title of the study the secondary data will be collected from the Government of India and Ministry of commerce & industry India. And correlated the population, food grains production of India. And also collected the data relating to the imports and Exports of cereals.

Analysis and Interpretation

Table 1 Net Availability of Cereals and Pulses

Year	Population (million)	Cereals				Pulses	per day (grams)		
		Net Production (million tonnes)	Net imports (million tonnes)	Change in Govt stocks (million tonnes)	Net availability (Col. 3+4-5) (million tonnes)	Net availability (million tonnes)	Cereals	Pulses	Total
1	2	3	4	5	6	7	8	9	10
2000	1014.8	171.8	(-)1.4	(+)13.9	156.6	11.7	422.7	31.8	454.4
2001	1033.2	162.5	(-)4.5	(+)12.3	145.6	11.3	386.2	30.0	416.2
2002	1050.6	174.5	(-)8.5	(-)9.9	175.9	13.6	458.7	35.4	494.1
2003	1068.2	143.2	(-)7.1	(-)23.2	159.3	11.3	408.5	29.1	437.6
2004	1085.6	173.5	(-)7.7	(-)3.3	169.1	14.2	426.9	35.8	462.7
2005	1102.8	162.1	(-)7.2	(-)2.4	157.3	12.7	390.9	31.5	422.4
2006	1119.8	170.8	(-)3.8	(-)1.8	168.8	13.3	412.8	32.5	445.3
2007	1136.6	177.7	(-)7.0	(+)1.7	169.0	14.7	407.4	35.5	442.8
2008	1153.1	197.2	(-)14.4	(+)17.0	165.9	17.6	394.2	41.8	436.0
2009	1169.4	192.4	(-)7.2	(+)11.5	173.7	15.8	407.0	37.0	444.0
2010	1185.8	178.0	(-)4.7	(-)0.5	173.8	15.3	401.7	35.4	437.1
2011(P)	1201.9	198.2	(-)4.2	(+)8.3	185.8	17.3	423.5	39.4	462.9

Interpretation

The above table indicates the total population in India and net availability of food grains data relating to 11 years from 2000 to 2011. We noticed that the net production of food grains were fluctuating year on year even though the population is in increasing direction. The net imports from other country also fluctuating with respect to the net production and the population. And finally we observe that the availability of food grains is not sufficient and not effective increase if you compare with the population changes.

Diagram 1: India Imports of Cereals

Interpretation

The above diagram shows that the imports of last nine years from the foreign countries from 2008 to 2016. In 2016 India Imported very less quantity of cereals compared to all other years the minimum 3.58 million tones in 2016 and the maximum import is happened 124.14 million tones in 2015.

Interpretation

The above diagram shows that the exports of last nine years to the foreign countries from 2008 to 2016. In 2016 India exported very less quantity of cereals compared to all other years the minimum 1017.3 million tones in 2016 and the maximum export is happened 10562.89 million tones in 2013.

Diagram 2: India Exports of cereals:

Conclusions

India should reduce the exports of food grains and should support to formers to improve their cultivation and forming activities to support future generations. Non government Organizations have to come up to take care of food security and preservation needs to end hunger around the nation. Based on a brief review of the current policy regime relating to pricing, marketing and trade and current agricultural scenario, a road map for making agriculture profitable and efficient and for restoring farmers' faith in

farming emerges clearly. In predominantly agricultural and rural economies, accelerated agricultural growth and an efficient agricultural sector is the key for reducing hunger, food insecurity and malnutrition at a rapid rate. Training of farmers, farm women and rural youth in post-harvest handling and value addition should be scaled-up and encouraged by increasing the scientific staff strength of Krishi Vigyan Kendras (KVK), which now exist in all the rural districts of the country. Every KVK should be provided with an agricultural marketing or agri-business specialist. There is one major policy implication of this study, and that is that the government needs to accelerate its move to direct cash transfers to help the poor. Encouragingly, this is already in the works and the next couple of years should witness a major transformation in the provision, and efficiency, of public goods and public transfers.

References

1. GoI (Government of India) (2006) Agricultural Statistics at a Glance, Ministry of Agriculture, New Delhi GoI (Government of India) (2006-07) Economic Survey, Ministry of Finance, New Delhi.
2. GoI (Government of India) (2007) Agricultural Statistics at a Glance, Ministry of Agriculture, New Delhi.
3. GoI (Government of India) (2007-08) Economic Survey, Ministry of Finance, New Delhi.
4. Planning Commission (2007) Eleventh Five-Year Plan: 2007-2012, Chapter 1 Agriculture, Government of India, New Delhi.

EVOLUTION OF ENVIRONMENTAL IDENTITY OF 'VELUTHA' IN THE *GOD OF SMALL THINGS* BY ARUNDHATI ROY

Jini Varghese
Research Scholar, Bharathiar University, Coimbatore

Abstract

One's identity is developed over time and cannot be replaced easily. The term 'Identity' is the reflection or totality of a person's being, having and doing. Madan Sarup, the famous sociologist in his work Identity, Culture and the Postmodern World, published in 1996, is of the opinion that identity basically is a kind of interface between the personal and the social. It consists of what an individual feel about himself as well as the social factors. There are two components as far as identity is concerned, namely the private and public identity. The private identity is about what a person conceives about himself/herself while the public identity is what society observes and constructs about a person from outside. This separation between who we are and what the society wants us to be has always been a very important topic that always comes up as part of discussions and debates on issues related to identity politics in India. An important factor that contributes to the formation of one's own identity is nature and environment. Especially in the lives of the downtrodden who lived in close association with the natural environment, the formation of 'self' or 'private identity' is greatly influenced by the presence of nature. The natural environment follows the principle of unity in diversity, where all organisms are equal without any kind of discrimination. The apartheid or discrimination of a person is always something constructed. This paper attempts to examine the formation of private and public identity of the character Velutha, an untouchable in the novel The God of Small Things by Arundhati Roy in the context of Eco-criticism and sustainable development, giving special emphasis to concepts like Equality, Endurance and sustainable development.

Keywords: *Identity, Society, Discrimination, Environment*

Introduction

The paper has elements of 'Eco-criticism' which is examined in the light of an extension of the economic term 'Sustainable Development'. The paper explores the character of Velutha from Arundhati Roy's debut novel *The God of Small Things.* The paper emphasizes on how inequality and discrimination affects the identity of this character leading to an identity crisis. The character experiences dilemma, confusions and concludes in a process of self- evaluation triggered in the presence of environment. An evolved identity emerges which is in close association with the nature around. The paper reflects upon the components of sustainable development.

Nature is an irrevocable image in many literary works. There is a strong bond between nature and literature as evident from the works of many famous writers. The association between nature and literature has paved way for many literary studies, which ultimately resulted in the birth of a genre of literary criticism named as 'Eco-criticism'. The term 'Eco-criticism' appeared for the first time in the article "Literature and Ecology: An Experiment in Ecocriticism" by William Rueckert in 1978. In simple words, the term 'Eco-criticism' indicates the portrayal of elements of nature in literary works. This literary theory became part of the academic discipline during the 1990's. Literary scholars have divided 'Eco-criticism' into two parts. The first wave/part of eco-criticism comprises of an analysis of elements of nature in literary writings and how environment plays an important role in the life of a human being. The second wave is a much broader one that brought out a parallel interpretation of the term 'environment' which moves beyond and explains how the life of a human being is affected by factorslike gender, race, class etc in the context of environment. An important component of the second wave of 'Eco-criticism' is the concept of 'Environmental Identity'. The main aim of this paper is to analyze the formation of environmental identity in the life of the character Velutha from the novel *The God of Small Things* by Arundhati Roy. One's identity is developed over time and cannot be replaced easily. The term 'Identity' has a long history attached to it and is derived from the medieval French word 'Identite', meaning sameness. The identity of a person is always taken for granted because it is believed that a person has a 'given' identity and is considered as an inherent quality. However the debates and discussions around this

term today assume that, identity is the result of a process as part of interaction with others. The formation of identity is considered to be an important component in life and is different from the concept of personality. Personality is an attempt to answer the questions related to 'What kind of person are you?' We may share many personal traits with other people. Identity on the other hand deals with some recognition and awareness from our part and is also constructed by the society in which we live. Madan Sarup in his work *Identity, Culture and the Postmodern World* published in 1996, is of the opinion that identity basically is a kind of interface between the personal and the social. It consists of what an individual feels about himself as well as the social factors. According to Sarup, each and every person has two major components in their identity namely their 'personal' identity and their 'public' identity. Sarup defines as follows: *Personal identity is how we see ourselves while public identity is how others judge us or observe us. (14)*

In social life, people are urged to live following the societal norms and conditions. The process of defining oneself within the context of a complex modern society is governed by factors like race, gender, caste, education, economic position etc.A person, in the journey of defining and defending himself/herself with respect to the predicates in association with the societal conditions around, has to incorporate conflicting models, recognitions, standards and values offered by his/her society. Thus identity formation has become challenging which might even lead to 'identity crisis' or an undefined personality. Environmental identity is yet another dimension of the identity of a person. CheryllGlotfelty, a famous eco-critic in her work *The Ecocriticism Reader: Landmarks in Literary Ecology explains environmental identity as the 'Thoughts and individuality of a person associated with the nature around. It is a reflection of the 'self' of a person in the context of environment' (Glotfelty, 35).*

Arundhati Roy's *The God of Small Things* has largely been esteemed as a fine, daring and adroitly intrepid work that gained widespread popularity in India and abroad. This novel is a dynamic work instilled with a turbulent spirit to break all the conventional methods of writing, both in theme and narration. The novel deciphers the scars, inner strife and tensions, dilemmas, agonies and adversities of a set of people, helpless and hunted by the social convictions leading to identity crisis. However towards the end of the novel we can see them embracing an evolved identity which is closely associated with their 'self' in the context of environment. A prominent character in the novel going through the process of identity crisis and embracing an environmental identity is Velutha, an untouchable. This paper examines in detail the various factors and incidents that led to the identity crisis of Velutha finally concluding with him evolving into a new self in the cradle of nature.

Roy's novel is based on the society which she has observed and analyzed. The questions raised by her are largely social questions. The novel takes place in a town called as Ayemenam in Kerala. It is the story of the fraternal twins, Estha and Rahel and their mother Ammu. The plot develops with the life of the twins in Ayemenam after Ammu left her husband and returned to her house. The story is a series of flashbacks and the narration moves back and forth. A memorable character in the novel is Velutha, an untouchable. He is a great friend of the twins. He is a skilled carpenter and works in the pickle factory of the twin's grandmother. His affair with Ammu and the problems it creates culminating in his brutal death form a major part of the main plot in the novel. Roy presents the life of a Dalit through the character of Velutha. In the novel, Velutha is marginalized owing to his birth as a 'paravan', an untouchable in Kerala. The novel examines the outlook of the society towards Velutha and his constructed identity as a Dalit as well as incidents that throw light at his own identity.

Ammu's family members especially her mother, Mammachi and her aunt Baby Kochamma symbolize society and how the society in Kerala looks at a Dalit. In the novel there are many instances that indicate Velutha's construction of his public identity as a Dalit. In the novel Mammachi recollects the memories of the rigid caste system that existed during her time. The memories of Mammachi are clear indications of how the Indian society wanted a Dalit to be and how his life should be. The society always

considers them as separate and not belonging to the mainstream. They are often treated in a way which is much worse than that of an animal. The following lines of Mammachi are indicative of this:

Paravans were expected to crawl backwards with a broom, sweeping away their footprints so that Brahmins or Syrian Christians would not defile themselves by accidentally stepping into a paravan's footprint…Pravans, like other untouchables were not allowed walk on public roads, not allowed to cover their upper bodies, not allowed to carry umbrellas. They had to put their hands over their mouths when they spoke, to divert their polluted breath away from those whom they addressed (73-74)

These lines clearly indicate the attitude of the society towards a person belonging to the lower caste. The way a paravan should live, behave and dress up is already decide by the society. They are born to be tortured and their identities to be molded by the society. The identity of a Dalit came to Velutha from his father, VellyaPappan. VellyaPappan is a victim of marginalization in society to such an extent that he himself has adhered to be considered a Dalit and be oppressed by the society. VellyaPappan was a toddy tapper and a faithful servant of the Ayemenam house. As a child Velutha used to work with his father for Pappachi, the twins' grandfather. Velutha and VallyaPappen were given permission to enter the Ayemenam house but to follow the stipulated path. They were not allowed to touch anything the touchable touched. Pappachi was a strict follower of the caste system and hierarchy and was not interested in the paravans entering the house. Even in order to deliver the coconuts, VellyaPappan and Velutha entered through the back entrance.

Another major instance in the novel that clearly constructs the attitude towards the Dalit is the way Mammachi hired and gave wages to Velutha. Velutha had great skills in carpentry. The dalit community was given the chores of cleaning dirt and filth. However Velutha found happiness in carpentry. His hands were magical when it touched wood. Mammachi recognized Velutha's talents and gave him the job of maintain the machines in Paradise Pickles. However the wages provided to him were very less compared to the other touchable workers. Moreover, the other workers always looked at him with contempt and disapproved of his presence in the factory because he was an untouchable. The other workers even disapproved of Velutha and disagreed to work with him. Mmmachi always paid him less and always found chances to discriminate him from others.

A major incident that forms the crux of the main plot in the novel is the love affair between Velutha and Ammu. A dalit having a physical and mental relationship with a woman belonging to the upper caste was strictly forbidden. Velutha in the novel had to face the penalty of betrayal and punishment of death for his relation with Ammu. It was VelyaPappan who revealed the relation to Mammachi. VellyaPappan in many ways disapproved of the life led by Velutha as the latter didn't follow the life style of a Dalit with respect to the norms and conditions in the society in Kerala. His son worked as a carpenter, didn't give importance to the rules and regulations to be followed by an untouchable and was also a member of the communist party. VellyaPappan was full of guilt and remorse when he confessed the sin committed by his son to Mmammachi. He returned his artificial eye glass to Mammachi who had paid for it and begged for forgiveness for the mistake committed by his son. VellyaPappan's victimization made himself a slave to the upper caste to such an extent that he was ready to kill his son for having a romantic relation with Ammu.

The death of Sophie Mol and the arrest of Velutha with charge of murder is another incident from the novel that emphasizes the fact of the constructed identity of a Dalit, a public identity. A dalit has neither rights nor freedom to express his thoughts. His life has already been constructed even before his birth. BabayKochamma in the novel creates a false story and get Velutha arrested for molesting Ammu and killing Sophie Mol. The police don't even give any importance to the innocence of Velutha. She reciprocated the story of his cruelty in a most believable manner. He was presented as a cruel, ill-mannered paravan who took revenge at the family for dismissing him from work at the factory. He was tortured brutally and had a sad demise in the police station. Ammu makes all her effort to convince the police officer that Velutha was innocent. Despite knowing that Velutha was innocent, the police officer

was not bothered to help him. The innocence of Velutha comes to limelight with the words of the police officer that what the paravan had taken from the touchable kingdom was not taken but given.

Every human being irrespective of age, sex, caste, class etc all belong to nature. In many ways the concepts of social justice and equality are considered as social issues where environment doesn't have any role to play. However from a literary perspective, sustainable development in its extended term eco criticism includes a fair and equal treatment for all human beings to meet the needs of present and conserving the rest for future. It assumes the form of an inter generational equality. In the novel Roy clearly describes how Velutha experiences equality in the laps of nature. In the presence of the Meenachal River and the environment around Velutha doesn't feel any rules or restrictions. He is free to act and behave like a normal human being and not an untouchable. Identity of Velutha only becomes complete with the association of it to the environment outside, especially the Mennachalriver. In front of nature all are equal without any restrictions on caste, race or gender. All are equal and have freedom to be what they are and who they are. Velutha also feels his identity, his self identity only in the presence of the river. It is in the presence of the river,Velutha meets Ammu, touches her and expresses his love. Velutha is not a dalit in the eyes of nature. Thus the character of Velutha faces his self identity only in the presence of nature. His emotions are related to the forces of nature around him.

Velutha in the novel has an identity crisis owing to his constructed identity or public identity as a dalit. However there are many situations in the novel where he asserts the thoughts of his self and tries to move away from the restrictions imposed upon him by the society, which happens when he is in close association with the environment around him. One major incident is his attraction and love towards Ammu. Though he tries to move away and restrict his feelings towards her, he still loves her. The following lines are indicative of this:

If he touched her, he couldn't talk to her, if he loved her he couldn't leave, if he spoke he couldn't listen, if he fought he couldn't win (189)

Though he wanted to love her he is incapable because he is a dalit, an untouchable. This shows the clear reference to the identity crisis faced him. The touch, voice and even the love of a dalit was considered to be polluted. However their meetings and relationship, both physical and mental develops near the river Meenachal. Both Velutha and Ammu consider the river as the true witness for their love. Another indication of the personal identity of Velutha is when he is with the twins. He doesn't feel any restrictions to play around and have fun with the twins even when he is officially prohibited. Velutha is not allowed inside the house in Ayemenam but outside, near the river and forest nearby Velutha plays and talks to the twins. They sit together and feel the wind and sound of nature which provides the context for developing their true friendship. Another main incident in the novel that throws light on Velutha's attempts to ascertain his self identity is his skills in carpentry. When he was a child Mammachi recognized his talents and sent him to the school of untouchables. He made toys out of things obtained from the nature around. It is the basic education and training that he acquired that gave him the courage to take part in political and social issues like becoming a member of the communist party. The light brown birthmark of Velutha is associated to a pointed dry leaf by the twins. Similarily Velutha always likes to live in close relation to nature. He makes the river his home by eating fish from the river and sleeping near the banks of river. All these are incidents from the life of Velutha where he expresses his desires and dreams without any restrictions of being a Dalit in the presence of environment.

Vandana Shiva, the famous environmentalist in her article "Everything I need to Know, I Learned in the Forest"is of the opinion that all species on earth should be considered equal. This philosophy of her is evident from the following words:

The Earth University teaches Earth Democracy, which is the freedom for all species to evolve within the web of life, and the freedom and responsibility of humans, as members of the Earth family, to recognize, protect, and respect the rights of other species (Shiva, 12)

Thus every human being is an equal in the eyes of nature. This paper on Identity Crisis talks about the ways in which the character Velutha in the novel face dilemmas and confusions owing to the conflict between who he is and what others assume about him, in terms of the outside society. The above section examines in detail the various examples which portray the issue of identity crisis occurring in the life of Velutha. The author through the novel puts forward various instances to show how the construction of the identity of the victim based on the societal norms create an image of Velutha, the dalit and how he tries to compare this image with his own self Thus it can be concluded that, the character Velutha attains his self, his environmental identity only in the presence of nature and the major factor that adds to the identity crisis of the victims is the role played by the society in their lives.

References

1. Glotfelty, Cheryll. The Ecocriticism Reader: Landmarks in Literary Ecology. Athens: University of Georgia Press. 1996.
2. Roy, Arundhati. The God of Small Things. India. Penguin Books. 2002. Print.
3. Rueckert, William. “Literature and Ecology: An Experiment in Eco-criticism” Low a Review 9.1 (1978): 71-85. JSTOR. Web. 2018
4. Sarup, Madan. Identity, Culture and the Postmodern World. Edinburgh. Edinburgh University Press. 1996. Print
5. Shiva, Vandana. “Everything I Need to Know I Learned in the Forest” Yes Magazine. 1.3 (2012): 12-18.JSTOR.Web. 2018

POVERTY ALLEVIATION PROGRAMMES AND RURAL DEVELOPMENT IN KARNATAKA: WITH SPECIAL REFERENCE TO DROUGHT PRONE AREAS –A STUDY

Smt. Manjula.V
Assistant Professor of Political Science, Government First Grade College, Kolar

Prof.Ramanna .P
Professor, Department of Political Science, Jnanbharathi, Bangalore University

Abstract

Poverty can be defined as a social phenomenon in which a section of the society is unable to fulfill its basic necessities of life. When a substantial segment of the society is deprived of the minimum level of living and continues at a bare subsistence level Poverty is indeed the central problem faced in the world and it is the way in which we set out to face it that we as a will be judged. It is a long and Erroneous battle that we have to wage. Poverty alleviation programmes in Karnataka are subject to the several criticisms. It is said that there is a lot of bias on the basis of caste, relationship to the power holders, nearness to the cities and extent of industrialization. The Government of India and Karnataka state has initiated so many programmes for rural development. The Study is Purely Theoretical. The Study is based on secondary data sources. The necessary information about the poverty alleviation Programmes in rural development in Karnataka state and its various components are collected from Books, Journals, Internet Source or related topic.

Keywords: *Poverty alleviation, Government Programmes, Policies, Poverty, Karnataka*

Introduction

Poverty can be defined as a social phenomenon in which a section of the society is unable to fulfill its basic necessities of life. When a substantial segment of the society is deprived of the minimum level of living and continues at a bare subsistence level Poverty is indeed the central problem faced in the world and it is the way in which we set out to face it that we as a will be judged. It is a long and Erroneous battle that we have to wage. It calls for clarity of purpose for determination for unity. It demands of us, all the perseverance the discipline, the .hard work which we are capable, slowly and steadily. We shall be building a new and progressive nation in which even the poorest in our country will be able to enjoy a minimum level of living. A new and targeted public distribution system has been announced to benefit the population below the poverty line with food grains at specially subsidy prices. The fundamental objective of our economic development is the removal of poverty. Programmes for generation of employment creation of assets improvement of skills and the raising of incomes of very poor people have all been strengthened.

On 15th August 1947 India got political Independence, but still it was in economic bondage and faced with the acute problem of poverty (mainly rural poor) when all most half of its population was below poverty line. In the first three year plan (1955-1966) the dominant thinking in the policy planning was that poverty could be effectively tackled through general growth process and that the benefits of higher growth would automatically trickle down to poor makes and alleviates their poverty. First plan emphasis therefore was placed on agricultural development and emphasized and reforms community development and co-operative movement Hence no specific attempts were made to tackle rural poverty directly. But nonetheless various anti-poverty programmes were put to experiment around this period it was during the fourth five year plan that the focus shifted from growth to the direct approach our poverty and special attention was given to poverty Alleviation. It is sufficient to note here that alleviation of rural poverty has been centered on the development agenda of the country since Independence.

Poverty Alleviation

The poverty alleviation perhaps may not be the correct process of remedy for the ills of poverty, which at best can mitigate the burden of the suffering infirmity. However, it is also not practical to think of achieving absolute relief from poverty overnight as a magic or drama. A large country as ours has no

mitigate poverty only stage by stage pragmatic methods and programmers. There could be in no denial of the fact that our society is casts based It is unfortunate that, this caste system has speculated in Industrial and Agricultural sectors also. The structural inequalities in society areal so important facts to be taken not of. In the subsequent plans the strategy for poverty alleviation laid stress in addition to investment in agriculture and allied activities. In poverty alleviation targeting means trying to shift the benefit of specific public spending programs or to the poor, by selecting them as the direct beneficiaries of public programs and project to its advocates targeting is the most desirable solution to the problem of poverty and benefits to the poor are aimed at lower cost. But in reality targeting may reduce some programs costs. Finally, targeting programs have usually failed either in fully covering the poor or in avoiding leakage if governments effectively promote economic growth and invest in basic social services of budgetary allocation there will be no need for finally targeted programs.

Towards alleviating poverty, some measures taken into consideration are:

- Redistribute land reform to increase the asset holding capacity of the poor.
- improving the access of the poor to important services like education, health etc., through the implementation of minimum needs program
- Organizing public distribution system to minimize erosion real income of the Poor.

The question of poverty alleviation as the prime objective of development planning has assumed critical importance in this context the seventh plan according to official statistics started with 31%of the population below the poverty line. The poverty alleviation target for the plan was that with a rate of growth of 5% those below the poverty line would be brought down by 10% to 21 % of the population. The rate of growth in the seventh plan has extended the target of 5% and is now estimated to be 5.4%. Those below the poverty line at the end of the seventh plan are now estimated to be 28 –30%, unlike in the past; a precise number has not been arrived at the decline in the number of those below the poverty line is therefore admitted to barely 1 to 3% of the population. This is so in spite of higher growth rate than postulated in the plan and a step up of financial allocations for special poverty alleviation.

Poverty Alleviation and Target Groups

As already mentioned the target groups include rural families below the poverty line. It is significant to note that for drawing the poverty line, the cut off income level itself has been raised from time to time to keep pace with the current price and desirable pace of development. For instance, the cut off annual family income for defining the poverty line which was fixed at Rs 6400/- at 1984 –85 Prices has now been enhanced to Rs 11,000/-a t 199 1 - 1992 prices.

The thrust of the IRDP, thus covers rural families with annual Income below Rs. 11,000/-t he pricing target for IRDP coverage which used to be families with annual income below Rs. 4,800/- at 1984- 85 prices, has now turned out to be families with annual income below Rs.8500/- at 1991 - 92 prices.

Poverty Alleviation Policy

It is the task of the government to ensure that the people's basic needs are not and fitness prevented particularly. This task becomes particularly more important at times of economic stress and charge that is when these in the greatest need for extending the safety net to the weak and the poor.

The government as per the survey is committed to expanding the scope and the coverage of direct poverty reduction programmes. Public distribution system has been extended already mentioned and supplies of essential commodities through it have been increased. The task ahead into the target the poverty alleviation programmes towards the worst affected sections of the people is to make them more responsive to their basic need and to improve their efficiency.

Poverty Alleviation Programmes in Karnataka: Anti-Poverty Programmes at Glanceirdp

Integrated Rural Development Programme (I. R. D.P) is a major instrument to wipe out rural poverty. Its objective is to enable selected families in rural areas to cross the poverty line. This is sought to be achieved by providing productive assets and inputs to the target group. The assets, which could be in primary, secondary and territory sectors, are provided through financial assistance in the form of subsidy

by the Government and term credit advanced by financial institutions. The limit for security free loans under IRDP has been raised from Rs.5000 to Rs**.** 10,000. Though the poverty line is identified at an annual family income of Rs.6400, the cut-off line for assistance to rural families under the Programme is Rs.4800. At least 30% of the assisted families should belong to Scheduled Castes and scheduled Tribes. To ensure better participation of Women in the development process, it is also envisaged that at least 30% of the beneficiaries should be women.

The Programme is implemented through district Rural Development Agenois (DRDAs) At the glass-loot level, the Block staff is Responsible for implementation of the programme Over 295crores families have been assisted under IRDP so far 41.38 per cent belonged to Scheduled castes and Scheduled tribes and 16.22 percent women The total investment was about Rs 10,278croresthis includes over Rs651 lcrores, mobilized through banking institutions till Nov, 1988.

Drought Prone District Wise IRDP- Year of -1998-99

Sl.No	District	No of Beneficiaries
1.	Kolar	4159
2.	Tumkur	6600
3.	chitradurga	2221
4.	Belagum	7311
5.	Bijapur	2170
6.	Dharwad	1713
7.	Gulbarga	5185
8.	Raichur	2513
9.	Bellary	2397
10.	Bidar	2272

TRYSEM

Training of Rural Youth for Self Employment (TRYSEM) is a component of IRDP. It aims at equipping the rural youth in the age group of 18 - 35 from families below the poverty-line with technical and managerial skills to enable them to take up self-employment ventures in agriculture and ached activities, industries, services and business priority is given to rural youth from Scheduled Castes and Scheduled tribes. Their minimum coverage should be 30% Coverage of women should be at least 33.113% Financial assistance **is** provided under the scheme Besides stipend of Rs 100,200 or 250 as the case may be, a free tool kit up to Rs 5001- is given to the trainee among the period of training Under TRYSEM, 16,40,670 rural youth have been trained the sixth and Seventh Plan period Out of these 5,91,552 youth belong to Scheduled Castes and Scheduled Tribes 6,17,655 women were trained during the period 7,73,980 trained youth have been self-employed and 1,66,709 youth employed on wages Thus, a total number of 9,40,689 trained youth have been employed since the Inception of the scheme.

District Wise TRYSEM- Year of -1998-99

Sl.No	District	No of Beneficiaries
1.	kolar	451
2.	Tumkur	420
3.	chitradurga	335
4.	Belagum	80
5.	Bijapur	753
6.	Dharwad	938
7.	Gulbarga	3814
8.	Raichur	439
9.	Bellary	449
10.	Bidar	195

DWCRA

Development of Women and Children in Rural Areas (DWCRA) was launched as a sub-plan of IRDP to meet this need for a separate programme with focus on the rural poor women to provide them withsuitable avenues to their skill and the local conditions. One time grant of Rs15,000 given to each group of 15 - 20 women in revolving the fund. This amount can be used for purchase of raw Materials, marketing, and child-care facilities DWCRA members can also avail of loan and subsidy under IRDP,UNICEF has been a partner in the programme since its inception. Provision of multi-purpose community canters is an integral part of DWCRA. Each block covered under the programme is to be-provided with one center which is designed as central place where women can assemble for training for training and carrying of economic activities The center has accommodation for training-cum-demonstration hall, balwadi and residential quarters for Gram Savika. The programme is implemented through the District Rural Development Agencies. 3,79,641 rural women below the poverty line have been assisted to take up income generation activities under DWCRA since the inception of the schemes in September, 1982. A total number of 22,682groups of women have been formed.

NREP

The National Rural Employment Programme (NREP) launched in 1980is the culmination of experience in implementing various employment schemes in the past years. It aims at generation of additional gainful employment for the unemployed persons in rural areas and creation of productive community assets for strengthening rural economic and social infrastructure, and improvement in overall quality of life in the rural areas. Expenditure on the programme is shared between the Center and the States on 50:50 basis. A minimum of 50% of the allocation would have to be spent on wages. NREP has a substantial impact on stabilizing wages in the rural areas, containing prices of food grains, creating wide variety of community assets and raising the level of living of the rural population. Over 305 crore man days of employment have been generated under NREP since the inception of the programme.

RLEGP

The RLEGP was started on the 15" August 1983 with the objectives of generating, gainful employment, creating productive assets in rural areas and improving the overall quality of rural life. The guarantee part of the programme, however, has not been operationalized so far due to paucity of resources. The preference in employment is given to landless laborers, women, scheduled castes and scheduled tribes. The programme is 100% funded by the Central Government. Over 128 more man days of employment gave been generated under RLEGP and4, 05,505 houses have been constructed under Awaas Yojna.

RWS

Recognition of top priority to rural water supply is evident from the inclusion of the sector in the Minimum needs Programme and the financial, technological and administrative support that has been extended to it by the Centre and the States. To give a sense of urgency to the task of covering all problem villages by 1990, the National Drinking Water Mission was launched in 1986. It is designed to extend coverage, facilitate scientific source finding and initiate steps to improve the quality of water under specific sub Missions on guineawolm eradication, removal of excess fluoride and iron and salinity.

DPAP

A Rural Works Programme was introduced in 1970-71 in areas chronically affected by drought, with the principle objective of organizing permanent works to obviate scarcity relief and to generate adequate employment through labour-intensive schemes such asmajor, medium and minor irrigation works, soil conservation, afforestation and village and district roads, necessary to open up the area for agricultural production. In the Fourth Plan, after mid-term appraisal, the Rural Work Programme was redesigned in 1973-74as the Drought Prone Area Programme (DPAP) and re-oriented as an integrated area development programme with the objective of developing the productivity of land water, livestock and human resources of drought-prone areas. DPAP was introduced to conserve, develop and harness land and other Natural resources including rainfall to improve and restore the ecological Balance It also aim sat minimizing the adverse effects of drought on Crops and livestock through the integrated development of land, water resources and adoption of appropriate technology.

Progress of Drought Prone Area Programme (DPAP) -1995 -96

Sl.No	District	Allocation	Achivements
1.	Bangalore urban	205	Nil
2.	kolar	235	68.51
3.	Tumkur	260	216.11
4.	chitradurga	1175	107.93
5.	Belagum	210	2629
6.	Bijapur	366	9699
7.	Dharwad	380	24412
8.	Gulbarga	270	67.84
9.	Raichur	203	31.310
10.	Bellary	163	54.70
11.	Bidar	120	83.36

Conclusion

India's work force is engaged in agriculture and a very small potion is engaged in industry and services. While around 66% of India’s population engaged in agricultural sector, in industry and services sectors 11 and **23** percentages respectively. Due to surplus work force engaged in agriculture per capita output from it is very low, which is very prominent reason

for India's inherent poverty. It is therefore evident that the lingering poverty of the Indian mass is due to too much dependence on agricultural sector. The static occupational structure Dominated by agriculture needs to be changed rapidly by rural industrialization. Population growth is higher among the poor than among the non-poor class relationship between poverty and higher fertility has been established by number of studies. Poor people steeped in illiteracy, ignorance and superstitious beliefs, abhor Birth control and go in for more children. This establishes poverty in them firmly. Various anti-poverty programmes like IRDP, NREP, RLEGP, JRY,NRY, NMNP, DPAP and TRYSEM were launched by the state governments with central assistance from time to time with the objective of raising the poor living below the poverty line. During the late 70'sand 80's all these programmes were intensive and substantial enough in providing relief to the rural poor. But the benefits did not reach wholly to the vulnerable sections of the society. Whether it reached people living on the fringe of the poverty line and thus to a larger extent diluted the purpose. Beneficiaries were mostly those favored by those politicians of the party in power or by the members of the village panchayat. Non-eligible beneficiaries of all these programmes were found between 20 – 40% varying from state to state.

References

1. Dr. V.K. VARMA. Rural Development in India. Review of TRYSEM, Pg 300-334, Year of Publication: 1994, Radha Publication, NewDelhi
2. PRASAD. Planning Poverty alleviation in Karnataka in year 1993
3. T.K.LAKSHMAN, B.K.NARAYAN. Rural Development in India, (A Multi-dimensional analysis)Sins of Indian Planning and Rural Poverty, Pg. 33, Year of Publication1984, Himalayan Publishing House, Bombay.
4. HOSHIARSINGH. Administration in Rural Development in India Drought Prone Area Programme, Sterling Publishers Pv t Ltd. Year of Publication 1995. Pg 137-147
5. TAR LOK SINGH. Social Science Research and Problem of Poverty, Published in year 1990,Concept Publishing Company. NewDelhi.

ICT FOR SUSTAINABLE DEVELOPMENT

Keerthi.A.V.M.Sc., M.Phil

Abstract

ICT is the backbone of today's digital economy. According UNDP there are 17 Sustainable Development goals to be achieved by 2030.The Information and Communication Technology can be applied to all these goals to achieve the Sustainability. Sustainable development actually means the economic development of the country without the depletion of natural resources. In this paper I tried to inculcate how Information and Communication Technology will help to achieve these goals. There are various areas where ICT can work efficiently to achieve the goals. To fight poverty and hunger by helping the farmers with advanced technology. In the field of education which connects the students and teachers with in the area and around the Globe. The medical related software's developed can be used efficiently in the field of Medicine and Health. Through various social Medias it is possible to reduce Gender equality and Women Empowerment. Not only that the various business deals are now managed through on-line .This is mainly because of the development in the field of Information and Communication Technology. All the records are almost completely computerized .You can have everything in front of your smart phone. Through the various technology developments we can improve the economic development of the country without losing our precious resources.ICT can improve in the lives in various other ways such as skill development, Automation, Innovation etc. Even though technology supports everything its proper usage only will help us to achieve the 17 goals mentioned in the SDG by United Nations.

Keywords: *Sustainable Development, ICT*

Introduction

Support and investment in information and communication technology directly affects a country's performance against the sustainable development goals by United Nations. There are 17 goals designed by the United Nations. In each of this goal the ICT is playing a very important role. Sustainable development is mainly development of economic growth without the depletion of natural resources. Through the application of ICT these goals can be achieved with in 15 years that is by 2030. ICT is the backbone of the digital economy. Within 15 years the real potential of ICT will come to light in achieving the sustainable development goals.

The 17 Goals by United Nationals

1) Zero Poverty
2) Zero Hunger
3) Good health and well being
4) Quality education
5) Gender equality
6) Clean water and sanitation.
7) Affordable and clean energy
8) Decent work and economic growth
9) Climate action
10) Life below water
11) Life on land
12 Responsible consumption and production
13) Industry innovation and infrastructure
14) Sustainable cities and communities
15) Peace justice and strong institution
16) Reduced inequalities
17) Partnership for the goals.

Zero Poverty/Zero Hunger

The first and second goals that is mentioned in SDG is no poverty and zero hunger. By giving the correct information at right time will help to improve the yield. This is mainly applicable in the case of

farmers. ICT in agriculture is also known as e-agriculture. To the farmers if we give the information like local weather for cast, crop specific advisory and price information at right time their yield also will improve which will give them more money to prevent hunger through remote sensors ICT helps in capturing weather parameters. This help them to know about the weather. ICT inventions are happening around the world to help the agriculturists to improve their livelihood through increased agricultural productivity and income.

Through the agricultural app set in their mobile phone which is set with their regional language will help them to deliver the information in simple manner and not only that through call centers they will be able to get solution for their queries. E-agriculture can help the farmers to reduce poverty by finding out the inefficiencies in farming. Not only that providing basic knowledge about information and communication technology, mobile phones how to use them and give them information about jobs they will be able to migrate from rural areas to urban areas to get a job and will be able to overcome the poverty. Through E-agriculture people all over the world will exchange their ideas and information which will help the farmers to get ideas and information for rural development and sustainable agriculture. E-agricultural markets provide services like seeds, fertilizers and pesticides etc.

Good Health and Well Being

The third goal is for good health and wellbeing. We all know that health is wealth and maintain health is very important, especially in the rural areas. Already ICT has proved its presence in the health sector and wellbeing. Through various ICT applications it is possible to know how to prevent disease, its treatment, where you can approach and how to avoid it. In rural areas malnutrition has become an important health issue. Now with the ICT it is possible to take survey and based on that will be able to monitor them and make the aware of the diet they have to take. ICT have o make a long run for this. By empowering women in the rural areas it is possible to reduce these levels at least by s 10 – 20%. By development of ICT various telemedicine software remote diagnostic deceives, smart phones, fast diagnosis, improve treatment can be provided. Now a days using smart phone will enable us to prevent various diseases. This application it develop more then it will be a blessing that people will be aware of disease how to prevent, how to avoid, how to overcome this. Today – laboratories are using a lot of new technologies for various tests and the researches is still going on and are coming up with new findings all these are because of development in technology. If this continues ICT will be really a blessing for the future in fulfilling the third goal.

Quality Education

The fourth goal mainly aims at quality education. Quality education means economically productive, develop sustainable livelihood, contribute peaceful & democratic societies and enhance individual wellbeing (VVOB's Definition). Quality education means not getting higher education and having a job it means what they can do, what are their rights & what is their social responsibility. ICT can play a major role in this. Many times students are not aware of what's happening around the world. Through the development in technology it is possible. For ex: Skype. Through Skype it is possible to communicate with people around the world. There was a school in US who have done a project for water purification with expensive materials. Project was a successful. Later they came to know about a school in Africa who don't have pure water to drink and cannot huge amount on that. So through skype they are able to connect and interact each other and discussed about the project they have done. Now they applied it and getting pure water to drink. This is just a small one. But by the development of technology we will be able to make more than this. Through quality education the students must be able to earn a permanent livelihood, do not forget their social responsibility. Must be aware of their rights and duties and should be able to contribute peace for their in wellbeing. Here also ICT helps to achieve all these. Collaborative learning is another development of technology in the field of education where the students will be able to do their project work sitting in different places. The use of ICT techniques in learning as well as teaching has a very positive influence of student's learning.

Gender Equality

Gender equality and reduced inequality are the SDG's goals. This mainly aims to empower all women and girls the use of technology – to promote empowerment of women and reduced in equality. ICT helps for personal security, better access to education, jobs and basic health care information. But the secure limited by factors likes security, skill and affordability. ICT plays a major role in gender equality. If these limitations are overcome then it by 2030 it is possible to achieve Gender Equality. To overcome the limitations there must be plans to make them aware of how to use technology in better way and help them to overcome all these problems so that women employment can be achieved.

Clean water and sanitation.

The next goal is clean water and sanitation. Every day people all over the world are struggling to get clean water for daily use. Development of technology has improved this level. The smart water management system will allow us to save water. Not only that there are so many online monitoring system to track the sanitation. There is sensoring system that helps to find the quality of ground water. Water recycling also helps us to recycle the waste water and to reuse it again. In many countries they are using the technology of waste water management. Moreover research is going on to purity the sea water and makes it capable of drinking. Smart water meters also help us to understand the consumption of water usage.

Affordable and Clean Energy Sustainable Cities and Communities

Next goal is affordable and clean energy and also sustainable cities and communities. This aims to provide affordable energy for all by 2030. Affordable and clean energy means energy from the renewable sources like solar energy, wind, tidal etc. The main aim is to end our carbon based fuels ICT and energy efficiency are connected. If we consume energy then only it is possible to produce affordable energy for all. By development of technology (Greening through ICT's) smart grids, smart meters are used. Smart grids help us to deliver energy more efficiently to home and buildings. Control of production and distribution of electricity is an important aspect of smart grid. Smart meters help us to improve our understanding of how much energy we consume and it provide flexible payment option for poor. ICT plays a very important role in energy conservation and efficiency through sensing and control.

Decent Work and Economic Growth

Next goal is decent work and economic growth even ICT has taken the whole control of this goal. Digital literacy had made mandatory for many jobs. Without ICT skills it is difficult to find a job and make application. Not only that there are so many online jobs available so that the house wives can sit at home and do the work. Millions of people are unemployed or working in bad conditions, poor wages etc. Involvement and awareness of ICT will help for a decent work and economic growth by at least 10-20%.

Climate Action

Climate action is another goal in SD climate change is a real problem. It is really unpredictable. So. It is necessary to solve the problem. Global temperature problem need to be tackled immediately. ICT helps a lot in this. Already we have somany instruments to alarm earthquake, hurricanes, tornadoes etc.

But still we need to improve and find a technology for emission of carbon 0dioxide in to the atmosphere. In the transport sector research are going on to provide electric vehicles. Carbon capture technology is also under process. Various monitoring system to monitor carbon-dioxide emission to the atmosphere also need to develop.

Life below water. ICT already has proved in this area. Various instruments which are used are advancement of technology. ICT play a significant role in the conservation and sustainable use of oceans through monitoring and reporting.

Responsible Consumption and Production

ICT help in reduce energy use as well as material consumption. It also support reuse, sharing ad remanufacturing of products & goods. Cloud technology allows resource use, both in material and energy. The concept of E-waste was able torecycle 98% of materials and reduce the cost.

Life on land. ICT helps people to raise awareness of environmental influence. Mobile phones and sensors are used to track poaching mobile sensors and IOT enable for monitoring the state of planet. Various projects are being developed with the involvement of ICT to protect our natural heritage.

Peace and Justice and Strong Institutions. Many fundaments rights are enabled through ICT. It ensures that citizens can have access to info. Through internet utilize will be able to express their opinion. ICT brings increasing transparency to society.

Partnership for the Goals

The last goal is partnership for goals. Increasing international co-operation is required to achieve 16 precious goals. Without the intervention of ICT it is not possible.

Limitation

It is difficult to implement the technology in many areas it is not possible to provide mobile phones for billions of people around the world. The research in many areas of ICT is going on, but still they also face implementation difficulties.

Conclusion

In this paper how ICT influenced each of the sustainable development goals are explained. But still there is a scope of research in each and every goal in detail.

References

1. A plan to solve climate crisis (2009) by Al Gore
2. The age of sustainable development (2015) by Jeffrey Sachg.
3. www. itu.int >sustainable - world > pages.
4. https://sustainable development.on.org.
5. https://tribune .com.pk.
6. https://futirism.com
7. https://the bulletin.Org.
8. www.climateactionprogramme.org.
9. https://www.ericsson.com
10. news.itu.int
11. www.globalgoals.org.
12. en.m-wikipedia.org
13. www.researchgate.net
14. www.activesustainability.com
15. www.cli.org
16. www.vow.edu.all

A STUDY ON WORK LIFE BALANCE OF FACULTIES OF SCHOOL AND COLLEGE WITH REFERENCE TO BANGALORE NORTH REGION

Balakrishnachar. M.S
Assistant Professor, Koshys Institute of Management Studies, Bangalore

Kavya.P
Student, II B.Com, Koshys Institute of Management Studies, Bangalore

Abstract

The successful management of an organisation's human resource is an exciting, dynamic and challenging task, especially at a time when the world has become a global village and economies are in a state of flux. In organisations and on the home front, the challenge of work life is rising to the top of many employers' and employees consciousness. Human resources are the most powerful and valuable and unique of an organisation. In today's fast paced society, educational institutions seek options to positively impact the bottom line of their faculties, improve faculty morale, retain faculties. Work life balance has been one of the major factors in influencing the organisation's efficiency. This paper highlighting the issues connected with work life balance of faculty in the educational institutions and the factors that determine work life balance.

Keywords: *Human resource, Faculty, work life balance, educational institutions.*

Introduction

In organizations and on the home front, the challenge of work/life balance is rising to the top of many employers and employees consciousness. In today/s fast-paced society, human resource professionals seek options to positively impact the bottom line of their companies, improve employee morale, retain employees with valuable company knowledge, and keep pace with workplace trends. In society filled with conflicting responsibilities and commitments work/life balance has become a predominant issue in the workplace. Today, in the fast running phase of life, people really find it difficult to manage a balance between the pressures of work place and the duties of a home-maker, be it a male or female. Their life hops at either end of a see-saw and often ends up in a juggling life. This contemporary managerial issue has become a challenging factor of not only the young corporate who had just started their family life but also the young and middle-aged parents who needs to provide constant attention to their children who are fast-growing students/young adults. Adapting to a strategy where an emotional intelligence becomes the lead factor would help achieve equilibrium of Work-Life Management.

The term "work-life balance" was first coined over 30 years ago in reaction to the trend of the 1970s and 1980s when men and women began prioritizing work and career goals over family, friends, community affairs, and leisure activities. Today, there is an entire industry dedicated to this field. The term work-life balance is commonly used as a more comprehensive expression to describe policies that have been previously termed 'family-friendly', but are now extended beyond the scope of the family. Work-life balance refers to the flexible working arrangements that allow both parents and non-parents to avail of working arrangements that provide a balance between work responsibilities and personal responsibilities. The term ‗work-life balance' was preferred due to the fact that it encompasses the experiences and needs of parents and non-parents alike, and is a more progressive theoretical framework in which to think about new ways of living and working that are satisfactory to all. In practice, it involves ―adjusting work patterns so that everyone, regardless of age, race or gender can find a rhythm that enables them more easily to combine work and their other responsibilities and aspirations‖ (Pillinger 2001: 1). Drew, Humphreys and Murphy point out ―that personal fulfilment was important inside work and that satisfaction outside work may enhance employees' contribution to work‖ (2003:13). Thus, work-life balance is now the term of choice.

Work-life balance is an issue not just for individuals, but for employers, the market, the state and society as a whole. The future workforce and consumer market is dependent on women bearing, and

parents raising children. The move from a single male breadwinner family model to one where both parents participate in paid employment has made it increasingly difficult to raise children while the workplace continues to be modelled on male breadwinner workers.

Work-family balance‖ evolved into ―work-life balance‖ partly in response to workers without family responsibilities who felt that employees with children were getting benefits that they were not. The term ―life‖ applies to any non-paid activities or commitments. While the term does not generally include ―unpaid work‖ when referring to work, it could be extended to cover that. Work-life balance issues appear to affect some groups of people more than others – those working long hours, those whose work spills over into the home as a result of modern technology, those in non-standard employment such as shift work, those on low incomes, those trying to juggle parenting and paid work, and those with cultural obligations beyond the family and paid work.

In very past years, organizations looked at ―work‖ and ―life‖ as independent domains. Employees were expected to place the organizations‘ interests ahead of their own. In the past, organizations reacted that, what happens to employees outside the office is their own business; what they do in the office is their business.‖ with changing time, attitudes have changed. Organizations and managers today have come to accept the impact that work-life has on personal life and vice-versa. Recent years have seen a growing number of organizations operate under the assumption that personal life and work life are complementary to each other and not competing priorities. It helps employees balance their work lives with their personal life and leads to positive outcomes for the employee and the organization. Therefore, a growing number of organizations have begun to adopt ―work-life (family) programs‖ or ―family-friendly practices‖. Work-life balance is the term used to describe those practices at work place that acknowledge and aim to support the needs of employees in achieving a balance between the demands of their family life and work lives.

Work Life Balance can be defined as the perfect integration between work and life both not interfering with each other. In the current business world, people and organizations are working round the clock to meet the ever-growing demands. A slight delay in meeting the schedules or expectations is considered to be an organizational failure. To avoid delays and failures, employees are working hard and giving their heart and soul to achieve work-life balance which is creating an enormous pressure on them and hence they are forced to finish their jobs irrespective of time limit. The most-often used phrase among the employees is that they don‘t have time or they have a hectic schedule. A day of 24 hours is no longer enough to perform work-related and personal-related duties or responsibilities. The problem seems simple but difficult to solve and handle. Employees who have to play another role of daughter/son/spouse/parents are not able to manage their roles. Observing the day-to-day lives of many employees, two main issues to be addressed to achieve work-life balance are time and stress. Managing these two variables is the secret of a perfect work-life balance. The HR department of the organization should assist the employee to maintain a work-life balance. The HR manager must carefully identify the issue and find a solution with the co-operation of the employer. Organization must include providing work-life balance as an HR policy.

Methodology of Study

Methodology relates to plan of study, which includes Data collection, types of Questionnaire, Processing of data and finally interpretation of data. Basically, the data is collected from Secondary as they‘ll as Primary Sources. These classifications are made according to the objective of the research. In some cases the research will fall into one of this category, but in other cases research will fall into another category.

Secondary Data

Before going through the time and expense of collecting primary data, one should check for secondary data that previously may have been collected for other purpose but that can be used in the immediate study. Secondary data may be internal to the firm, such as Business Development Strategy, In-House Research Team, Documented Papers or many are external to the firm such as published data or

commercially available data. Secondary data has the advantage of saving time and reducing data gathering costs. The disadvantage is that the data may not fit the problem perfectly and that the accuracy may be more difficult to verify for secondary data than for primary data.

Sources of secondary data for this research are: Websites, Articles, Magazines, Publications, and Annual Reports, Journals as well as Thesis & Dissertations and other project on the same or related topic.

Primary Data

Primary data collection is necessary when a researcher cannot find the data needed in secondary sources. Three basic means of obtaining primary data are observation, surveys, and experiments. The choice will be influenced by the nature of the problem and by the availability of time and money.

In this research Sample survey technique is used for the purpose of Primary data collection. The data for this study is collected from faculties of Schools and Colleges. A sample of 200 from each of Bangalore north region was collected. The collection was done through personal interview and questionnaire method personally.

Research Methodology

For this study, the survey-questionnaire instrument was used to achieve the main objective of the study. The questionnaire was designed after referring to extensive literature available on same as they‘ll as related topic. A self-administered questionnaire was distributed to the faculties. The questionnaire included 30 questions of open-ended, close-ended & Likert scale type of questions. The research instrument is divided into three categories of Personal Information, Work related Information & Information on Work-Life Balance.

Sampling

Sampling refers to the way that observations are selected from a population to be in the sample for a sample survey. The sample related to the present study will basically include the entire population of Faculties from School and colleges in Bangalore North region. But the potential respondents (element) are basically selected from few major places in Bangalore city. Judgmental Sampling was used for this research and the sample included faculties from all genres like Teachers, Lecturer, Asst. Professors, Associate Professors, Professors, and Head of Departments.

Sampling Method

A Non-Probability Convenience sampling was used in this research. With non-probability sampling methods, they do not know the probability that each population element will be chosen, and/or they cannot be sure that each population element has a non-zero chance of being chosen. Non-probability sampling methods offer two potential advantages - convenience and cost. The main disadvantage was that non-probability sampling method was that it does not allows to estimate the extent to which sample statistics are likely to differ from population parameters. A convenience sample was nothing but, was made up of people who are easy to reach.

Sample Size

The accuracy of a sample is based on its absolute size, not its proportion of the total population. A larger sample will always be more reliable than a smaller sample whatever the total size of the population. As a generally, 200 is regarded a minimum reliable sample size.

Limitations of Study

The perceived work-life balance remains a difficult variable and concept to measure and understand within certain contexts. This is mainly because different researchers use different concepts to measure the balance. Apart from this the domain of ―life of an individual‖ remains the most difficult variable to measure.

The results of this study are a reflection of these shortcomings. The study is restricted to understand the perceptions of faculties of education sector units of the Bangalore North region. The study is also restricted only to Schools and Colleges of Bangalore north region. The study findings cannot be

generalized as the characteristics and work culture of institutes could be different from employee to employee at the same level in the different parts of the country.

Problem Statement

Work-life balance has become a universal concern for organizations as they‘ll as individuals in the fast paced digital age that they inhabit. Rise in the 365/24/7 Global Operations, coping with the time zones with more and more businesses emphasizing on round the clock customer services the concern for work-life balance for employees has become more essential. Ironically technology has added to the speed of operation, rather than easing the work practice. Employees are expected to work long hours and cope with tougher deadlines. Today‘s world literally doesn‘t go to sleep.

With all the above mentioned concerns regarding work – life balance this study focuses primarily on faculties of Schools and colleges institutes. Apart from this, the research will also focus on the relationship between various demographic factors like Age, Gender, and Location etc on different variables. The variables selected for this study are: Level of Stress, Work amenities & provisions provided by educational institution, Factors promoting & hindering Work-Life Balance and Job Satisfaction

Objectives of Study

The current research study is an attempt to understand the work life schedule of Faculties of Schools and Colleges of Bangalore North region. Also, the study will highlight the relation between the level of stress and the demographics of an individual.

The present study is formulated with the following objectives: The present study is formulated with the following objectives:

- To study work life schedule of faculties of engineering & management institutions
- To study the level of stress among faculties of engineering & management institutes
- To study the impact of demographic variables on work-life balance
- To study the existing Work-Life Balance policies in organizations

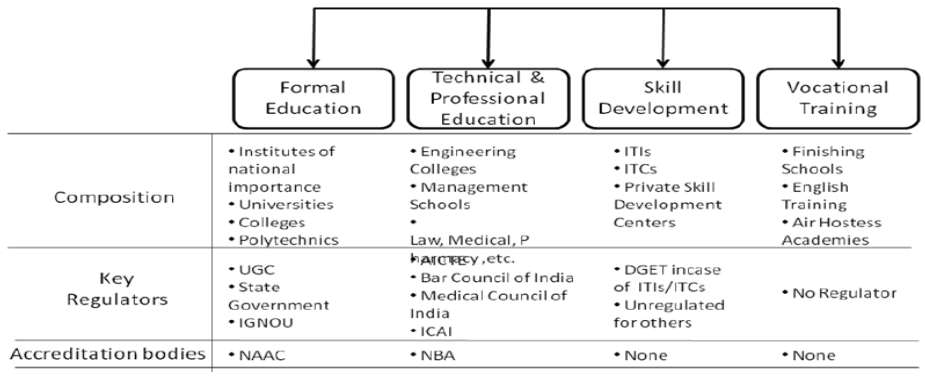
Limitations of Study

The perceived work-life balance remains a difficult variable and concept to measure and understand within certain contexts. This is mainly because different researchers use different concepts to measure the balance. Apart from this the domain of ―life of an individual‖ remains the most difficult variable to measure.

The results of this study are a reflection of these shortcomings. The study is restricted to understand the perceptions of faculties of education sector units of the Bangalore North region. The study is also restricted only to schools and colleges of Bangalore north region. The study findings cannot be generalized as the characteristics and work culture of institutes could be different from employee to employee at the same level in the different parts of the country.

Over View of Educational Sector in India

ɔw:-



Data Analysis and Interpretation

Education Course

The very basic objective of the study is to identify the work life balance of faculties belongs to schools and college. These two educational courses were selected basically to examine the significance of work life balance with respect to schools and colleges.

Course	No of respondents	Percentage
Schools	100	50
Colleges	100	50
Total	200	100

The above table indicates that out of total sample of 200, there is an equal distribution of sample for the educational course like schools and colleges.

Gender

Information on demographic factors is collected to study effectiveness of relation between genders Work Life Balance. The classified information according to gender is presented in the following table

Gender	No of respondents	Percentage
Female	120	60
Male	80	40
Total	**200**	**100**

The above table indicates that out of 200 respondents, 120 respondents are females and 80 are males.

The Age Group

Information about the age of respondents is collected and classified in to three categories. Respondents of age below 30 years is classified as Young age and responded of age 31 to 40 years is considered as Middle age and respondents of age above 40 years in classifies as Elderly age group. Information of classified data is presented below

Age Group	No of respondents	Percentage
Young	150	75
Middle	40	20
Elderly	10	5
Total	**200**	**100**

Above table indicates that out of 200 respondents, maximum respondents are 150 from young group and 10% are from middle age and only 5% respondents are elderly group.

Marital Status

To understand the variables of work life balance in a better manner, respondent's marital status is being studied. Information of classified data is presented in the following table

Marital Status	No of respondents	Percentage
Married	180	90
Unmarried	20	10
Total	**200**	**100**

Above table indicate that out of 200 respondents, maximum respondents are 180 who married and have more responsibilities, and only 20 respondents are not married till the date.

Spouse Employment

The employment of spouse is studies to understand the impact of spouse employment on the different variables of work life balance. Information of classified data is presented in the following table

Marital Status	No of respondents	Percentage
Married	170	85
Unmarried	30	15
Total	**200**	**100**

Above the table indicates that out 200 sample size, majority respondent's spouses were employed and minor not employed.

Monthly Income Group

Information about Monthly Income group of respondent is collected and classified in to four categories. Respondent with Income group of Rs. 10,001-20,000 are classified as _Low Income group', respondent with Income group of Rs. 20,001-30,000 are classified as Middle Income group' respondent with Income group of

Income group	No of respondents	Percentage
Very high	27	13.5
High	84	42
Low	23	11.5
Middle	66	33
Total	**200**	**100**

Rs. 30,001-40,000 are classified as _High Income group‘ and respondent with Income group of above Rs. 40,000 are classified as _Very High Income group‘. Information of classified data is presented in the following table:

Above table indicate that out of total sample size 200, 84 respondents belong to _High Income group‘, 66 respondents belong to _Middle Income group‘, 27 respondents belong to Very High Income group‘ and 23 of them belong to _Low Income group‘.

Overall Findings

1. The association between the level of work-life balance of Schools and colleges Faculties is significant.
2. It was observed that Management faculties have good Work-Life Balance, because the mean score of Schools faculties is 62.04 and Management is 69.20. Also, comparing the locations of the respondents,
3. It was found out that, there is significant association between Work-Life Balance of Faculties belonging to Bangalore North region. The mean score of faculties of Bangalore is 68.8 and Faculties of Bangalore North city is 62.44, hence faculties belonging to Bangalore North city have good Work-Life Balance.
4. The marital status of respondents also has an impact on the level of Work-Life Balance. It was found out that, there is significant association between Work-Life Balance and Marital status of respondents. The mean score of married faculties is 61.16 and unmarried faculties are 71.06, hence faculties who are unmarried are able to manage their personal & professional.
5. The study found out that, the coefficient of correlation between Work-Life Balance and Work policies score is positive but not significant.
6. Work policies include factors like: Flexible start/end time, Flexible working hours, Paid time off, Career breaks & Sabbaticals.
7. Therefore, it is observed that there is an association between the organizational policies and Work-Life Balance but, it is not significant.
8. Telephone &Counselling Services, Health Programs, Parenting & Family support programs, Recreation & Transportation are the various Work-facilities provided by the institutions.
9. Therefore, the study revealed that there is an association between the facilities provision and Work-Life Balance to a certain level but, it is not that significant.
10. Various attributes like Negative attitude of management & colleagues, Technologies such as Laptops/Cell phones & Travelling can create obstructions in maintaining Work-Life Balance.
11. It was found out that, there is an association between the Hindrances to Work-Life Balance and Work-Life Balance to a certain level but, it is not that significant.
12. The coefficient of correlation between Work-Life Balance and Organizational Policies is positive and significant. Organizational policies include factors like Work Practices, Work Environment, Remuneration, Employee Morale, Fringe Benefits, Organization Structure, Job responsibilities, Employee-Employer relations etc. Therefore, it was observed that there is an significant association between Employer‘s Contribution and Work-Life Balance.

Suggestions & Recommendations

The study reveals that there is no consultation or dialogue between faculties and management when it comes to provision of any family support programs across the institutes. Hence, it is advised to the management that a coordinating committee with the representatives of management and employees should be constituted which itself is a great initiative from employee‘s point of view. The committee can give broad guidelines to the management in creating a family friendly and work support environment in their respective departments which can also become a platform for employees to voice their concerns about work-life issues.

Institutions need to create counselling services in their respective organizations by appointing full time counsellors who can help employees in balancing their mental and physical rhythm

Sabbaticals & Part-time work arrangements need to be promoted in institutes as Education is gender unbiased sector. These work life initiatives also offer good opportunity for institutions to manage their tight salary budgets in periods of tough competition and declining revenues. Free health checkups, health insurance & exercise facilities are the initiative not only expected by the employees but they are also the initiatives which will be the critical influencing factors for employees in making choice of employment. These can be used not only as work life initiatives but also as good retention tools in times when health care is very expensive.

It is advised to employees that careful planning and personal effort is important for balance in work and personal life. Employers can only facilitate work life balance with many schemes that can attract employees and satisfy their needs but it is employees, who have to plan, prioritize and schedule their work and life obligations. Cost effective retention strategies like creating a retention culture in the organization, ensuring freedom of expression to employees, creating friendly work environment and instituting competitive reward schemes are a few strategies institutes can be experimented with in talent retention.

Conclusion

The growing diversity of family structures represented in the workforce, including dual-earner couples, single parents, blended families, employees with elder care responsibilities and the increasing number or people choosing to live alone, has heightened the relevance of balancing work and life roles for a substantial segment of employed men and women. These societal developments have greatly increased the complexities of the interface between work and life roles especially in case of educational institutions.

Institutions should consider child supervision to be better regulated than employees do. At the same time, employee's expectations of balance in this area are high. It should therefore be pointed out to employers that more attention could be devoted to this area. Apart from this, flexible working time is also an area which requires particular attention from management. The incorporation of Work-Life Balance strategies into annual planning of educational institutions can, in fact, have positive impact on employee's well-being. Therefore, it is equally important for employees to express their expectations and needs, since otherwise they cannot expect management or the institutions to resolve matters for them on their own initiative.

References

1. Ali, A. (1996), __Organizational development in the Arab world'', Journal of Management Development, Vol. 15 No. 5, pp. 4-21
2. Allen T. D. (2001). Family-supportive work environments: The role of organisational perspectives, Journal of Vocational Behaviour, Vol.58, pp.414-435.
3. Aryee S., Srinivas E. S. and Tan, H.H. (2005). Rhythms of Life, Antecedents and Outcomes of Work-Family Balance in Employed Parents, Journal of Applied Psychology, Vol.90, pp.32-146.
4. Baker, S. H. and Hansen, R. A. (1975). Job design and worker satisfaction: A challenge to assumptions. Journal of Occupational Psychology, 48, 79-81.
5. Bharat S. (1995). Attitudes and sex-role perceptions among working couples in India. Journal of Comparative Family Studies, Vol.26, pp.371-388.
6. Bharat, S. (2003). Women, work, and family in urban India, towards new families? in J. W. Berry, R. C. Mishra, and R. C. Tripathi ed., Psychology in human and social development, Lessons from diverse cultures pp.155-169 New Delhi, India, Sage.

A STUDY OF SOFT SKILL TRAINING FOR PROBATIONARY OFFICERS OF BANKS AND ITS IMPACT ON SUSTAINABLE DEVELOPMENT

Anjana Padaki
Co-Ordinator, Manipal Academy of Banking, Bangalore

Abstract

The technical skills of a person is referred as the occupational requirement of a job and are mainly applicable at the work place. Does the competency of a person in his technical skills alone judges his effectiveness at the workplace? No, his ability to interact with co-workers, customers, peers and sub-ordinates will certainly have a role to play in making the person a good worker. These qualities are nothing but a person's ability to communicate, to make right decision at right time, leadership skills so on and so forth. The skills which a person possess or acquire through training are called as "soft skills". A study from Harward has mentioned that "85% of one's success at the work place is attributed to soft skills and only 15% to technical skills". To get a good job one should have both academic skills and soft skills. Academic skills are knowledge. Transferring that knowledge into application is the most important factor. The application of the knowledge into the nature of job is a perfect gel of soft skills is a pressing requirement to become an effective worker. All types of industries today give importance to soft skills to be imparted to their employees. This research paper is a study on the "Need of the Soft skill training" for any job especially focussing on Banking sector Officers. These days, it's the bank officers who are much in the lime light for both positive and negative reasons.

Keywords: *Soft skills, Communication, Behaviour, Decision-making, Team work, Time Management, Sustainable Development*

Introduction

Soft skills are a person's ability to interact effectively with co-workers and customers. Technical skills comprise the occupational requirement of a job and are mainly applicable at the workplace, while soft skills are broadly applicable both in and outside the workplace. Soft skills complement technical skills. They also complement many other activities that are outside the sphere of the workplace. Presently, in addition to standard qualification, soft skills are increasingly being sought after by employers. There are professions where soft skills prove to be more important than core occupational skills in the long term. Although the soft skills does not have role directly on the sustainable development, the impact of soft skills on the overall development of an individual and thereby the company's progress cannot be ruled out. "85% of ones Success at the work place is attributed to soft skills and only 15% to technical skills" – Harward study Development of an individual is certainly development of a company. The sustainability of the company is directly proportionate to the sustainable development of the individual. And the individual shall not be called as an effective performer without he/she acquiring good soft skills and showcasing the same. It's hard to judge which soft skill are most important. In view what employers means the skills which are most likely to enable you to build constructive working relationships with others, or to be a constructive and helpful employee. Some of the soft skills have been listed:

- Communication skills
- Making decisions
- Self - motivation
- Leadership skills
- Team working skills
- Creativity and problem solving skills
- Time Management and ability to work under pressure.

Communication Skills

The majority of jobs require employees to have good **communication skills**, so that they can express themselves in a positive and clear manner, both when speaking to people and in writing. Communication is one of the main ingredients for corporate success, but the problem is that the phrase 'good communication skills' is a term so overused that it is difficult to pinpoint what it actually means.

Demonstrating strong communication skills is about being able to convey information to others in a simple and unambiguous way. It involves the distribution of messages clearly and concisely, in a way that connects with the audience. Good communication is about understanding instructions, acquiring new skills, making requests, asking questions and relaying information with ease. Good communication skills are perhaps the most basic skills that you can possess as an employee, yet they remain one of the most sought after by employers. Communication skills are essential no matter what job you work in or your level of seniority. When there is a breakdown in communications, often efficiency, morale and objectives can all suffer. In today's competitive jobs market, communication skills in the business world are highly sought after, with recruiters looking for candidates who can communicate information, negotiate and confidently deal with customers. Listening carefully, speaking clearly and putting others at ease are very valuable attributes to possess.

Decision making

Decision making is a core skill that every employee will need to use at some stage in their career. To prove you are good at decision making, you will need to make the best possible choice in the shortest time possible, as well as being able to show reasons that support your decisions. Generally the more senior the role, the more difficult these decisions become. Many employees are forced to make complex decisions routinely as part of their job description; sometimes these decisions have to be made under intense pressure. Therefore employers need to know that the people they recruit can take the initiative when required and make good decisions in important situations. In certain positions (eg management), decision making is a fundamental aspect of the role. Consequently employers need to measure the capability of an individual to make informed decisions. Skills tests and activities through an interview or assessment centre are a great way to achieve this. Of course, decision making is not just confined to a managerial role; it relates to almost every job at every level. Good decisions are a crucial element of day-to-day business.

Self-Motivation

Self-Motivation is an important soft skill which encourages the self to motivate others and mainly in releasing the stress en-route to the successful task completion while leading the team. This tool is a very essential tool as there will be demotivating factors while achieving a big goal. Whether internal or external, there are factors which hinders the process of team accomplishments and thus disturbing the self-esteem of a leader. A well-disciplined person with focus on his goal and direction does require to acquire the self-motivational skill so as to achieve goals effectively while keeping his own self-esteem at high. The self-motivation will improve the mental ability of the leader and thus he could motivate his team mates to face the unforeseen challenges with positive energy.

Leadership Skills

Leadership means different things to different people around the world, and different things in different situations. For example, it could relate to community leadership, religious leadership, political leadership, and leadership of campaigning groups. Leaders help themselves and others to do the right things. They set direction, build an inspiring vision, and create something new. Leadership is about mapping out where you need to go to "win" as a team or an organization; and it is dynamic, exciting, and inspiring. Yet, while leaders set the direction, they must also use management skills to guide their people to the right destination, in a smooth and efficient way.

Who is a good leader?

May be a politician, a famous businessperson, or a religious figure. Or maybe – a boss in an organization, a teacher, or a friend. A person who could achieve a task while leading his team effectively and efficiently is a Leader. A good leader is the one who will retrospect himself, analyze his actions, explores and optimizes his team's skills in the right direction to get an effective result.

Team working skills

Teamwork has a dramatic effect on organizational performance. An effective team can help an organization achieve incredible results. A team that is not working can cause unnecessary disruption, failed delivery and strategic failure. Team working skills is nothing but assessing the teams' strengths and weaknesses and getting the work done accordingly. A team of people will invariably of heterogeneous in nature with different type of hard skills and with different emotional backgrounds. To possess a good team working skill, first and foremost thing is to know the team members thoroughly.

This assessment helps to uncover common team-working problems that might be experiencing. Once completed the assessment, team tools will help to improve and develop these important skills.

Creativity and Problem Solving Skills

Creative problem solving (CPS) is a way of using your **creativity** to develop new ideas and solutions to **problems**. The process is based on separating divergent and convergent thinking styles, so that you can focus your mind on creating at the first stage, and then evaluating at the second stage.

Time Management and ability to work under pressure

The ability to work faster and get more done in less time is nothing but time management. Managing time is nothing but planning your work and then working your plan. After a good time management, in a nut shell, the following will be the results indicating that there was effective time management:

- More work done in less time
- Deadlines and commitments met with ease
- Time is still available for hobbies and families
- Enhanced job performance
- Time wasters eliminated
- More efficient and effective
- Reduced pressure and stress &
- Never having any backlogs

Why Training should be given?

Employability is the greatest factor for every student. To get a good job we should have both academic skills and soft skills. Academic skills are our knowledge. Transferring that knowledge into application is the most important factor which is supplemented by soft skills. Employees are required to "own their skills" and successfully market them to employers. Many industries today give prominence to soft skills to their employees. Earlier the industrial sector was sceptical about the soft skills and its impact on sustainable development. Post-independence and after revolution in the sector, the industries agreed to go with soft skills which helps in achieving the sustainability. Soft skills is a term referring to various behaviours that help people work and socialize well with others. In short, they are the good manners and personality traits needed to get along with others and build positive relationships. Unlike hard skills which include person's technical skills and ability to perform certain technical tasks, soft skills are broadly applicable across job titles and industries. It is often said hard skills gets us*a job interview*, we need soft skills *to get and keep the job*, having the technical skills and knowledge to successfully execute a job. It is only one part to be the best at work-place. In addition to hard skills we also need soft skills.

Good soft skills will help you STAND OUT in a crowd of Mediocrity.

Importance and need

Soft skills training is being highly prioritized and recognized today by corporate industries as being essential often we are asked the question "What are soft skills" soft skills are personal capability to interact affectively with others. Simply put, it is all about empathy. Empathy is not restricted to work but in fact it is vital in all areas of life. Soft skills are skills, abilities and traits that pertain to personality, attitude and behaviour. Soft skills are not formal or technical knowledge.

"Soft skills are important to job-related skills that involve little or no interaction with machines and whose application on the job is quite indiscriminate"

Experts comment that soft skills training should begin for a person when they are students, to perform efficiently in their academic environment as well as in their future work place. Hard skills are technical or functional abilities that apply directly to the job title (i.e accountant, engineer, project Manager). Soft skills apply more to personal characteristics and work ethic such as effective communication, problem resolution, customer service, and team collaboration. Soft skills is a synonym for "people skills". The term describe those personal attributes that indicated a high level of emotional intelligence. Unlike hard skills, which describe a person's technical skills set an ability to perform specific tasks, soft skills are broadly applicable across job titles and industries.

Scope of Study

Study is conducted at Manipal Academy of Banking at Bangalore to understand the need and necessity of soft skills training to probationary officers of Banks and take their feedbacks.

Objective of the Study

- To study the need and types of soft skill training.
- To find the importance of the soft skill training
- To analyse the training needs of probationary officers of banks.
- To provide suggestion with the skill gaps.

Research Methodology

Sample Size: 50 probationary officers are targeted from ICICI bank for the distribution of questionnaire.

Data Collection: The two methods by which data collected are:-

Primary data: Primary data are fresh data collected through survey from the probationary officers using questionnaires.

Secondary Data: Secondary data are collected from Books and internet.

Reference Period

Study was conducted for a period June 2017- Jan 2018.

Data Analysis and Interpretation: The Data will be ranked with tabulation and diagrammatic representations. The study will identify the productive personality traits that characterize one's relationships in a milieu.

Profile of Manipal Academy of Banking

Manipal Academy of Banking partner with 25 leading Banks and Financial Institutions and have trained over 25,000 professionals for leading banks, insurance and financial services organizations. Manipal Academy of Banking has established exceptional benchmarks in enhancing the productivity by transforming the human capital of the banks and financial institutions. Manipal Academy for Banking, established in 2008, is an Industry-Academia partnership between Banks and Manipal Global Education Services The Academy was set up to create an ecosystem that would provide banks a steady flow of industry ready bankers who would deliver 'first day, first hour' productivity. The superior pedagogy employed faculty members of Manipal Academy of Banking provides experiential learning to the learners and equips them with domain-specific expertise. The case study and simulation based training, and hands-on learning ensures that the trained professionals are work ready from day one, thus enabling banks to address human capital challenges like job readiness & banking knowledge level of incoming employees, domain expertise, and leadership development

Limitations of the Study

The present study has yielded good preliminary findings, its design is limited to get the desired output from a small homogeneous target group. The main limitations are expressed as follows:

- The sample size selected is small. The study is conducted ona small group of officers.
- The study is limited to only one bank probationary officers.
- The skill requirement of other banks may vary.
- The information provided by the respondents may not be fully accurate due to unavoidable biases.

Expected Contribution

Customer is king: In the face of the steep challenges faced by banks, there is a need to streamline human resources and re-skill bank employees to ensure excellence in customer service.

The soft skill training will indicate the benefits of effective training and development policy in the banks. Adoption of best practices needs analysis and positive interactions between the trainers and the trainees which prove as important factors in up skilling. Since the reference group is drawn from the intervention sample, the difference in the soft skill index emphasizes development pattern that is taking place. The study of soft skill is developed not only in the workplace but also in other institutional setups like family, school and college (where the emphasis is only on the workplace). Soft skills not only empower the higher education institutions and workforce in advancing career development and personal growth, they also create new opportunities.

Future Direction

With the help of the findings and analysis, the study directs the need for soft skills in the work place and new ways to provide soft skills training should continue to be developed.

Conclusion

The findings and the analysis of the survey drive us to conclude as follows:

1. Soft skills training is very much essential for all types of job
2. Soft skills enabled person is a better choice when it comes to the effectiveness at the workplace
3. The firm which aims at sustainable development must possess people who are well trained in soft skills.
4. Any personal traits of a person could be groomed in a proper way through the soft skills training.
5. The trainer should be a properly trained Soft skills expert who shall consider the trainees individually to put them on track of soft skills

For Project Work **Annexure - I**

Kindly, spare a few minutes to fill the questionnaires for gathering the information for a project work only. (Your name will not be disclosed at any stage).

Part – A

Name (Optional) :

Age (in yrs) : Gender :

Part – B

Soft Skills related:

1. Do you think soft skills are a prerequisite for performance at any work place?
   a) Yes b) No.
2. Does it bring out leadership qualities?
   a) Yes b) No
3. Does these skills help you in making decision
   a) Yes b) No
4. There is significance of soft skills for your job
   a) Agree b) strongly agree c) cannot say d) disagree e) strongly disagree
5. Soft skills improves our communication skills
   a) Agree b) strongly agree c) cannot say d) disagree e) strongly disagree
6. Skills build stronger work relationship
   a) Agree b) strongly agree c) cannot say d) disagree e) strongly disagree
7. Bank based goals are reached through soft skills
   a) Agree b) strongly agree c) cannot say d) disagree e) strongly disagree
8. In addition to technical skills we also need Soft skills
   a) Agree b) strongly agree c) cannot say d) disagree e) strongly disagree
9. To what extend does soft skills enhances your learning
   a)Very great extent b) Great extent c) Less extent d) None

10. Soft skills Maximize your career prospectus
    a) Agree b) strongly agree c) cannot say d) disagree e) strongly disagree
11. Soft skills improves your positive behaviour with customers
    a) Agree b) strongly agree c) cannot say d) disagree e) strongly disagree
12. Overall growth of the bank is rapid with a soft skills' trained officer
    a) Agree b) strongly agree c) cannot say d) disagree e) strongly disagree
13. Soft skills blends team for better performance
    a) Agree b) strongly agree c) cannot say d) disagree e) strongly disagree
14. Command on soft skills will also lead to collective decision making
    a) Yes b) No
15. Is there a need to have other skills too along with soft skills
    a) Yes b) No
16. Experts opine that without soft skills, a leader cannot emerge
    a) Agree b) strongly agree c) cannot say d) disagree e) strongly disagree
17. Is it possible to address conflicts with good soft skills
    a) Yes b) No
18. Does the soft skills have a direct impact on customer relations
    a) Yes b) No
19. Do you think that soft skills can help in building teams
    a) Yes b) No
20. Soft skills are one of the components for a Bank's overall sustainable growth
    a) Agree b) strongly agree c) cannot say d) disagree e) strongly disagree
21. Creative ideas will emerge if you are strong in soft skills
    a) Agree b) strongly agree c) cannot say d) disagree e) strongly disagree
22. Soft skills are nothing but only communication skills
    a) Yes b) No
23. Soft skills will not allow you to take decisions
    a) Yes b) No
24. Soft skills can help you to work under pressure
    a) Yes b) No
25. Soft skills will enable you to become a leader
    a) Agree b) strongly agree c) cannot say d) disagree e) strongly disagree

ANNEXURE II

FINDINGS OF SURVEY CONDUCTED ON SOFT SKILLS' IMPORTANCE								
Sl	**DESCRIPTION**	**Yes**	**NO**	**Agree**	**Strongly Agree**	**CANNOT SAY**	**DIS AGREE**	**Strongly disagree**
1	Is soft skill is a pre-requisite for performance	50						
2	Does soft skills gives leadership qualities	47	3					
3	soft skills helps for decision making	50						
4	Significance of soft skills in job			14	36			
5	Improves communication skills			17	32	1		
6	Builds stronger work relationship			16	33	1		
7	Bank based goals could be reached			30	15	4	1	
8	In addition to technical skills we also need soft skills			14	32	3	1	
9	soft skills enhances learning			12	37		1	
10	Carrier prospectus will be improved			21	28	1		
11	Improves positive behaviour with customers			16	34			
12	Overall growth of bank is rapid			27	20	3		
13	soft skills blends team for better performance			22	26	2		

14	Collective decision through command on soft skills	46	4					
15	is there a need to have other skills too	46	4					
16	a leader cannot emerge without soft skills			29	20	1		
17	is it possible to address conflict with soft skills	42	8					
18	Does it have direct impact on customer relations	49	1					
19	does this helps in team building	50						
20	these are one of the components for overall growth of banking			29	20	1		
21	Creativity increases			23	12	11	4	
22	It's nothing but communication skills	22	28					
23	it will not allow to take decisions	6	44					
24	it can help you to work under pressure	35	15					
25	it will enable you to become a leader			34	12	2	1	1

Analysis

1. The target group is already trained and around 90% opines that the soft skills training is very much required
2. Around 25-30% of the group is sceptical on the role of training in increasing the creativity of the individuals
3. The group is completely agreeing on the following with respect to soft skill training

- Helps in team building
- Blends team for better performance
- Soft skills enhances learning
- Carrier prospectus will be improved
- Improves positive behaviour with customers

Overall growth of bank is rapid

4. More than 40% of the group still believes that soft skills is only communication skills
5. There is ambiguity in around 10% of the group that Soft Skills does not allow to take decisions
6. Contradictorily, >95% believes collective decisions are best emerged with command on soft skills

All the group members opine that soft skills is a pre-requisite for performance and it helps in decision making

INDEBTEDNESS AND STRESS IN THE START UPS

Shilpa Shivakumar
Assistant Professor, Indian Academy Degree College, Bangalore

Abstract

There has been much discussion over the past few years about loans and the increasing debt being taken on by the start ups. From the perspective of monetary policy, high debt levels will influence the calibration of interest rate changes. The more debt the more sensitive their cash flow, and hence consumption, is likely to be to a rise in interest rates. Start ups with higher debt levels may also sharply curtail their consumption in response to an adverse shock such as rising competition or more number different forms of start ups, amplifying any economic downturn. My focus today, however, is on the potential risks to financial stability from this build up in debt. One of the key issues we have been focusing on is the extent to which rising debt might presage stress in how the funds are getting managed, with flow on effects to financial stability and ultimately to the economy. There has been a lot said and written about this issue in recent times, using a multitude of data sources and anecdotes. What I hope to do today is to put this information into some context to provide a balanced view on the current and prospective levels of financial stress, and hence the implications for financial stability.

Keywords: indebtedness, stress, financial stress, bank, loans.

Introduction

The definition of indebtedness is the state of owing something (usually money) to someone or the total amount owed. Stress is defined as "a state of psychological and physiological imbalance resulting from the disparity between situational demand and the individual's ability and motivation to meet those needs." A start-up company is an entrepreneurial venture which is typically a newly emerged, fast-growing business that aims to meet a market place need by developing a viable business model around an innovative product, service, process or a platform. A start-up is a young company that is just beginning to develop. Start-ups are usually small and initially financed and operated by a handful of founders or one individual.

Financial Stress

The Financial Health Institute defines "Financial Stress" as:"A condition that is the result of financial and/or economic events that create anxiety, worry or a sense of scarcity and is accompanied by a physiological stress response."

How is Debt and Stress Related to Start-Ups?

As an entrepreneur, one has many things to worry about. One deals with more than just customers. Your interaction with vendors, property owners, prospective clients and the community, all affect how your business operates. Start-up companies, particularly those associated with new technology, sometimes produce huge returns to their creators and investors; a recent example of such is Google, whose creators became billionaires through their stock ownership and options.

However, the failure rate of start-up companies is very high. A 2014 article in Fortune estimated that 90% of start-ups ultimately fail. In sample of 101 unsuccessful start-ups, the top five factors in failure were lack of consumer interest in the product or service(42% of failures); funding or cash problems (29%); personnel or staffing problems (23%); competition from rival companies (19%); and problems with pricing of the product or service (18%). In case of funding problems it can leave employees without pay checks. Sometimes these companies are purchased by other companies, if they are deemed to be viable, but often times they leave employees with very little recourse to recoup lost income for worked time. Building and sustaining a business is a day-in, day-out battle between uncertainty and willpower. Your ability to preserve through prolonged periods of risk and manage the stress that comes with it is as important to your company's survival, as well as your own, as any business decision you'll have to make along the way. Running your own business takes nerves of steel. Risk is, of course part of the price of starting a business. The better you can handle the unknown, the higher the odds of outlasting your

business's biggest challenges. Survival comes down to managing the fallout of long-term risk, from living with debt to the high anxiety of chronic fear and stress.

Financial risk is a bonfire existential threat, making it an easy trigger for the fight-or-flight machinery of stress, which only makes matters worse, but never give up. The best way to understand how you handle living with risk, is look at your ability tolerate debt and its potentially gut-twisting consequences. You don't have to pay attention to the negative points. Contest irrational thoughts with facts. Understand what you can and can't control. Chronic stress lowers good cholesterol, and suppresses your immune system. Taking a break interrupts stress. Make time for exercise and hobbies, or your health and ability to make good decisions. Choose a daily relaxation technique. Meditation cuts off obsessive thoughts and provides deep relaxation. Focus on the possibilities instead of fear.

Entrepreneurs need to practice focusing on what's ahead. They need to compartmentalize, keep their focus steady and shove worries aside. They have to believe in the power of the quantum leap. One may be surrounded by cardboard boxes and subsisting on fast food, but your vision for your company's future must remain clear. Debt doesn't make you a good entrepreneur, and the goal should be to get out of debt as soon as possible. Entrepreneurs can manage financial risk and the stress that comes with it by minimising debt through creative husbanding of precious cash. Great entrepreneurs get their customer to put down a deposit or they go to the vendor and ask for extra terms. Push for quick payment and delay any cash going out from your coffers.

One needs to prepare for such financial risks through another source of income as backup. According to the SBA (Small Business Administration), 70% of small businesses fail within the first seven years. The risk is real, as is the strain that constant uncertainty places on one's nervous system. Chronic stress can lead to any number of serious health problems, from insomnia to heart attack and stroke. Entrepreneurs need to build a stress management plan as a companion piece to their business plan. It should include techniques to help cope with the pressure cooker of living with uncertainty, from reframing and disputing irrational thoughts to relaxation exercises. The stress response hijacks the rational brain and turns the wheel over to the emotional hub, the amygdale, which loves to jump to the conclusion that the sky is falling, that your business is failing, that you're a loser. The stress response goes off before we can think rationally about the situation, so one has to learn to recognize when one is in its grip before the emotional nonsense takes over one's brain. If you are dealing with big stress from small business debt, you should make getting out of debt your top priority. As a small business owner, you also would not want your customers put on notice that you are going through something very public like a bankruptcy as a consequence they would not bode well for your business. Getting out of debt can be done in a variety of ways. Many entrepreneurs borrow from their friends and family before presenting themselves to financial institutions. Negotiating this private debt should be easier than negotiating with financial institutions. However, if your debt is through credit cards or loans, negotiating with your creditors can be the most proactive measure taken to manage your debt.

Statement of the Problem

- To identify the stress level of the starters.
- Check how it's only from banks.

Objective: The objective of the study is to detect the factors causing stress level due to indebtedness.

Methodology

Secondary data: data that was collected by someone other than the user. Common sources of secondary data for social science include censuses, information collected by government departments, organisational records and data that was originally collected for other research purpose.

Descriptive Study

Analysis: Different types of stress with respect to self employment.

- Loneliness: The lifestyle of an entrepreneur can be lonely. When you start a business you are so busy that you don't get chance to socialise, you are completely isolated.

- Fear of the unknown: As an entrepreneur, it is impossible to know what will happen in the future and you will never know what troubles lay around the corner or what hurdle you will have to jump next. No amount of organisation and planning will truly prepare you for what may happen in the future and this can be very stressful. The harsh fact is that 90% if start-up businesses fail and it's hard to know if you will be in the lucky 10% that doesn't.
- Financial concerns: Your businesses become your life, you are financially dependent on it and your family may be dependent on you, so what happens if something goes wrong. A poor sales month may cause low returns or no returns which can have a detrimental effect on your cash flows. This is one of the factors of stress which an owner of business is bound to make feel the pressure of cash flow problems.
- Workload: Starting up your own business and running it is a lot of work. You may experience sleepless nights due to the workload worrying about what next in your list to do. You not draw the exact or more returns of what you have invested.
- Amount of responsibility: Being the owner of and director of a business comes with a huge amount of responsibility, both for the business itself and all the staff you employ. If anything goes wrong, it is you who has to deal with the consequences. The stress of this responsibility can have huge implications on your wellbeing and the overall success of your business.
- Managing time and deadliness: You may find yourself wishing you had more time, or wondering if you actually do need to sleep. Deadliness can be the source of enormous stress for entrepreneurs and managing time can often prove very difficult, particularly when no matter how hard you work, it seems impossible to keep up with everything.
- Public speaking/pitching: No one particularly likes public speaking, no matter how many times you have done it, no matter how used to it you are; speaking in front of a large number of people is always a scary thing to do. Entrepreneurs have to pitch their businesses every day to potential customers, investors and partners making it an essential but often stressful process.
- Finding the right team: You would think that with the levels of unemployment, it would be easy to recruit employees for your business. Entrepreneurs can experience enormous difficulty in finding suitable workers for their business. When resources are scarce and time is limited, it essential that you are able to find the right team to help you grow and scale the business. If this is not possible, then this can cause huge amounts of pressure for you as a business owner.
- Customer interaction: Customer interaction both face to face and over the phone can be a 'nerve-wracking' experience. When a lot is riding on a conversation with a customer, stress levels are elevated. They may ask difficult questions, you may have to persuade them or they may be totally uninterested in what you have to say. Either way, you can't run a business without customers so it is a stress factor that has to be managed properly.
- Rest: This may sound weird but the thought of rest can sometimes be a very stressful even deserve to have a break?', 'what if I miss an opportunity'. All of these thoughts can lead to feelings of anxiety and make you unable to relax. With entrepreneurs being prone to burnout, it is important that you are able to manage these thoughts and your workload in order to remain productive.

Bank /Loan Repayment System

Personal loan is a type of loan where in there are no restrictions to what the loan amount can be used for by the borrower. The loan amount advanced for personal loan can be used for any personal expenditure including wedding expenses, home renovation, a vacation, medical expenses, cosmetic procedures and other such expenses. Personal loan works like any other loan but it offers more flexibility and is pretty much available to everyone. There are unsecured personal loans and secured personal loans. There is no need for collateral or security with unsecured personal loans.

Personal Loan for Self-Employed

Self employed individuals are those who own an unincorporated business all by themselves. They are the sole proprietor of the business. Though it might seem like it might be hard for self employed individuals to avail personal loans due to the fact that they are not salaried, that is not the case. They can easily avail personal loans without any hassles. Usually, personal loans are granted for salaried, non salaried and self employed individuals. The documentation and interest rate offered for personal loans might be different for self employed individuals.

Personal Loan from Banks and NBFC for Self-Employed

Banks and Non-Financial Banking companies provide personal loans to self-employed individuals easily. The difference between the personal loans offered by banks and NBFCs is that banks have stringent rules and some of the banks provide personal loans only for individuals with good credit but NBFCs are more lenient with the requirements when providing personal loans. NBFCs charge a higher interest rate compared to banks when it comes to personal loans.

Personal Loan for Self-Employed with Bad Credit

Having a bad credit is never a good thing when one has to apply for loans. A bad credit history can ruin or lessen the chances of getting a good loan. But it is still possible to avail loans with bad credit. Self employed individuals with bad credit score or credit history can avail loans through no credit check loans or secured personal loans. Banks don't require a good credit history for a secured personal loan as there is a collateral that they can bank on. It is a win for both the lender and borrower.

Features of Personal Loan for Self-Employed

Listed below are the features of personal loan for self employed.

- Competitive interest rates.
- Quick processing of the loan.
- The loan amount can be used for any personal expenditure.
- Flexible tenure periods.
- No collateral.
- Loan amount depends on the repayment capacity of the individual.
- Some banks charge no processing fee for the loan advanced.
- Additional benefits.

Interest rate: the rate of interest offered for personal loans depends on the loan amount and the repayment capacity of the borrower. Different banks offer different interest rates so it's best to shop around before you make a decision.

Listed below are the benefits of personal loan for self employed?

- No restrictions on how the loan can be used
- Quick approval
- Option of using collateral simple documentation
- Transparency
- Some banks offer additional benefits like personal accident insurance with the loan
- Competitive rates

Disadvantages of personal loan for self-employed

Listed below are the disadvantages of personal loan for self employed?

- Higher interest rate compared to other loans
- No part payments
- A good credit history is important to avail a personal loan
- Mandatory bank account
- Late payment charges apply

Personal Loans for Self Employed in India

A self employed individual can avail a personal loan in India with no hassles whatsoever. The loan amount granted to a self employed individual depends on the repayment capacity of the individual. Different banks offer personal loans for the self employed based on different terms and conditions.

Top 5 personal loans for self employed in India

Listed below are the top 5 personal loans for self employed offered in India?

ICICI Bank personal loan: ICICI Bank Personal Loan is a multipurpose loan that comes with a fixed interest rate. The loan can be repaid in easy instalments and there is no need for collateral or security. It comes with easy documentation and quick processing.

Interest rates- the rate of interest offered for personal loans for self employed ranges between 11.99% to 20%.

SBI Saral personal loan: SBI Saral Personal Loan for self employed helps one fund their dream vacation, home renovation or for purchasing an asset. The loan has attractive interest rates and flexible payment terms. SBI Saral personal loan doesn't insist on margin amount.

Eligibility Criteria

Listed below are the eligibility criteria for SBI Saral personal loan

- Any self employed engineer, doctor, chartered accountant, architect or an MBA with 2 years standing is eligible.
- Minimum income amount : Rs. 24,000 in urban areas and Rs. 10,000 in rural areas
- Maximum income amount : Nil
- Repayment term: 48 months

Interest rate: The interest rate offered for SBI Saral personal loan is 8.50% above base floating rate.

Citibank personal loan: Citibank offers personal loan for the unemployed which will be granted within a span of two days. The loan offers full and part repayment options along with additional funds. It offers for terms ranging from 12-60 months.

Eligibility criteria:

Listed below are the eligibility criteria for Citibank personal loan

- Any self employed individual
- No income proof required
- Existing Citibank customers

Interest Rate: The interest rate offered for Citibank personal loan starts at 14.00% p.a.

HSBC Personal Loan: HSBC Personal Loan for self employed comes with flexible payment terms and attractive interest rates. The personal loan can be used for any personal expenditure.

Interest Rate: the interest rate offered for HSBC personal loan starts at 12.99% p.a.

IDBI Personal Loan: IDBI personal loan helps meet unexpected financial emergencies. Be it a wedding expense or a luxury trip, IDBI personal loan is there for your aid.

Interest rate: the interest rate offered for IDBI personal loan ranges at 13.00% p.a.

Bank loans

In the current economic conditions it is hard for small businesses to borrow money from banks. However, in order to avail financial aid by banks, for the self employed most banks will want to see a business plan, which will include information such as how much money you will need to start up, where it will come from and financial projections going forward.

Findings of the Study are

- Indebtedness and stress increases the death rate.
- The increase in stress level leads to mental illness.
- Many start-ups face even family issues due to indebtedness.

- Many start-ups try to give up the thought of self employment due to indebtedness and stress faced by them.
- The start-ups fear of bankruptcy where many entrepreneurs windup the business with a wrong notion of not recovering back to normal status.

Suggestions

- Facing indebtedness and stress leads to death but that is not the end of all. A problem shared is a problem halved. Discuss your concerns with someone, whether it be your bank manager, a family member, friend or business mentor. There is plenty of advice available and nothing is beyond repair.
- One can choose a daily relaxation technique. Medication cuts off obsessive thoughts and provides deep relaxation. Progressive muscle relaxation also helps tense muscles for five seconds, then release. Go through all the major muscle groups twice, two times a day.

Conclusion

At various points in business, you may find yourself facing tricky debt obstacles that need to be overcome. During these challenging times, it's easy to feel overwhelmed and like you may not make it through, but with the right practices in place, you can usually overcome whatever hurdle it is that you're facing and get back on track to business success. Furthermore, you will learn from the experience and in the future, you'll be more likely to recognize the signs that a hurdle may be on the horizon and better

If things seem out of your depth and overcoming certain obstacles impossible, it might be a good idea to seek out business debt specialists or a licensed insolvency practitioner who will look into your individual business case and find the best solution for you. You might be able to rescue your business and get it back if the right help is sourced.

References

1. Website: www.bankbazaar.com
2. Article name: Personal loan for self employed
3. Website: www.theguardian.com
4. Article name: Self-employment: how to find funding and finance for your business
5. Website: www.thinkentrepreneurship.com
6. Article name: Dealing with Big stress from business debt-Guest Post

MUTUAL FUND INVESTMENT AND INDIAN STOCK MARKET

Sathish.P
Research Scholar – VIT Business School, VIT University, Vellore

Mamtha.D
Assistant Professor, Department of Management, Kristu Jayanti College, Bangalore

Abstract

Asset management companies are one of the domestic institutional investor who plays a major role in Indian capital market. Mutual funds are found to be one of the factors along with Foreign Institutional Investors (FIIs) for the fluctuations that happens in Indian stock markets. This research paper makes an attempt to identify the impact of mutual fund investment in Indian equity market. The data of past five years (2013-2018) were taken into account for analysis. The gross purchase, sales and net inflow of mutual fund in equity component is taken for this study. The sample consists of 60 observations of monthly data on mutual fund. SENSEX is considered as benchmark index for analyzing with basic econometric tool.

Keywords: *Mutual fund, stock market, Net investment, BSE and NSE*

Introduction

In the financial market ecosystem, asset management companies facilitate financial intermediation and portfolio diversification. Besides providing financial stability, they help investors diversify their assets more easily and can provide financing to the real economy. The Indian mutual fund industry is one of the fastest growing and most competitive segments of the financial sector. In the last two decades the mutual fund industry has shown impressive growth not just in the scale of assets under management (AUM) but also in terms of schemes and products. Buoyed by robust capital inflows and strong participation of retail investors the asset base of the mutual fund industry again produced record breaking numbers in 2016-17. As of March 31, 2017, the total AUM of the sector stoodat17,54,619 crore. The AUM of the industry saw a lucrative year-on-year growth of 42.3 per cent in the year ending March 2017. However, AUM to GDP (151.83 lakh crore at current prices) ratio of 11.6 per cent indicates a large untapped market potential and very low penetration vis-a-vis global and peer benchmarks. There is immense scope for unprecedented growth of the industry with support from innovative technological initiatives and broadened investor participation over time Mutual funds witnessed impressive growth in terms of net resource mobilization and assets at the end of the financial year 2016-17. The gross resources mobilized by all the fund houses stood at 1,76,15,549crore in 2016-17 as compared to1,37,65,555 crore in the previous year, showing a tremendous increase of 28.0 per cent. Correspondingly, redemption increased by 26.7 per cent to 1,72,72,500 crore in 2016-17. The mutual fund industry saw net inflows to the tune of3,43,049 crore in 2016-17, demonstrating an increase of almost 3 times from 2015-16. The net annual inflows in income oriented funds in the year ending March 31, 2017 stood at 2,13,154 crore, which is 6.5 times more than the annual inflows in the year ending March 31, 2016.

Literature Review

The following literature found related to this study. Thiripalraju et al. (2011) analyzed the case study of FII and Mutual funds investment in Indian stock market. The study took the sample period from 2000 through 2009. They reported that there exists bidirectional causality between the foreign institutional investment and Indian stock market and vice versa. And also found one-way causality between the mutual fund investment and market return. A study conducted by Hemanathan (2011)investigated the relationship between the mutual fund investments and Indian Stock Market. The result evidenced that there is positive and significant relationship between the mutual fund investment and CNX Nifty (11.9%) followed by S&P BSE SENSEX (12%). By using daily observations from 2000 to 2013, Agarwal (2013) found that the foreign institutional investment has positive and significant relationship with SENSEX (79.66%). A study conducted by Hossain et al (2013) examined the dynamic relationship between the stock market and mutual fund during 2008 and 2010. Variables such as general index return, DSE general index turnover, mutualfunds' return and mutual funds' turnover, of which it's been observed that, the DSE general index

and mutual funds are co integrated by using Johansen test. There was bi directional causality between the DSE general index turnover and DSE general index return and vice versa.

Aras et al. (2003) investigated the causality relationship between the institutional investors and stock market development by using panel data of 23 OECD countries over a period of 18 years spanning from 1982 to 2000. They found significant relationship (0.715) between the institutional investors and stock market development and there is bidirectional causality between the institutional investors and stock market development. Similarly, a study conducted by Ananda et al. (2013) explored whether FII activity has a significant impact on the flow of Indian market and causal relationship. They found that, 15.2% variation in BSE return is explained by changes in the FII and there is significant positive correlation between the FII and BSE return. The author used regression and correlation analysis to investigate the impact of FII and domestic institutional investors. The paper also probed the relationship of nifty with FII and DII over a period of nine years spanning from 2006 to 2014. They found that, there is (-0.007) negative correlation between the nifty and mutual fund inflow. Nifty is not influenced by the FII and DII during this study period.

The institutional investors both domestic as well as foreign investors have significant influence on the Indian equity market after 2008 and there is no impact of domestic debt market on the Indian equity market returns (Mukherjee et al 2016). On the other hand, Syamala et al. (2014)explored the relationship between the institutional ownership and stock liquidity over a period of 12 years across 2001 to 2012. They found that, firms with higher institutional ownership have stock liquidity. FII and bank ownership have negative impact on lower liquidity. Scott (2014)came with the evidence that the increased institutional ownership leads to increase in research and development investments especially in firms with higher stock liquidity. He concluded that, the Institutional investors should encourage the management to invest in R& D for long term benefits by using generalized method of moments (GMM) during 1990 - 2005. A study conducted by Goel et al. (2014) investigated the outline of mutual fund industry in India during 2010 to 2014. They found that, the large number of mutual fund schemes has increased during this period and the debt scheme showed highest growth rate among the schemes. They concluded mutual fund investors invest in the debt securities of the Indian stock market.

Tao Shu (2012) also found the evidence of institutional investor contribution can increase stock price efficiency and therefore drastically decline stock market variance associated with price inefficiencies. One of the studies conducted in the context of China (Don Bredin et al. 2014) had examined the foreign institutional investors prefers to invest in Chinese ownership structure of listed firms. Similarly, Roger et al. (2012) came with the evidence that the average return of all the 42 Chinese mutual fund was 8.45 per cent with the standard deviation of 25.62 per cent. They conclude that, there is no evidence to depict any long term persistence existence in Chinese mutual fund during the period 2002 to 2009. Athanasius et al. (2005) also found the evidence of all the Greece equity mutual funds show positive value in the first three years after which a fall in the stock market impacted mutual funds with negative return in 2000.

Objectives

- To examine the relationship between the mutual fund investment and Indian stock market
- To analyze the influence of mutual fund investment on Indian stock market

Hypothesis

H_1- There is a relationship between the mutual fund investment and Indian stock market.

H_2- There is an impact of mutual fund investment on Indian stock market.

Research Methodology

The study is descriptive and analytical in nature. To accomplish the objective, the study uses monthly time series data on gross purchase, sales and net inflow of mutual fund equity component. The sample consists of 60 monthly observations for a period of five years from Feb 2013 to Jan 2018.SENSEX closing price was taken as market proxy. The data was analyzed by using basic econometric tools such as correlation analysis and ordinary least square method.

Table 1 Unit Root Tests Results

Variables	Augmented Dicky Fuller Test					
	At level			1st Difference		
	t-statistics	Critical Value	P value	t-statistics	Critical Value	P value
MFGP	-0.5012	-3.5482	0.8830	-10.7006	-3.5482	0.0000*
MFGS	0.2660	-3.5482	0.9745	-15.1549	-3.5482	0.0000*
MFNI	-3.5587	-3.5482	0.0097*	-	-	-
SENSEX_RET	-7.6283	-3.5482	0.0000*	-	-	-

** denotes significance at 1 percent level*

This study is carried out Augmented Dicky fuller (1981) stationary tests. The results from table 1 shows that ADF test for unit root fail to reject the null hypothesis of non stationarity and also observed the test statistics is more negative than the critical value, thus evidence that MFNI and SENSEX are stationary at level which indicates mean and variance is constant through these years. However, MFGP and MFGS are found to be a non stationary or random walk at the level but become stationary at the first difference.

Table 2 Descriptive Statistics

Frequencies	MFGP	MFGS	MF Net Investment	SENSEX
Mean	250519.1	210522.0	39997.56	26211.74
Std. Dev	146023.8	113486.9	53640.02	4251.113
Minimum	63210.00	77440.00	-101981.0	18619.72
Maximum	748856.5	658624.9	172219.3	35965.02
Skewness	1.1030	1.6276	0.0546	-0.1233
Kurtosis	4.1403	6.1504	2.8633	2.4509
Jarque -Bera	15.4178	51.3056	0.0765	0.9058
Probablity	0.0004	0.0000	0.9624	0.6357

The above table depicts that, among the five variables, the mean score (M=26211.74; SD=4251.113) of SENSEX is observed to be centered and deviation less than the mean score. Similarly all the other three variables showed the same type of results, MFGP *(M=250519.1; SD=146023.8)*, MFGS *(M=210522.0; SD=113486.9)* and MFNI *(M=39997.56; SD=53640.02)* respectively, showed an acceptable mean score with less deviation. The MFGP and MFGS had higher kurtosis that reflected flatter distribution as compared to normal distribution. The SENSEX were negatively skewed and other variables such as MFGP, MFGS and MFNI were positively skewed in most of the years.

Table 3 Correlation Matrix

Variables	MFGP	MFGS	MFNI	SENSEX_RET
MFGP	1	0.47*	0.17*	-0.10*
MFGS	-	1	-0.21*	0.27*
MFNI	-	-	1	-0.38*
SENSEX_RET	-	-	-	1

**Correlation is significant at the 0.01 level (2 tailed)* Preliminary test to establish the relationship between Indian stock market and FIIs trading activity is summarized in Table 3. The result reveals that the purchase activities of MFs have negatively correlated with the SENSEX (r=-0.10, p<.01) followed by MFNI (r=-0.38, p<.01). However, the result found that there is positive relationship (r=0.27, p<.01) between the MFGS and SENSEX. The overall result indicates that for every time the mutual increases their investment, the responses of the market is negative and it turns positive when they withdrew their investments. .

Ordinary Least Square Method: In this section, we used OLS to bring out the impact of mutual fund investment on Indian stock market.

Model Specification

$$SENSEX\_RET = c + \beta 1\ (MFGP) + \beta 2\ (MFGS) + u \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

$$SENSEX\_RET = c + \beta 1\ (MFGP) + \beta 2\ (MFGS) + \beta 2\ (MFNI) + u \ldots\ \ldots\ (2)$$

Table 4 Ordinary Least Square (OLS)

Model	DV	IV	Beta	t stat	DW Test	F Stat	R-Squared
Model 1	SENSEX_RET	MFGP	-0.5630	-2.1827**	1.78	4.83	0.14
		MFGS	0.6557	2.9829*			
Model 2	SENSEX_RET	MFGP	-0.3760	-1.4305**	1.78	5.12	0.21
		MFGS	0.4834	2.1445**			
		MFNI	-1.96E-06	-2.2379**			

** and** indicates significance at 1 and 5 per cent level*

Estimated regression output is presented in Table 4 as two different models. In model 1, the first equation with two predictors produced $R^2=.14$, $F(2,60) = 4.83$, $p<.01$. It was found that mutual fund Gross Purchase ($\beta=-0.56$, $p<.05$) and Gross Sales ($\beta= 0.65$, $p<.01$) significantly predicted movements in SENSEX return. It indicates that investment made by mutual funds when the market index decreases and a sale by mutual funds when the market index increased.

In addition, the mutual fund net investment included in the second equation to check the effect mutual fund net inflow on Indian stock market. The beta coefficients of mutual fund net investment have negative and significant impact on SENSEX at five percent significant level. The overall model explain about 0.21 percent represented by R^2 which indicates 21 percent changes in SENSEX return is explained by changes in mutual fund gross purchase, sales and net inflow.

Table 5 Residual Diagnostics

Residual Diagnostics	Model 1	Model 2	Decision
Auto Correlation	*F(2,54) 0.75*	*F(2,53) 0.71*	*No autocorrelation*
Heteroscedasticity	*F(2,56) 0.45*	*F(3,55) 0.73*	*No heteroscedasticity*

Finally, the study tested the residual diagnostics for the above OLS model. The probability value of autocorrelation, heteroscedasticity are greater than 5 percent which indicates there is no presence of autocorrelation and heteroscedasticity between the residuals. Hence, the estimated OLS model is strongly fit.

Conclusion

After the post crisis period, there has been tremendous change in mutual fund industry in India. In the last two years, mutual fund investment was more than the foreign portfolio investment in the Indian stock market. The study discloses the relationship that exists between purchase/sales of mutual funds and the market indices. The study indicates that mutual funds operating in India do have the power to influence the changes that is observed in market indices. While the investors buy and decide to go for redemption, mutual fund has the task to enter and exit the Indian stock market more frequently, which in fact has an impact on the market.

References

1. Agarwal, T. (2013). Foreign institutional investment: A study of co relationship with mutual Funds investment and sensex. Researchers World, 4(3), 63.
2. Ananda, S., & Nair, B. (2013). Fund Flow of Financial Institutional Investors to Indian Stock Market: An Empirical Study. Asia-Pacific Journal of Management Research and Innovation, 9(2), 201-219.
3. Bose, S. (2012). Mutual Fund Investments, FII Investments and Stock Market Returns in India. Money & Finance, ICRA Bulletin, September.
4. Goel, D., & Gupta, R. (2014). Mutual Fund Industry in India: An Overview. International Journal of Emerging Research in Management &Technology, 3(5), 168-171.
5. Hemanathan .M. (2011). Role of mutual fund in Indian stock market. Singaporean Journal Scientific Research, 4(2), 268-273.
6. Hossain, M. S., Munibur, A. B. M., &Rajib, M. S. U. (2013). Dynamics of Mutual Funds in Relation to Stock Market: A Vector Autoregressive Causality Analysis. International Journal of Economics and Financial Issues, 3(1), 191.
7. Kotishwar, A., &Alekhya, P. FII & DII Fund Flow Impact of Mutual Funds Inflows and Outflows–A Study.
8. Mahdavi, G., MonfaredMaharlouie, M., Sarikhani, M., & Ebrahimi, F. (2012). The impact of institutional ownership on risk-taking behaviors. African Journal of Business Management, 6(12), 4488-4495.
9. Mukherjee &Malabika Roy (2016). What Drives the Stock Market Return in India? An Exploration with Dynamic Factor Model. Journal of Emerging Market Finance15(1), 1–27.
10. Muslumov, A., & Aras, G. (2005). Institutional investors and stock market development: a causality study. ISE Review, 29, 1-14.

11. Scott, R. W. (2014). Institutional investors, R&D policy and firm stock liquidity. International Journal of Economics and Finance, 6(10), 26.
12. Syamala, S. R., Chauhan, Y., & Wadhwa, K. (2014). Institutional Investors and Stock Liquidity: Evidence from Indian Stock Market. Global Business Review, 15(3), 461-476.
13. Thiripalraju, M., & Acharya, R. (2011). Dynamic Interaction between Institutional Investment and Stock Returns in India: A Case of FIIs and MFs. Indian Institute of Capital Markets.
14. Sanjana Juneja,(2013).Understanding the Relation between FII and StockMarket, International Journal of Commerce, Business and Management, 2(6), 2319–2828.
15. Jatinder Loomba, (2012).Do FIIs Impact Volatility Of Indian Stock Market?, International Journal of Marketing, Financial Services & Management Research, 1(7), 2277 - 3622.
16. Bohl, M. T., Brzeszczyński, J., &Wilfling, B. (2009). Institutional investors and stock returns volatility: Empirical evidence from a natural experiment. Journal of Financial Stability, 5(2), 170-182.
17. Gabaix, X., Gopikrishnan, P., Plerou, V., & Stanley, H. E. (2005). Institutional investors and stock market volatility (No. w11722). National Bureau of Economic Research.
18. Kim, J. B., & Cheong, H. Y. (2015). Foreign versus domestic institutional investors in emerging markets: Who contributes more to firm-specific information flow?.China Journal of Accounting Research, 8(1), 1-23.
19. Srinivasan, P., Kalaivani, M., & Bhat, K. S. (2010). Foreign Institutional Investment and Stock Market Returns in India: Before and During Global Financial Crisis. IUP Journal of Behavioral Finance, 7(1/2), 59.
20. Lakshman, M. V., Basu, S., & Vaidyanathan, R. (2013). Market-wide herding and the impact of institutional investors in the Indian capital market. Journal of Emerging Market Finance, 12(2), 197-237.
21. Liu, N., Bredin, D., Wang, L., & Yi, Z. (2014). Domestic and foreign institutional investors' behavior in China. The European Journal of Finance, 20(7-9), 728-751.
22. Piotroski, J. D., &Roulstone, D. T. (2004). The influence of analysts, institutional investors, and insiders on the incorporation of market, industry, and firm-specific information into stock prices. The Accounting Review, 79(4), 1119-1151.
23. Shu, T. (2013). Institutional investor participation and stock market anomalies. Journal of Business Finance & Accounting, 40(5-6), 695-718.
24. Lakonishok, J., Shleifer, A., &Vishny, R. W. (1992). The impact of institutional trading on stock prices. Journal of financial economics, 32(1), 23-43.
25. Witt, S. F., & Pass, C. L. (1985). Institutional Investors and the Stock Market. Managerial Finance, 11(3/4), 15-25.

INDIA'S INITIATIVE TO STRIVE SUSTAINABLE DEVELOPMENT GOALS – A SPECIAL FOCUS ON MR. MODI POLICY

Priya Singh
HOD, Department of Humanities, Indo Asian Academy Degree College, Kalyan Nagar, Bangalore

Abstract

The concept of sustainable development promoted after the formation of Sustainable Development Gaols (SDGs) to be achieved by all the Nations in 2030 as proposed by the United Nations. All the issues mentioned under the 17 SDGs are not contemporary issues instead its been there always in past. We are living in the world of interconnectedness and interdependence because of which SDGs cannot be ignored. The SDGs goals have come to limelight only after the 20th century. Today the significance of SDGs had increased to an extent that every progressive country will not do the mistake of ignoring them. India also being the fastest growing economy in the world cannot ignore it priority towards reaching SDGs goals on time. These goals where always taken care internally by every country through internal policies but SDGs has made these goals Multi-dimensional. This is a theoretical secondary data research paper. This paper is formulated to explain, predict, and understand the phenomena of India's initiative for SDGs with a special focus to the present Prime Minister, Mr. Narendra Modi's Government policies. There are plenty of papers and reports on the SDGs and India's involvement in reaching these goals. Nonetheless this paper is unique as this paper gives the condense information about various policies made in India by the present Government. This paper individually discusses each 17 SDGs by showing the policies made to reach the goals. The reason of choosing the period 2014 – 2018 in this study is to concentrate on the policies implemented under the guidance of Mr. Modi, as the most popular Indian politician.

Keywords: *Sustainable Development Gaols (SDGs), Sustainable Development, Policies, Multi-Dimension, United Nation.*

Introduction

"The principle of common but differentiated responsibilities is the bedrock of our enterprise for a sustainable world" - Indian Prime Minister of India Narendra Modi

Sustainable Growth and it development is primacy of contemporary world. A concept born in 1987, at the Brundtland Report by the United Nations World Commission on Environment and Development is equivalent to the survival of the fittest. Every country today is competing globally to show its position and to make it count they have to succeed in achieving the Sustainable development goal. India being one of the prominent member of United Nation and the emerging economy in the world cannot go-slow in the development of sustainability.

Mr. Narendra Modi, the most Tech-Savvy Prime Minister of India showed his commitment towards sustainability in his address to 200 delegates at the World Sustainable Development Summit. When he said, "India is one sixth of the global community. Our development needs are enormous. Our poverty or prosperity will have direct impact on the global poverty or prosperity. People in India have waited too long for access to modern amenities and means of development. We have committed to complete this task sooner than anticipated. However, we have also said that we will do all this in a cleaner and greener way." Mr. Modi added on saying, "As a nation, we are proud of our long history and tradition of harmonious co-existence between man and nature. Respect for nature is an integral part of our value system. Our traditional practices contribute to a sustainable lifestyle." These encouraging words of Mr. Modi definitely displays India's gravity in achieving SGDs earlier 2030. The concept of sustainable development from being fixated the environmental and ecological concern has nowadays converted into a multi-dimensional concerns for the country. India despite being the third largest economy in the world overtaking other biggest countries like Japan, Brazil and Russia cannot remove SDGs from the countries chief agendas. Therefore, this paper will highlights the measures taken by each individual SDGs by the current government in India.

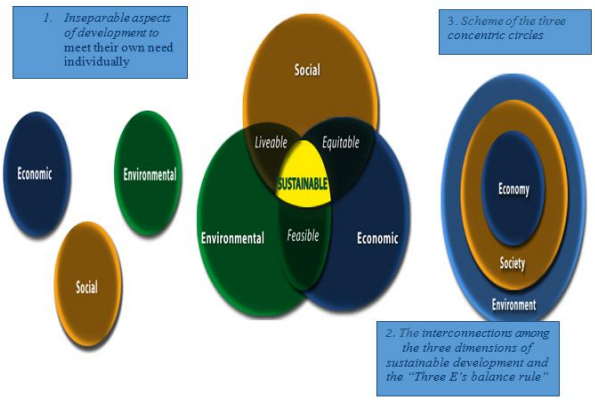
Mr, Modi is the first limelight Prime-Minister of India for all the controversial policies like Demonetization, Beef Ban, Triple Talaq and recent being the of GST. Time and again the present

government has attested that they will implement all necessary action require to make India self-sufficient in sustainable growth. Even if it require take strict action and making rigid policies for the country. But despite all criticism the passion and goals of Mr. Modis couldn't be changed. Therefore, it would be interesting to see the actions taken by the current government to reach the SDGs quicker. In this paper will be focused on the various policies made in India after the 2014 Modi's Government by individually centring on all the 17 SDGs. This paper will extensively explain all the gaols set by united nation sustainability programme in detail and will try to understand where does India stand today in each goal and how much improvement can we see from 2015 SDGs birth to 2018 current scenario. The most widespread expression of Mr. Modi's "Sabka Saath Sabka Vikas," in English translates as "Collective Effort, Inclusive Growth" forms the cornerstone of India's national development agenda. To promote this program at the advanced platform, the Government of India released a draft 'Three-Year Action Agenda' covering both years 2017-18 to 2019-20. In similar, the work is in advance stages on a 15-Year Vision, which will also include a 7-year Strategy. Reflecting the country's long-standing federal tradition, these documents are being prepared with active participation of the States. In fact India has played crucial role in determining the Sustainable Development Goals (SDGs). If noticed the country's national development goals are mirrored in the SDGs and India has been effectively committed to achieving the SDGs even before they were fully designed. Therefore, this connection between India and SDGs is compelling me to focus the study on Mr. Modi's Policies.

Sustainable Development

Sustainable development is the most highlighted topic of today. Every countries is fighting with this concept by employing various policies to reach permanent sustainability. This concept originated with the dissolution on The Brundtland Commission in December 1987 after releasing Our Common Future, also known as the Brundtland Report, in October 1987. This report presented a document which coined, and defined the meaning of the term "Sustainable Development".

The Sustainable development moved from just being a "economic development that is conducted without depletion of natural resources" to "the Organizing principles for meeting human development goals while at the same time sustaining the ability of natural systems to provide the natural resources and ecosystem services upon which the economy and society depend". In the philological of International Relations this concept changed from being a Uni-lateral idea in past to Multi-lateral contemporary thought. The theory of sustainable development travelled from the imbedded ideas about sustainable forest management, to the twentieth century environmental concerns to the twenty first century three pillar dimensions on economic, social and environmental protection for future generations.



The above diagram clearly shows the different principles of Sustainable development moved from 1987 till SDGs in 2015. The core ideology remained the same with shifting its structure in different phases of development. Hence, from 1987 many attempts have been made to set a single methodological framework for all the United Nations member countries to priorities its agenda towards sustainability. Whether it is about 1992, the UN Conference on Environment and Development published the Earth Charter, which outlines the building of a just, sustainable, and peaceful global society through the "Agenda 21" action plan or the 8th September 2000 a three-day Millennium Summit the General Assembly of the United Nations adopted the Millennium Declaration (Resolution 55/2). Yet, none of these plans could reach the aspired goals of the United Nation to enhance the significance of Sustainable development for every country. So finally in September 2015, the United

Nations General Assembly formally adopted the "universal, integrated and transformative" 2030 Agenda for Sustainable Development, a set of 17 Sustainable Development Goals (SDGs). The goals are to be implemented and achieved in every country from the year 2016 to 2030.

India and Sustainable Development

The SDG Index and Dashboards Report produced by the Sustainable Development Solutions Network (SDSN), India is ranked 116 out of 157 nations with a score of 58.1, behind countries such as Nepal, Iran, Sri Lanka, Bhutan and China &Pakistan is ranked 122 on a global index that assesses the performance of countries towards achieving the ambitious sustainable development goals (SDGs). These facts clearly indicates that world leaders need to strengthen their joint efforts to realise the 17 global goals. It said many of the richest countries in the world are nowhere near achieving the global policy objectives but also deteriorate the implementation process for poorer countries because of negative spill over effects. India being one of the significant game player in global economy cannot show its back in enhancing India's rank in the coming future. Moreover, the India's P.M statement at the UN summit for the adoption of Post-2015 Development Agenda said, "One must care about the world one will not see", are promising. Indeed, humanity has progressed when it has collectively risen to its obligation to the world and responsibility to the future. Seventy years after the end of a tragic war and birth of a new hope for our age, we are meeting to chart a course for our humanity and our planet. In India NITI [National Institution for Transforming India] Aayog, the Government of India's premier think tank, has been entrusted with the task of coordinating the SDGs. This is a new organisation set up in 2015 by the new government, replacing 65 years old Planning Commission in the name of changing the working model of the institution. NITI Aayog has planned few ideas which relate to the SDGs and their targets, and has identified lead and supporting ministries for each target. They have adopted a government-wide approach to sustainable development, emphasising the interconnected nature of the SDGs across economic, social and environmental pillars. The States have been advised to accept a parallel representation of the schemes, by best to 'put people first' and to ensuring that 'no one is left behind'. The UN Country Team in India supports NITI Aayog in its efforts to address the interconnectedness of the goals, to ensure that no one is left behind and to advocate for adequate financing to achieve the SDGs. In close collaboration with NITI Aayog and partners, the UN has supported thematic consultations on the SDGs to bring together various states governments, central ministries, civil society organisations and academia to considered particular SDGs. The above informations are evident in India's obligation in succeeding SDGs. This this study will hence gaze at the policy measures taken by the Mr. Modi government to reach these goals. In 2015 sustainable development goals originates with the end of 15-year cycle of the anti-poverty Millennium Development Goals (MDGs), and officially accepted on 1 January 2016 by the United Nations as an even more ambitious set of goals to banish a whole host of social ills by 2030. "The Seventeen Sustainable development Goals [SDGs] are our shared vision of a humanity and social contract between the world's leaders and the people" said by Ban Ki Moon on 2030 agenda of SDGs. He also added that, "these are to-do list for the people and planet, and a blueprint for success". Thus, let's begin to see India's blueprint policies in reaching SDGs under Mr. Modi regime. Subsequent are the 17 SDGs also promoted by UNDP for inclusive and sustainable growth, measured with India's major policies.

Goal 1: End Poverty in All Its forms everywhere

Poverty is the problem of all developing countries since ages and India despite being the fastest-growing economies in the world still have 21.9% population below the national poverty lines. Some importance steps take to control poverty are:

- The Pradhan Mantri Jeevan Jyoti Bima Yojana
- Pradhan Mantri Jan-Dhan Yojana
- The Deen Dayal Antyodya Yojana
- Pradhan Mantri Suraksha Bima Yojana
- Atal pension Yojana

- National Social Assistance Programme

All the above scheme will provide skilled employment of marginalizedcommunities, access to financial services namely banking savings and deposits accounts, remittance credit, and essentially people will receive pension in an affordable manner. It also promises pension to workers in the unorganised sectors, widows and the differently abled.

Goal 2: End Hunger, Achieve Food Security and Improved Nutrition and Promote Sustainable Agriculture

India requires urgent attention for its hunger problem as the country ranks 100th out of 110 countries on the global hunger index – behind North Korea, Bangladesh, and Iraq though still ahead Pakistan. Where the hunger is concerned the present government has not brought any bomb policies instead we are still following the old Mahatma Gandhi National Rural Employment Guarantee Scheme (MNREGA), National Health Mission (NHM), the Integrated Child Development Scheme (ICDS), **Akshaya Patra,** Midday Meal Programmes (MDM)under anganwadis. However, some added benefit can be seen through Mission Indradhanush, Beti Bachao - Beti Padhao, and Pradhan Mantri Matru Vandana Yojana etc as a positive impact on nutrition.

In the area of Agriculture following initiatives are taken to uplift the sector of economy.

- Mega Food Park
- Krishi Unnati Mela
- DD Kisan
- Pradhan Mantri Krishi Sinchai Yojana

These schemes includes establishing a "direct linkage from farm to processing and then to consumer markets" through a network of collection centres and primary processing centres. A fair is to create awareness among farmers about the latest agriculture-related technological developments. It also include an Indian agriculture 24-hour television channel dedicated to agriculture and related sectors, which disseminates real-time inputs to farmers on new farming techniques, water conservation and organic farming among other information and through a national mission to improve farm productivity and ensure better utilization of the resources in the country.

Goal 3: Good Health and Well-Being of People

India Ranks 143/188 in the global health index is not a pleasing figure. There are many indicator of health which varies from specific disease of malaria to mortality rate, hygiene, sanitation etc. Therefore, the above score is the final result after measuring at all pointers. Some major policies taken by the government here are:

- The National Health Policy, 2017
- Swachh Bharat
- Free Vaccination diphtheria, whooping cough, tetanus, tuberculosis, polio, measles and hepatitis.
- Universal health coverage
- National Urban Sanitation policy

These schemes will facilitate Promoting proper functioning of network-based sewerage systems and ensuring connections of households to them wherever possible; b. Promoting recycle and reuse of treated waste water for non-potable applications wherever possible will be encouraged. c. Promoting proper disposal and treatment of sludge from on-site installations (septic tanks, pit latrines, etc.). It will clean up the streets, roads and infrastructure of India's cities, smaller towns, and rural areas. One of the policy also provides a health insurance cover to the tune of INR 100,000 (USD 1,563) for families below the poverty. The policies will try to preventive and promote health care orientation in all developmental policies, and universal access to good quality health care services without anyone having to face financial hardship as a consequence. This would be achieved through increasing access, improving quality and lowering the cost of healthcare delivery.

Goal 4: Quality Education

"All the SDGs comes down to Education..." Malala Yousafzai. As, per social progress index India ranks 81/128 countries. Prime Minister Modi recommended a series of structural reforms in education ranging from schools to universities, by instructing Niti Ayog to focus on the government's mission on 'grade-wise learning for each class' and the overhauling of University Grants Commission and All India Council of Technical Education (AICTE).

- Beti Bachao Beti Padhao,
- Rashtriya Avishkar Abhiyaan for primary/secondary education
- SWAYAM
- GIAN
- E-Pathshala [Digital Education]
- Saransh [Digital Education]
- Higher Education Financing Agency (HEFA)

The new schemes have not just opened more opportunity in the field of education instead it has opened the new wings of education by the mean of connectivity using E-education approach to speak the knowledge at every corner of India.One of the scheme includes the leverage funds from the market and supplement them with donations and CSR funds to strengthen Support system for Education.

Goal 5: Gender Equality

As per UNDP Ranking India's ranking is very low 132/148 in the Gender Gap and inequality index. UNICEF says gender equality "means that women and men, and girls and boys, enjoy the same rights, resources, opportunities and protections. It does not require that girls and boys, or women and men, be the same, or that they be treated exactly alike."

The following programmes displays the outlook of current government in gender equality by introducing many special schemes for the women's. Mr. Modi once said it is important to understand that "when it comes to multi task activities, nobody can beat women. Such is the strength and we must be very proud of it"

- Beti Bachao, Beti Padhao *(translation:* Save girl child, educate a girl child*)*
- Sukanya Samriddhi Yojana
- Pradhan Mantri Surakshit Matritva Abhiyan
- Pradhan Mantri Suraksha Bandhan Yojana
- Pradhan Mantri Ujjwala Yojana

These schemes comprised the social security and life insurance benefits for the women through the social campaign of the Government of India. The programmes aims to generate awareness and to improve the efficiency of welfare services intended for girls with the initial funding of □100 crore (US$15 million. The programalso includes other benefits like providing financial security, the campaign of public education, free health check-ups which provide great convenience to pregnant women etc.

Goal 6: Clean Water and Sanitation

As per the survey done by World Water Council in March 2018 the standard of drinking water in India has improved in the last five years, with an efforts towards clean drinking. The present government has aimed at providing every person in rural India with adequate safe water for drinking, cooking and other domestic basic needs on a sustainable basis through following scheme.

- Swachh Bharath Mission
- Ganga Clean Up
- National Rural Drinking Water Programme (NRDWP)
- Solid and Liquid Waste Management activities and making Gram Panchayats Open Defecation Free (ODF)

The above mentioned programmes accelerate the efforts to achieve universal sanitation coverage and to put focus on safe sanitation. It improves the levels of cleanliness through Solid and Liquid Waste Management activities. The scheme will provide every person in rural India with adequate safe water for drinking, cooking and other domestic basic needs on a sustainable basis. Safe water is to be readily and conveniently accessible at all times and in all situations.

Goal 7: Affordable and Clean Energy

India is emerging as a major market for renewal Energy with a huge investment in solar and wind energy. If India moderately increases the share of renewable energy and reduces the fossil fuel then the government can increase this capacity to 175 GW by end of 2022. The following are the initiatives after 2014 Government.

- Deendayal Upadhyaya Gram Jyoti Yojana
- Renewable Energy Vision
- Efficient Household Lighting programme
- UJALA programme

Connecting renewable energy systems across national borders has had a difficult start. This Plan promote efficient lighting, enhance awareness on using efficient equipment which reduce electricity bills and help preserve environment. These scheme are designed to provide continuous power supply to rural India.

Goal 8: Decent Work and Economic Growth

This scheme gives immense emphasis on creating conducive trade and business environment as reflected in the ease of doing business report 2016-17 by World Bank. This goal focus on two aspects: Urbanization & Manufacturing. The programme will connect renewable energy systems across national borders.

- Make in India
- Start-up India
- Skill India
- Digital India

All these initiatives reflect that the country is committed to attain the targets set forth and it is employing the two pronged strategy of growth and employment to achieve the same. All the mentioned scheme came as new India policies from being skilled job, media service to reach early. The government initiative to economic growth and improve the quality of life of citizens by enabling industrial and urban infrastructure development Industrial Corridors and 21 new nodal Industrial Cities

Goal 9: Industry, Innovation and Infrastructure

Investment in innovation and R&D offers large payoffs in terms of economic growth and competitiveness in global economy.

- 3rd largest tech driven Start-up ecosystem globally and Tech Startups in India are expected to reach 11,500 in 2020 from 4,300 in 2015
- “Start-up India” initiative was launched aiming at fostering entrepreneurship and promoting innovation by creating an ecosystem that is conducive for growth of Start-ups.
- Intellectual Property Rights Policy launched in May 2016 is having salient feature

The Scheme for 'Providing Financial Assistance on Bar-Code' an NMCP Scheme. Various projects and PPP model based on investment.

Goal 10: Reduce Inequality

The Indian government has recently initiated schemes to open bank accounts for large sections of the population and provide the poor with financial services such as insurance and pensions at affordable rates. Develop quality, reliable, sustainable and resilient infrastructure, including regional and Tran’s border

infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

Goal 11: Sustainable Cities and Communities

The smart city proposal of each shortlisted city is expected to encapsulate either a retrofitting or redevelopment or Greenfield development model, or a mix thereof and a Pan-city feature with Smart Solution(s). It is important to note that pan-city is an additional feature to be provided. Since smart city is taking a compact area approach, it is necessary that all the city residents feel there is something in it for them also. Therefore, the additional requirement of some (at least one) city-wide smart solution has been put in the scheme to make it inclusive. For North Eastern and Himalayan States, the area proposed to be developed will be one-half of what is prescribed for any of the alternative models - retrofitting, redevelopment or Greenfield development. The Smart Cities Mission having a project outlay of US$ 7.69 billion is progressing, with Special Purpose Vehicles for 19 cities already set up

Goal 12: Responsible Consumption and Production

All the programmes and schemes under Goal 2, Goal 6, Goal 7, Goal 8, Goal 9, Goal 11, Goal 13, Goal 14, Goal 15. Sustainable Consumption and Production (SCP) is a pre-requisite for the world's development to remain within the safe limits of growth and planetary boundaries. It is fundamental in order to achieve sustainable development. Schemes to set-up facilities and specialised storage facilities such as high humidity cold storage deep freezers, controlled atmosphere or modified atmosphere storage. 100 per cent FDI in the cold chain sector through the automatic route

Goal 13: Climate Actions

India is one of the world's foremost emitters of CO2. A recent study conducted by Yale and Columbia universities, ranks India 126 out of 132 countries on environmental performances.

- National Action plan
- Paris Agreement
- Green India Mission
- National Mission for Sustainable Agriculture

According to a recent report produced by the Carbon Disclosure Project (CDP) India, is supporting the climate goals of the government set under the Paris Agreement. India made 11 point plan to fight Climate Change with new mission which addresses the impact of Climate change on health, coastal zones and waste-to-energy etc. Time and again every Indian Government has taken appropriate action to take actions on climate. The present Green India Mission aims at protecting, enhancing and restoring India's decreasing forest cover and responding to climate change by a combination of mitigation and adaptation measures. The next scheme is formulated for enhancing agricultural productivity especially in rained areas focusing on integrated farming, water use efficiency, soil health management and synergizing resource conservation.

Goal 14: Life below Water

The world's oceans – their temperature, chemistry, currents and **life** – drive global systems that make the Earth habitable for humankind. ... The SDGs aim to sustainably manage and protect marine and coastal ecosystems from pollution, as well as address the impacts of ocean acidification.

- Blue Revolution (the Neel Kranti Mission)
- National fisheries Action plan
- National Oil Spill Disaster Contingency Plan
- The Sagarmala Programe

These schemes vision includes economic prosperity of the country by the food contribution by the fishers and fish farmers and nutritional security through full potential utilization of water resources for fisheries development in a sustainable manner, keeping in view the bio-security and environmental concerns. It also ensure that Oil Spill at Sea is given top priority by all the concerned agencies. The

government is planning to build modernised port, to increase the port-linked industrialisation undertaken from 2015 to 2035.

Goal 15: Life on Land

India has an existing network of 700 protected areas (ENVIS Centre on Wildlife & Protected Areas, 2015). the Aichi Targets for Biodiversity Conservation that states, "By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes" (CBD, 2010)

- Forests and Wildlife
- National Afforestation and Eco development Board
- National River Conservation Directorate

Goal 16: Peace, Justice and Strong Institutions

It is an important goal for pleasant co-existence of individuals in a democratic society. It is hoped that further studies will assess the reforms or additional systems needed to strengthen India's institutions, peace and inclusiveness. The current government has ambitious plans to expand access to ICT to the entire population; the cost of telecom and internet infrastructure for such an intervention has been estimated under Goal 9.

Goal 17: Partnerships for the Goals

Indian leader speaking at the first session on global growth and trade at the G-20 Summit, highlighted his government's ambitious rollout of the Goods and Services Tax (GST), saying it would create a unified market of 1.3 bn people and build resilience. He also said that growth and development for all in India is central to his pursuit of eco-prosperity and for this, his government aims to lift 100 million households out of poverty by 2019. The vision also includes doubling farmers' income by 2022 and equip the 500 million youth of the country with productive skill set.

Conclusion

This paper has made an attempt to produce all the initiative taken by the present government to achieve Indian target of SDGs. Each goal is individually discussed to show the major policies implemented to curb the problem sooner or later. This paper nowhere claims that the past India's Prime Ministers did not take any serious measure to control the issues mentioned in the SDGs. Instead, the paper is focus on only the Mr. Modis policies as he is a dominant and fearless leader in the contemporary world. It would also be too early to judge Mr. Modi's policies as three year is too les time to create any opinion for world matter. However, having said it would be remarkable if any comparative studies is done between of SDGs (BJP Government) and MDGs (Congress Government). The study can also be on modified policies existed before 2014 and what's its outcome today.

References

1. Felix Dodds, David Donoghue, Jimena Leiva Roesch (2017).Negotiating the Sustainable Development Goals: A Transformational Agenda. Routledge publication New York.
2. Kobena T. Hanson, Korbla P. Puplampu, Timothy M. Shaw (2017). From Millennium Development Goals to Sustainable Development Goals. Routledge publication New York.
3. R.K. Mishra, Jayasree Raveendran (2011). Millennium Development Goals and India: Cases Assessing Performance. Allied Publisher
4. Ricardo Hausmann (2009). The Global Gender Gap Report 2009. World economic forum.
5. World Bank (2017). Atlas of Sustainable Development Goals 2017: From World Development Indicators. World Economic Forum Publication.
6. www.thehindu.com
7. www.indianexpress.com
8. www.un.org
9. www.business-standard.com

BENGALURU - A TESTIMONY TO DISINTEGRATION FUELLED BY MIGRATION AND DISPLACEMENT

Saranya Francis
Assistant Professor, Department of English, Indo Asia Academy Degree College & PG Center, Bangalore

"Turning and turning in the widening gyre
The falcon cannot hear the falconer;
Things fall apart; the centre cannot hold;
Mere anarchy is loosed upon the world,
The blood-dimmed tide is loosed, and everywhere
The ceremony of innocence is drowned;
The best lack all conviction, while the worst
Are full of passionate intensity."

--William Butler Yeats

Abstract

Bengaluru, as a city, has burgeoned in the last three decades. While growth is a welcome relief to a developing nation, Bengaluru's growth has come with a heavy price tag as the city has fallen victim to severe congestion, choking and increasing filth in landfills leading to the depletion of its resources and the degradation of its famous climate. Rapid growth in the IT sector and Bio-Medicine has attracted workforce from across the globe. Terms like Bangalored, Silicon Valley of India, Outsourced, On Location, Work from Home and Off Shore have made inroads into the language and lifestyle of Bangaloreans. Scores of people from around the globe are steadily making Bengaluru their home and the city is in a dismal state of preparedness. This movement of workforce from the place of origin has created several problems for an already exploding city, original inhabitants (defined as people living in Bangalore for the last four generations) of the city. The city's transition from being Bangalore to Bengaluru, though remarkable, has left its residents panting for breath. All this has resulted in displacement related crises. Bengaluru today has to find ways to accommodate a migrant workforce, increase an already exploding industrial and tech park space, look for newer residential spaces, deal with severe depletion of groundwater levels, battle agrarian crisis, and come to terms with cultural and linguistic erosion. The paper attempts to highlight how displacement has fuelled the disintegration of the city and also suggest ways in which the existing demographic dividend can be managed better. The paper will also examine the impact that displacement has had on language and culture and how this affects sustainability of the "Bengaluru Way of Life" at large.

Keywords: *Displacement, Bengaluru, Population Explosion, Integration, Culture, Language, Growth, IT, Sustainability, Demographic Dividend, Inhabitants, Cityscape.*

When Yeats observes, "things fall apart the centre cannot hold" in his poem "The Second Coming" he gently cautions his readers to heed to the call of the falconer lest we turn to dust on the chosen day. One may interpret Yeats' words as a warning to be responsible inhabitants of the planet and respect the laws of nature. Displacement, however, bears a grim testimony to how we have failed to heed this warning. In an age where global warming and climate change haunt environmentalists, discussions on environmental displacement are inevitable and one can't help but observe how the issue is a matter of great concern to every nation that is worth a mention on global development charts. This paper focuses on how displacement has driven Bengaluru to a virtual state of disintegration and how the city in particular and the nation in general has to wake up to the stark realities of shrinking spaces and eroding quality of life in Bengaluru.

Introduction

Bengaluru, as a city, has burgeoned in the last three decades. While growth is a welcome relief to a developing nation, Bengaluru's growth has come with a heavy price tag as the city has fallen victim to severe congestion, choking and increasing filth in landfills leading to the depletion of its resources and the degradation of its famous climate. Rapid growth in the IT sector and Bio-Medicine has attracted workforce from across the globe. Terms like Bangalored, Silicon Valley of India, Outsourced, On Location, Work from Home and Off Shore have made inroads into the language and lifestyle of Bangaloreans. Scores of people from around the globe are steadily making Bengaluru their home and the city is in a dismal state of preparedness. This movement of workforce from the place of origin has created several problems for an already exploding city, original inhabitants (defined as people living in Bangalore

for the last four generations) of the city. The city's transition from being Bangalore to Bengaluru, though remarkable, has left its residents panting for breath. All this has resulted in displacement related crises.

Bengaluru today has to find ways to accommodate a migrant workforce, increase an already exploding industrial and tech park space, look for newer residential spaces, deal with severe depletion of groundwater levels, battle agrarian crisis, and come to terms with cultural and linguistic erosion. The paper attempts to highlight how displacement has fuelled the disintegration of the city and also suggest ways in which the existing demographic dividend can be managed better. The paper will also examine the impact that displacement has had on language and culture and how this affects sustainability of the "Bengaluru Way of Life" at large.

Part I – Understanding Displacement

Displacement can be understood as resettlement, transference or removing of one from one's natural, inherited habitat to another owing to various reasons. Apart from looking at displacement in the context of people moving from one place to another for survival, refuge or employment, one may also consider "climigration" a term coined by Robin Bronen in his web page on displacement and environmental issues in the context of climate change and global warming. Historically Bangalore has been frequented by people from world over for its famed climate. The pleasant atmosphere and clean streets were a major attraction factor; this however has changed now- way beyond a Bangalorean's wildest imagination.

Causes of Environmental Displacement

Every city deals with displacement in a different way; it is also true that every city has a unique challenge posed by displacement. An interesting article on **www.guardian.co.uk** quotes the prediction of 'The UN Convention on Climate Change' as follows: "…communities rather than individuals will be forced to migrate. Permanent relocation will be mandated because there will be no ability to return home as home will be under water or sinking in thawing permafrost." We have seen this prediction come true in the explosion of migrant population in Bangalore. Displacement becomes an issue of international concern in the context of global warming. If displacement is so bad, why do people migrate from their homeland to another place? Discussed below are a few causes of displacement:

- Natural causes such as desertification, flooding or nature related causes such as depletion of groundwater in homeland
- Education and health sector malfunction in remote parts of some states
- Economical, social, communal and political conflicts (both internal and international), struggle for independence, conquests, anarchical trauma and so on. The 2012 May issue of the Economic and Political Weekly points out to the violence in the Gujarat riots of 2002 and highlights how minorities have been forced to migrate in view of the violence.
- Agricultural schemes, building of dams and irrigational infrastructure, relocation schemes, deforestation and fuel wood crisis
- Better opportunities of income, opportunities created by outsourcing and technological advancements
- Rising mercury levels in cities within India and biting winters in other parts of the world from where Bangalore receives migrants

Effects of Environmental Displacement

Here are a few effects of displacement on the environment as observed by noted writer-historian Ramachandra Guha:

- Food conflicts and problems of food assistance
- Loss of livestock
- Narrow scope of income generation
- High cost of living
- Rapid conversion of agricultural lands for habitation
- Depletion of ground water

- Epidemic and pandemic threats
- Devastating impact on cultural, religious and social realities

Displacement – The Trajectory

Displacement is no alien word to Bengaluru, having been a city whose lifeline has been a migrant population, accommodating new population has always been apreoccupation of the city planners. It will help to have an idea of the trajectory of displacement before dwelling on the actual issue of displacement faced by Bengaluru, for this purpose let us divide the time period in scrutiny into the following five eras:

- Quaint Home Town Era – 1500 – 1800
- Colonial Era – 1800 – 1947
- Industrial Development Era – 1947 – 1980 (Also an era when the city was famously dubbed as a *Pensioner's Paradise.*
- Science and Industry Era – 1980 – 1999
- Hitech Era of the Millenials – 2000 - Current time

These eras represent specific development milestones in the history of Bengaluru each marking a point in progress of the journey Bangalore towards Bengaluru. Of the above the last two eras namely Science and Industry Era (1980 – 1999) and Hitech Era of the Millenials (2000 - Current time) are of particular interest to this study as these are the eras that witnessed the maximum displacement take place especially with respect to migrant workers.

With the opening up of the market in the time of liberalisation and the ease of doing business factor increasing in Bangalore, the city began facing a steady influx of people. New engineering colleges started mushrooming, several institutions of higher education were started and operating out of Bangalore even settling down here became an aspiration to many youth from tiers 2 and 3 cities.

The outsourcing boom in 2001 brought with it a sea change in the cultural, economical and social attitudes of the city. So to say the social fabric of Bangalore was steadily changing shade and texture but no one was complaining, yuppies (young professionals) were here to stay and the high life that Bangalore offered, lured more and more youngsters from across the country. Areas such as Ramamurthy Nagar, Banaswadi, Whitefield and K.R.Puram started expanding rapidly with Whitefield standing tall in its place as the location of the very first IT park ITPL. Real estate also changed face around this time; rendering the actual, old residents of Bangalore as the ones really displaced as against the ambitious,new 'netizens' now jostling to make the city theirs.

Displacement Related Changes in Statistics Vital to Health of the City

- Bengaluru's IT sector alone contributes to 150 billion dollars to the nation in other words nearly 10% of India's GDP.
- It is estimated that Bengaluru will be home to about two million IT workers by 2020
- A recent survey conducted by ACNielsen quotes that of all terms that migrant workers from the Americas detest, the term Bangalored is the most detested
- The BBMP has had to expand the purview of city limits by a whopping 360% since the close of the Industrial Development Era in 1979 to present time. Which means that the city has had to be expanded to the effect of 161 sqkms in 1979 to 709 sqkms today to accommodate the influx of people
- This translates to a 584% growth in built up area
- The Indian Institute of Science IISc has revealed in its report of 2012 that the available 68% land available for vegetation in 1992 has stooped to an all time low of 23% land available for vegetation.
- Temperature in summer in 1992 which ranged from 18-33 degree Celsius, touched the 40degree Celsius mark last summer.
- Bangalore according to a Mc Kinsey Study, is the single largest IT cluster on the planet overtaking silicon valley with 2 million it professionals, 6 million indirect IT jobs, $80 billion in IT exports
- Of the population employed in the IT sector about 81.3% are not original inhabitants of Bengaluru

- The rise of the IT sector has also created the problem of e-waste in the city: a 2013 report estimated that Bangalore produces 20,000 tonnes of e-waste per year.
- Garbage management has become a perennial problem with 62% of dry waste segregation centres being overloaded. Source level segregation is not taken seriously by many residents
- Two major landfills are causing severe lifestyle crisis to their neighbourhoods
- Migrant population that is displaced does not have access to basic amenities such as clean water, shelter or toilets hence diseases spread

When one compares the facts and figures pertaining to the city in the earlier eras to the statistics pertaining to present time, one may note that Bangalore's population has doubled in 15 yrs and 11.5 million people have been added to its people bank and newer parts of town have been earmarked as their spaces. One can easily say that Bangalore's case is that of a city that can be viewed as the face of India's changing fortunes whose face has changed.

Displacement in this context was not simply geographical or physical but clearly psychological as well. The culture and very atmosphere of Bangalore was changing at this time. The sense of belonging to the city was obviously absent in these new inhabitants and the feeling of otherness crept in.

Displacement as a Challenge to the Cause of Sustainable Development

- With displacement comes a lack of belonging. This means that the city is taken for granted and resources are plundered
- Native culture, language, resource management wisdom and collective social responsibility suffer
- Living becomes more and more unsustainable

Recommendations and Conclusion

- Strict adherence to building construction norms must be ensured
- Conduct regulated capacity building studies
- Landfills to be cleared off existing overburden and garbage processing plants to be put in place
- Language and cultural immersions to be encouraged and regulated
- Workplace timings that influence vehicular movements on roads to be reworked
- A consortium of IT and IT related firms to be formed to address sustainability related issues in particular
- View migrant population in a more objective manner
- Come down heavily on land mafia and arrest the rapid encroachment on lakes
- Encourage the involvement of local communities in conservation, protection and implementation of development and sustainability projects
- Increase awareness campaigns in schools and colleges, open spaces for dialogue

References

1. Gadgil, Madhav and Ramachandra Guha (1992). This fissured land: an ecological history of India. Berkley,CA: University of California Press
2. Modern Criticism and theory – a reader. Edited by David Lodge. London and New York Longman (1988)
3. Dale Nimmo Leuphana (2015) Global land displacement a challenge for conservation biology . University of Lueneburg
4. Weinzettal et al. 2013 and Yu et al. 2013 Land displacement
5. Gurucharan Das. The Elephant Paradigm – India wrestles with change. New Delhi, India. Penguin Books India (2002)
6. SanjeeviniBadigar – A Normal anomaly: displacement due to communal violence in Gujarat - Economic and Political Weekly. Jan 2012 Vol XLVII No 3

MEGACITIES, SMARTCITIES, AND THEIR IMPACTS WHAT THE FUTURE LOOKS LIKE– FOR INDIA'

Vanitha Senthil Kumar
Head of the Department Commerce and Management, Indo Asian Academy Degree College and PG Center, Bangalore

Abstract

Megacity: A metropolitan is defined as a city exceeding the total population of one crore people. In India currently, we have five such megacities and this will grow up to seven by 2030. Delhi by 2030 will continue to hold the second largest populous city in the World and estimated to add 9.6 million people to its population by then. (Data from 2016 World Cities Report issued by the UN's department of economic and social affairs). In 2016 it was declared Mumbai, Kolkata, Bengaluru, and Chennai were megacities and by 2030, Hyderabad and Ahmedabad will evolve as megacities. Apart from megacities, Government of India has proposed and worked on the creation of 20 new smartcities which will act as a mini version megacity and has a potential to grow into a megacity in the near future. These cities based on the infrastructure and growth opportunities can even overtake any of the current megacities. In this article, we will see more details about how the rise of the megacity and the smart city is changing the way we live. The rapid increase in the number of mega and smart cities home to more people moving from rural to urbanised area within the country to look for opportunities will not only bring in talent pool from rural area but also poses a serious challenge on how shelter, society, environment, economy, and above all, systems of governance can contribute to urban vibrancy and viability in the new emerging smart cities which megacities are already facing.

The urbanizationmoves if not done in a balanced and sustainableway to support the countries core occupation "Agriculture", It will post a serious threat to our countriesagricultural growth and we will be depending on other countries for our essential food commodities. If we fail to create a sustainable solution to the growing agricultural crisis and continue focusing more on urbanization, it will end up only as a historical memory amongcurrent and future millennials who prefer to migrate towards mega and smart cities exploring opportunities in emerging job domains/markets.

Introduction

In developing countries, large cities see exponential population growth which leads to a major problem to provide basic services and shelter. The growth also brings in significant growth in technologies and opportunities but adds challenges in providing improved urban lifestyle, basic amenities,and services, The common challenges in any megacities are shelter, sanitation, water, transportation and infrastructure to support the growth. Slum-dwellers in India migrate to the megacities, not for bright future but to have a better job opportunity in the intense labor market which will help them to get rid of the poverty. It is always expressed by a newcomer to megacity from slum that, those who migrated has a better lifestyle by riding motorcycle and access to cellular phones. This phenomenondoes not only add more people to mega and smart cities, it also adds a series of challenges and also shifts a considerable amount of population to move away from agriculture due to the family and economic conditions. It creates a vacuum with in people who are in early thirty's and below. People who traditionally inherit agriculture as a core occupation from their fathers and forefathers currently focused on irrigation and the batten do not pass over to their sons or daughters who are millennials because they do not want them to go through the challenges what they are facing currently.An annual report published by Minister for Agriculture and farmers welfare in 2016-2017 says Agriculture Gross Value Added (GAV) the Agriculture and Allied sector contributed close to 17.0% of GVA at current prices during 2015-16. Gross Value Added (GVA) of Agriculture and Allied sector and it's share in total GVA of the country during the last 3 years including the current year, at current prices of 2011-12 series is as follows: There has been a continuous decline in the share of Agriculture

The share of Agriculture & Allied Sectors in Total GVA (Rs. In Crores)

Items	2012-13	2013-14	2014-15	2015-16
GVA of Agriculture and Allied Sectors	1680797	1902452	1995251	2093081
Per centto total GVA	18.2%	18.3%	17.4%	17%

Source: Central Statistics Office, Ministry of Statistics and Programme Implementation, Govt. of India.

and Allied sector in the GVA from 18.2 percent in 2012-13 to 17.0 percent in 2015-16 at current prices. Falling the share of Agriculture and Allied sector in GVA is an expected outcome in a fast growing and structurally changing economy. While this is the scenario of the rural area the modern urbanized area of mega and smart cities grow at a rapid phase. By the year 2015 India will have new 300 million urban residents and there will be a serious challenge to construct an eco-friendly city to support the needs of the growing population

The first 'World Cities Report 2016- Urbanisation and Development: Emerging Futures' report by United Nations Habitat said, close to 60% of Indias current GDP is contributed by Urban cities and by 2050 Indian government plans to add new 100 cities over the period. This will have a serious impact on climate change, and more challenges to build low cost, low infrastructure, and low energy cities, which should also solve for the crisis that will arise from transport, electricity, communication, water supply and sanitation in support of production. A total of 100 towns & cities identified by the government for the Smart City Project, The first 20 smart cities were identified and the rest will take shape in the near future. The qualification criteria for a smart city is that the city must have all service levels, infrastructure and proven track record of growth. Our prime minister's vision is to create at least one smart city in every state which will provide a quality of life compared to any global smart cities. All basic amenities like water, sanitation, dry and wet waste management, mobility, electricity, uninterrupted public transport, e-governance and IT infrastructure will be the focus area for every smart city in India. An estimate of 3lakh crore will be invested by the government of India to develop the smart cities sustainably.

This mass mega transformation of new urban cities will not only have residing populations but also will have more floating population from the peripheries of the cities which will reduce the number of people engaged in the agricultural activity and causes a serious threat to agriculture.

The current state of Agriculture in India:

- We don't know anything apart from Agriculture.
- The cattle are dying without water
- The major reasons are water scarcity and disputes between states for water
- Some states don't even listen to the court order due to their political gains and how do they have visibility to the crisis arising from water scarcity and disputes.
- We will have a job (cultivation through agriculture) only if we have undisputed water supply for agriculture
- How can farmers eat without earning through their main source of income
- If this situation continues then we will need to go to cities in search of jobs for our basic living.

The above are some of the true and very often heard statements by any of the citizens in India. The government is trying to hide the truth for its own benefits. The government does not take steps to ensure farmers dying and mostly worried about retaining their reputation. This is not the situation of very few farmers but common for most of the farmer community who are into core agriculture occupation.

In this article, I would like to strongly record that Agriculture is in the verges of extinction. We don't need to tell the importance of agriculture, anyone who eats food will understand its importance. When we travel across drought-hit lands, it looks like a desertstruck by a bomb. The farmers who fed the whole world are in a great misery now. It is a shame for the people and the government that the farmers in spiteof being the backbone of the country are shattered by poverty and debts to choose death over life.

The farmers love their crops more than their children. That's why most of them spend their daytime with their crops when they are green with their lush. They lover their crops more than their family. How can they see their crops ruined just before the harvest? This is why the farmers are forced to commit suicide. What is worse is, in spite of their death, the mounting debts and financial incapability have been increasing the death tolls to date. The current state of Indian farmers, those who believe in agriculture either die of shock or commit suicide or migrate to a different job leaving agriculture.

Most of us know how the banks in India treats the farmers, the crop insurance scheme is mostly used as a tool to recover the loans from the farmers. The government should bring in more reforms for sustainable solutions to the farmers. The following three challenges will be very important for India's overall development which will improve the welfare of its farmers.

Increase Agricultural Productivity/ Unit of Land

This should be the main focus for sustainable agricultural growth which ensures all lands suitable for cultivation to be utilizedeffectively. Water prioritization for urban needs should be well optimized and quantum of water should be given to farmers for effective cultivation. Urban areas to be built on more self-sustainable and recycling water plants rather than natural water resources/reservoirs.

Improved Usage of Technology to Scale and Sustain Agricultural Productivity, Competitiveness, and Growth

Invest and Promoting in new technologies which will bring in a new dimension to agricultural research. The research should be focused on how to improve water resources management. Modernizing Irrigation through automation, Incentivising farmers improving cost recovery; Focus on rationalizing expenditures related to agriculture, with competitive schemes for farmers to ensure highest returns; and sufficient resources allocation for operations and maintenance for the sustainability of investments.

Mandatory Deployment of Millennials in Agriculture for Short Term

To ensure focus on agriculture government should draft policy that all students post their 12th standard or PUC should be deployed in agriculture activity at least for two years. And this should be monitored and monetized by the government. This should be the basic qualifying criteria for further studies. This will help Policymakers to ensure scrap existing policy and create an agricultural reform which will shift the sector away from the existing policy and institutional regime that is no longer viable and help in building a very strong foundation, which creates a productive, globally competitive and diversified agricultural focus in the country.

Conclusion

Focus to create more megacities and smart cities will definitelyhelp in creating better lifestyle and opportunity for people migrating from rural to urbanized cities at the same time there should be a parallel focus to ensure sustainable growth both at rural and urban areas while the current situation only helps to fulfil the growth of urban areas and in rural areas the growth is getting narrowed due to fading agriculture practise. In order to maintain a fine balance government should have the ambitious budget to invest and support for agricultural R&D. Agriculture crisis should be considered as a national crisis and not a crisis to farmers alone. Agriculture should be a growth engine that provides primary employment opportunities for all citizens post which they will be allowed to choose their career choice. Governments should own and drive agriculture as a business which will help engagement of all category of people into the well being of the country. Finally, All non-agriculture based industries in India should own a considerable share in promoting and supporting governments vision of creating a sustainable agriculture focused economy.

References

1. Department of Agriculture, Cooperation & Farmers Welfare (Ministry of Agriculture & Farmers welfare, Government of India) – Annual Report 2016-17
2. State of Indian Agriculture Annual Report 2015-16- Directorate of Economics & Statistics
3. 2016 World Cities Report issued by the UN's department of economic and social affairs
4. 2016- Urbanisation and Development: Emerging Futures' report by United Nations Habitat
5. Smart Cities Mission - Ministry of Housing and Urban Affairs Government of India (http://smartcities.gov.in)
6. The Hindu, Times of India, Business time – Articles on Challenges of Indian Agriculture
7. Documentary and short filims from YouTube videos on Mega, Smart cities and challenges

FINANCIAL INCLUSION FOR SUSTAINABLE GROWTH-A STUDY ON JANSURAKSHA SCHEMES

Vidya Ghanshyam
Assistant Professor, Department of Commerce and Management, Indo Asian Women's Degree College, Bangalore

Abstract

With the progress of the Indian economy, especially when the focus is on the achievement of sustainable development, there must be an attempt to include maximum number of participation from all the sections of the society in most of the areas like banking, health and insurance. With the aim of encouraging people of different sections &providing maximum security to all the sections of the society, social security schemes were introduced under the leadership of Prime minister Narendra Modi. With the large success of Jan-Dhan yojana which was introduced in July 2015, the government came up with a universal security system for all Indians especially the excluded sections and low-income groups of the country that ensures that no Indian citizens will have to worry about illness, accidents or penury in old age.As a part of jansuraksha Yojana three important schemes were introduced like "Pradhan Mantri Suraksha Bima Yojana" (for Accidental Death and Disability), "Pradhan Mantri Jeevan Jyoti Bima Yojana" (for life insurance) and "Atal Pension Yojana" (for pension). These schemes were introduced under insurance and pension scheme mainly to uplift India from these sectors which are underserved for many years. The paper under study is highlighting features of the schemes and how it can be considered as successful schemes in developing poor sections of the economy for the inclusive growth.

Keywords: *Jan-Dhan Yojana, PMSBY,PMJJBY, APY, financial inclusion, Financial stability.*

Introduction

A new flagship of initiative was inaugurated on 15th August 2014 under the prime minister ship of Mr.Narendra Modi. The programme is Pradhan Mantri Jan Dhan Yojana which was launched on 28thy August 2014 with a mission of ensuring easy access of financial services for the excluded section mainly people below poverty line and low-income groups. As per the scheme anyone can open bank account in any bank with zero balance. The idea is to bring about comprehensive financial inclusion of all households in the country there by achieve inclusive growth. The yojana provided all the financial services like bank account with RuPay Debit card, access to credit, remittance, Insurance and Pension. The main mission is to bring all the excluded sections into the financial inclusion scheme and makes the transfer of benefits of various subsidy schemes of the government more efficiently without any hurdles. It is the first step taken by the government to bring economic stability and remove financial disparity. The target of the program was to provide a bank account to every household especially the neglected and unorganized sectors within twelve months. To encourage this an incentive was also introduced like personal accident insurance of Rs 1, 00,000 and life insurance of Rs. 30,000. Inaddition, every household was given overdraft facility of Rs.5000 after few month of opening an account. The response was overwhelming with the opening of 15 million new account on a single day. With the success of Pradhan Mantri Jan Dhan Yojana, the government of India started working towards introducing universal social security schemes which can cover accident, illness and also old age pension and security. The idea is to help all Indians, specially the poor and the under-privileged and the workers in the unorganized sector, using the bank accounts as the basis for launching the schemes. On 9th may 2015, Prime minister of India came out with the new programmes and launched three social security schemes such as Pradhan Mantri Suresh Bima Yojana(PMSBY), Pradhan Mantri Jeevan Jyoti Bhīma Yojana (PMJJBY), Atal Pension Yojana(APY) to provide pension and insurance cover to the poor and unprivileged sections of the society. These are the schemes which ensures the financial security and long-term sustainability to the families especially to those families when the earning family member retires, dies or suffers full or partial disability. Jan Dhan to Jan Suraksha ensures financial inclusion where all the sections of the society are included will definitely the sign of sustainable growth of the economy of a country.

Meaning of Financial Inclusion

Financial inclusion refers to the accessing facility to take up any kind of financial services like banking, credit facility or insurance facility to the weaker sections of the society as well as low income

groups at an affordable price. “Financial Inclusion” focuses on bringing previously excluded people under the umbrella of financial security. "Financial inclusion may be defined as the process of access to financial services and timely and adequate credit where needed by vulnerable groups such as weaker sections and low income groups at an affordable cost."(Rangarajan,2008) The financial services include the entire gamut - savings, loans, insurance, credit, payments etc. The purpose is not only the access but also use of financial services. Despite the various improvements on financial viability, profitability and competitiveness, there is a blame that all the sections of the society are not gaining the benefits of banking services. So the government took initiative to include the weaker sections by introducing financial inclusion concept to bring them into the basic banking services. A formal financial institution is not restricted only o the commercial banks, but also includes credit unions cooperative banks, post offices, and microfinance and insurance sectors. So financial inclusion is expected to unleash the hugely untapped potential of the bottom-of-pyramid section of Indian economy. The need for financial inclusion is important as it gives both micro and macro benefits. In the micro level it helps individuals to meet the financial needs better with poverty, especially the challenges of irregular income and occasional large bill expenses. Micro enterprises also get benefit from the inclusion. On a macro scale, financial inclusion boosts economic growth by mobilizing savings.

Literature Review

Chakravarthy,SR and Pal(2013)described in financial inclusion in India that to save ,deposit, invest and avail various financial services the banks, post offices and insurance companies has become essential. Nufazil Altaf (2014) in his study titled “towards financial inclusion “explains that one of the most required element for economic development in financial inclusion. Both at national and international level it is considered important in creating inclusive development. Pranab Mukerji (2010) said that financial inclusion was a main factor of sustainable and inclusive growth, which gives enough opportunities for saving and investments among lower segments of the society. Joseph Massey (2010) said that in a developing nation role of financial institutions very crucial for financial inclusion. The efforts of the government can be successful if the same kind of practices has been shown by these institutions as they have large responsibilities in including the financial excluded groups.

Statement of the Problem

A developing country has people from all the sections of the society. There is a vast disparity in the distribution of income level of the people. This disrupts the country to go a way forward for financial growth and there by achieve economic growth. The country’s growth is entirely depending on the economic prosperity of the people of the nation. One of this is financial inclusion. A saving habit is most important factor for better and relaxing tomorrow. Banks and insurance companies will definitely help in this regard. To encourage such type of saving among people especially over weaker sections of the society, social security schemes have been introduced. The new schemes introduced by the Prime minister are showing better ways to save money and provide money for the future. The schemes are for the safety and wellbeing of the people of the country, which is a measuring tool of the sustainable growth.

Objectives of the Study

- To highlight on the social security schemes under Jan Suraksha Yojana.
- To study the Challenges of Jan Suraksha Schemes
- Tohighlight the uses of Jan Suraksha schemes for financial inclusion.

Research Methodology

The paper under study is descriptive in nature. The information and data are collected from published articles, journals, newspapers and websites of government of India on financial inclusion.

Jan Suraksha Scheme-Brief Highlights

The great success of Jan Dhan Yojana, motivated the government in launching social security schemes which covers insurance coverage of workers and unorganized sectors. It involves three social

security schemes which covers insurance and pension sector under the flagship of Jan Dhan Yojana. The schemes are as under:

Pradhan Mantri Suraksha Bima Yojana (PMSBY)

It is an accidental insurance scheme introduced which offers benefit in case of accidental death and disability. The scheme offers insurance coverage of Rs.2 lakhs at a small premium of Rs.12 per annum. The facility will be available to all the bank account holders whose age is between 18-70 years covering annual period of 1st June to 31stMay. The premium will be automatically debited from the bank account through auto debit facility which have been opened under PMJDY scheme.

Pradhan Mantri Jeevan Jyothi Bima Yojana(PMJJBY)

It is a one-year life insurance scheme which is meant for death coverage. People would get an amount of Rs,2 lakhs for an annual premium of Rs.330 only. The amount will be given only after the death of the accountholders. The scheme covers the insurance for the people age group between18 to 50 years. Only those have saving bank accounts can enroll these schemes. As PMJDY was started to encourage opening bank account, this scheme can be taken as extension of the yojana because PMJJBY is linked to the Jan Dhan account. Themain aim is to bring the unbanked population under the stream of banking system especially the people working under unorganized sectors. Because very few will take up the life insurance on the health of self or families. If an individual is having more than one saving bank a/c he can join only one scheme. If anyone join the scheme after the due date they should submit full premium along with a self-certification of good health.

Atal Pension Yojana

It is a guaranteed pension scheme administered by pension fund regulatory and development authority. It is started to encourage unpension workers in unorganized sector to come under national pension scheme. Any Indian within the age group of 18 tom 40 years is eligible to contribute under Atal Pension Yojana. People can avail tax benefit for the premium paid under this scheme u/s 80CCD.This scheme was remodified with the time of premium payment that is monthly/quarterly and half yearly. The reason is to get more subscriber for the scheme as initially the it has got poor response. Another modification is an option to exit from the scheme before the age of 60 years. The subscriber should have bank a/c in his name. if not they can open zero balance account under Jan Dhan Yojana. The main objective of introducing pension scheme is to enable workers from unorganized sector get the financial security at their old age in the form of regular pension. All the social security schemes under the flagship of Jan Dhan Yojana ensures that the country is going forward along with the growth of the economy where people play very important role. Jan Dhan to Jan Suraksha ensures financial inclusion where all the sections of the society must be covered and there will be financial security to all irrespective of poor and rich which in turn contributes to the overall development of the country.

Major Challenges of Jansuraksha Schemes

- The schemes introduced to the public with a very low amount of premium in order to get more enrollment and more business. But such low price may not be sustainable for the long run.
- In India where, maximum people still not enrolled under the insurance scheme due to lack of knowledge about the importance of various types of insurance like life, health accident etc.
- Starting insurance by targeting at the individual level is a big challenge to the government because of low insurance penetration.
- The schemes offered under Jansuraksha scheme aiming at bringing more people under insurance coverage, but the premium specified is very low like Rs12 in PMSBY and Rs.330 in PMJJBY which will create a great challenge to settle the claim amount.
- Due to low premium huge volume of population showed interest at the time of launching. But there is no guarantee that there will be same kind of enthusiasm while renewing for the next year.
- If the premium raised for the second year, there will be a challenge in renewing the policy. it may results in dropout by many policyholders.

- With the Special premium offer of jansuraksha scheme under PMJJBY, other insurance companies are finding it difficult to compete with these schemes as it is very difficult for them to fix low premium on life cover business. Further insurance agents are finding it difficult to get new enrollment for higher value insurance coverage especially in small cities.
- Under the APY scheme, the subscriber will get the pension after the completion of 60 years. However, the policy is silent if the subscriber dies before 60 years, whether the benefit goes to his/her spouse. This is a serious issue should be resolved with guidance of government.
- Enrollment of female members to these schemes are very low due to lack of education and knowledge of insurance schemes and uses of these schemes which provide protection against probable risks.
- The scheme's premium was kept low with the long term aim of getting the large volume of enrollment. If that doesn't happen, the pricing mechanism would have to be completely reversed keeping in mind the actual numbers.

Importance of Jansuraksha Schemes -A Way Forward

- Insurance provides financial support as well as safety &security against any event likedeath, fire, accident, etc. So it reduces the uncertainty.
- Huge amount of premium collection is a good source of financial resources to the government. The fund invested in securities which will be gainfully employed in the industrial development of the country. In turn creates more employment opportunities.
- Insurance is considered as one of the avenue which encourage savings, as insurance not only protect against risks and uncertainties but also provides an investment channel too.So, it encourages savings.
- By mobilizing domestic savings, the amount collected as a premium will be accumulated as capital which will be used for productive investment. It promotes trade and commerce activities which results into economic growth and development.
- In India where people of the family depends on main family earner's income to survive and grow.so these schemes definitely play very important role in providing social security comfort to the citizens of the country.
- It facilitates spreading of risks from the insured to the insurer.

Jansuraksha Scheme Providing Financial Inclusion

As India is a nation with low banking and insurance coverage as most of the population are unaware of the benefits of banks and insurance companies. The financial necessity will be covered with local money lenders by paying double rate of interest on borrowings. These kinds of debt traps are leading to disasters in one's life if they are unable to return or repay. As per World Bank report on 35% of adult Indians have a bank account. As a step taken towards being an insured nation, Prime minister has taken up a tremendous policy towards banking system through Jan Dhan Yojana and social security systems like PMSBY, PMJJBY, APY for all the Indians. This ensures that no people of the country suffers from illness, accidents and penury in old age. The final motive is not only cover the poor sections of the society but also include them in the economy of our country there by achieve inclusive growth of the economy. Due to administrative gaps in the policies of the past some of the schemes did not show the successive results.as result of that we can see still most of the people are below poverty lines. Now the government came up with social security schemes which has socio economic value to empower the citizens to avail the services for their growth and development. People of the country should be educated about the benefits of these schemes and try to build saving habits among rural and unorganized sector. Then only the government mission of enrolling maximum people into banking and insurance sector will be successful. This will encourage people with empty bank accounts to start using them in order to get insured and have a security in their old age. In this era of uncertainties and high cost of living, insurance with a very low amount of premium will be definitely bring a tremendous change in the life of people of the nation.

Suggestions for Effective and Successful Implementation of Social Security Schemes

- The government should take steps to create awareness about the schemes both is rural and urban areas.

- The agents should be properly trained with respect to social security schemes so that they can explain about the scheme and convince the people to take up the insurance policies which will be taken as a entry-level tool in insurance area.
- When maximum number of people from poor households started getting the benefits of schemes automatically the awareness will be created.
- The insurance agents are of having the notion that social security schemes are the major threats to normal insurance business. So they should be motivated first in this regard to come out with positive attitude towards these schemes.
- Banks especially public-sector banks should be involved more in the matter of insuring unorganized sectors of the country with an aim that they are selling insurance as one of their core functions.
- Banks should train their employees to learn more about insurance products and services as these schemes are linked to JanDhan schemes. This will make them sell more of insurance to their customer in a better way.
- The IRDA must come out with the new concept of social audit and make it compulsory for the insurance companies. Their social obligation must be remodified for the effective implementation of social security schemes.
- A wide level of publicity by way of short movies, CDs, video visuals, road shows must be undertaken in a large scale to create awareness and strong impact on the people so that maximum entry we can get for these schemes.

Conclusion

A country can attain inclusive growth only when there is an equal distribution of opportunities and benefits. Financial inclusion is one of that crucial opportunity which can be attained only through having more banking and insurance facilities. All these depends on the financial products and schemes which the government is offering to the public and the promotional programmes they are undertaking. The schemes introduced under the Flagship of Jan Dhan Yojana is really a mark able change in the history of banking and insurance sectors. These schemes take into account the participation of vulnerable groups such as weaker sections of the society and low-income groups, based on the extent of their access to financial services such as savings and payment account, credit insurance, pensions etc. After the launch the schemes have shown substantial growth in numbers. But by analyzing overall situation still requires more steps to be taken to improve the transactions under each scheme to accomplish the objective of irradiating the poverty, enhancing the savings and security to the people then only we can say Jan Dhan Se Jan Suraksha.

References

1. https://www.researchgate.net/.../235944172_FINANCIAL_INCLUSION_FOR_INCLU...
2. www.cgap.org/.../Working-Paper-Achieving-Sustainable-Development-Goals-
3. https://www.indiapost.gov.in/Financial/Pages/content/JansurakshaScheme.aspx
4. https://www.bankbazaar.com › saving Schemes
5. www.business-standard.com/.../jan-suraksha-claim-servicing-may-be-a-challenge-115.
6. https://www.india.gov.in/spotlight/jan-dhan-se-jan-suraksha-social-security-citizens
7. pmjandhanyojana.co.in/suraksha-bima-yojana/
8. 8www.jansuraksha.gov.in/Files/APY/English/About-APY.pdf
9. Acharya and parida T.K.(2013)”measuring performance and efficiency growth of selected Indian life insurance companies” 10 Department of financial services, Government of India.

A STUDY ON "POPULATION - A BARRIER TO SUSTAINABLE DEVELOPMENT"

Syeda Hajera Tahseen
Assistant Professor, Department of Commerce and Management, Indo Asian Academy Degree College, Bangalore

Abstract

This paper sketches the relationship between human population dynamics and the sustainable development dimensions. It illuminates the convolution and contextual specificities of population impact on sustainability in a number of domains which hampers the economic development of a country. It explores the whole range of barriers created due to the population growth. (e.g., global environment, deforestation, natural resources exhaustion. shortage of food and water, chronic unemployment). Developing countries are under increasing pressure to compete economically and their industrial advancements are damaging as well. The demands that this growth places on our global environment are threatening the future of sustainable life on earth itself. This fear of population growth is not new. Thomas Robert Malthus and other classical economists worried that as the growing population made land increasingly scarce, rising food prices would eventually choke off further economic and population growth, leading to the "stationary state." This paper briefly reviews a concept and theories for understanding population and sustainability and then proceeds to provide a state-of-the-art review of studies that have examined population dynamics and their relationship to sustainability issue areas. The review concludes by analysing the synergism that can be achieved with population control awareness and rewards associated with it for the present and future generation

***Keywords**: Population, Sustainability, Environment, Development, Economy*

Introduction

All nations are zealous towards achieving a higher standard of living for their people adequate food, good health, literacy, education, gainful employment and most importantly an environment or place to sustain life by protecting Mother Earth. From a broader and direct perspective all nations are focusing on Economic growth and Sustainability. These are the goals of millions now living in indigence. An important barrier to the achievement of these goals is the current rate of population growth.

What is Population vs Over Population?

A population is defined as a group of individuals of the same species living and interbreeding within a given area. Members of a population often hinge on the same resources, are subject toakin environmental constraints, and depend on the availability of other members to persist over time Overpopulation is an undesirable condition where the number of existing human population exceeds the carrying capacity of Earth and all the resources available to a living creature. Overpopulation is caused by number of factors, such as minimised mortality rate, better medical facilities, depletion of precious resources.

Defining Sustainability

Sustainability has many a time been defined as how biological systems tarry and remain manifold and productive. But, the 21st-century definition of sustainability goes far beyond these straitened parameters. Today, it refers to the need to develop the sustainable models imperative for both the human race and planet Earth to survive. Sustainability is a balancing act. The United Nation's 1987 Report of the World Commission on Environment and Development: Our Common Future noted that sustainable development meets the needs of the present without compromising the well-being of future generations. The concept continues to expand in scope. In 2000, the Earth Charter broadened the definition of sustainability to include the idea of a global society "founded on respect for nature, universal human rights, economic justice, and a culture of peace."

Objectives of the Research

The primary objective of this paper is to check the awareness of people on Population and its direct impact on sustainability; also it indirectly aims at creating an awareness of the causes and effects of Over Population from a broader perspective. Secondly the paper highlights the Synergism that can be archived when the population is in control, as it directly leads to sustainable development of the various aspects in question which are presently being threatened.

Literature Review

Population Theories

There are has been various theories propounded by renowned Economists, English clerics, social philosophers and scholars, who have been extremely influential in the fields of political economy and demography. The three most popular and enunciated views have been briefly outlined below: The Malthusian Theory of Population: (Essay on the Principle of Population as it affects the Future Improvement of Society Published in 1978)

Theory 1: Malthus states that the pressure of increasing population on the food supply would destroy perfection and there would be misery in the world. Malthus was severely criticised for his pessimistic views which led him to travel on the continent of Europe to gather data in support of his thesis.

The Malthusian doctrine states that there is a natural sex instinct in human beings to increase at a fast rate. Due to which the population increases in geometrical progression and if not restrained it doubles itself every 25 years. Whereas the other aspect of the theory states that the food supply increases in a slow arithmetical progression due to the operation of the law of diminishing returns based on the conjecture that the supply of land is constant. This results in an imbalance, which in turn leads to population growth which can be overcome by preventive and positive checks

Theory2: The Optimum Theory of Population by Edwin Cannon and popularised by Robbins, Dalton and Carr-Saunders: (Book Wealth published in 1924)

The optimum theory is claimed to be more realistic than the Malthusian theory of population. The optimum population is the ideal population which combined with the other available resources or means of production of the country will yield the maximum returns or income per head.

Theory 3: The Theory of Demographic Transition: (Proposed in 1929 by an American Demographer Warren Thompson)

The theory of demographic transition is based on the actual population trends of advanced countries of the world. According to this theory, every country passes through three different stages of population growth. In the first stage, the birth rate and the death rate are high and the growth rate of population is low. In the second stage, the birth rate remains stable but the death rate falls rapidly. As a result, the growth rate of population increases very swiftly. In the last stage, the birth rate starts falling and tends to equal the death rate. The growth rate of population is very slow.

Conclusion of the Theories

The theory of demographic transition is the most sustainable theory of population growth. It neither lays prominence on food supply like the Malthusian theory, nor does it develop a pessimistic outlook towards population growth. It also has higher-ranking to the optimum theory which lays an exclusive emphasis on the increase in per capita income for the growth of population and shirks the other factors which influence it. The demographic transition theory is superior to all the theories of population because it is based on the actual population growth inclination of the developed countries of Europe.

Almost all the European countries of the world have progressed through the first two stages of this theory and are now in the final stage. Not only this, this theory is equally relevant to the developing countries of the world. The most backward countries in some of the African states are stock-still in the first stage whereas all the other developing countries of the world are in the transitional stage two it is on the principles of this theory that economists have developed economic-demographic models so that underdeveloped countries should gain access to the final stage and procure the stage of self-sustained growth. Thus, this theory has universal applicability.

Sustainability Concepts and Theories

The Three Pillars of Sustainability

Adding to the meaning described at the beginning of the paper, in 2005, the World Summit on Social Development identified three core areas that contribute to the philosophy and social science of sustainable development. These “pillars” in many national standards and certification schemes, form the backbone of

tackling the core areas that the world now faces. The Brundtland Commission described it as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". We must consider the future then, in making our decisions about the present.

Economic Development

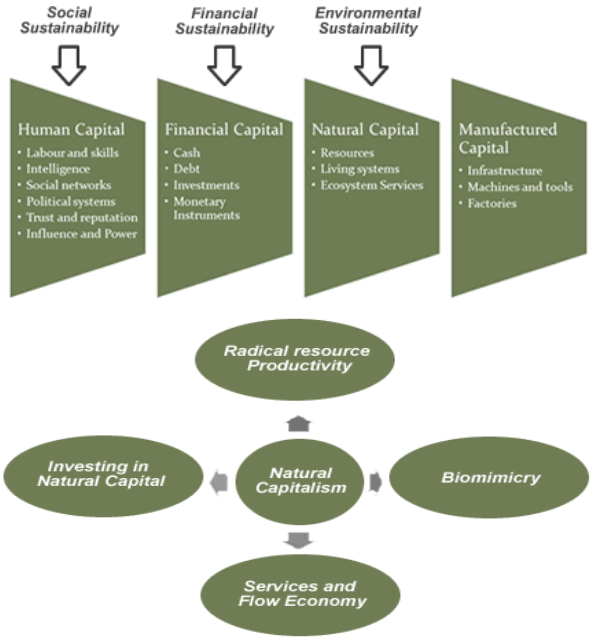
This is the issue that proves the most problematic as most people dissent from political ideology what is and is not economically sound, and how it will infect the businesses, jobs and employability. The supply and demand market are consumerist in its essence and modern life requires a lot of resources every single day; for the purpose of the environment, getting what we devour under control is the paramount issue. Economic development is about giving people what they want without undermining the quality of life, especially in the developing world, and reducing the financial onus and "red tape" of doing the right thing.

Social Development

There are many dimensions to this pillar. Most importantly is of awareness and legislation protection of the health of people from pollution and other harmful activities of business and other organisations

Environmental Protection

Everyone is aware of the need to protect the environment, whether it is to do with recycling, reducing the power consumption by switching off the electronic devices instead of going on standby mode, by walking short journeys as an alternative of taking the bus. Businesses are administrated by law to prevent pollution and to keep the carbon emissions low. There are incentives for installing renewable power sources at homes and businesses. Environmental protection is the third pillar but in reality, to many, the primary concern of the future of humanity. It defines how we should study and protect ecosystems, air quality, integrity and sustainability of our resources and concentrating on the elements that place a strain on the environment. It also deals with how technology will drive our greener future; the Environment Protection Act recognized that developing technology and biotechnology is a key to this sustainability and safeguarding the environment of the future from potential damage that technological advances could potentially bring.



Four Capital Model

There are predominantly four types of capital in a society. To be specific it is the Human Capital, Financial Capital, Environmental Capital, and Manufactured Capital.

In its orderliness to build and perpetuate the sustainability in the society, the mentioned capitals must be balanced in the society. For Instance, too much attention to human or manufactured capital may affect the environmental sustainability. The model places all these four capitals next to each other and talks about the fact that sustainable society is not possible to be built without maintaining a balance amid these four capitals and maintenance of their sustainability in itself.

Natural Capitalism

Prior to the development of Four Capital Model, there were only three capitals which were taken into consideration i.e. land, labor, and manufactured Capital. These capitals were considered for sustainability in the context of the society by existing models at that time. This caused the natural capital to be ignored for a long time and its sustainability not to be considered in the society and as the result; a lot of natural resources were used without proper management.

Natural Capitalism model exhibits different instruments – namely Radical Resource Productivity, Biomimicry, Services and Flow Economy and Investing in Natural Capital, which can be employed to conserve the environmental sustainability in the society.

Statement of the Problem

"Unawareness among the people with reference to the dangerous impacts of Overpopulation towards Sustainable development"

Research Methodology

Source of Data: Primary Data

Study Location: Data has been collected from various Cities of India, such us Bangalore, Mumbai, Calcutta and Delhi.

Sampling Method: Random Sampling

Instrument: Survey Questionnaire (Mailed Questionnaire and Telephonic Interview Questionnaire)

Sample Size: 50

Data Collection and Analysis

The data has been collected through random sampling method through 2 types of Survey Questionnaire Namely Mailed Questionnaire and Telephonic Interview Questionnaire.

The first 2 questions focus on creating awareness among the respondents and participants indirectly indulging them in answering these questions. From question number 2 to 9 forms a basis of the awareness check this paper aims at and question 10 takes a feedback and suggestion from the respondents on how to create an awareness of overpopulation impact and how to control the population

Awareness check of Population and Sustainability

How many amongst the below listed options are you aware to be the Causes of population

- Hot Climate
- Child Marriage and Multi Marriage System
- Religious Superstitions
- Illiteracy and Unawareness
- Poverty
- Increasing Birth Rate
- Decreasing Death Rate
- Indifferent towards Family Planning
- Lack of Social Security
- Arrival of Refugees

How many amongst the below listed options are you aware to be the Effects of population on our economy?

- Loss of Fresh Water
- Species Extinction
- Lower Life Expectancy in the Fastest Growing Countries
- Depletion of Natural Resources
- More Intensive Farming Practices
- Increased Global Warming and Climate Change
- Elevated Crime Rate
- limited natural resources,
- reduces private and public capital formation,
- Problem of Capital Formation
- Diverts additions to capital resources to maintaining rather than increasing the stock of capital per worker.
- Pressure on Environment

- Effect on per Capita Income
- Impact on Maternity Welfare
- More Pressure on Land
- Problem of Investment Requirement
- Effect on Food Problem
- Problem of Unemployment:
- Low Standard of Living:
- Poverty
- Burden of Unproductive Consumers
- Social Problems (Slum Areas, unhygienic and insanitary conditions.

Do you know the meaning or importance of what is Sustainable development?

Yes No

Modern technology is capable of solving any of our problems?

True False

The current population of India is

132 100 200 150

Manmade hazards and Nature calamities reduces population

Yes No

Are you comfortable in discussing your family planning details with others?

Yes No

Would you encourage Sex education at your child's school?

Yes No

Will tax exemption for families with 1 or 2 kids help population control?

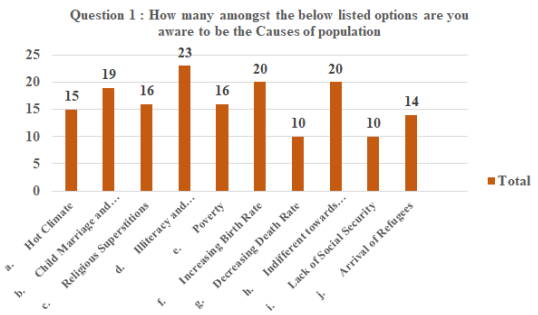
Please suggest a way in which we can create awareness of overpopulation impact and also suggest a way on how to control the population.

Awareness Measure

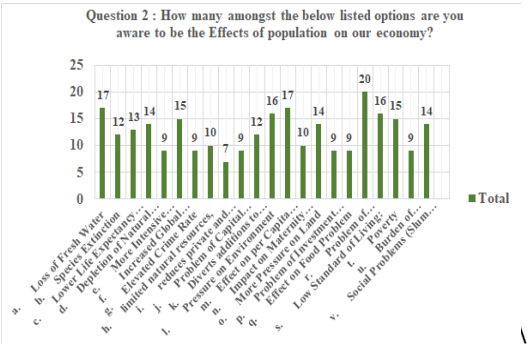
Control Measure

Analysis

Based on the respondent's answers, a detailed analysis of the survey has been performed and represented below with help of Diagrammatic representation in percentages and values



Question No 1 Figure 1.1



Question No. 2 Figure 1.2

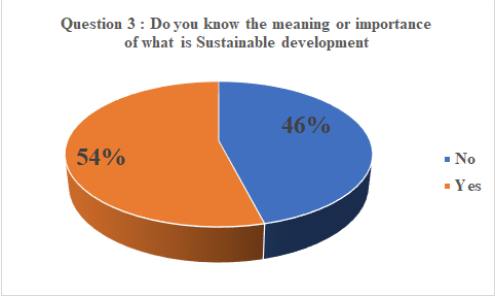
With the help of above Graphical representation we can easily understand that **figure 1.1** displays that out of 50 respondents, how many of them are aware of the causes of population from the list of options given as shown in the questionnaire above. Illiteracy and Unawareness is considered as the major reason for overpopulation, followed by Increasing Birth Rate and indifferent attitude towards Family Planning

Figure 1.2 clearly demonstrates the respondent's awareness of effects of overpopulation on our economy, where problem of unemployment has been regarded as the worst effect of overpopulation followed by effect on per capita income and loss of fresh water which is the basic necessity of life.

Post creating an awareness questionnaire, the focus shifts on the reality check of how well are the respondents aware of the critical situation we face today of overpopulation and its direct impact on Sustainability, let's see the detailed examination below:

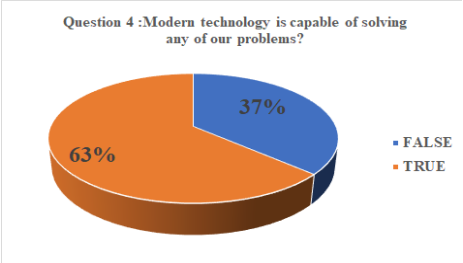
- Out of 50 Respondents only 54% are aware of the meaning of sustainable development, which reflects the lack of awareness among the people on this crucial subject.

Question 3 Figure 1.3



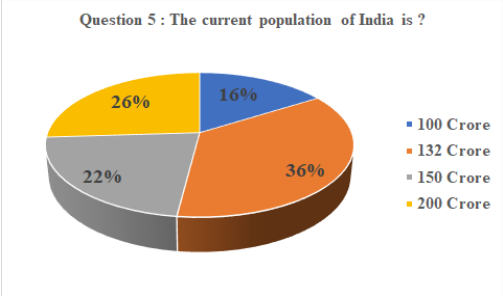
- 63% Respondents believe that with the help of technology every challenge and problem can be overcome, they fail to understand the most important effect highlighted by them i.e. the Problem of unemployment, cannot be solved with the help of technology.

Question No 4 Figure 1.4



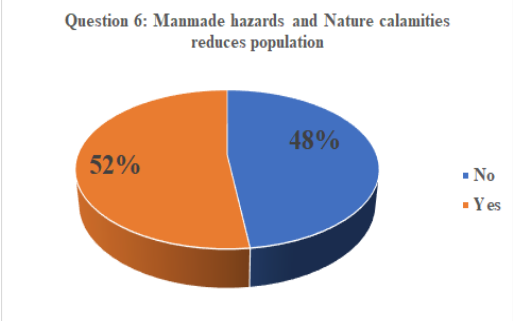
- Only 36% of the respondents are aware of the population of India, which clearly demonstrates an unawareness issue.

Question No 5 Figure 1.5



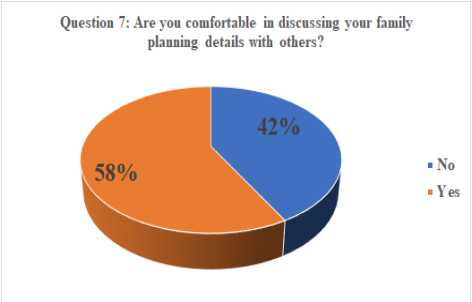
- 52% of respondents believe that manmade hazards and natural calamities reduces population, where as it doesn't even leave a dent on the population in reality.

Question 6 Figure 1.6



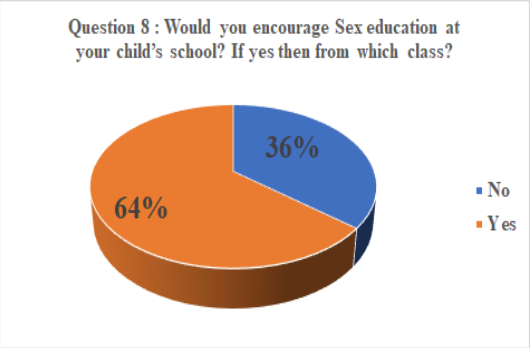
- 42% of the participants refuse to discuss their family planning with others which is presently being looked at as the most important aspect of creating awareness on how important it is to have a small family.

Question 7 Figure 1.7



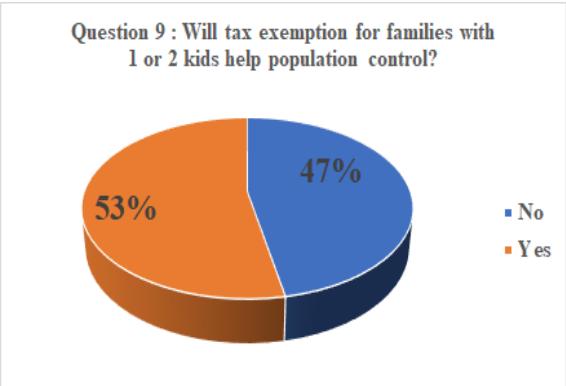
- This figure appears to be encouraging as more than 60% i.e. 64% of respondents are ready for permitting sex education at their child's school, which will make the most important difference to the issue prevailing today. The importance of controlled population can be nurtured in the minds of young generations from the beginning.

Question 8 Figure 1.8



- 53% of the participants believe that creating an exemption in tax for a family of 1 or 2 will be of immense assistance in controlling the overpopulation; hence this must be looked upon as a rewarding measure by the government.

Question 9 Figure 1.9



- For the last question the focus shifts to ascertain and understand, what according to the respondents will help in creating awareness and what strategy must be adapted to control overpopulation. The views have been summarised from the respondents below:

Awareness and Control Measures

- Use of contraceptives
- Consulting a Doctor
- Citing examples of situation prevailing today in the context of causes and effects of overpopulation and advantages upon overcoming the situation
- By education Younger generation and people at large
- Educate Women and Eradicate Poverty
- Projecting Future Crisis
- Delayed Marriage, medical facilities and Education
- Compulsory government rule of maximum of 2 kids
- Special benefits by Government for a family of 1 or 2 kids
- Government must Increase literacy rate
- Family planning measures in each and every part of the country
- Intensive family planning measures
- Tax exemption
- Motivation by GOVT. through schemes
- Medically stopping birth after 2 children especially in rural areas

- Encourage Adoption
- If population is to be controlled then do it by education and awareness and with proper govt administration not by any law or force.
- Population control issue is only with India, not for the world, population cannot be an issue if administration is proper. If you compare China with India, they are more developed than us despite their population, it's because their administration, politics is far good than us.

Conclusion

It can be concluded by saying that considering and analysing the various aspects of this research paper that Intensive awareness programs and excellent rewarding system for a family with 1 or 2 kids by the Government, will benefit our economy with the Synergism of controlled population and sustainability achievement. Through the analysis it can be seen that the awareness ratio is very low with just a sample of 50 from various cities, Hence a remarkable achievement is required in creating an awareness in the very first instance of the topic in itself.

References

1. http://www.economicsdiscussion.net/theory-of-population
2. http://www.sociologydiscussion.com/demography/population-theories
3. http://www.yourarticlelibrary.com/population/theories-of-population-malthus-theory-marxs-theory-and-theory-of-demographic-transition/31397
4. https://www.conserve-energy-future.com
5. https://www.sustainabilitydegrees.com
6. https://www.environmentalscience.org
7. http://www.csdila.unimelb.edu.au
8. http://www.berkshirepublishing.com
9. https://www.tandfonline.com
10. https://www.conserve-energy-future.com/what-is-sustainable-development-and-its-goals.php
11. https://greenliving.lovetoknow.com
12. http://www.markswatson.com
13. https://www.ncbi.nlm.nih.gov
14. http://www.everythingconnects.org
15. http://www.economicsdiscussion.net/articles
16. https://www.nature.com
17. https://www.sustainabilitydegrees.com
18. http://www.everythingconnects.org

A STUDY ON GREEN HRM IN CORPORATE SOCIAL RESPONSIBILITY AND SUSTAINABILITY

Batty Dorance Jeen
Assistant Professor, Department of Commerce and Management
Indo Asian Academy Degree and PG Centre College, Bangalore

Rajalekshmi Srinivas
Assistant Professor, Department of Commerce and Management
Indo Asian Academy Degree and PG Centre College, Bangalore

Abstract

The current century portrays great interest in all the concerns on the environment in a global perspective to all the fields in business. Disposition of waste materials and industrial pollution such as toxic chemicals are areas of focus that need the formulation of policies and regulations and its effects to the society. To achieve an effective environment system, a business must incorporate environmental strategies and objectives in its overall strategic development goals. There are several factors that influence a company's adoption of the environmental strategies. In 1994, Wilson and Lado gave a definition of HRM as a combination of inter-related function, processes and activities aimed at directly developing, maintaining and attracting the human resources of an organization (Renwick, D. W., Redman, T., & Maguire, S. (2013). Green Human Resource Management promotes environment friendly activities by engaging employees in greener activities (Kapil, 2015). Environment friendly HR policies resulting in greater efficiencies, lower costs and create an atmosphere of better employee relationship, which in turn helps organizations to operate in an environmentally sustainable fashion (Dutta, 2012). It increases employee morale, reduces labour turnover, attract human talent, builds company image, improves external and internal quality of an organization, improves relationship with stakeholders, reduces cost, facilitates growth improvement and provides competitive advantages (Deshwal, 2015). Environmental practices help an organization to save money, discover new sources of business and avoid problems (Mehta &Chugan, 2015). This study focuses on various green HRM practices followed in the organization. The study also focuses on the relationship with Social Corporate Responsibility and Sustainability. It extends human resource management (HRM) practitioners in understanding sustainability in an organizational context. It can be used as a guide for the HR function to support sustainable business and perform HRM sustainably. This study begins by examining the different green practices and suggestions for better corporate Responsibility and sustainability.

Keywords: *Social Responsibility, Green Human Resources, Sustainability*

Introduction

Twenty-first century has been showing heightened interest in the environmental concerns all around the globe irrespective of related fields be it politics, public, or business. The recent interest in environmentalism globally has arisen from specific treaties to combat climate change, e.g. Kyoto 1997, Bali 2007 and Copenhagen 2009 (Victor, 2001Victor, D. G. (2001). Owing to the harmful consequences of industrial pollution and waste materials, including toxic chemicals, governments and NGOs round the globe promoted regulations and policies with effect of slowing down and to some extent even reverse the destruction of natural resources and its negative effect on the mankind and the society as a whole (Christmann& Taylor, 2002Christmann, P., & Taylor, G. (2002). As Corporate Social Responsibility (CSR) continues to gain traction in management circles, its translation into actual managerial practices and performances remains a challenge for many organizations (Carroll &Shabana 2011, Jamali & Neville 2011, Aguinis & Glavas 2012). This would enable managers and decision-makers to design CSR initiatives that leverage internal competencies as they seek to contribute more constructively to an improved workplace environment, positive perceptions of the firm and meeting the expectations of internal and external stakeholders (Morsing*et al. 2006*, McWilliams & Siegel 2010, Orlitzky*et al.* 2011). Human Resource Management (HRM) function can potentially provide both strategic and operational support to CSR; and that a closer integration of the two can produce synergistic outcome of sustainability as understood within the context of a co-creation process. "By aligning organisational goal with Human Resource Management for businessSustainability" is known as Green Human Resource Management"

Many companies adopting less paper, mail communication, E-meeting, E-training, video conferencing interview and also encouraging employee to switch off light and computer when they are not in use.

Objective

The main purpose of this study is to

- To provide with the basic understanding of Green HRM
- Highlight with different Green HRM practices and CSR
- Elaborate on various green practices that can be incorporated for building a Green workplace.
- To know how green HRM practices brings Sustainability

Methodology

The study is primarily based upon the secondary data. For this extant literature related to the topic from different databases, websites and other available sources were collected. A systematic review of collected literature was done in detail.

Literature Review

Corporate Social Responsibility

Corporate social responsibility is a multi-aspect construct that encompasses 30 economic and non-economic (e.g. diversity) concerns (Lis, 2012; Ones &Dilchert, 2012b) and is defined by McWilliams, Siegel and Wright (2006, p. 1) as: 'situations where a firm goes beyond compliance and engages in actions that appear to further some social good, beyond the interests of the firm and that which is required by law'. Mozes, Josman and Yaniv (2011) further define CSR as: 'acknowledging the importance of economic performance, as well as the broad range of stakeholders, while also highlighting the need for balancing these factors with societal responsibility'.

Corporate social responsibility is now recognised as a vital conduit between corporate strategy and social responsibility outcomes. It overtly demonstrates to employees, governments, stakeholders and communities, what are the firm's values and policies and the organisation's strategic agenda (Garavan& McGuire, 2010; Manika, Wells, Gregory-Smith & Gentry, 2013; Rangarajan& Rahm, 2011)

Human Resource Management

Employees are being progressively recognised as valuable assets in organisations, through their contributions to firm performance (Biswas & Varma, 2012; Luthans & Youssef, 2004; Zutshi&Sohal, 2003). Organisations need to diversify their strategies and invest in the people management side of their company, in order to tap into a value adding resource to boost a firm's competitive advantage (Luthans & Youssef, 2004). Leading executives Carly Fiorina, (former) Senior Executive of Hewlett-Packard, and Bill Gates of Microsoft (cited in Luthans & Youssef, 2004, p. 143), claim that: 'the most magical and tangible and ultimately the most important ingredient in the transformed landscape is people' and 'our most important asset walks out the door every night'. Human resource management is defined as "a set of distinct but interrelated activities, functions and processes that are directed at attracting, developing, and maintaining (or disposing of) a firm's human resources" (Lado& Wilson, 1994, p. 701). It is widely accepted in the literature that a positive correlation exists between HRM practices and organisational performance (Ahmad & Schroeder, 2003; Chartered 33 Institute of Personnel and Development (CIPD), 2001; Huselid, 1995). Green HRM has emerged from within the confines of HRM and green management. Green management, according to Lee (2009, p. 1102) refers to: "the management of corporate interaction with, and impact upon, the environment', and should go beyond mere regulatory compliance to include 'pollution prevention, product stewardship and corporate social responsibility".

Anjana Nath, Regional Head of HR in Fortis Healthcare Ltd. suggests that: "Green HRM can be defined as environmentally friendly HR initiatives resulting in greater efficiencies, lower costs and better employee engagement. Human resources plays a key role as it creates awareness amongst employees and builds engagement, which in turn, helps organisations to operate in an environmentally sustainable fashion" (Taj, 2011, p. 27).

Green HRM and CSR

There is a positive effect of green HR on business environment that leads the firm to compete with others. Sudin (2011). The compensation and rewards systems in an organisation could contribute to environment management. Intrinsic and Extrinsic rewards encourage and increase loyalty of workers to be environmentally friendly. HR practices such as performance management, compensation management and reward system also concerned for environment management. It increases the ability to adopt green HRM practices towards environmental safety issues (Carter &Dresner, 2001). Green HRM in welfare and safety management may an effective way to enhance eco friendly HR practices (Milliman and Clair, 1996). Govindarajulu and Daily (2004) have found out that employee involvement programme may help the organisation to adopt green practices which improve health, safety and welfare of workers. Green HRM is the use of HR policies for sustainable business organisationMadip (2014). Also (Knox et. al) found out that Environment Management/ CSR initiatives have been linked to employee engagement, through reduced costs due to increased employee retention as well as improved reputation in the eyes of employees. CSR is increasingly seen as an indicator of the business performance and as an opportunity for achieving sustainable development in business and wider environment. By the late 1990s the idea of CSR became almost universally sanctioned and promoted by all constituents in the society from governments and corporations to NGOs and individual consumers (Lee, 2008).

Sustainability

Sustainability is often defined as the "ability to meet the needs of the present without compromising the ability of future generations to meet their needs (WCED, 1987 as cited in Cohen Toylor& Muller, 2004). In the environmental literature, the concept of green management for sustainable development has various definitions; all of which generally, seek to explain the need for balance between industrial growth for wealth creation and safeguarding the natural environment so that the future generations may thrive (Daily & Huang, 2001).

Green HRM and Sustainability

Stephen King (2004) believes that the future of HRM will be built on the foundations of creativity and innovation and environmental sustainability for HRM could be achieved only by continuous financing and support of employees towards green human resources management initiatives. Mandip (2012) believes that Green human resources management system looks at using every staff‘s potential to endorse sustainable practices and increase awareness of employees on the importance of committing to a sustainable Green Human Resource Management The Organizations Human Resources function act as a key player in ensuring that the organization's responsibility towards the environment becomes a part of the corporate mission statement. Muster and Schrader (2011) believes that Green Human Resources Management brings out strategies and policies that work in bringing about a change in the employee‘s behavior towards the environment through their job so as to imbibe this culture in their personal life as well. It also educates employees on the effects of following a sustainable green practice that contributes to the environment‘s wellbeing and making it safe for our future generations. This belief and the eagerness to safeguard our planet's resources motivate employees and instill a sense of pride towards their small contribution to the organization as well as the environment.

Green HRM Initiatives

- Practices of Green HRM, Paperless office, Turn off lights, Computer and Printer off after work and on weekends, Mail communication, Electronic filing, Encouraging use of laptop instead of desktop, Waste Management, Online recruitment, Video conferencing meeting, Paper less training, Performance management on basis of green practices.

Components of Green HRM

- Green Recruitment
- Green Performance Appraisal
- Green Compensation and Reward

- Green Counseling
- Green Welfare Practices
- Green Selection
- Impact of Green HRM
- Green Training

Impact of Green HRM

In the first level fully implementation of green HRM is difficult but by continuous effort organisation may create learning environment which adds value to professional and personal life of employees. The impacts of green HRM practices are noted below.

- It increases employee morally.
- It preserves the natural resources.
- It improves the relationship between stake holder, customer, supplier, employees and the media.
- It reduces the overall cost.
- It increases the company's image.
- It develops the knowledge of green HRM.
- It motivates innovation and growth.

Green Recruitment

Now organisations are giving their advertisement through their web-site. This method is very fast, cheap and easy to assess. Bauer &AimanSmith (1996) identified the impact of proenvironmental factor recruitment that employees are encouraged to work in a firm which promote green practices. Frank (2003) identified the relationship between perception of employee and ethics of company and found that employees are interested to work in eco-friendly Company.

Green Selection

Interviews are conducted by group discussion, personal interview, and different activities and in online test. Candidates could be given preferences who are more environment friendly for an organisation. Green Orientation Induction and orientation programmes are framed in such a way that facilitates the new comers about green practices. Green issues like health and safety, use of material and cleanness of area in work place etc.

Green Training

Consistent with the literature (Lawrence & Morell, 1995; Lee, 2009; Paillé et al., 2014) and the green HRM practices as highlighted by Renwick et al. (2013), it is concluded that for firms to benefit from green HRM, organisational training and development processes should be designed to: Develop programs that build the technical and management capabilities and skills of employees associated with green management Ensure that employees acknowledge their ability (or inability) to undertake required tasks. If the employee is adequately trained, this should positively affect individual motivation, engagement and drive to achieve organisational green goals. Conversely, if an employee has not received adequate training they are less likely to be motivated to achieve the organisation's green goals

Develop employee knowledge about the effects of individual behaviour on the environment to induce an employee's emotional involvement, engagement and contribution to organisational green initiatives Increase the green knowledge of leaders, managers and supervisors as they are effective messengers of organisational policies to frontline employees and By having managers and supervisors overtly display green behaviours, this demonstrates to employees what are the behaviours and attitudes desired by the organisation, and what is expected of employees in the workplace. Training should be given on increase of green management. Trainer should give their training on presentation or by video conferencing. Trainer should use more soft materials rather than printed handouts to reduce the use of paper. Sarkaris (2010) suggested that employees presented better training on environmental training programme. Daily (2007) suggested Green training will help the employees to identify the challenges of green HR principles.

Green Performance Appraisal

In performance appraisal use of green practice should be one of the key performances Area (KPA). Green performance appraisal motivates employees for use of green practices in organisation. Jabbar (2012) studied that human dimensions impacts the organisational performance as well as environmental management system or organisation. Renwick et al. (2013) suggest that firms need to: develop a number of performance indicators, which can be accurately measured so that they can be included in the firm's formal performance management and appraisal process, ensure that information pertaining to green initiatives and company environmental objectives is clearly disseminated to all employees throughout the organization, clearly explain the expectations that the firm has of its managers in regards to green outcomes, clarify KPIs and ensure that these are specified in a manager's performance appraisal, ensure that employees are unambiguously advised of specific individual KPI objectives and green outcome requirements, make certain that the skills and capabilities of the employee match that of individual KPIs and assigned job tasks and, ensure that rewards and benefits are available to employees who achieve green objectives.

Green Compensation and Reward

Compensation and reward system should be directly linked to use of green skills. Forman and Jorgensen (2001) suggested rewards help to improve employee commitment to environment management programmes. Renwick et al. (2013) have identified a range of green HRM activities related to employee rewards and compensation that are expected to positively contribute toward the achievement of green goals. In particular, Renwick et al. (2013) claim that firms need to: reward employees for making suggestions for environmental improvements, encourage skills development and reward employees with skills-based pay, monetarily reward managers for meeting EM based KPIs and, recognise employee efforts with monetary and/or non-monetary awards including incentives such as gifts and time off work.

Green Counseling: Top level managers and counselors can take initiative to motivate employees for implementation of green practices and business sustainability.

Green Welfare Practices: Organisations have adopted the concept of health, safety and welfare of employees to health, safety and environmental management.

Green Practices Adopted by Companies

- LG India Newly lunched LED E60 and E90 series, monitor 40% less energy than conventional LED monitors
- HCL Introduce eco-friendly products HCL ME 40 notebooks Energy efficiency Hair India Lunched Eco life series Energy efficiency
- Samsung India Eco-Friendly LED backlight in LED TV 40% less use of electricity Tata Consultancy Services Initiative of creating technology for agriculture Community benefits

Conclusion

Green HR practices are focused on improving HR practices for business sustainability. It aims at reducing wastages and is very much concern for environment. Green HR initiative results higher productivity and build a developmental climate for business. By doing so, organisations would add value to their brand image. The green recruitment, green selection, green induction, green performance appraisal, green compensation and rewards system are powerful tools in making employees more eco friendly for business sustainability.

References

1. Marc Orlitzky, Donald S. Siegel, and David A. Waldman. 2011Strategic Corporate Social Responsibility and Environmental Sustainability, Sage publication,
2. Suruchi Pande, Vivek Viswanathan, Preeti Kamboj. Sustainable Green HRM – Importance and Factors affecting Successful Implementation in Organizations, International Journal of Research in Management and Business
3. Benz, M., & Frey, B. S. (2007). Corporate governance: What can we learn from public governance? Academy of Management Review, 32, 92–104.10.5465/AMR.2007.23463860
4. Berrone, P., & Gomez-Mejia, L. R. (2009). Environmental performance and executive compensation: An integrated agency-institutional perspective. Academy of Management Journal,52, 103–126.10.5465/AMJ.2009.36461950

A STUDY ON THE IMPACT OF SUSTAINABILITY ON BRAND VALUE

Sheetal Dhan, Uzma Anjum & Sasmita Sahoo
Assistant Professor, Department of Commerce and Management, Indo Asian Women's Degree College, Bangalore

Abstract

Sustainability is the need of the hour, with the growing awareness of the negative impact of the company's activities on the environment has led to a new way of doing business. Sustainability is the ability to meet the demands and needs of the present generation without compromising the needs of the future generation by utilizing the resources judiciously. This moment calls for ethical products and services that will benefit the society and environment. The customer behavior which is now more focused on the green concept has forced the companies to adopt sustainable strategies that will boost the company's brand value and equity. Brand value is the products value premium that is generated with its recognizable name. Therefore the purpose of the study is to find out whether the inclusion of sustainability creates brand value for the companies or not. The study is based on secondary data focusing on companies who have made the first move towards incorporating sustainability in their projects and whether that have yielded positive results for their brand value or not and also on companies which have failed to implement these in their project and the results thereof of their particular moves. The study found that the companies have benefitted directly in a number of ways like – reduction in CO2 emission, consumption of energy is reduced, thus helping the company in reducing cost of production, compliance with the legislation etc. The study shows that sustainability when incorporated as a business practice does improve the brand value and ensure survival of the business in this competitive world.

Keywords: *Sustainability, brand value, companies, environment, society*

Introduction

Since the beginning of time, humans have been the consumer of resources rather than the replenished of it. Earlier people would move about like nomads from place to place in search of food and shelter due to environmental changes but soon they learned to make changes to the environment to suit their needs. This gave way to settlements that soon became villages, towns and cities- with the growth of population around a place led to businesses being emerged which sped the destruction of resources; all this had a collective effect on the environment. During these times there was no concept of sustainability. History is witness that many societies have collapsed due to these unsustainable practices of humans. Philosophers and Renaissance expressed their distress over the growing population and no regard for environment but they were not taken seriously. People started to acknowledge the environmental damage caused by their reckless actions in the 20th century. This led to a growing concern among the people about the environmental damages like pollution, depletion of natural resources, felling of trees which became the major cause for green house effect, the damage done to the ozone layer protecting the earth etc. A strive for a sustainable future led to the adoption of sustainable way of living and doing business.

Theoretical Background

The consumption of resources has escalated in the recent years; every single day the companies consume a lot of resources. Destruction of resources was done in the name of development which led to us living a modern, consumerist and urban existence. The concept of sustainability took its actual form around the 20th century when it was taken as seriously as the environmental damage that was done. Sustainability has many definitions and one among it is that it's a study of how natural system functions and restores the balance of nature by producing everything it needs. This definition also encompasses that humans utilize these resources to sustain their modern way of living. Since sustainability is the need of the hour, businesses are adopting sustainability strategies to do business; this astute move has led to increasing the brand value of companies who are more environmental friendly. This study highlights the impact of sustainability on the brand value.

Literature Review

There is a lot of research done in the field of sustainability and brand value. Sustainability was first used by World Council of Churches in 1974 when environmental challenges were affecting economic

growth (Dresner 2002). It gained more importance in the report by the United Nations World Commission "Our Common Future". It's defined as the ability to meet the needs of the present generation without compromising the needs of future generation. Milton Friedman a 20th century spokesperson is of the opinion that the primary objective of the company was to increase the wealth of the shareholders. But Mackey suggested that this perspective is too narrow and may be harmful to the company as well as the community and environment. Hamel (2000) suggested that this holistic view can produce wealth for the company as well as innovative products that will ensure long term competitive advantage. Sustainability is a unifying approach essential that lays the foundation for sustainable, socially-responsible business. Linking of sustainability initiatives with social responsiveness to improve the operations, brands and profits have created value for many companies.

Objective of the Study

- To analyze whether sustainability does impact the brand value of a company or not.
- To explore if sustainability can be taken as a new form of doing business.
- To find the advantages and disadvantages of sustainability on a company and its environment.
- To know whether sustainable future is attainable or not with the present conditions.

Statement of the Problem

There is an explosion of interest in the concept of sustainability as a business practice. The expectations of the consumers from the big companies around the world are seeing a drastic change. These changes are pertaining to the contributions made by companies towards the society and environment. Consumers now want to see the result of the contributions made by the companies towards making the environment and society into a better place. 90% of the people are of the opinion that the companies need to give back to the society they function in. Hence, the study on the impact of sustainability on the brand value of the company.

Scope of the Study

This study highlights the emerging trends of sustainability strategies adopted as a business practice around the world and its impact of the brand value of the company. This current scenario in which the companies are tussling between with the scarcity of resources and meeting their organizational goals they face needs to be dealt with immediately.

Methodology

Methodology deals with the methods and procedures to carry out this study. The study is based on secondary data. Secondary data was collected from books, websites, journals and other publications.

Analysis and Interpretation

- Businesses around the world are now proactive and trying to shun the image of being negligent towards the environment. There is a drastic change in the outlook of consumers towards products manufactured by the companies.
- Companies are venturing into using sustainable strategies to add brand value by investing in projects that are not directly related to company but add value to the environment and society.
- Honda was the first mover to incorporate sustainability in their projects by launching fuel efficient cars, P&G developed products like Ariel that would give the same result of using cold water instead of hot water to wash clothes. Sustainability was unheard of in the category of detergents.
- New and innovative products are developed that are environment friendly to retain their customers. These sustainability strategies have led to an increase in the above companies brand value by 28%.
- Companies like Ford motors, Nike, Wal-Mart, Starbucks, Dell, Brown Foreman, Adobe, Johnson & Johnson, PepsiCo, Ambuja Cement, ITC, Dalmia Bharat and GE have emerged as role models in adopting sustainability as a new way of conducting business.
- The primary goals of sustainability were laid out to be eradication of poverty and hunger, the standard of education and heath should be uplifted, giving special attention to water scarcity and sanitation.

Sustainability should also strive to achieve economic growth with stronger economies without neglecting the environment.

- These goals gave the companies a framework to act on, but most companies only focused on areas which got media coverage like Swatch Bharath Abhiyan , Go Green, Save Water etc. so that the company would be highlighted and distinguished for its good work.
- The companies gain in the form of continued support of customers who are willing to buy their products. Sustainability benefits the society, environment and the company; the many benefits are waste management, reduced CO2 emission, minimizing water wastage, bringing gender equality, eliminating illiteracy and poverty etc.
- The dream of a sustainable future is still a distant dream, because the need for development and modernization is having a huge bearing on the natural resources. There is now a much greater need for products that would function not on energy and fuel. The world needs to take major steps in the direction of water scarcity. The world now requires renewable resources and substitutes for the resources we cannot do without.

Conclusion

The study reveals that there is not just a significant increase in the brand value of the company but it also guarantees a continued existence of the business for the long run. The investments made in initiatives by the companies directed towards environment and community show there is a positive impact on stakeholders and public investment decisions.

References

1. Banerjee, Sarmila, Chakrabarti, Anjan (2013).Development and Sustainability(1st ed).
2. Kolkata. Springer International Publishing AG
3. Sachs, Jeffrey (2015). The Age of Sustainable Development (1st ed.). Colombia:
4. Landmark.
5. Aggarwal, Priyanka (2013). Impact of Sustainability Performance of Company on its
6. Financial Performance: A Study of Listed Indian Companies. Global Journal of
7. Management and Business Research, Vol.13 (11), from
8. https://globaljournals.org/GJMBR_Volume13/6-Impact-of-Sustainability-Performan.pdf
9. Gidwani, Bahar (2013). The Link between Brand Value and Sustainability. Director
10. Notes, from https://www.conference-board.org/data/
11. L. Hart, Stuart and B. Milstein, Mark (2003). Creating Sustainable Value. Academy of
12. Management Executive, 2003, Vol. 17, No. 2, from
13. http://www.stuartlhart.com/sustainablevalue.html
14. Sustainability: Benefits of Social Responsibility to Brand Value & Profit by Michael Nastanski, Professor of Strategic Management & Marketing, Saint Leo University, USA Stephen L. Baglione, Professor of Marketing & Quantitative Methods, Saint Leo University, USA

A STUDY ON THE ROLE OF CORPORATE SOCIAL RESPONSIBILITY IN CREATING EMPLOYMENT OPPORTUNITIES IN INDIA

Deepa.S
Assistant Professor, Indo Asian Academy Degree College, Bangalore

Suresh.N.V
Assistant Professor, Indo Asian Academy Degree College, Bangalore

Abstract

Corporate social responsibility is emerging as a replacement field within the management analysis. India stands in making CSR mandatory for companies functioning in India following the modification of the company's act 2013. Corporate Social responsibility is expressed as the voluntary assumption of responsibilities that go beyond the economic and legal responsibilities of business firm. The conception of CSR began in 1920 and located itself within the spot light after 1951. It encompasses not solely what companies' do with their profits, however conjointly they create them. This paper seeks to search out whether there is a favourable or unfavourable relationship between CSR and employment opportunities created in India with the mandatory implementation of it. Some major initiatives are taken in this field by companies like Infosys to enhance employability of engineering graduates, companies providing only training and development through this we can draw that CSR is not playing a major role in creating employment opportunities. Companies only intend to cover legal and moral responsibility the conception of CSR is narrow when compared to actual results and the participation initiatives taken by the businesses aren't up to the expectation of society.

Keywords: *Companies, CSR, employment, opportunities, India.*

Introduction

During pre-industrialization the merchants helped the society to beat the things of famine and epidemic by doing philanthropic work, this helped them secure a crucial place for them within the society. The arrival of colonial rule saw a amendment within the approach of CSR. the businesses throughout the nineteenth century like TATA, Birla, Godrej, Bajaj etc were powerfully inclined towards economic and social development. The influencers of CSR were culture, tradition, values and political objectives. The situation modified throughout the economic movement once Mahatma Gandhi stressed on the thought of district that needed the industries to manage their wealth in such how that it advantages the individual. Fast industrial enterprise modified the normal face of CSR into strategic business moves that incorporated property to boost the standing of the corporate within the society. Some corporations didn't repay to the society the advantages they reaped. So, a choice was created by the govt. of India to form CSR necessary for corporations to contribute towards the event of society. The 3 pillars of CSR are – surroundings, social and economic and during this paper the main focus is on the utilization issue that makes an individual financially and economically freelance to support himself and his family. Informally the pillars of CSR are identified by – folks, planet and profits.

Theoretical Background

Corporate social responsibility has several definitions and is referred by totally different names like company citizenship, company conscience and accountable business. The corporate has to contribute to the society and surroundings through property development project which will give social, economic and environmental advantages. CSR is concerned seriously by {the corporations/ the businesses} and since it's been necessary for companies with a net value of five crores to form a CSR committee with three to four administrators and a minimum of one ought to be an freelance director. The programs that are enforced as CSR initiatives ought to be understood through the annual reports within the company's web site. The report should also specify what will be done in the coming year and what they have already done should be reported. One necessary thanks to repay to society are often by providing employment opportunities; this initiative can represent the CSR pillar- people. That they have to be compelled to realize whether or not the businesses are providing enough employment opportunities to cater to the wants of the people.

Literature Review

There is an explosion of interest in the much talked about concept of sustainability that is becoming prominent in businesses. There is research done in various areas pertaining to sustainability and business. Windsor (2001), speaks about the future of relationship between Corporate Social Responsibility and the business in the long run. The past trends highlight the different alternatives to CSR – those are concept of responsibility, global corporate citizenship and stakeholder's management practices. It was later explored by Nigel Sarbutts (2003) in his paper where he states the way small and medium sized companies carry out CSR activities. The paper formulated a structured approach to gain reputation and pursue profits by the company through its CSR activities. Because of scarcity of resources in small enterprises, the impact of CSR activities was not very prominent. The report by Organization of Economic Cooperation and Development (OECD) on employment showed that more than 30% of Indian youth were not employed. For our country to prosper and grow it's important that the youth is empowered. Being financially independent is one of the pre – requisites of a country being self-sufficient.

Objective of the Study

- To ascertain whether or not CSR is building employment opportunities or not.
- To recognize if CSR initiatives are a lot of centered on providing job opportunities or not.
- To conclude if the businesses are investing money in CSR with the intention to profit the society or not

Statement of the Problem

CSR is gaining speed as a business strategy to attract customers and to build brand value for the company. This new way of doing business by incorporating sustainability in the business practice is benefitting both society and the company. But the one on the more gaining side is the company. Employment is the best way to develop a nation and its people by making them financially independent. So the question arises as to how much effort is put by the companies to create employment opportunities to make the society self-sufficient. Hence the study on the role of CSR in creating employment opportunities.

Methodology

The study is based on secondary data where the information is acquires from different secondary sources like books, magazines, journals, publications, papers and websites etc.

Analysis and Interpretation

The companies are solely making enough employment opportunities which will profit the corporate over what's going to profit the society during which they operate. The job opportunities or programs enforced don't seem to be innovative or development programs which will provide career direction to the candidates rather they are coaching and development specification needed by that specific company.

Companies are environmentally conscious and are producing products that are eco friendly and which consume less power and electricity and wastage of water is minimized and emission of CO2 is reduced. Initiatives like Swatch Bharath Abhiyan and save water and Go Green movement are highlighted and a section in the newspaper is also allotted for this purpose which has lead to companies taking active participation in these issues and much contribution from the companies is seen in this section.

Companies additionally target providing education facilities, rise the poor, providing middle day meals and different philanthropic work however only a few initiatives are directed towards making employment opportunities that may create the Indian public economically and financially freelance.

Suggestion and Conclusion

The saying goes like "Give a person a fish and you feed him for a day; teach a person to fish and you feed him for a lifetime" Companies have to be compelled to invest on initiatives that are job oriented and would supply a lot of employment opportunities to the folks not simply in rural however additionally in urban India. The number of employment opportunities in urban places isn't adequate enough to fulfill the wants of the people.

CSR ought to categorize initiatives and programs as necessary programs and different programs which will not simply need a pair of contribution of net value of the corporate in any environmental, social and economic spheres rather the govt. ought to stress on the world that it desires to boost. The CSR activities are only taken up and money is invested in projects that benefit the company directly or indirectly. They are done with an objective to increase the brand recognition and value. This incorporates a correct coaching facility which will equip staff for the longer term challenge in their employment.

References

1. Freeman, R.E. strategic management: A stakeholder Approach (Pitman publishing Marshfield, M.A, 1984)
2. Windsor, Duane (2001). "The future of corporate social responsibility". International Journal of Organizational Analysis. Vol. 9. No.3. Pp.225 – 256.
3. Sarbutts, Nigel. (2003). “Can SME‟s do CSR? A practitioner‟s views of the way small and medium-sized enterprises are able to manage reputation through corporate social responsibility.” Journal of communication management.Vol.7.No. 4. Pp. 340-347
4. www.scribed.com
5. www.enotes.com
6. www.managementstudyguide.com

DEVELOPMENT AND ENVIRONMENT: A STUDY ON THE POPULAR STRUGGLE OF KEEZHATTOOR

Vivek Noble
MA, South Asian Studies, Pondicherry University

Abstract

Globalization and privatization introduced the developing nations to the uncanny taste of a hostile neo liberal culture. The very word development itself has come to incorporate within itself echoes of capitalist destruction and environmental degradation. The term "sustainable development" started gaining more and more traction in light of the looming threat of a global environmental crisis. This paper is constructed around the struggles lead by a group of young people "Vayalkkilikal" in Kannur district's Keezhattoor. This is an attempt to study why it is necessary for the state to adopt a model of development which doesn't shy away from questioning man's supposed dominance over natural resources, and to ask if we need widened roads over paddy fields. Development should be sustainable and state has the moral obligation to ensure it. Struggle of Keezhattoor is emerging as a strong voice of resistance against the reactionary policies of the Government. The study will strive to present a concise yet coherent picture of the struggles related to environment in Kerala, with main emphasis on Keezhattoor.

Keywords: *Keezhattoor, Globalization, Privatization, Kerala, Sustainable Development*

Introduction

Kerala's soil has always been drenched with the blood seeping out from a past marked by historic struggles. Bold fists raising up against every form of injustice meted out to the people define the political ethos of the state. The exponential growth of development in Kerala is now crossing paths with Keezhattoor. "To save our dying earth, any government which is not environmentalist must go because on earth there are thousands of governments but there is only one earth! Continuing with the eco traitor stupid government means an environmental suicide! Enemies of nature are real barbarians and there is no place for the savages in our civilization." The problem of water scarcity figures prominently as a challenge confronted by the conception of sustainable development. The need for the conservation of existing water resources in order to make certain that they will be of service to the future generations often reemerge there. It is also inevitable to think through the creation of feasible models of water management. The protection of the right of the commoner to have access to natural resources is a fundamental responsibility of the state. Reclamation/conversion of a paddy land is the issue currently plaguing Keezhattoor. The people of Keezhattor tried in vain a number of times to bring the attention of the authorities to the deep environmental costs such an action would result in. According to a government notification issued in 2004, a decision was made to construct a bypass (Thaliparambu National Highway) from Kuppam till Kuttikkol, building the road through the east part of Keezhattoor where there are no paddy lands. On September 2010, in the presence of the District Collector, alignment was prepared to begin construction of the bypass. But the alignment was done across the center of the paddy fields. Of the 6 kilometers of the proposed bypass, nearly 4.5 kilometers will pass through the paddy fields. The length of these fields varies from 80 meters to 90 meters. If the bypass, which will roughly be 40 meters wide, is to be built through the center of the fields, water will begin to stagnate on both sides, effectively turning the paddy fields unusable. Such an absurd decision would only exacerbate the condition of the Municipality, which is already reeling from intense water scarcity. The Left front government which came to power in 2014 under the leadership of Pinarayi Vijayan made promises to initiate and support attempts to protect paddy fields and wetlands on their election manifesto.

History of the Struggle

The popular struggle in Keezhattoor acquired a formal structure on 16th December 2016.*Vayalkkilikal* came to the forefront of the struggle through protesting against decision of the group presided over by the District Collector to suggest the construction of the bypass over the paddy fields. The gathering was led by Keezhattoor Suresh, Nampradathu Janaki (Januchechi) and C. Manoharan. Keezhattoor and the area

which includes the paddy land belong to Thalipparambu constituency, currently under the administration of the Communist Party of India (Marxist). The people set out in resistance with slogans like *Annavum Vellavumtharunnavayalmannittumoodanullathalla* (the paddy fields which give us food and water are not meant to be buried beneath the soil). The paddy fields in question are under the possession of 45 individuals. The CPI(M) completely supported the struggle in its initial stages but later turned against it. Local committee of CPI(M) expressed their indignation against vayalkkilikal in strong language at the same time when CPI(M) Kannur District Secretary P. Jayarajan made it clear in unequivocal terms that the bypass was a greater priority for the party. On 4th of January 2017 a few members from the organizing committee of the protest met with the revenue minister of the State, G. Sudhakaran. He promised to establish a special team to study the issue and suggest alternatives and further went on the say that no action will be taken on the basis of earlier government notifications until the results of the newly established team's study is submitted. However, despite the efforts of the protesters, the team appointed by the minister didn't even bother to visit the fields or communicate with the farmers. What they did was to demand the protestors to meet the team at the collectorate. During the meeting they proposed a new alignment crafted on 'Google Maps'. Since it also incorporates paddy fields, the protestors rejected the proposal outright. Meanwhile the state was determined to follow through on their earlier notification. Though the Communist Party of India (CPI) is in favor of the struggles, in Kerala's present political scenario it's difficult for the party to position themselves against CPI(M), the hegemonic party.

The paddy fields in Keezhattoor are situated within one kilometer of Thalipparambu town. Sacrificing the fields for a bypass would likely to push Keezhattoor to extreme draught. The economically underprivileged farmers of the area will have to bear the extra burden. Presently the ponds and wells in the place are replete with water but the atmospheric temperature of Kannur was manifesting a gradual increase from 40 to 42 degrees and if the paddy land, the most important water resource of the area is forsaken, the eco system will be subjected to irrevocable damages. Realizing the futility of the promises made on January 4, the people of Keezhattoor set out on a hunger strike. The 68 years old Nampradath Janaki (Januchechi) fasted for 13 days. Other leaders of the protest also joined her on the hunger strike.

The CPI(M) activists who supported the struggle in its larval stage were entirely missing from the later incidents. The protest is organized by the people in a 'Party Village' (Keezhattoor), with many of the protestors still active members of the CPI(M). In Keezhattoor we are witnessing the metamorphosis of CPI(M) from a party that helmed popular struggles to a party that is averse to any voice of disagreement. The party even went to the extent of expelling and anathematizing the members who were active participants in the protest. Following this, *Vayalkkilikal* submitted a letter to the party leadership, denouncing the expulsion and beseeching a rethinking of party's stance on the issue. They are striving hard to make the party realize its fault while proving that they are not class enemies in favor of reactionary politics. The only demand put forth by the comrades of Keezhattoor is entangled to the conservation of the paddy land, which gifts the village with food and water. However still the party didn't bulge an inch. 2nd February 2018 saw the beginning of a strike, with the primary purpose of keeping watch over the paddy fields at all times. Dismayed at the continued indifference of the government, the protestors successfully resisted the coercive attempts of the police to survey the land on March 14. Police forcefully arrested many of the protest leaders. While the dramatic events were unfolding on one side, CPI(M) workers set fire to the protest pandal.

Kerala Conservation of Paddy Land and Wetland Act-2008

In order to protect paddy fields and wetlands, Kerala Government on 11th August 2008 passed *Kerala, Conservation of Paddy Land and Wetland Act.* According to this bill it is mandatory for the state to appoint a state level committee and to comply with its suggestions when a paddy land or wet land is taken over by the state machinery to utilize for public usage. But the bill underwent several amendments in 2016, and the need to establish a special committee was removed in favor of handing over the determining agency at the complete disposal of the State. The bill has been distorted in such a way that it has become

nearly impossible to question the government even if Wetlands or paddy fields are chosen as garbage dumping sites. The struggles across Kerala, related in many ways to the conservation of environment, especially the scattered voices of resistance against the quarry lobby, has to come together to guard fresh air, water and the precious natural eco systems such as the wetlands and the mangrove forests. The levelling of the paddy fields in Keezhattoor would require the soil from almost three hills. Attempts are currently made to select a few hills from the Western Ghats, with high threats of soil erosion, for this purpose. The paddy act of 2008 defines what "*Reclamation*" is and seeks to prevent it. *"Reclamation implies that an act or series of acts whereby a paddy land or wet land as defined in this act is converted irreversibly and, in such a manner, that it cannot be reverted back to the original condition by ordinary means."*

Environment and Sustainable Development

The very idea of Sustainable development is inherently linked to the future. It refers to the use and conservation of the resources we are endowed with, with a special emphasis on the coming generations' right to everything that we possess. Water scarcity is a major threat faced by mankind in a global scale. Constant climate change and the rising temperature coupled with a persisting lack of rain can lead to economic and environmental catastrophes. The report of the Gadgill committee, selected to study the variances in environment, states that the Western Ghats are a magnificent source of fresh water and warns against its destruction. The paddy fields in Keezhattoor are surrounded by the Western Ghats. The paddy fields are the only reason why the village is still able to survive scorching summers. Levelling it would be tantamount to inviting a terrifying drought to the village. The government has turned a blind eye towards Environment Impact Assessment. But the people of Keezhattoor are adamant on their stand that they won't yield to the pressures of the CPI(M) which deterred from their own election manifesto to protect corporate interests. The paddy fields of Kizhattoor come upto nearly 250 acres. They are legally owned by 45 different individuals. 3 of them gave up their land for 4.16 lakh percent due to continuous persuasion from the Party. The rest of the 42 families stand firmly with protestors.

Increase in Vehicular Population and the Environment

The proposal to expand National Highway 66 (previously NH17) into four-lane in order to regulate traffic more effectively has been brewing for years. The Kerala Government is keen on acquiring land and other resources for the project, in accordance with the norms set out by the Central Government and the National Highway Development Authority (NHDA). The bypass in question emerged as a solution to the problems pertaining to increasing traffic in the national highway as well as in city centers. The procedures for the realization of the project are being followed with much enthusiasm by the State Government. Most of the paddy fields in Kerala has already been leveled for the planting of cash crops as well as for the construction of Buildings and roads. To continue on this path would inevitably lead to a calamity. Paddy fields were the products of geological processes that lasted millions of years. The fertile soil in a paddy land is the sedimented soil from mountain valleys with high mineral concentrations. Paddy fields play a crucial role in revitalizing groundwater by trapping the rain and allowing it to trickle down during monsoon. The significance of the protest in Keezhattoor lies right at the heart of the conservation of the paddy fields. The trend in vehicle industry today is an obvious proof of Kerala is becoming a land of consumption rather than of production. Following table lists the increasing number of vehicles in Kerala from past twenty years.

Years	1998-99	2011-12	2015-16
Total vehicle	1708938	6865539	10171813
Private cars	228824	1226691	2070665
Kannur	90344	332989	601790
Source: Kerala Economic Review			

In 2015-16,there was 40826 vehicles registered in Kannur district, among this 14582 are cars; whereas in 1998-99, there was 10268 vehicles registered and only 521 were cars.

Conclusion

The purpose of this study was to examine if it was really possible to bring road development without leveling paddy fields and demolishing hills. A few suggestions emerged during the study from various sources,

- Strengthen the public transport system and strive to popularize it.
- Try to stifle the use of private vehicles.
- Only allow reclamation when there are no other options available.
- Construct flyovers

The protestors of Keezhattoor are imploring the state to look at alternative ways of solving the traffic puzzle. They emphasize again and again on the necessity of cost effective methods for road construction which conserve paddy fields and wetlands. The people's science collective in Kerala, the Sasthra Sahithya Parishad after conducting a study suggested the construction of a fly over. If their suggestions are to be followed, it is possible to reduce traffic without causing serious harm to the environment.

Kerala is the most densely populated state in the country (population density is 867/square kilo meter). If sufficient linkages can be provided to the state highways of Kerala, the pressure for the expansion of national high ways can be reduced. As such, the then Government lead by Com. V S Achuthanadan proposed to reduce the width of the NH to 30 meters instead of the proposed 45 meters by the NH authority. But the NH authority rejected the proposal of the elected government and insisted on 45 M width for the NH. We submit that the proposal put forward by the then Government with the active support of the oppossitoin parties are the genuine demand from the people of Kerala and it should be considered as such. But, sadly, the present union government and the state government are insisting on 45 M width for National High Ways. This is against the will and wishes of the people of the concerned states. if the government is so particular about expanding the National Highways, it is better to consider the expansion of the present high ways rather than constructing new bye-passes by filling fertile paddy lands. It is clear that the existing high ways can be expanded to at least 30 meters without much effort. *Vayalkkilikal*continue to argue that expansion/development of the present national high way and proper links from NH to Coastal high way, hill high way, national water way and the rail way is the only feasible solution to the present chaos in the transportation sector of the state. Their only demand is for the paddy fields to be kept alive, and it is difficult not to notice the selfishness and relevance of that demand at these times.

References

1. http://www.thehindu.com/news/national/kerala/article23246300.ece
2. http://www.thehindu.com/news/national/kerala/article23246299.ece
3. http://www.mathrubhumi.com/news/kerala/protest-against-keezhattoor-bypass-1.2670233
4. https://www.indiatoday.in/india/story/kerala-protest-in-kannur-against-government-s-move-to-acqure-paddy-field-for-road-construction-1188972-2018-03-14
5. http://www.kaumudiglobal.com/innerpage1.php?newsid=104828
6. http://www.mathrubhumi.com/news/kerala/valakkilikal-responds-on-g-sudhakaran-s-controversial-speech-1.2684511
7. Report of the Western Ghats Ecology Expert Panel, submitted to the Ministry of Environment and Forests Government of India, 31 August 2011.
8. Kerala Shastra SahithyaParikshat, March 2018, pg 1-9

CLARION CALL: REDEFINING SUSTAINABILITY

Lijo Placid
MA II Semester, Indo Asian Academy PG Centre, Bangalore

Abstract

The paper "Clarion Call: Redefining Sustainability"; focusses on the life style of the present generation which is leading to the destruction of our home (ecology). It highlights how in a subtle way the greed is creeping into human life and we are moving away from ecology. Different aspects of human life and how it is affecting our ecology. First it highlights various human behavior which are obstacle to sustainable development. Second part of this paper goes deeper into present day society and tries to overcome the obstacles. Conclusion part brings out the spirituality behind the sustainable development.

Keywords: *Ecology, Sustainable Development, Inclusive, Ego, Culture, Greed, Virtual Water.*

Introduction

"We have not inherited the world from our forefathers-we have borrowed it from our children."

In Samuel Beckett's novel " Malone Dies", the main character decides to make a list. Imagine trying to write down everything you possess-every single thing. It might take a while, right? Yet go back a few generations and the problem would probably have been a lot easier for most member of your family-food, working clothes, may be a set of formal clothes that lasted a lifetime, some household utensils and perhaps a few other goods. Sustainable development; Development that meets the needs of the present without compromising the ability to meet the needs of the future generations. The concept of sustainable development first appears in The Brundtland report in the year 1980, "a global agends for change." "urgency of re-thinking our ways of living and governing."

Consuming is a pervasive fact of life and begins even before babies are born, when the parents' friends and relatives celebrate the big events with a gift. Babies themselves begin to consume, or to influence purchasing decisions, as soon as they can point at a toy or cereal box. The water footprint is calculated for the use of fresh water. It is based on the idea of "Virtual water". A t-shirt for example contains no water, but it takes 1100 liters on average to produce a kilogram of the cotton it's made of once we include irrigation, bleaching, dyeing and other steps. This paper mainly focusses on studying of various obstacles in the Sustainability Development. These findings will surely and certainly help overcome the same and encourage all of us to work towards handling these obstacles. At the end of the day the presenter wishes to see that these obstacles will be addressed wisely by all the educated and enlightened lot of society so that the society, the city and the nation will grow towards an Utopia which all of us would like to experience.

Obstacles for Sustainable Development

"I- centered culture": We are living in a world where emphasizes is one 'self'. When I am highlighting 'self' and 'I'; it means it refers to 'ego'. My being is solely depending on what I have? Rather than what I am? The identity of an individual depends on the things I possess. The human has 'I' – centered; only thinking about self. We had a deep spirituality where we believed in 'Dana'; the act of giving alms. The act giving alms inculcated in us the virtue of generosity. This helped in a movement from 'I'- centred to 'other-centered. Often we can see that we are least affected by the happenings around us. These days many lives have being lost in Syria, but how many of us are affected. We are thinking about our comforts. When we are a little affected by the world and events around us how will we think about the future generation. There is an urgent need to take a shift from 'I'-centred being to 'other'-centered being. The self 'I' has to be filled with the virtues which keep in mind the other first then self.

"Hoarding culture": These days the culture of hoarding is prevalent, the things you possess has become the status symbol. Look at the cupboards at home, things you have many of them were not even you looked at them once after you bought them. The number of shoes you have, number of shirts and pants you have, the vehicles you have; etc all these things give meaning to you. Many of these things have emotions attached to them but are they useful to you. The things we hoard leads to wastage of natural resources. The maximum utilization of resource is something that gives meaningfulness to human life and the natural gifs available before us.

"Mall culture": Mall culture or in other words I would say Brand culture; we the modern generation pay more attention to packaging than the content inside it. We buy things branded without paying much attention to the quality or durability of the product. We talk about relationship also this mall culture affects us, now we look for a person who has money, social status but very few pay attention to the character of a person; in this matter I am lucky. Often we don't pay attention to the ingredients or composition of the product. Lack of the product knowledge also leads a greater damage to the environment. Avoid the monotony break up and come up with a creative outlook and approach. All go to Mall, let us go to small retail where we get the same quality products at cheaper price.

"Buy 2 get 1 free culture": We are easily drawn to the shops where we get "buy 2 get 1 free". Our eyes are easily drawn toward offer. Many of us will buy goods; which are not our needs but offer makes us to buy. Our shopping apps provide us with abundant offers and we are easily carried away. When we need only one why we should buy two. The answer will be to get one free. This culture depicts how greed has crept into our day to day life. It's the greed that overpowers our need makes us to act. It's high time to analyse the market strategies and make them oriented towards sustainable Development.

"Use and Throw culture": Let us go back some 20-30 years ago; most of our parents were using ink pens. When the ink gets over they will fill ink. Then came refil pens,we just had to buy refils. Now at present we have use and throw pens. It's cheaper, but have we ever given a thought about ecological damage it does. These 'use and throw culture'; is prevelant in our day to day life. In our day to day dealings we often use relationship to get some favours. When we don't need a person we tend to withdraw from them.

Being Humane: Focusing on the roots; education nurtures human being and enables a human person to be more humane. These days education is no more nurturing better human beings but it has become mere process of generating profit. At various levels of imparting education, morality has very little or no space. Education is supposed to help the generation to analyse things and respond to the situation creatively. Present day educational mechanism curtails the creative aspect of a child. When we evaluate present day educational institutes very few highlight on the seriousness of the ecological crisis.

The first step towards sustainable development should begin from educational institutes. The present generation should be enlightened about the seriousness of the environmental issues. Let the change begin from this day and from the very roots. There is a fight between mammoth money and value. Let the education system bent more and more towards values than money.

Values + Education = Sustainable Development

Inclusive Development

Framing inclusive and long term policies; the policies framed by the government these days are more inclined for the growth of corporate sector. The backbone of a country is farmer. Seeing the condition of a farmer we can conclude how developed the nation is? In our country our media is more worried about other petty issues than the farmers committing suicide. Loop sided policies and pro corporate policies have led to the mass suicides among the Farmers. Now a farmers is not ready to continue the legacy of his father being a farmer. While framing the policies agriculture and farmer must be kept in the centre of the policies. (Long Term + Inclusive) Development = Sustainable Development

Conclusion

Paradigm shift: "Earth does not belong to man- man belongs to the Earth. All things are connected like the blood which unites one family. All things are connected." Development plans and strategies should be planned keeping in mind the eco-system. The Centre of the planning should be ecology not human beings.

Getting Back to the Roots

Isavasyamidamsarvam, time to get back to IsavasyaUpanishad , the creator dwelling in whole creation. *"Whatever befalls the Earth-befalls the sons of the Earth. Man did not weave the web of life- he is merely a strand in it. Whatever he does to the web, he does to himself." The paper recommends that every individual needs to develop the element of spirituality which will make him or her an ideal citizen towards the society and the nation and in turn help develop a nation in retaining its sustainability.*

References

1. Understanding Economic Development, NCERT publications, Chapter 1
2. Abstracts from the speech of Chief Seattle www.savethefrogs.com

CORPORATE GOVERNANCE AND SOCIAL RESPONSIBILITY

Ayesha .B.B
Department of Commerce & Management Studies, BET Sadathunnisa Degree College

Mohseena Jabeen.S
Department of Commerce & Management Studies, BET Sadathunnisa Degree College

"Corporate Social Responsibility is the ethical behaviour of a company towards society"

Abstract

Corporate Governance refers to the way a corporation is governed. It is the technique by which companies are directed and managed. It means carrying the business as per the stakeholders' desires. It is actually conducted by the board of Directors and the concerned committees for the company's stakeholder's benefit. It is all about balancing individual and societal goals, as well as, economic and social goals.CSR is a recent term but it has been followed by companies from many years ago. Companies know their responsibility towards the society where they exist. In today's Changing world CSR is growing area of interest in all areas. Corporate social responsibility is responding positively to emerging societal priorities and expectations. Corporate Governance is nothing more than a set of ideas, innovation, creativity, thinking having certain ethics, values, principles etc which gives direction and shape to its people, employees and owners of companies and help them to flourish in global market. CSR is concept where by companies integrate social, environment & health concerns in their business strategy. The importance of CSR emerged significantly, in the last decade.

Keywords: *Corporate Social Responsibility, Better Society, Corporate governances Stakeholders, Emerging Societal Priorities*

Introduction

Corporate governance is a process set up for the firms based on certain systems and principles by which a company is governed. The guidelines provided ensure that the company is directed and controlled in a way so as to achieve the goals and objectives to add value to the company and also benefit the stakeholders in the long term. Corporate governance and corporate social responsibility (CSR) are actually quite different business concepts but they have become much more closely linked in the early 21st century due to increased focus on balancing business profits with responsible operations. In fact, the definition of corporate governance has evolved over time to include core aspects of CSR.

Corporate governance is concerned with set of principles, ethics, values, morals, rules regulations, & procedures etc. Corporate governance establishes a system whereby directors are entrusted with duties and responsibilities in relation to the direction of the company's affairs.The term "governance" means control i.e. controlling a company, an organization etc or a company & corporate governance is governing or controlling the corporate bodies i.e. ethics, values, principles, morals. For corporate governance to be good the manager needs to meet its responsibilities towards its owners (shareholders), creditors, employees, customers, government and the society at large. Corporate governance helps in establishing a system where a director is showered with duties and responsibilities of the affairs of the company

Need for Study

To establish good corporate image, business organisations include and adopt social responsibilities as a corporate objectives.

Objectives of the Study

- To study the corporate social responsibility (CSR) status in India.
- CSR practices and its impact on business
- To study Important Issues In Corporate Governance

Research Methodology

Exploratory research is used for this study. Available secondary data was extensively used for the study. Secondary data has been collected from textbooks, research paper, journals, and magazines.

Key Findings of the Study

- CSR practices moulds in creating a share value with the formula of corporate success with social welfare.
- CSR is self-imposed restrictions by companies on their activities

CSR in India

The evolution of CSR in India refers to changes over time in India of the cultural norms of corporations engagement of corporate social responsibility (CSR)among other countries India has one of the richest traditions of CSR. Today CSR in India has gone beyond charity and donations and is approached in more organised manner.CSR refers to the thought whereby companies make a decision voluntarily to donate to a better society and a cleaner environment. The main objective of CSR is to fulfil the responsibility of an organisation towards consumers, employees, stakeholders and all other members of the society.CSR has gone through many phases in India. The Indian government has been trying to make it mandatory for companies to spend at least 2% net profits on CSR.

CSR Concepts, Definitions and Model: CSR is closely linked with the principles of sustainable development, which argues that companies should make decisions based on not only on financial factors but also on long term social and environmental consequences of their activities.

According to **ICAI** "CSR is achieving commercial success in ways that honour, ethical values, respect people, communities and the natural environment"According to **Cannon**," Corporate Social Responsibility means devising corporate strategies and building a business with the society's needs in mind" World business council for sustainable development defines corporate social responsibility as "the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large".

Model of Corporate Social Responsibility

Archie Carroll Introduced the Pyramid Model of CSR

Corporate Governance

Corporate Governance deals with determining ways to take effective strategic decisions. It gives ultimate authority and complete responsibility to the Board of Directors. In today's market- oriented economy, the need for corporate governance arises. Also, efficiency as well as globalization is significant factors urging corporate governance. Corporate Governance is essential to develop added value to the stakeholders.Corporate Governance ensures transparency which ensures strong and balanced economic development. This also ensures that the interests of all shareholders (majority as well as minority shareholders) are safeguarded. It ensures that all shareholders fully exercise their rights and that the organization fully recognizes their rights.Corporate Governance has a broad scope. It includes both social and institutional aspects. Corporate Governance encourages a trustworthy, moral, as well as ethical environment.

Benefits of Corporate Governance

- Good corporate governance ensures corporate success and economic growth.
- Strong corporate governance maintains investors' confidence, as a result of which, company can raise capital efficiently and effectively.
- It lowers the capital cost.
- There is a positive impact on the share price.

- It provides proper inducement to the owners as well as managers to achieve objectives that are in interests of the shareholders and the organization.
- Good corporate governance also minimizes wastages, corruption, risks and mismanagement.
- It helps in brand formation and development.
- It ensures organization in managed in a manner that fits the best interests of all.

The Objectives of Corporate Governance

Transparency in corporate governance is essential for the growth, profitability and stability of any business. The need for good corporate governance has intensified due to growing competition amongst businesses in all economic sectors at the national, as well as international level.The **Indian Companies Act of 2013** introduced some progressive and transparent processes which benefit stakeholders, directors as well as the management of companies. Investment advisory services and proxy firms provide concise information to the shareholders about these newly introduced processes and regulations, which aim to improve the corporate governance in India.Corporate advisory services are offered by advisory firms to efficiently manage the activities of companies to ensure stability and growth of the business, maintain the reputation and reliability for customers and clients. The top management that consists of the board of directors is responsible for governance. They must have effective control over affairs of the company in the interest of the company and minority shareholders. Corporate governance ensures strict and efficient application of management practices along with legal compliance in the continually changing business scenario in India. Corporate governance was guided by **Clause 49** of the Listing Agreement before introduction of the Companies Act of 2013.

Important Issues in Corporate Governance

There are several important issues in corporate governance and they play a great role, all the issues are inter related, interdependent to deal with each other. Each issues connected with corporate governance have different priorities in each of the corporate bodies.

The issues are listed as below

- Value based corporate culture.
- Compliance with laws
- Holistic views.
- Disclosure, transparency & accountability.
- Corporate governance & human resource management.
- Lessons from corporate failure.

Best Practices of CSR

Corporate social responsibility has become a key word of the socially conscious corporate world. In India, about 100 Indian companies and 25 foreign companies are seriously pursuing fulfilment of their CSR. It is difficult to assess the impact of activities of Indian companies. Some of the Indian companies who are involved in CSR activities:

Infosys: It is a company that has philanthropy in its heart right from its inception, as its founders themselves are committed towards social welfare activities. Infosys technologies has promoted several public health programmes and helped in higher education and research. It is actively engaged in community service, education, rural benefit schemes, health care for needy.

Tata Group: It is one of the oldest business houses in India. It has fulfilled its social responsibilities with great enthusiasm and vigour. There is hardly any social sector that Tata group has not touched with its soothing hands. Maternity and child health, education, family planning, immunisation, healthcare, relief programmes during national calamities and sports are the domains in which this group has done commendable work.

Mahindra & Mahindra: It is a company that is serious about fulfilling its social obligations. It believes that lack of education is at the roots of most of the social ills affecting the society. It has founded

that the K.C. Mahindra Education Trust, which has so far spent over Rs. 7.5 crores as grants to educational institutions and scholarships and loans for further education to meritorious and needy students.

Key Findings of the Study: Under CSR companies incorporate social and environmental concerns in their business operations and in their interaction with their stakeholders on a charitable basis. CSR policy functions as a built in self regulating mechanism whereby business monitors and ensures its active participation towards society. Corporate governance should also have approach of holistic view, value based governance, should be committed towards corporate social upliftment and social responsibility and environment protectio. Corporate Social Responsibility (CSR) is self-imposed restrictions by companies on their activities.

- Now a day, Corporate are treating Corporate Social Responsibility (CSR) as a Separate entity and dedicates attention to it.
- Many case studies done on CSR by companies suggest that the CSR is slowly moving from charity to improving the quality of life of the workforce and their families as well as their local community and society at large.

Conclusion

Corporate social responsibility (CSR) holds very important place in the development scenario of India and can create as an alternative tool for sustainable development. The concept of CSR is now firmly rooted on the global business agenda. But in order to move from theory to concrete action, many obstacles need to be overcome. The concept of corporate governance hinges on total transparency, integrity and accountability of the management and the board of directors. The importance of Corporate Governance lies in its contribution both to business prosperity and to accountability.In the age of globalization, global competition, good corporate governance helps as a great tool for corporate bodies.

References

1. Kumar, R,(2008), " social responsibility of the corporate sector in India", journal, july,2008.
2. Arora B, and Puranik (2004), "a Review of corporate social responsibility in India". Development,47 (3),
3. Mohan A , (2001) ," corporate citizenship: perspective in India, journal of corporate citizenship
4. Dr. K.R.Chandratre, Dr A.N. Navare, Bharat Corporate Governance, Bharat publication -2010.
5. Moon J. (2002)," Corporate social responsibility: an overview, "international directory of corporate philanthropy.
6. Windsor, Duane (2001) , "the future of corporate social responsibility", international jounal.vol.3, No.3 ,Pp 225-226.
7. Global journal of commerce & management perspective: "recent trends in corporate social responsibilities", Vol. 2(2) 2013:58-62
8. Dr. G.K Kapoor, Taxmann's Corporate Laws- 2006.

CORPORATE GOVERNANCE AND SOCIAL RESPONSIBILITY — A STUDY ON SUSTAINABILITY

Shyamaraj.G
Student, Hasanath Degree College, Bangalore

Abstract

The relationship between corporate governance (CG) and Corporate Social Responsibility (CSR) is a vexed, yet a vital, one for each of these regulatory logics. Accordingly, it is a key issue for the business of society. It seems to me that CSR and CG are not the same thing; nor different things; nor the other side of the same coin. Ministry of Corporate Affairs has recently notified Section 135 and Schedule VII of the Companies Act as well as the provisions of the company rules 2014 (CRS Rules) which has come into effect from 1 April 2014.applicability Section 135 of the Companies Act provides the threshold limit for applicability of the CSR to a Company i.e. (a) net worth of the company to be Rs.500 crore or more; (b) turnover of the company to be Rs.1000 crore or more; (c) net profit of the company to be Rs.5 crore or more. Further as per the CSR Rules, the provisions of CSR are not only applicable to Indian companies, but also applicable to branch and project offices of a foreign company in India. Companies need to be a transparency because of that corporate governance is important, companies have to concentrate on the environmental issue.

Keywords: *Corporate Social Responsibility, Corporate Governance, Indian companie.*

Introduction

The term CSR itself came into common use in the early 1970s. The last decade of the twentieth century witnessed a shift in focus from charity and traditional philanthropy towards more direct engagement of business in mainstream development and concern for disadvantaged groups in the society.

Applicability*:* Section 135 of the Companies Act provides the threshold limit for applicability of the CSR to a Company i.e. (a) net worth of the company to be Rs.500 crore or more; (b) turnover of the company to be Rs.1000 crore or more; (c) net profit of the company to be Rs.5 crore or more. Further as per the CSR Rules, the provisions of CSR are not only applicable to Indian companies, but also applicable to branch and project offices of a foreign company in India

These guidelines came into effect from 1 April 2013 and are a revised version of the previous comprehensive "Guidelines on Corporate Social Responsibility for Central Public-Sector Enterprises" issued by The Department of Public Enterprises (DPE), in April 2010.

Objectives of the Study

- To have a deep insight about the concept of corporate governance and social responsibility.
- To study about the Impact of corporate governance and social responsibility.
- To offer suggestions on the corporate governance and social responsibility.

Materials and Method

This study is qualitative and descriptive in nature. The details regarding the study are gathered from Secondary data that is from the sources such as the articles which were published online.

Limitation of the Study

- The study is completely based on the secondary sources
- No Quantitative data were collected
- The Study is not based on the research

Corporate Governance and Social Responsibility: An Overview

Corporate social responsibility (CSR) is a business approach that contributes to sustainable development by delivering economic, social and environmental benefit for all stakeholders. Corporate governance broadly refers to the mechanisms, relations, and processes by which a corporation is controlled and is directed, invoices balancing the many interests of the stakeholders of a corporation.

Objectives of CSR and CG

- Identifying the role of the board directors: corporate governance will identify the role of each and every board of directors. It gives the equal preference to all the directors, all the directors can interfere in the every decision making of the organization.

- Ethical behavior: Ethical behavior of each stakeholder will considers in the corporate governance and social responsibility will considers the ethical behaviors of towards stake holders.
- Keep the interest of stakeholders in mind: It considers the all the stakeholder equally and each stakeholders can suggest their opinion at the time of decision making. Stakeholders can get opportunity in the higher management in the board of directors.
- Treating shareholders equally: Treating every shareholders as equally in every activities of the business or organization, employees, customers, shareholders, directors equally in the organization.
- Transparency: every stakeholders get the opportunity in the organization then transparency will increase in the organization. Every stake holders have equal rights to ask the performance of the organization.
- To help the public: corporate social responsibility will farms to help the society and government .in the way of giving funds and constructing the basic facilities to the society , developing schools and hospitals .
- To improve the economic condition of society: social responsibility will improves the economic value of the society by helping the poor people in the financially and development of homes and toilets etc. for free of cost to public.

Types of Corporate Social Responsibility

Responsibilities towards customer

These responsibilities towards customer to make goods of the right quality make it available to the right people at the right at time and right place.

- The business should not include in unfair practices: like black market, adulteration.
- To provide prompt and polite service to customer.
- To handle customer grievances carefully.

Responsibilities towards Human Resource

A business organisation must be willing to maintain the dignity of every employee as human being, provide opportunities to individual.

- Fair wages
- Proper organisational climate
- Good working conditions
- Career prospects

Responsibilities towards Environment

Socio economic problems like poverty, unemployment etc. adopt villages for concentrated development activities.

- Socio economic objectives.
- Efficient use of resource.
- Improving local environment.
- Employment opportunities business morality.

Responsibilities towards Government

This responsibility towards government have to pay taxes on time without any default on the right time.

- It can pay its taxes and duties in time.
- The government’s social policy programmes.

Responsibilities towards Global Business Environment

Business enterprise to fulfil the needs of worldwide customers.

Companies Following Sustainability Reporting and Corporate Governance

Infosys, Wipro, Tata consultancy service, reliance, ICICI, big basket, Arvind life style brand ltd. INFOSYS Sustainability Report of 2017

- The energy resource institute in Bengaluru.

- Infosys develop the Hebbal lake.30 cross
- Introduce rain harvesting in Infosys campus.
- IT parks, schools, hospitals opt to out of grid green energy.
- SPARK program, reached 9, 37,590 students.
  Wipro Sustainability report 2017
- Increased reach to 2000 school, 1500 colleges and 2200 teachers in 45 districts across 21 states.
- Conducted 4 Wipro quizzes with a total participation from 360 teams and 720 students.
- Through 3 project an aggregate of over 40000 people get access to primary health care.

Suggestions and Recommendations

- **Compulsory to medium scale industry also:** As per law is there for 500crs above companies, these two-corporate governance and social responsibility have to introduce to 100 crores net profit companies also. Because all are surviving in the society they have to contribute for the society. Elin appliance pvt ltd, Jaipur Rugs co. pvt ltd, smart Aqua technologies pvt ltd. Are the medium scale industries are following the corporate social responsibility and corporate governance? Like this all medium scale industry have to follow compulsorily.
- **Have to reach the right consumer:** Who needed facility and development there has to develop, not to show the in reports. Have to reach the genuine consume, where is don't have facility there has to construct.
- **Have to kept villages in mind:** As per study of Infosys and Wipro report they have purely kept their mind in cities, but they must develop the villages, because India is a village county. Have to give more facilities to villages than now.
- **Have to help to the farmers of the country:** All the companies are concentrating on the schools and hospitals, but companies don't have that much interest in helping farmers they are facing problems actually than compared to city people.

Conclusions

It is concluded that the study on the corporate social responsibility and corporate governance, not only large industries must contribute for the society even the small and medium scale industries must contribute their respective to the society. And common people have to use the projects what they constructed and given to the society. Business always be a transparent activity, good governance can give the good administration.

With all the above data it can be concluded that if all the corporate companies follow and execute their social responsibility as per the norms an organization as well as a country grows in linear progression and it isn't far of dream to think of achieving hundred percent of Sustainability Development of a nation with all the above suggestions and recommendations.

References

1. Infosys sustainability report of 2016-17.
2. Wipro sustainability report of 2016-17.
3. D Jamaliarticleat www.onlinelibrary.com

ECO-CRITICISM – A DIMENSIONAL STRATEGY FOR SUSTAINABILITY

Vinutha.E & Lorraine Lourenco
Assistant Professors, Department of English, Indo Asian Academy Group of Institutions, Bangalore

Abstract

The study of this paper brings to light the invisible thread that binds flora, fauna and human kind. The goal of the study is on how individuals in society react in relation to nature and ecological aspects. In the past, criticism was centralized on different concepts which included society, marriage, latest technological advancement and monetary power. In today's day and time there has been a radical shift and the critique is on our environment which is centered on the concept of ''Eco-criticism'' and its sustainability. A case study was done on two poems which were written on the same landscape in different time periods which showcases the destruction of the ecosystem by mankind in a short span of 100 years? This highlights how the use of literary works in prose, poems and fiction written by notable writers across different centuries embarks on a self discovery of the ecosystem as it was before to what it is now.There are several remedies put forth in this paper which can be used by various Academicians to compare and contrast the past with the present and the future in accordance with the usage of various techniques which are off late included in our school, curriculum, so that students would know the impact of saving the environment. Thus, it explores the possibilities that lie in the potential for teachers and students to use the various resources at their disposal for learning. With the help of teaching and cultural criticism on the environment together with methods for sustainable development which will help build societies with a strong environmental consciousness.

Methodology: *Descriptive Methodology of secondary data*

Key words: *Environment, Eco-centrism, poems, techniques, flora and fauna, self discovery, Sustainability.*

Introduction

"When all at once I saw a crowd,
A host, of golden Daffodils;
Beside the Lake, beneath the trees,
Fluttering and dancing in the breeze."
Daffodils – William Wordsworth.

Nature and literature have always shared a close association as is evidenced in the works of the poets and other writers down the ages in almost all cultures of the world. (Kumari Shikha, 2011) This is true not only in our age but has been seen in all eras from the earliest Medieval times all through Renaissance and now in the modern world which we call the "New World". Today the intimate connection between the natural and public world is being analyzed and emphasized in all departments of knowledge and growth as it is the burning need of the day. There is no media that doesn't shout out that the world is burning because of the greed of the human activities which is depleting the earth of its much treasured irreplaceable bounty of flora and fauna. There is an increasing feeling to showcase the cries and groans of our planet through literary works. This feeling towards nature, whether reflected by the poets or the novelists, made the creative writers 'Romantic' and when this feeling turned itself into a serious faculty of the intellectuals, it became Eco-Criticism (Ecocriticism) or Green Studies. The word 'ecocriticism' first appeared in William Rueckert's essay "Literature and Ecology" in the 1970's. Eco-Criticism gave importance to the poets and writers like Wordsworth, Walt Whiteman and other romantic poets. The writers gave significance to nature and its function in life and in the environmental setup. Wordsworth also known as the Nature poet mainly focuses his writings and poems on Nature, Wordsworth says that "Nature is the best teacher "and in his other poem "Rainbow", he talks about the Eternalness of Nature where Nature is given central position which is of prime importance in all his works. As per the term Eco-Criticism, it only came into the major play after the attempts of Cheryll Glotfelty, right since the 1989 WLA (Western Literature Association) conference. Glotfelty urged the scholars to use this term to refer to the belt of studies which was previously popular as the study of green writing. It was his effort in the USA that Eco Criticism became popular as a theory with this name. Scholars also trace it back to 1978 William Rueckert's essay and also Karl Kroeber's back in 1974. However, the main propeller of this term was enforced by Cheryll.

Literature deals with works that focuses on attractiveness and control of the natural world. However, the concern for ecology and the danger that the incessant exploitation of our surroundings poses on humankind has only lately trapped the concentration of the writers. It is this wisdom of alarm and its indication in literature that has given rise to a new division of literary hypothesis, namely Ecocriticism (alok Mishra, 2016). The literary reviewer tries to study how this close connection between environment and the world has been textualized by the writers in their works. In this circumstance two terms have developed into importance today – ecology and eco criticism.

One of the main goals in eco criticism is to study how individuals in the social order behave and respond in relation to the environment and ecological aspects. This form of analysis has gained a lot of awareness during current years due to superior societal importance on ecological obliteration and increased technological expertise. It is therefore a fresh way of analyzing and interpreting literary texts, which brings new magnitude to the field of literary and academic studies. The two components of nature, organisms and their surroundings are not only much multifaceted and vibrant but also mutually dependent, equally reactive and consistent. (Kumari Shikha, 2011). Ecology is also defined as the way in which vegetation, flora and fauna and populace are related to each other and their location. In this association they are so many co-dependents on each other that any commotion or disturbance in one disturbs the other. History has proved this every now and then that with every modification or change in the culture, the affiliation of animals and human beings have also changed and the effect on the development of the civilization and the changes in environment has been so sensitive that sometimes it has killed the entire civilization from the face of the earth. The earth now is in a new jeopardy and hence if we scrutinize the works of later poets we can see the new changing discrepancies of our times.

"I wondered lonely as a crowd
that flows down streets and avenues
my spirit darkened by a cloud
of troubles I could not refuse,
for I had looked for daffodils
and found but few in England's hills"

– Gordon J L Ramel

This verse is a parody of William Wordsworth poem "Daffodils" which is also coined as "I Wandered Lonely as a Cloud" a lyric poem by William Wordsworth. The poem was inspired by an occurrence on 15 April 1802, in which Wordsworth and his sister Dorothy came across a "long belt" of daffodils. Written sometime between 1804 and 1807 (in 1804 by Wordsworth's own account), it was first published in 1807 in Poems in Two Volumes, and a revised version was published in 1815. The environment is for helping and serving individual wants and requirements as it is seen by this poem that in the 18th century, Nature was in its full bloom and glory. This era was a witness to a grand display of green pastures and long never ending meadows which sparkled with dew drops of nature's bliss which is was symbolic of a paradise on Earth*(Motion et al., 2004), (http://www.ecology.info/daffodils-no-more.htm)*

On the other hand, following the eighteenth century, there emerged many voices that demanded a revaluation of the association among man and the environment. This can be seen in the various works published after the 18th century and there is an excerpt in the following paragraph which shows how much the Earth has suffered in the hands of mankind through plundering of natural resources, warfare, pollution in all its forms, usage of aerosols, depletion of the ozone layers, multiple diseases connected with explosions, usage of crackers, spillage of industrial wastes, which is being dumped in third world war countries or also in underdeveloped and developing countries which is a controversial revelation on how our Earth stands today versus how it was when William penned his poem sitting on the belt of greenery bedecked with daffodils.

"A poet could not help but sigh
on seeing how the world is changed

and ask himself, or God on high,
why humankind is so deranged
it can destroy, for such poor ends,
the world on which its life depends" – Gordon J L Ramel

In the Wordsworth period, much significance was given to Eco centrism and on the other hand the central underlying theme of the poem was written by the Eco centric poet Gordon J L Ramel highlights the subject of anthropocentricism in the worlds famous poem " Daffodils no more". In that poem "Daffodils", Wordsworth wrote of the beauty of wild daffodils and how they inspired him with their long stalks and swaying in the breeze which was a bed of colors attractive to the human eye. He also mentioned considering gigantic figures of this plant: "Ten thousand saw I at a glance, tossing their heads in sprightly dance." In Daffodils No More, Gorden J.L. Ramel draws our mind to the informative detail that the number of untamed, undomesticated, wild Daffodils in England has declined to a great extent since Wordsworth's day. In addition, the large quantity of many other organisms, as well as certain varieties of birds and butterflies, has also declined. Many of these reductions are the result of drainage projects and wide-ranging renovation of wild domain to agriculture. Such loss of confined, local, limited biodiversity is now a widespread dilemma throughout all the countries of the world which has recognized this dilemma as a worldwide issues and not a specific issue centralized to only their domain. (http://www.ecology.info/daffodils-no-more.htm) Such defeat of the local biodiversity is now a widespread crisis and is gaining attention not only from the people in the higher strata of society but also people from the middle and lower strata of society. Man's view of the natural world as seen in earlier theories in fictional, legendary, literary and cultural studies centered on issues of class, race, gender, region which were the "subjects "of significant study and investigation. The late twentieth century has woken up to a new danger and threat which is one of the biggest hazards faced by us today: the threat of ecological disasters and loss. The most important ecological evils that human race faces *as a whole* are: nuclear war, depletion of precious natural resources, population sudden increase, proliferation of manipulative technologies, invasion and conquest of space prelude to using it as a compost dump, toxic waste, pollution, extermination of species (though not a human problem) surrounded by others. In such a context, literary and cultural theory has begun to address the issue as a part of academic conversation which is the much needed discussion of the day.

"I wandered lonely as a cloud" and he says, "the narrator," which would be Wordsworth I suppose, "Composes the landscape into artistic shape from a solitary summit, located outside the countryside, exactly the method of a striking spectator, and in the development constructs a with the sole purpose of illustration and apparently intangible subjectivity. He claims to connect to the environment, he views that the natural world from beginning to the end a kind of indistinguishable structure and turns it into a resource for the structure of his own seemingly independent self. The lake, we have all these diminutive vegetation, and then we have the larger trees, and the flowers are underneath, and then we have some clouds. There we go. And he is looking at the scene as if from a cloud, so quite far away. And this conception of distance is significant, according to Scott Hess. Wordsworth does two things. First he treats the scene just as a picture and you can take it with you and you can frame it -- this notion of framing is significant and after that the second thing is that he uses it for the sole purpose self-interested reasons so that he can feel good about whom he is and he can construct a sense of self.

Teaching the environment surrounded by standard English literature courses is clearly no easy task, as English major courses provide much less room for Education for Sustainable Development, a situation that underlies the predicament of ecocritics who are sincere in their desire to make a difference outside the classroom. As people across the globe come to grips with the consequences of environmental dreadful conditions, "teaching sustainability" within the context of the humanities is of the essence, yet the challenges are daunting for many educators who struggle to deal with the topic within their punitive norms. In English Studies, we have seen this dilemma played out in abundant, ongoing intellectual

debates about the put into practice and teaching of ecocriticism and environmental literature, the relative value of theory in opposition to more experiential knowledge, and the merit and methods of an interdisciplinary come within reach of and an action-oriented core curriculum. Cheryll Glotfelty captures the impulse a lot of of us feel when she says in a letter published in PMLA:"The question that fires me incessantly is this: how can one, as a literary critic and teacher, contribute to the ecological health of the planet?"In addressing this pressing question, those of us sympathetic to the cause bring to the table an array of possibilities that reflect our best intentions as well as the realities of the institutions we teach in and the students we teach**.** Students learn how the past was in terms of ecology and the present harsh truth that the Earth is crying out loud for us to do something and take action before it is too late (http://sites.bu.edu/impact/previous-issues/impact-summer-2016/essay-sustainable-communities-teaching-the-environment-in-the-english-classroom/)

In advance of the environment section, students read literature and secondary texts that explore the theme of their surroundings. Using these poems, we can draw our student's attention to the rising apprehension and through various environmental works like planting of saplings, saving water, elimination of wastes into dry, wet and electronic wastes starting from the classroom level which will instill in their minds the love for their ecosystem before it is too late. In addition to presenting projects on the environment, students can lead the class in discussion over environmental topics. Environmental Day on 05thJune can also be celebrated and key speakers can be called to address the environmental concerns. This practice is now widely spread in many colleges and schools. Students perform skits and themes are provided on environmental an issue which again brings out critical thinking. Free saplings are also provided to students on this day. Students will move beyond just thinking that there is an issue as published in the news, toactually working on this issue. Students can save the planet by working on one road at a time close to their houses and writing about these issues, participating in multiple hands-on activities, creating awareness, ensuring that their cooperators also engage in these activities.

An annual celebration of Earth Day should not be the only time during the school year when we and the students dedicate important classroom time to exploring issues of environmental awareness**.** The hypothetical dilemmas and student-chosen interdisciplinary articles are meant to force students to internalize and be purposeful about tangibly dealing with ecological challenges that many of them admittedly would rather pay no attention to. Such classroom practices also have the added advantage of protecting the teacher from the charge of being activist in the classroom, since the conversation will emerge from peer-reviewed scholarship and student-centered dilemmas, all well thought-out within the context of widespread ethical and principled concepts. Being Academicians, we must ensure that each and every student leaving the walls of our school or college has an idea that the Earth is in grave danger and needs our help. The Government has also taken several initiatives as they have also realized that the ecosystem is now undergoing a major threat. One of the activities imposed by the government is "Swatch Bharat" by Shri Narendra Modi. Following is the text of Prime Minister, Shri Narendra Modi's message on Swachh Bharat on 25TH September, 2014. "I am sure you have heard time and again that cleanliness is next to Godliness. Alas, things are often different when it comes to putting this into practice." On 2nd October we are launching Swachh Bharat Mission, a massive mass movement that seeks to create a Clean India. Cleanliness was very close to Mahatma Gandhi's heart. A clean India is the best tribute we can pay to Bapu when we celebrate his 150th birth anniversary in 2019. Mahatma Gandhi devoted his life so that India attains 'Swarajya'. Now the time has come to devote ourselves towards 'Swachchhata' (cleanliness) of our motherland. I urge every one of you to devote at least hundred hours every year, that is two hours every week towards cleanliness. We can't let India remain unclean any longer. On 2nd October I myself will set out with a broom and contribute towards this pious task. Today, I appeal to everyone, particularly political and religious leadership, mayors, sarpanchs and captains of industry to plan and wholeheartedly engage in the task of cleaning your homes, work places, villages, cities and surroundings. I request your active support and participation in our collective quest to make a Swachh Bharat." In addition to this, the

Government should also inculcate fines and heavy penalties on those who cut down trees for their own materialistic purposes. The Government should also add new laws where citizens should compulsorily plant saplings around their houses or in their compounds and preserve greenery. People who condemn these laws should be punished severely by the cooperators of their wards. This is one way of restoring greenery back to the ecosystem. The ecocentric disagreement is grounded in the belief that, compared to the undoubted significance of the human part, the whole ecosphere is even more significant and consequential: more inclusive, more multifaceted, more integrated, more imaginative, more beautiful, more inexplicable, and older than time. The "environment" that anthropocentrism misperceives as materials designed to be used exclusively by humans, to serve the needs of humanity, is in the profoundest sense humanity's source and support: its resourceful, inventive life-giving matrix. Ecocentrism goes beyond biocentrism with its obsession on organisms, for in the ecocentric view people are undividable from the inorganic/organic nature that encapsulates them. They are particles and waves, body and spirit, in the context of Earth's ambient power and energy. **(**http://ehc.english.ucsb.edu/?page_id=2422). There should be radical change from anthropocentrism to eco-centrism in today's scenario. As Wordsworth says "Nature is a teacher, we co create with her and recognize her rights". We can continue to pass the baton from one class to the other and increase awareness by also asking students to partake in various environmental activities in their neighborhood and also in their districts. Hopefully the day will come when we can revisit the poems and talk like William Wordsworth where he sees a land of beautiful colorful flowers which definitely will be the situation in the near future. To conclude, the main onus lies not on our shoulders just because we are teachers. It lies on us because the Earth is demanding it and who better to approach this paradox of our times than we Academicians who can support Ecocentrism and pave the way for a greener future. With the help of poetry, and looking through the eyes of various poets in different eras, we can see the changing trends in our ecosystem and showcase the advantages and disadvantages of living on this planet Earth which we call home. People should also realize that what they do unto nature, will reflect back to them. To be in harmony with Nature, is akin to being closely associated with God as God has created nature. If we preserve Nature, we are thanking God and if we don't then we are punishing ourselves. Earth is equivalent to a paradise and that is reflected through the scenic beauty of nature. Poetry is a must and Poetry which deals with the environment is always welcome. The poetry of earth is never dead" Poets die; genres change or modify; writing style sees many changes over time; literary trends might change usually… however, the poetry of earth did never die; cannot die ever! This belief of John Keats is justified. Earth has seen ages; the earth has seen civilizations emerging and dying; the earth has seen bombings; the earth has seen disasters… it still stays and for it to continue staying we need to act fast and there is no better time than now. It's time we heed the cry of our motherland and work towards a sustainable development of the Earth. There is a saying "Prevention is better than cure" so let's work together and end this menace before it becomes too late. In this paper, we try to focus on the importance of preserving nature and the environment in any city and we sincerely believe that the said conserving nature is directly proportional to sustainability of the country. Failure to preserve nature leads to failure of sustainability.

References

1. http://www.ecology.info/daffodils-no-more.htm
2. http://sites.bu.edu/impact/previous-issues/impact-summer-2016/essay-sustainable-communities-teaching-the-environment-in-the-english-classroom/
3. https://en.wikipedia.org/wiki/I_Wandered_Lonely_as_a_Cloud#cite_note-cumbria-8
4. http://worldlitonline.net/ecocriticism-in.pdf
5. https://literariness.org/2016/11/27/ecocriticism/
6. http://alok-mishra.net/eco-criticism-theory-literature-introduction-analysis/
7. https://www.edutopia.org/environmentally-conscious-lesson-ideas
8. http://worldlitonline.net/ecocriticism-in.pdf
9. http://www.ecology.info/daffodils-no-more.htm

ENVIRONMENT AND PUBLIC HEALTH – CAUSES AND REMEDIES

Tharamani.S
Assistant Professor, Department of Commerce, Government First Grade College, Peenya, Bangalore

Prathibha Vikram
Assistant Professor, Department of Commerce and Management, Indo Asian Academy Degree College, Bangalore

Abstract

A country has to progress economically, technologically and in all the positive aspects. But, while the economic progress is taking place, care should be taken it is not at the cost of the environment and public health. Economic progress has to be attained retaining good environment and public health. But, environment and public health is spoiled in many ways. Air pollution, water pollution, noise pollution and soil pollution is taking place because of so many reasons by members of the public and industries. One of the major issues of urban areas is waste management. Every day several tonnes of wastes are been created in urban areas. These wastes are of several types, which are to be managed properly. If these different types of wastes are not disposed properly, it may cause lot of health problems to the residents of the city as well seriously pollute the environment. Wastes created by households, industries, construction sites and e-wastes are to be disposed properly so that it is not a causing depletion in environment. One more serious problem is the increase in the number of vehicles registered and the pollution it is causing. But, care should be taken such that mankind is living in a healthy state to enjoy the economic progress.

Keywords: *Wastes, pollution, management, environment, health.*

Introduction

The environment where we are living is highly important for everybody and every country. Because, the environment surrounding us, the quality of the same is having a direct impact on our health. If a country has to progress in all respects i.e., economic, social, technological and cultural aspects health of the citizens is very crucial. Public health is the general health condition of the citizens, either by different vaccinations and prevention of diseases, by means of developing awareness of the importance of health. In the same way, care should be taken by the public as well as by the corporate sectors that they are not spoiling the environment of the country.

Need for the Study

To know the importance of the quality of environment surrounding us, to know its impact on the health of the citizens and to know the methods of caring our environment which is having a direct impact on the health of the individuals as well as the economic development of the country.

Objectives of the Study

- To know Economic parameters of the country
- To know the factors causing different types of pollution
- To understand the waste management techniques

Methodology

This is a descriptive paper based on secondary data which are available in textbooks, newspapers, different government websites etc.,

Economic Parameters of India

Any country ‘s economy is studied on the basis of its GDP and GDP rank and its growth , sectoral growth, inflation rate, labour force by occupation and its unemployment and average net salary and the main industries of the country. India’s GDP $2.439 trillion (nominal; 2017), its GDP rank 6th (nominal); 3rd (PPP), GDP growth is 7.2 %(Q3, 2017-18) (MOSPI). It clearly indicates the economic development of India. Same way, Inflation (CPI) has been increased to 4.44 %(February 2018). In 2011, World Bank estimates that 21.2% live less than $1.90/day, 58% live less than $3.10/day. LabourBureau 2016 says 4.9% are unemployed in urban, 5.1% unemployed in Rural and 5.0% unemployed at national level. These data tells the facts and figures of the country which helps us to know the economic conditions of India. In the same way, we can get to know the data relating to revenues and expenses, exports and imports of the

country and even average net salary of an individual from different estimates or data collected by different governmental organizations. But, the concern is whether it is sufficient if a country is just growing economically in all respects, like gdp, gdpsector wise, exports and even average salary of an individual etc., No, certainly not. Along with economic progress, something which is more important is to retain the plant earth atleast in the same way in which we have received from our parents. But, are we successful in this direction?

Environmental Factors

Air, water and soil are the main environmental factors. In the same way humidity, temperature is a matter of our concern. Earlier, major portion of the population were depending on agriculture. But, after Industrial Revolution, the country has seen a phenomenal increase in the number of different types of industries. Lot of increase in economic activities has taken place. Industries are centralized in only certain places where there are facilities required for the same. So, migration started happening continuously, which caused an increase in the population of urban areas. Subsequently, facilities for living in urban areas in the form of infrastructure, transport system also increased. All these changes paved the way for deterioration of the environmental factors.

Environmental Pollution: Environment is polluted in several ways, from individual level to industries.

Air Pollution

Air pollution is caused by industries medium and large scale and even by large number of vehicles on road. The same way air pollution causes heavy fluctuations in the components of air which also causes asthma and respiratory problems and lungs problems.

Water Pollution

Water pollution is caused industrial liquid wastages and chemical being discharged to the nearby lakes and rivers. For this, Bellandur Lake in Bangalore is a classic example of water pollution Large amount of foams are seen even from 25 years back and many times fire has broken out in the lake. Once upon a time, Paddy and other vegetables were grown on the banks of Bellandur Lake and were even used for fishing. But, now it has become a bad example for how man can pollute water so badly that fire takes place in the lake itself. Because, of this lot of skin allergies, asthma and respiratory problems are arising because of the bad smell.

Noise Pollution

One more highly irritating problem in urban areas is the noise pollution caused by heavy traffic, large number of vehicles on road and even in industrial areas. Human can tolerate minimal decibels of noise; if it is more than that it may cause deafness.

Soil Pollution

Soil or land pollution is caused by usage of fertilizers and pesticides and even by land filling of solid wastes. This is a very serious damage caused as it the only resource through which we can grow something and everything for food. So, care should be taken not to spoil the quality of the soil. So, organic forming is taking popularity these days. We can say olden days are coming back.

Public Health

It means Prevention of diseases and improving the general health conditions of all the members of the public and regarding the health status of just an individual or a particular disease.

Air Pollution on Public Health

Components of air are 78% Nitrogen and 21% oxygen 0.93% argon, 0.04% carbon dioxide and small amounts of other gases. But, the pollutants in air are carbon monoxide, lead, Nitrogen dioxide, ozone and Sulfur dioxide. Air pollution causes increased respiratory and cardiovascular mortality, asthma exacerbation and even lung infections and changes in heart rate variability. Air pollution can cause from simple respiratory problems to even premature death.

Water Pollution on Public Health

It is a mixture of two hydrogen atoms and one oxygen atom. The pollutants in water maybe detergents and other chemicals used for cleaning, the fertilizers and pesticides used in agriculture. Water is polluted

even by industrial wastages. This may cause water polluted to the extent not just drinkable but even useless for any activity. Polluted water can cause diarrhea, including cholera and can cause even Typhoid and Dysentery. Poor quality water or polluted water has negative impacts even on agriculture.

Noise Pollution and Public Health

Noise pollution affects both health and behavior. Noise pollution can cause hypertension, high stress levels, hearing loss and even sleep disturbances.

Waste Management Practices in Urban Areas

One more serious concern in urban areas is the amount of wastes generated by them. Wastes may be from households, industries, hospitals, garden wastes or may be from construction activities or even from street sweeping. These wastes may be organic or inorganic. Maybe hazardous or may be simple wastes. These wastes are also the reason for pollution in different ways, which are polluting the environment, if not managed properly. BBMP collect segregated wastes, transports the same to distant places disposing centers i.e., wet wastes are sent those places where they are turned into compost and sold again, dry and recyclable wastes are sent to the recycling centers, which possibly reduces pollution level and even cutting of trees for production instead of going for recycling. Sanitary/ reject wastes are sent to incineration centers for disposal. Solid wastes are disposed even by land filling. But, the problem here is in spite of the serious guidelines by BBMP, public have not taken the matter of segregation of wastes so seriously. And more is dumping of wastes in vacant sites. These faults on the part of the public causes lot of pollution to the environment in the form of bad smell, perfect places for breeding of mosquitoes and spreading of diseases, and even pollution of water.

Number of Vehicles on Road

Total vehicles registered and kept for use in Karnataka state are as below:-

- As on March, 2015 two wheelers 1, 06, 44,368
- As on January, 2016 were 1, 15, 61,150
- As on December, 2016 was 1, 26, 33,691,
- As on January, 2017 was 1, 27, 27,733,
- As on December, 2017 was 1, 38, 12,151,
- Ason January, 2018 was 1, 39,07,244.

The above data shows the increase in the number of two wheelers in Karnataka year after year. The same thing holds well with the number of four wheelers in Karnataka as well as in other towns and cities in Karnataka as well as in Bangalore. But, the problem here is the emission by these vehicles on road at such a higher rate. Is it good for the health of the people.,

Possible Remedies

- Take initiative in plantation of trees
- Go for Reforestation and not deforestation
- Strict regulations regarding disposal of wastages from industries
- Put a quota on the number of vehicles per family/atleast motivate them in that direction.
- Motivate public in sharing of vehicles or depending on public transport systems.
- Make campaigns regarding saving our rich natural resources like water, air and land and educate the public not to pollute them.
- Make compulsory the learning of preserving the environment
- Educate the children regarding all these matters from the very childhood.

Conclusion

One Earth, let us save this mother earth, so that it is saving us from all ill health, so that we can progress economically and also able to enjoy the economic success keeping our health condition in a good manner.

References

1. Environment and public health –Dr. PratulBiswas and Dr. KalyanBiswas

IMPACT OF CORPORATE SOCIAL RESPONSIBILITY ON CORPORATE GOVERNANCE

B.R.Lavanya
B.Tech. in Computer Science & Engineering, Dayananda Sagar University, Bangalore

Abstract

Corporate governance is associated with holding the balance between economic and social goals among individual and communal aims. Corporate Governance is certifies that an organization is accountable in ensuring responsibility, transparency and compliance with its key stakeholders whereas Corporate Social Responsibility (CSR) is corporate form of self-regulation integrated business model to create a positive impact on the investors and the environment. This paper is review article that summarizes the current understanding about corporate governance and corporate social responsibility. The paper also emphasizes in the connection between corporate social responsibility and the corporate governance. The paper is absolutely theoretical research work using all the secondary data available. There are plenty of paper written in and around the impact of Corporate Social Responsibility on the Corporate Governance (CG). However, this paper is unique in presenting the model of Corporate Governance with a distinct focus on stakeholders rather than shareholders.

***Keywords**: Corporate social responsibility (csr), corporate governance (cg), stakeholders, shareholders, accountability.*

Introduction

In a corporate setting, the implementation of an effective CG system is not as easy as it may appear, with ongoing challenges to maintaining it and reaching the desired goals. The existence of CG governs the relationships between the management and the firm's stakeholders (Gebba, 2015). As a result, the importance of CG and the awareness about it were rising in the last few decades with the aim to protect and secure all stakeholders interests while ensuring the companys economic efficiency and leading to sustainability (Crowther, 2008; Grant, 2003). Under CG practices, there lie several categories and components which usually indicate the level of CG in a company. One such component is the ownership structure which mainly focuses on the board of directors practices and its established committees.

On the other hand, the ownership structure only does not guarantee an effective CG system. This requires three distinct characteristics in a company: accountability, responsibility and transparency. The presence of these traits is the duty of the management, the board of directors and the audit committee toward the investors and all other stakeholders. While many interrelate CG with ethics and morals (Trong, 2012), it is crucial to have an internationally acceptable guidelines and ethical behaviours upon building up a CG system. For a business to be considered ethical, it has to balance between both pursuing profit and fulfilling social responsibilities. In this sense, morals and standards may vary according to culture and region. In the Middle East and North Africa (MENA) region, 85 percent of business entities are small to medium-sized enterprises (SMEs) and family-owned enterprises (FOEs) (Saïdi, 2004), where CG practices have yet not reached a saturated level, and are still challenged by both external and internal factors. In such a significant region, SMEs seek to achieve and sustain innovation capabilities through the combination of inventive entrepreneurial processes which lead to the creation of new economic value.

Hypothesis: In Whose Interests should Corporations be governed? A properly designed corporate governance structure asks the right questions and has the right controls in place to make sure the answers lead to long-term, sustainable value (Monks and Minow, 2004). For whom that value is created, however, is a source of some controversy; should shareholders be accorded primacy or should a firm's other stakeholders be of equal concern in corporate governance? As Phillips et al. (2003) note, stakeholders' costs, risks, and contributions should be factored into any decisions regarding the benefits they receive. Using those criteria, one could argue that shareholders achieve primacy through the moral force of their property rights, the contribution of their equity capital, and the risks that investment can mean for their personal wealth. Certainly, the shareholder is a dominant stakeholder, possessing the attributes of power and legitimacy (Mitchell et al., 1997), who will often develop into a definitive stakeholder when issues

become urgent. Corporate governance systems throughout the world are converging on a shareholder-centric ideology (Engelen, 2002; Hansmann and Kraakman, 2001). However, shareholders are not a homogeneous group with a sole interest in wealth maximization. They vary in their investment horizons (Gaspara et al., 2005), their trust levels and risk preferences (Ryan and Buchholtz, 2001), and their goals (Ryan and Schneider, 2003). Institutional investors may embrace concepts of corporate social responsibility and value stakeholder welfare maximization (Ryan and Schneider, 2002, 2003). As evidence, Neubaum and Zahra (2006) found that long-term institutional ownership was positively correlated with corporate social (p. 329) performance. Johnson and Greening (1999) found that pension fund groups were more likely to invest in firms that had good social performance relative to people (women and minorities, community, and employee relations) and a solid record of product quality (relative to both the product and the environment). Thus shareholders and stakeholders are not always opposing forces. As Ryan and Schneider (2003) note, the heterogeneity of their financial and performance expectations may make institutional investors more sympathetic to the corporate social performance demands of stakeholders than current theory suggests. In fact, as share ownership becomes more accessible to a wider range of people, the concerns of stakeholders may be addressed as diverse shareholders assert their ownership rights (Ryan and Schneider, 2003). Furthermore, stakeholders often purchase shares of a company's stock to achieve the rights and privileges that share ownership accords.

We will begin our discussion by examining the role of corporate governance in creating value for shareholders. The issues of shareholder property rights and stakeholder theory are covered in earlier chapters so we will delve no further into that debate. Shareholder activism and social investing are also covered elsewhere in this volume and so we will not be discussing the actions of shareholders. Instead, we will focus on the actions of the corporation and the board toward its shareholders and other stakeholders, i.e. how corporate governance serves or fails to serve their interests. We will cover the assumptions that underlie theories of corporate governance and the expected outcomes of various board structures and compositions. Then we will examine the state of corporate democracy, the issue of accountability, and key legislation relative to corporate governance.

Corporate Governance: From Agency to Accountability

In the public marketplace of ideas, the term "corporate governance" has recently been described as "the set of processes, customs, policies, laws and institutions affecting the way in which a corporation is directed, administered or controlled." Yet the substance attributed to this definition has changed quite dramatically over the past years, shifting from a functional, economic focus on agency problems within a private law sphere to a public policy approach that seeks to protect investors and non-shareholder stakeholders. The evolution in the perception of corporate governance reflects broad changes in the socio-legal view of business corporations. For decades, a controversy over the nature and purpose of the corporation articulated a fundamental tension in corporate law. This controversy had its roots in the 1919 Dodge v. Ford Motor Company decision holding that a corpo-ration must strive to maximize its shareholder-value. A debate played out in the academic arena between Columbia Professor Adolf A. Berle and Harvard Professor E. Merrick Dodd, with the former taking a shareholder-centric position and the latter calling for greater non-stockholder considerations.

Corporate Social Responsibility: From Ethis to Business Judgment

As in the realm of corporate governance, there has been ongoing debate regarding the definitions and interpretations of the term "corporate social responsibility." Upon emerging in the political and academic landscape several decades ago, CSR related first and foremost to the conceptual challenges raised by scholars and advocates who criticize corporate America's shareholder primacy ethos. CSR offered theoretical insights as to why companies should not be treated solely as their shareholders' private property but rather as semi-public enterprises based on sophisticated transactions and relational contracts among investors, managers, and employees. For example, scholars suggested that applying the contractarian approach to corporate law (which portrays the corporation as a voluntary "nexus of

contracts") as well as the realistic approach(which paints the corporation as a separate legal personality akin to a human being) should not result in giving superior property rights to shareholders over employees. Rather, they posited, workers who invest their labor as an input in the enterprise should enjoy legal recognition of their residual interest in the company's assets.

Literature Review

CG

It is well known that CG has various definitions since it is tackled from opposing viewpoints; however, it is universally agreed upon that CG plays a fundamental role in distributing responsibilities and resources in a firm in order to affect strategic choices and create value within the respective entity and across countries (Aguilera Florackis and Kim, 2016). Not only this, CG is also defined as a set of laws and rules that regulate the legitimacy of firms activities. With the occurrence of several business failures, scandals and the financial crisis later, Claessens and Yurtoglu (2013) explain that such lack of successes are just indicators of several structural reasons that explain why CG became of superior prominence for well-being and economic development. For example, the financial crisis of 2008 reinforced how CG failures can not only ruin corporations, but also adversely disrupt whole economies (Claessens and Yurtoglu, 2013).

Transparency of Financial Data

As accounting is the language of business, the need for a clear and fair representation of the firms standing becomes a must. In light with many scandals and fraud actions, financial reporting and disclosure became among the basics of a healthy CG system. In the MENA region, not all firms have the required infrastructure of this system while Utama (2012) reveals that SMEs have a lower level of disclosure. In Egypt, Hassans (2013) study links the failure of a clear information disclosure by the enterprises to the absence and the non-sufficient regulatory framework in the country. Also, the reason behind this failure goes back to socio-economic issues as Samaha et al. (2012) predicted that it will take the Egyptian firms some time to envision the long-term benefits of high levels of CG disclosure. As a result, it is obvious that effective CG needs both internal and external supporting factors.

Analysis of Ownership Structure and Control Privileges

With FOEs and SMEs dominating the business enterprises in the Lebanon and Egypt, CG practices became more challenged given the highly centralized control power. Khalil et al. (2015) explained that as the quality of available protection for shareholders varies, the financial contracting varies too. Firms in developing nations, such as MENA countries, believe that it is non-beneficial to spend time on CG and it is better to leave the rights of the minority shareholders be identified at a country level instead of at a company level (Doidge et al., 2007). Therefore, in order to protect investors, an efficient CG system is essential to be applied.

Structure of Board of Directors

The board of directors performs both a monitoring and advisory role. While monitoring, the board is responsible for determining standards, ideals and principles, along with ensuring that the referred to are set in place. In Lebanon, the concept of separating between ownership and control is not realized (Salloum et al., 2013). In most cases, the board members hold the same family name as the owners without forgetting the possibility of the CEO duality. Ehikioya (2009) studied CG structure and firm performance in developing countries to find that CEO duality and the existence of more than one family member in the board have an adverse impact on the firms performance. In developed countries, the ownership structure is dispersed while in developing ones it is concentrated (Ehikioya, 2009). This is significantly true in Lebanese and Egyptian SMEs and FOEs.

Audit Committee

According to Mahmood (2008), any code of CG must at least include the following fundamental keys: board of directors, corporate financial reporting, independent external audit and internal audit. Ghafran and OSullivan (2013) stated that financial statements attain a higher quality, when audit

committees are more independent and reveal good expertise in finance/accounting. The study also showed that the existence of this committee positively impacts the firms performance. In Korea, Choi et al. (2014) found that, in general, the stock price of a company increases with audit committee appointments. A Malaysian study by Kallamu (2016) examined the impact on audit committee attributes and firm performance as a result of the code of CG being revised, to find that these attributes were significantly improved.

Business Ethics

Ethics are the rules and principles that specify how an individual or individuals within an entity should to behave. Ethical issues are important to individuals and professionals in everyday life whether in businesses, academia or elsewhere (Gbadamosi, 2004). CG must be examined from an ethical and moral stance. Thus, business ethics must be strongly enforced in a world where greed and profit seeking blind out the minds oftentimes. Although large firms have established and comply by strong ethical standards (Mahmood, 2008), SMEs in developing countries are still halfway in understanding the importance and the impact of business ethics. Rossouw (2005) considers that the way a company treats its stakeholders reflects its ethical standards. Given the fact that good CG is based on a number of fundamental ethical values, Rossouw (2005) listed the four top values of good CG: transparency, accountability, responsibility and probity. In addition to that, the board of directors has moral and ethical obligations toward its stakeholders such as enduring the rights of shareholders (majority and minority), as well as the rights of employees and their safety (Rossouw, 2005). And since ethical practices are concerned with the general welfare of all stakeholders, equally and fairly, the presence and the practice of good CG will further enhance these ethical behaviors and increase the weight of their associated results and benefits. On the other hand, ethics are not only measured at the level of actions in fact, they start from the decision-making point.

Limitation & Future Research

The sample size was relatively small while a larger one may expose a more accurate significance. Although it was valid to look at SMEs as they are expected to have a lower CG mechanism than larger companies, yet those companies (large enterprises) are expected to have higher social responsibility engagement. Hence, future research can compare the differences in CG and CSR levels between SMEs and large companies. Since the study did not support the direct relationship between ethics and CSR, future studies can examine mediators other than CG (i.e. culture) on this relationship.

Conclusion

As stated, implementing CG may not be as easy as it appears, especially when it comes to the corporate realm, but researchers have agreed on the importance of CG in enforcing CSR and ethical principles with in an entity.The study moves on to discuss the relationship between CG and CSR. In order to satisfy stakeholders and gain a positive image, firms have adopted CSR in their agenda and embedded it into their strategies; the concept of CSR developed beyond economic responsibilities as building and maintaining an ethical identity became prominent, especially when stakeholder became more interested in the overall well-being of the society. Thus, CSR has been considered as a model of CG with a focus on stakeholders rather than shareholders.

PATANJALI'S CONTRIBUTION TO SUSTAINABLE DEVELOPMENT IN INDIAN ECONOMY

Preetha.L
BA (Journalism), Indo Asian Co-Ed Degree College, Bangalore

Abstract

Patanjali an Indian own Ayurveda brand is booming in the markets of naturopathy and Ayurveda. In a span of two years it has reached thousand ten billion crores as its marginal value. The main purpose behind this study is to understand the various strategies used by the founder Baba Ramdev and Acharya Balakrishna in knowing the needs of the people and method adopted to attract the mass. This is a case study to analyze the impact of Indian grown brand as FNGC product and its contribution in sustainable growth. Patanjali became the largest economic contributor in the field of FNGC which attracts the researchers to know the methodology used by the company to overtake other International leading brands in contemporary economy. The paper nowhere claims that Patanjali growth has shadowed international brands instead it's just an attempt to understand the company's ideologies in promotional activities compared to other Indian companies. The methodology used for this case study: secondary data and market strategies.

Keywords: *Patanjali, FNGC, Ayurveda, Naturopathy, Indian Economy*

Introduction

Patanjali was established in 2006 by Baba Ramdev and Acharya Balakrishna. It was started as a service sector to reach the masses through the roots of Ayurveda.They collided Yoga with Ayurveda which rejuvenates both mind and heart. Patanjali is not a fancy term, it is a trace from Rig-Veda which is known for its rich medicinal scriptures. After the 2014 general elections, BJP which bagged the majority and they started the celebration of Yoga day throughout the nation and also a few developed nations. This paved a way for Patanjali which promoted BJP in 2014 to reach the booming economic margin. In 2016/17 it reached double its target.

"Patanjali control of the mind and fluctuations" Baba Ramdev a profound yoga guru established the Patanjali Ayurveda limited in 2006along with Acharya Balakrishna who is popularly called the master of Ayurveda. The objective of Patanjali is to club science with ancient wisdom and technology. The main purpose of this case study is to analyze the dramatic growth of Patanjali's economic growth.

Hypothesis-How could Patanjali over take all other leading brands in a span of two years? Vaidhyanath a scholar in Ayurveda has his retail outlets all over India from past 100 years its turnover is 700 crores with 700 patented products, Dabur another leading Ayurveda brand makes 800 crores turn over. Patanjali with just 103 patented products is making a turnover of 1010 crores. Patanjali in a span of two years has over taken Hal, Ayush, Dabur, Himalaya etc. in terms of sales.

India is recognized and regarded for its rich medicinal value.It is a fact that an Indian sage by name Shushrudhasumhethi introduced the concept of plastic-surgery to the world, Charaka traces the medicinal values of cactus in curing cancer. Then Ayurveda was a service to the humankind but today it has become a means to mint money. Patanjali which was established in 2006 while other brands were doing great in market through its marketing strategy, star endorsement, and direct encounter with other brands which is agonized ACCI. Ramdev baba has been successful in knowing the needs of the common people, his PR team is strong and innovative. Social platform is used to its fullest. Ramdev baba who started his marketing through his shows on Ayush channel but the boom was not as much as it is today.

There is a hidden agenda, were in it is told that after BJP coming to rule is when Patanjali earned its prominence to its fullest.PM. Modi's yoga campaigning paved way for what Patanjali is today. There are other brands of Ayurveda but again Modi emphasized on Ramdev baba's Patanjali it's all because of the 2014 elections. Ramdev support and promotions were also a reason for the success of BJP, this is how today Patanjali has entered the list of FNGC products which no other Ayurveda brands have been able to do. Balakrishna and Ramdev baba are the ones who know the need and speed of the world, there products

starting from Baby care to Beauty products, Dish washers, Toiletries etc.Baba has replaced Powervita with Bonvita, Energyba with other chocolates, Soaps, Shampoos, Lip care, Sugar, Gee, Rice, Wheat etc.

Today starting from teenagers to old agers all are becoming diet conscious hence ayurvedic products can make an easy impact. Colgate's share in tooth paste market fell by 80 bases points Patanjali's paste gained 300 points in the same year. Ramdev is planning to make India an economic super power by 2040 by Saikat-Das ET-Bureau July 20 2017Patanjali group reported 111 over 1056 crores. In 2017 Patanjali reached 2000 crore turn over this has given sleepless nights to other brands. In the year 2017 the rival companies filed to AICC about the miss leading ads of Patanjali to cure Homosexuality. This has no way affected the sales or brand name of Patanjali. Patanjali which has made a remark through economic growth is now turning its heads towards Cannabis. Cannabis research is earning prominence in Patanjali. The CEO Balakrishna stated that Ayurveda which is deep rooted in India also used Cannabis for medicine, this is proved through the great works of Rig Veda known for medicines. Parts of Hemps seeds were used in order to cure many disease. Now Patanjali is working on Hemp seeds, there are around 200 scientist working on it at the Research and Development center at Haridwar. Indigenous plants of India, Cannabis are one of them. This a queue from western nations were Cannabis is legal and this is in turn paving way for booming economy. In western nations Cannabis are used for oil, fiberetc. Now Patanjali is trying to use the same strategy to improve the GDP, National income of India. A few states of US the sales of Cannabis generated $ 8 billion in 2017.In India Cannabis is used for industrial purpose but consumption could lead to imprisonment of 6 months or hefty penalty. Under financial and revenue minister the Narcotic drugs and PSCO tropic substance from 1985 is monitoring the sales of Cannabis.

Patanjali through its research is trying to cultivate Cannabis with low Tatra Hedra Cannabinol under national policy. A very few companies and legislative have come forward if this is successful then this could provide a livelihood to farmers. Everything that is in Patanjali is not 100 % ayurvedic true, as the sources proved. But through its approach and ideas the national economy has seen a great change. Make in India policy which is also adopted by Patanjali has now established it's outlets at US, UK, China, and Japan. Many MNC companies are also today trying to adopt the ideas of Patanjali.

References

1. Patanjali brand marketing script-www.sript.com.
2. Research report on Patanjali by TejasIM.
3. Research report by Economic times on June 20 201.
4. International journal of informative ISSN-Jan 5 2016
5. Journal on costumer behavior August 12 2017
6. Hindu article on May 11 2017
7. The business line-September 15 2016

PROGRESSIVE FOREIGN POLICY- A NEW DIMENSION TO SUSTAINABLE DEVELOPMENT BETWEEN THE INDO-ISRAEL RELATIONS

Maiza Mohamed
II M.A., (Political Science), St. Josephs College (Autonomous), Bangalore

Abstract

The main motivation to take up this topic is the curiosity towards the topic. Throughout my readings, I found information to not ambiguous and less transparent, moreover this is a very recent topic and not many works are done on this. The main objectives behind writing this paper is analyse whether sustainable development is playing a role in the changing India- Israel relations and to understand the contributions that both countries are making to towards achieving their sustainable development goals. India and Israel's relations have been evolving in nature. They did not any formal relations until 1992. The year 1992 has been the important year for India- Israel relations and for the establishment of the Commission on Sustainable Development. Ever since there has been global efforts to curb the environmental issues and keep pace with the changing needs and requirements of the world community without trying to sacrifice the economic growth and development. India and Israel are signatories to the Kyoto Protocol, Paris Agreement and the Post 2015 Development Agenda. They are striving to bring their goals in to action by the 2030 Agenda. The recent developments in Indo- Israel relations show that both countries have enshrined sustainable development in their policies and it is bringing together a lot of joint efforts in attaining their goals, which is showing a clear effect on their increasing friendship and their foreign policy approach. Their areas of cooperation can be a beneficial model for other developing countries to adopt and improve how sustainable development goals can be achieved through cooperation which can be achieved through the foreign policy relations. I have tried to fulfil the research objectives through this paper. I have used both primary sources like the government documents and the secondary sources like books, journal articles, newspaper articles and other online sources.

Keywords: *India, Israel, Foreign-Policy, Sustainable Development, Bi-Lateral Relations*

Introduction

The India- Israel relations had been changing over the time. But harsh stance towards Israel had been transformed into the softening of the relations; led to the establishment of the diplomatic relations between the two countries in the 1992. The formal establishment of the relations took place under the P.V. Narasimha Rao government. India and Israel are nuclear power countries which are not signatories of the Nuclear Non-Proliferation Treaty (NPT); one is a growing and developing country belonging to the Global South and the other belongs to the developed Global North. Both the countries give importance to sustainable development and strive to keep up the Sustainable Development Goals (SDGs). The countries coming together in 1992 is seen as a foreign policy shift in India. The reason being India critical of the creation of the Jewish state of Israel and its traditional support to the question of Palestine and its quest for statehood; India had hostile relations with Israel. With the end of Cold war and with the disintegration the Soviet Union, India had lost a very strategic friend and a defence partner. Israel took that position since 1992 and since then there has been no looking back. There have been diplomatic visits and exchange programs between the countries. The relations got strengthened further when India had the Bharatiya Janata Party (BJP) led National Democratic Alliance(NDA) government in the centre coming into power in 2014. The Likud party led by Benjamin Netanyahu are the right –wing party like the BJP in India. The personal bond that both NarendraModi and Benjamin Netanyahu share also in an important aspect of the relationship and how they consider each other's friendship and charisma is important in the international arena. The year 2017 marked the twenty five years of the formal relations establishment. Prime Minister Modi had visited Israel to mark the anniversary which marked the signing of the Memorandum of Understanding (MoU) among India and Israel. The next visit was made by the Israeli Prime Minister Netanyahu in January 2018 which further led the countries to sign more treaties of agreements and signing cooperation in various fields. This relationship is an important and a very strategic one in the Asian relations context as well as in the world politics. India and Israel are both countries which are focussing on improving its relations in the present times. They are cooperating on the areas of counter-terrorism, agriculture, water management, business, communication, energy and cyber security, Oil and

Gas Sector, amendments on Air Transport Agreement, cooperation in the field of space, cooperation in the area of metal air batteries and area of concentrated solar thermal technologies and Research in Homeopathic medicine etc.Israel has investments in India over a hundred and thirty million dollars in the field of agriculture, irrigation and renewable energy sources. The two Prime Ministers officially launched the India-Israel Industrial R&D and the Technological Innovation Fund (I4F), which includes a twenty million dollar contribution of both the countries to promote research in futuristic technologies.

India has been a friend to Iran and is depended on Iran for its crude oil and is vulnerable to the energy security concerns of the same. Iran and Israel are countries who are hostile to each other and India is the common to friend to both the countries. Both Israel and Iran is aware that India maintains good relations with both and wants both the friend equally. The political instability in Central Asia, the terrorism and the Indian national interest in the region makes the relations look strategic. India needs investments and partners to full its policies and enhance better trade, cooperation and fulfil its sustainable development goals. India and Israel are stakeholders among the hundred and ninety three countries who have adopted the United Nations Summit Adoption for Post- 2015 Development Agenda to meet 2030 agenda for Sustainable Development.

The dimension of sustainable development in analysing the foreign policy relations between India and Israel will be relevant and can become a developing model and an inspiration to the countries in Asia and the developing countries.

Review of Literature

In the book by AparnaPande titled *From Chanakya to Modi, The Evolution of India's Foreign Policy;* (2017) has tried to explore the deep civilizational roots of India's foreign policy. The author says that foreign policy has roots in the cultural heritage as it has the elements of national interest in it. The book traces from Chanakya, who lived in the 3rd century BCE to Prime Minister NarendraModi and how they have influenced in the foreign policy making and its evolution. The author projects the fact that autonomy and independent decision- making are two frequent factors that is seen in the foreign policy making and with India's relations with the outside the world. Nehru's policy of non- alignment is but Kautilyan Realism adapted to the reality in the contemporary world. The book also speaks about the leaders and stalwarts like Gandhi, Nehru, Indira Gandhi, Rajiv Gandhi, Vajpayee and Modi. The author portrays about four influences of messianic idealism, realism, isolationism and imperialism; factors that had complemented each other at one point of time. Messianic idealism reflects the ideals of global peace, which is inspired from the moral legacy of the ancient Indian thought. In this context, realisation of the use and influence of hard power is realism. Every much similar to the Kautilyan ideology of the Saam, Daan, Dand, Bhed; any of these can be used at the time of need. India has shown the isolationist tendencies when it did not join the Cold war or the super power blocs initially. And India is little imperialistic in its approaches to get things done or the foreign policy ideals. The book has also tried to trace about Nehruvianism, the dynasty politics of the Nehru-politics, the power-seeking after Nehru's death, Eclipse of Cold war politics, The Modi- era. Some of the drawbacks of the book are that the individual is given importance more than the institution and book is heavily depended upon history.

In this Indian government document from the official website of the Ministry of External Affairs titled *India- Israel Bilateral Relations*(2013);it talks about the bilateral relations that India shares with Israel. The political relations of India and Israel began after India had recognised the state of Israel in the year 1950. But the countries did not establish any diplomatic relations. In 1953, the Jewish Agency established the consulate in Bombay. Only in 1992 that India had established formal diplomatic relations with Israel. The document also contains about the cooperative areas like agriculture, defence and security, science and technology, culture, education, and about the Indian community in Israel. It spoke about the agreements that were made during PM Modi's visit to Israel. During the visit of PM Modi in July 2017, a MoU for establishing India-Israel Industrial R&D and Innovation Fund (I4F) by the Department of Science and Technology, India and the National Authority for Technological Innovation, Israel was

signed. This MoU, with a contribution of $ 20 m from each side over 5 years, is expected to play an important role in enabling Indian and Israeli enterprises to undertake joint R&D projects. This document gives the government level details and highlights about the recent visit of the Indian Prime Minister to Israel in 2017.

In this article by Maina. C. Singh titled *'Indians and Israelis: Beyond Strategic Partnerships'* (2012) the author mainly focuses on the cultural relations of the countries. The article speaks about the cultural links of India and Israel. India's relation with Judaism and the Zionist movement is also discussed in length. India established a full diplomatic relations with Israel only in 1992. But the cultural exchanges had existed much before that. India hosts about 40,000 Israeli travellers every year in the various parts of the country. India was one country were the Jewish community did not face persecution, but they were persecuted in many other parts of the world. The article speaks about the socio- cultural engagements of the countries in the recent years. It covers a wide range of issues like education, sports, culture, yoga, tourism, art, research and migrant work. It also speaks about the P2P (People to People) cultural exchanges.

In the paper by Sharachchandra.M. Lele titled '*Sustainable Development: A Critical review'* (1991), the author gives a very critical view of the sustainable development. The author finds the concept of sustainable development to be flawed and it is not backed by any theoretical or analytical framework.

There are various interpretations to the concept of sustainable development (SD). The author says that a wide number of non- governmental organisations and inert-governmental organisations have adopted this as a new development paradigm. The author says that sustainable development is often referred as sustained growth, or sustained change or simply the successful development. The author says that the major impact or the drawback with sustainable development is that environmental notion constraints development or the development generates environmental pollution. The concept lacks some serious drawbacks like the characterisation of problems of poverty and environmental degradation, conceptualisation of the objectives of development and sustainability and participation.

These literatures that I read are not dealing with how sustainable development can influence the relations between two countries and how it can affect the foreign policy changes of a country.

Research Objectives

- To analyse whether sustainable development play a role in changing India- Israel relations.
- To examine the contributions made by both countries towards achieving their sustainable development goals.

Evolution of the Sustainable Development

The profound idea of sustainable development came about in the thinking of some scholars, popularly called as the 'Club of Rome' in the year 1972. The Report of the club of Rome is called as the Limits to Growth; which predicted the five extrapolating variables; world population, industrialisation, pollution, food production and resource depletion- that world's oil supplies would run out by 1992(Heywood, 2016; 392). His had shown that environmental problems have an intrinsically transnational character; they are no respecters to borders. States are therefore vulnerable to the economic activities of other states.The very same year the Stockholm Conference or the United Nations Conference on the Human Environment took place in Stockholm, Sweden, during 5th- 16th June 1972 (Ghosh, 2016). It was the first of the UN initiative on international environmental issues and became a turning point in the international environmental politics.

The landmarks in the sustainable development is however are obviously the World Conservation Strategy (1980); Our Common Future (1987) and the Caring for Earth (1991). The World Conservation Strategy (WCS) was prepared in the early 1970s by the International Union for the Conservation of Nature and Natural Resources (IUCN), the World Wildlife Fund (WWF) and the United Nations Environment Programme (UNEP), and this was published in 1980. They upheld that both conservation and development are the key to a sustainable society. The major objectives of the WCS were that of

essential ecological processes, preservation of the genetic diversity and the sustainable utilisation of the resources. The Brundtland Commission which is officially known as the World Commission on Environment and Development was prepared under the United Nations World Commission in 1983 on Environment and Development elucidating the concept of Sustainable Development. The Report of the Brundtland Commission was called as 'Our Common Future' published in 1987. The report had tried to encapsulate the 1972 Stockholm Conference which had introduced the environmental concerns to the formal political development sphere. The Report had defined sustainable development as "Development that meets the needs of the present generation without comprising the ability of the future generations to meet their own needs, improved living standard for all, better protected and managed ecosystem and a safer; more prosperous future"(Ghosh, 2016).Caring for the Earth was prepared in 1991 IUCN.

The publication of Our Common Future and the work of the World Commission on Environment and Development laid the groundwork for the convening of the 1992 Earth Summit and the adoption of the Agenda 21, the Rio Declaration, and also led to the establishment of the Commission on Sustainable Development. The Earth Summit or the Rio Summit is known as the United Nations Conference on Environment and Development. The prime achievement of this conference is Agenda 21: Green Paths to the Future or the Rio Declaration of 1992. It contains twenty seven articles, intended to guide future development around the world. Climate change has also been an important global issue that plays equally in the sustainable environment goals.

From 1990s onwards, environmental debate increasingly focused on climate change brought through global warming. One of the main consequence of the Earth summit was there was the establishment of the UN framework Convention on Climate Change (FCCC); first initiative to stabilise the green house gas concentrations at a level that would prevent the human induced climate change. The responsibility for reporting the implementation of FCCC was invested in the Panel on Climate Change (IPCC); which was established in 1988. The Kyoto Protocol of the 1997, in which the countries agreed to cut down the emissions of the green house gas; by an average of five percent by the 1990 levels, during the 'commitment period' from 2008-2012. There were successive conferences held in Copenhagen (2009), Durban (2011) and Doha (2012) as the attempts to formulate a successor to Kyoto. This paved way for the idea of the 'Tragedy of the Commons' which was to draw parallels between the global environmental degradation and the fate of the common land before the introduction of closures as said by Garrett Hardin (Heywood, 2016, 395). Rio+ 20 was a twenty year follow- up to the Earth Summit and the tenth anniversary of the 2002 World Summit on Sustainable Development. It was hosted by Brazil in Rio de Janeiro from 13th – 22nd June 2012. The outcome of it was the 'The Future We Want By', 'For and With All Stakeholders Redefining the Multi- Stakeholder Partnership Contract'. The themes of the summit were; a green economy in the context of sustainable development and poverty alleviation and an institutional framework for sustainable development.

India and Israel on Sustainable Development Goals

Background

The year 1992 is very strategic to India; the reason being that was the year India and Israel had established formal relations after almost four decades of hostilities. It was the same year when the Earth Summit took place and the same year Commission for Sustainable Development were created. With the end of Cold War, disintegration of the Union of the Soviet Socialist Republics (USSR), the world escalating into the world ruled by the existing single hegemon USA and the issues of climate change become serious. Somewhere Cold war rivalry that led up to the degrading environment because of the constant competition and race for supremacy. Both the sides joining with its allies, prompting proxy wars, were inventing dangerous to deadliest weapons and endangering the world and its resources to the face of depletion and scarcity. All this was for the economic, military, defence, political power and the worldwide influence. However, the countries had come into the realisation to protect and save the world. Both India

and Israel are signatories of the Kyoto Protocol. They both are signatories of the Paris Agreement on Climatic Change.

Israel and its SDGs

Israel is that one country that ostensibly support the sustainable development and in achieving its goals. It has joined the Agenda 2030 and believes to eradicate poverty, empower women and bring about gender equality in the society of the state of Israel. The SDGs were the continuation of the Millennium Development Goals (MDGs). It was decided to establish an "inclusive and transparent intergovernmental process open to all stakeholders, with a view to developing global sustainable development goals to be agreed by the General Assembly". The Rio 20+ believed that the SDGs should be less in number so that it is short and easy to achieve. And the three dimensions of sustainable development should be kept in mind while framing the SDGs. For the action in framework, MASHAV or the International Development Cooperation Agency of Israel along with its Ministry of Environment Protection collaborated and arranged people from the various government sectors and the civil society groups to Discuss and address the post- 2015 development Agenda by the UN and to discuss upon Israel's position and the SDGs at the international level. An active global agenda for sustainable development may have implications among the states in achieving them. One of the major issues addressed by Israel is the maximisation of food production with the minimum resource. Other connecting issues are food security, climate change, poverty eradication and desertification. The inclusion of the gender aspect to the sustainable development and the recognition of various other life indicators, reducing inequality, education, regional development, water treatment and management, agriculture, capacity building for developmental activities, nature and importance to ecology etc are all factors to be taken care of.

India and its SDGs

India is one country that believed that world is VasudaivaKutumbakam (The World is One Family). India mainly focuses on eradicating poverty and brings prosperity in the world. The memorable phrase SabkaSaathSabkaVikas, translated as "Collective Effort, Inclusive Development" and enunciated by the Prime Minister, forms the cornerstone of India's national development agenda. To fulfil this agenda, National Institution for Transforming India(NITI) Aayog, the successor of the Five Year Planning and a premier institution of the Government of India, recently came up draft Three-Year Action Agenda for 2017-18 to 2019-20. In parallel, work on a 15-Year Vision and 7-yearstrategy document is in advanced stages. These documents are being prepared with the various sub-national factions taking into consideration the dynamic federal tradition that India has. India aims for higher economic growth through industrialisation and infrastructure development. India's war against poverty is basically focussed on social exclusion and empowerment of the poor, but it will not side-line environment. India is committed to minimise the emissions and to create a carbon sink. The NITI Aayog, with the Prime Minister as its chairperson gives charismatic leadership in taking up various initiatives and working hard to reap success and being able to achieve its SDGs. The institution has been carrying out the 17 Goals and 169 targets to Nodal Central Ministries, Centrally Sponsored Schemes and major government initiatives. Most state governments are also trying up hard to maintain the SDGs and bring the long desired results out of it.

One of the several schemes adopted by India and the one which is popular and the largest financial inclusion scheme is that of the Pradhan Mantri Jan Dan Yojana (PMJDY). Through this scheme the India government was able to dispense twenty five billion dollars to three hundred and twenty nine beneficiaries; through Direct Benefit Transfers. The government is able to fund and enhance the programmes better. The government is sponsoring job opportunities, collecting village's tom cities through roads, offering education in various states and building houses for the poor. The various chief Ministers of the state advices and gives suggestion to the Central government on the issues of skill development, digital payment and Clean India Campaign or the Swachch Bharat Abhiyan.

Sustainable Development and the Changing India-Israel Relations

Since the time of the formal establishment of the relations, both India and Israel were defence partners. Israel is the third largest defence supplier to India. Sustainable Development is playing a role in the changing India- Israel relations. The major shifts in the relations took place in 1992 and recently in 2014.The year 1992 is when they established the full diplomatic relations and 2014 is the year when the dynamic and charismatic BJP led government under the leadership of Prime Minister NarendraModi came into power. The BJP Government has always supported the creation of the Jewish state of Israel and presently, both the governments at the centre are right wing ideology driven; The Bharatiya Janata Party (in India) and the Likud Party (in Israel). The relations took an improved form under the Modi-Netanyahu leadership.

Since completion of twenty five years of peaceful and diplomatic relations, both the countries look forward for raise the standards of their bilateral relations. The beauty that India maintains in the relations with Israel is the dehyphenation strategy, where India does not tangle its relations with Palestine or Iran. India's dependence on the West Asian Energy sources is very obvious and it had imported almost nine billion dollar worth crude oil from Iran in the fiscal year 2016-2017, which is believed to more than twice as it has imported in 2015-2016. Iran is member country of the Organisation of Petroleum Exporting Countries (OPEC) and India's relations are increasing with the organisation as well. Iran is an important conduit for the Indian development aid to Afghanistan. The recent shipment of wheat to that country via the Chabahar demonstrates the critical role Iran plays in India's regional priorities (Rajiv, 2018).

After the Netanyahu visit, things are changing for the better in the ways of Israel as the MoU's signed by both countries cover the areas of achieving their sustainable development goals and it has improved their foreign policy relations. Both India and Israel are working the Five Year Joint Work plan for cooperation in the fields of water and agriculture. They have started the Three year work programme (2018-2020) under the MASHAV (Israel Ministry of foreign Affairs) and Ministry of Agriculture in India for improved efficiency in water utilisation and being farmer friendly. The launching of the India- Israel R&D and the Technological Innovation Fund (I4F); they had emphasised upon the role of youth in collaborating with the innovations the projects. They have introduced the annual exchange hundred youth from the science streams for the same. In order to build strong network of women scientists and researchers and technologists, an India- Israel STEM (Science, Technology, Engineering, Mathematics) Symposium to be organised in October, 2018 to take place in India. One of the biggest collaboration is in the field of energy sector with both the countries signing an MoU is the Oil and Gas sector, to promote research and development in the coming future initiatives, start-ups in oil and gas. Israel wants to become a Partner country with India in its initiative to establish the International Solar Alliance which promotes renewable energy for sustainable development in the context of climate change. They are looking for research institutes and industries from other countries to collaborate in the initiative. Israel companies are joining with the Indian companies on the defence sector under the proud Make in India initiative; for more joint venture, business models to enhance the defence sectors and to long-term sustainable cooperation in the area of defence. To curb terrorism and its related issues they have signed an MoU in cyber security. They are developing joint programmes in the third countries for skill development, training, capacity building and small scale projects in the areas of health care, education and agriculture etc.

Conclusion

India and Israel are cooperating on several various fields which are directly or indirectly linked to sustainable development. Both have their ideology as well as national interest to fulfil. But the recent visits and the agreements signed makes this relationship very strategic. Since the time of formalising the relations, India's foreign policy has faced shifts from the Nehruvian legacy to the contemporary which is aggressively pursuing its national interest and paying way for its entry as a rising global power which dehyphenates the relations between countries. Israel follows more proactive foreign policy and it cares for the recognition and its relations with India, which is one of the largest democracies in the world and

fastest growing economy. Despite the population difference in the countries, Israel the epitome of innovation and technology along with India is a strong alliance to look forward in the world politics and their initiatives to fulfil their goals in sustainable development is appreciable.

References

1. Government of India, (2013); India- Israel Bilateral Relations; Ministry of External Affairs; accessed at http://www.mea.gov.in/Portal/ForeignRelation/Unclassified_Bilateral_briefb.pdf; accessed on 28th November 2017.
2. Government of India, (2018); India- Israel Joint Statement during the visit of Prime Minister of Israel to India(January 15,2018); Ministry of External Affairs; accessed at http://www.mea.gov.in/bilateral-documents.htm?dtl/29357/IndiaIsrael+Joint+Statement+during+visit+of+Prime+Minister+of+Israel+to+India+January+15+2018; accessed on 17th March 2018.
3. Government of Israel, (2015); Israel's contribution to Post 2015 Development Agenda; Ministry of Foreign Affairs; accessed at http://mfa.gov.il/MFA/mashav/Latest_News/Pages/Israel%E2%80%99s-Contribution-to-the-Post-2015-Development-Agenda.aspx; accessed on 18th March 2018.
4. Ghosh, Peu (2016); International Relations, Delhi, PHI Learning Private Limited.
5. Heywood, Andrew (2016 reprint) Global Politics, UK:Palgrave Macmillan; Nutech Print Services in India.
6. Kumar, Rajeev .P.S (2018); Why Does Israel Matter to India; Global Policy Studies & International Security; https://bainesreport.org/2018/02/why-does-israel-matter-to-india/- accessed on 13th February 2018.
7. Lele, Sharachchandra. M. (1991);' Sustainable Development: A Critical Review'; World Development, Vol.19, No.6, pp. 607-622.
8. Pande, Aparna (2017) From Chanakya to Modi, The Evolution of India's Foreign Policy, New Delhi: Harper Collins.
9. Singh, C. Maina (2012) 'Indians and Israelis: Beyond Strategic Partnerships', Israeli Studies, Vol.17,

SOCIAL RESPONSIBILITY OF BUSINESS

Ramandeep Kaur
Assistant Professor, Tjohn Institute of Management and Science, Bangalore

Abstract

The social responsibility of business means various obligations that a business-organization has towards the society within which it exists and operates from. Social responsibility is an ethical framework and suggests that an entity, be it an organisation or individual, has an obligation to act for the benefit of society at large. Social responsibility is a duty every individual has to perform so as to maintain a balance between the economy and the ecosystems. Social responsibility means sustaining the equilibrium between the two. It pertains not only to business organizations but also to everyone whose any action impacts the environment. This responsibility can be passive, by avoiding engaging in socially harmful acts, or active, by performing activities that directly advance social goals. Businesses can use ethical decision making to secure their businesses by making decisions that allow for government agencies to minimize their involvement with the corporation. Social responsibility is a voluntary effort on the part of business to take various steps to satisfy the expectation of the different interest groups. Its activities amongst various corporations could contribute macroeconomic development of a developing country through sustainable benefit to all. At the same time, optimum national impact, cooperation, and communication would be encouraged and socialized.

Keywords: *Obligation, Equilibrium, Social Goals, Ethical Decisions, Optimum National Impact.*

Introduction

The phenomenon of social responsibility of business is not new rather historical facts are of the evidence that the business house helps the society at the times of famines and other natural calamities. The historical facts are of view that although business houses serve the society in past also but though it was not a regular feature of their business activities as it is become today. The business community and the managers in the past were concerned only with productivity and profits. All managerial processes were geared to maximum profits through increased productivity in factors, marketing and other operations of business. Today's social climate make many demands on business requiring business leaders to be as skilled in managing their business social relations as they manage their economic ones. Practically business depends upon social relations as they manage their economic ones. The business depends upon society for its needed inputs like men, material, money and skills etc. While society depends upon business for products and services produce by business for their daily requirement and employment also This mutual interaction between business and society has created a new phenomenon called the corporate stake holders. Corporate stakeholders are all the groups include shareholders, workers, government, customers, suppliers, wholesalers etc.

Review of Literature

In the words of Drucker, “Social Responsibility requires managers to consider whether their action is likely to promote the public, to advance the basic beliefs of our society, to contribute to its stability, strength and harmony". According to Keith and Davis, "Social Responsibility refers to the businessman's decisions and actions taken for the reasons at least partially beyond the firm's direct economic or technical interest."

Research Methodology

This is a conceptual study based on secondary data collected from books, journals, magazines, newspapers and the internet.

Objectives of the Study

- To explain the concept of social responsibility of business
- To study the activities of social responsibility of business
- To study the responsibility of business towards different interest groups.

Concept of Social Responsibility of Business

Profit making is not the sole function of business. It performs a number of social functions, as it is a part of the society. It takes care of those who are instrumental in securing its existence and survival like- the owners, investors, employees, consumers and government in particular and the society and community in general. So, every business must contribute in some way or the other for their benefit. For example, every business must ensure a satisfactory rate of return to investors, provide good salary, security and proper working condition to its employees, make available quality products at reasonable price to its consumers, maintain the environment properly etc. while doing so two things need to be noted to view it as social responsibility of business. First, any such activity is not charity. It means that if any business donates some amount of money to any hospital or temple or school and college etc., it is not to be considered as discharge of social responsibility because charity does not imply fulfilling responsibility. Secondly, any such activity should not be such that it is good for somebody and bad for others. Suppose a businessman makes a lot of money by smuggling or by cheating customers, and then runs a hospital to treat poor patients at low prices his actions cannot be socially justified. Social responsibility implies that a businessman should not do anything harmful to the society in course of his business activities.

The concept of social responsibility discourages businessmen from adopting unfair means like black-marketing, hoarding, adulteration, tax evasion and cheating customers etc. to earn profit. Instead, it encourages them to earn profit through judicious management of the business, by providing better working and living conditions to its employees, providing better products, after sales-service, etc. to its customers and simultaneously to control pollution and conserve natural resources.

Responsibility towards Different Interest Groups

Business operations affect various sections of people. Customers pay for the product and therefore, want full return of their money. Shareholders invest and hence they want dividend. Employees work for the organisation and expect adequate remuneration. State provides infrastructure, financial resources and legal protection to business for which it should also be compensated. The major responsibilities of business may be grouped into following categories:

Responsibility towards Consumers

- The goods are produced in right quantity to meet consumers demand.
- The time schedule is adhered in manufacturing to make goods available when desired by the consumers
- The quality standards as laid by the statutory authority are followed,customer's requirements and specifications are adhered.
- The goods made available at the centre which are conveniently located from the customer's point of view.
- Advertisement are not misleading and incorrect.
- After sale service, if promised, is provided.
- Black marketing and hoarding not to be done.
- Product research and development are promoted.

Responsibility towards Shareholders

The first responsibility of the management is to protect the interest of real owners of the business called shareholders. Therefore the management are expected to use the resources provided by the shareholders in their best interest

- A fair return on investment
- Safety of investment
- Steady appreciation of investment
- Regular, accurate and full information about the working and progress of the company.

Responsibility towards Workers

- Pay fair day's wages for a fair day's work
- Not to make unauthorised deductions from pay
- Disburse pay on time
- Ensure good working conditions inside the plant.
- Arrange for the safety of workers at the work place by installing necessary safety devices, maintenance of plant and machinery and work place etc.
- Provide housing, educational, recreational, transport and other facilities for the workers.

Responsibility towards Institutions

The business schools, University, Department of business Administration, Economics and Commerce and other institutions preparing young men and women for career in business are serving the business world. Industrial houses are cooperated with such institutions by providing practical training facilities, scholarships and stipends.

Responsibility towards Society

- Follow social norms and moral values and promote healthy traditions by their own behavior.
- Co-operate with resources of society for maximizing production and using their money power for social desirable ends.
- Enrich the cultural traditions of society by encouraging the artists, musicians, poets, writers and scholars in different walk of life.
- Assist in the development of education, medical, sports and other facilities.
- Help in creating better environment, higher standard of living for people and improving the image of business class.

Responsibility towards Environment

- Establishing new industries away from the cities and towns to avoid further congestion and polluting in these areas
- Beautifying the industrial towns and trade centers by developing parks, lakes and fountains.
- Installing anti-pollution devices in the factories, arranging for treatment of water, gases and liquid pollutants.
- Helping the local administrations in city planning, drainage system and maintenance work.

Responsibility towards Government

Business activities are governed by the rules and regulations framed by the government. The various responsibilities of business towards government are:

- Setting up units as per guidelines of government
- Payment of fees, duties and taxes regularly as well as honestly.
- Not to indulge in monopolistic and restrictive trade practices.
- Conforming to pollution control norms set up by government.
- Not to indulge in corruption through bribing and other unlawful activities.

Responsibility towards Competitors

Competitors are the other businessmen or organizations involved in a similar type of business. Existence of competition helps the business in becoming more dynamic and innovative so as to make itself better than its competitors. It also sometimes encourages the business to indulge in negative activities like resorting to unfair trade practices. The responsibilities of business towards its competitors are

- Not to offer exceptionally high sales commission to distributers, agents etc.
- Not to offer to customers heavy discounts and /or free products in every sale.
- Not to defame competitors through false or ambiguous advertisements.

Responsibility towards Suppliers

Suppliers are businessmen who supply raw materials and other items required by manufacturers and traders. Certain suppliers, called distributors, supply finished products to the consumers. The responsibilities of business towards these suppliers are:

- Giving regular orders for purchase of goods.

- Dealing on fair terms and conditions.
- Availing reasonable credit period.
- Timely payment of dues.

Arguments in Favour and Against the Social Responsibility of Business

Arguments in Favour

Dependence upon Society

Business Organization is significant part of society and must respond to social demands. A business operates within a set of cultural norms and restraints. These are certainly not only economic but also legal, political, social and technical. A business is not isolated unit rather it is a part of society. It operates in society and earns profit by selling output to the society. Since the business is a sub system of society, its functions should contribute to the welfare of the system as whole and only to the sub system alone. Therefore, organization decisions should be made in a way which not only provides welfare to the organization decisions should be made in a way which not only provides welfare to the organization but also to other sub system of the society.

Freedom from Government Control

If a business enterprises perform all its social responsibilities voluntarily then it will remain free from government measures enacted for the purpose.

Public Image

Adoption of social responsibility as an objective will help to improve the public image of business.In the present business scenario, the size and the extent of social responsibility of a business is an important factor used by various sections of the society to guess the image of an organization.

Social Impact

During the course of its regular activities a business enterprise makes several decisions and actions. Its activities and actions have strong influence on the interests and values of the society both positively and negatively.

Interest Groups

A business enterprises has several interest groups i..e shareholders, employees, suppliers, customers, government, etc. In order to survive in the market specifically and in the society generally the business has to face challenges from all these groups. To face the challenges posed by all these groups the business has to work for some special social interest of all these groups. A business should, therefore work for the interest of all the groups.

Arguments Against

Dilution of Economic Objectives

A business exists for earning profits. The adoption of concept of social responsibility will lead to diversion of precious managerial time and efforts on social action programmes. This may adversely affects the profits and ultimately the interest of shareholders.

Increases in Prices

If business assumes social responsibility, the cost of running business operations would increase, thereby increasing the cost of commodities. This increases in cost will have to borne by the consumers in the shape of increased prices.

Difficulty in Decision Making

Profitability is the common criteria for decision making in business. Tempering it with social responsibility would make the decision making process quite complex and controversial.

Lack of Social Skill

Business organisation and their managers are not familiar with social affairs. They have competence and experience only in economic activities. They are not social service organization.

Social Responsibility Activities of Major Business Houses in India

Birla Group

Major Institutions Established

- Birla Institute of Technology, Pilani and Ranchi
- Birla Economic Research Foundation
- Birla Academy of Art and Culture

Trust
- Hindustan Charity Trust
- BM Birla Foundation
- MP Birla Foundation

Field supported
- Technical Education
- Agricultural Research
- Medicine
- Art and Culture

Bajaj Group

Major Institutions established
- Institute of Gandhian Studies
- Gandhi Centre for Human Values

Trust
- Jamnalal Bajaj Foundation
- Jamnalal Bajaj Sewa Trust

Fields supported
- Community Development
- Upliftment of Widows
- Scholarships and Literacy

Godrej Group

Major Institutions Established
- Dr. BP Godrej Student Centre
- Godrej Sailing Club
- Pirosha Godrej Research Labs

Company's Community Program
- Family Planning Centre, Well Baby Clinics, Godrej Ganga Ecology Panel

Trust
- Pirosha Godrej Foundation
- Sona Bhai Pirosha Godrej Foundation

Field Supported
- Education
- Health and Medicine
- Supports
- Environment and wild life

Conclusion

The Social Responsibility is very important to both society and business organisations. It is not against the idea of earning profits by business. In reality, unless a business makes profits it will not be in a position to discharge its social responsibility. Any business which is incurring losses or making very little profits will resort to short cut to profits and may harm the interest of society in different ways such as production of inferior quality goods, underweight packing, paying lower wages to workers, evasion of taxes etc. Thus it can be said that earning of profits is desirable but it cannot be the sole objective of business.

References

1. Corporate Accounting by V. Rajasekaran, R. Lalitha
2. Politics, Ethics and Social Responsibility of Business by K.V. Bhanu Murthy and Usha Krishna
3. Social Responsibility of Business Enterprises by Chitta Ranjan Sarkar
4. Business Environment by R S Sandhu
5. www.bbamantra.com
6. www.investopedia.com
7. www.wikipedia.org

STUDY ON HONESTY, INTEGRITY AND ETHICS FOR SUSTAINABLE BUSINESS

Arshiya.M.Taj
IV Semester B.Com 'A' Section, Indo Asian Academy Degree College, Bangalore

Abstract

The success of an organization mostly depends upon the trust of customers, employees and the general public. If we trust someone we believe that they are endowed with these qualities. These are the foundation of a sustainable society, leadership, excellence, good character, etc., There are no shortcuts of morality in the game of life or business. Shortcuts and unethical business practice will lead to unwanted disputes. "There are, basically, three kinds of people, the unsuccessful, the temporarily successful, and those who become and remain successful. The difference is character." And character can be built out of good traits like morality, honesty, integrity and ethical behavior. They should never compromise with honesty, integrity and ethical nature by cheating, harassing, abusing and disrespecting others. A successful entrepreneur adheres to value properties to build trust and confidence. These are the qualities which always imply refusal to lie, steal, or deceive in any way. They should be truthful, trustworthy or genuine. Unethical practices in any workplace can result in lost revenue, a drop in productivity and lower morale and also creates a negative effect on the organizational reputation. These qualities cannot be taught at each level of life. It should come from their place of living.

Keywords: *Moral traits, sustainable society, confidence, productivity, trust.*

Objectives

- The purpose of study is to develop the potentialities leading to sustainable development.
- To understand the behavior of employees of business organization.
- To understand the importance of the honesty, integrity and ethics in business organization.
- To identify the factors influencing honesty of employees towards the Sustainability of the concerned organization.
- To make constructive suggestions to improve the Sustainability.
- To study existing status oflevel of people following the above aspects to develop the Sustainability.
- To know the challenges faced by the organization in the context of sustainable development.
- To understand the role of employees in Sustainable Development.
- To study the needs of morality in sustainable development.
- To understand the concept of sustainable development.
- To study the problems faced in sustainability.
- To know the reason for unsustainable development.
- To know the impact of unethical behavior, immorality, dishonesty…etc.,
- To study and understand the other aspects.

Introduction

General meaning of Sustainable development:- Sustainable development is a development which believes in fulfilling today's needs without considering or compromising the ability of future generation to meet their own needs and aspirations. Primary conditions for sustainability:-No poverty, zero hunger, good health, quality education, gender equality, clean water and sanitation, Affordable and clean energy, decent work and economic growth, industries infrastructure, Reduced inequalities, sustainable city and communities, responsible consumption and production, living organism under water, life and land, peace, justice and strong institution etc., Sustainable development in business means acquiring new methods of business strategies and activities which are essential for the enterprises and its stake holders today while protecting, sustaining and enhancing the human and natural resources that will be needed in the future.

Role of Honesty Integrity and Ethics in Business Enterprises

Honesty: Honesty refers to the execution of moral characteristics with positive and virtuous attributes such as truthfulness, with the of suppression of truth and with absence of cheating, theft, etc., It also

involves trustworthiness, loyalty, fair attitude and sincerity among which, some of these, if not all, have to be implemented sincerely for the sustainability of any organization or business.

Integrity and ethics are internist and can be complicated at times to involve or implement. They go hand in hand like the two side of coin of moral philosophy. If you have integrity, you are honest and firm in your moral principles. Ethics is dealing with what is good and bad and with moral duties and obligations.

The Research Identified a Several Vulnerable Dimensions of Unsustainable Development

- Sharing company's confidential data to the competitors or , sharing data of the business. Tenders and quotations of market can be quoted as examples.
- An individual employee working for two or more companies and misusing the company's information's.
- Misusing the power of designations or authority. Owing to lack of integrity some of the employees are directly responsible for the unsustainability of an organization.
- Over loading the employees will lead to a disasters condition where they attempt to escape from their responsibility which directly affects the sustainability.
- Discrepancy in the remuneration of employees based on various discrimination factors also leads to unsustainability.
- Failure to be trustworthy can also be a dominating factor for the unsustainability.
- When the work force of an organization fails to utilize the companies time meaningfully also can cause a decline in the sustainability of an organization.
- Frequent absenting from work under false excuses can be detrimental to sustainable growth of an organization.
- Team work :- with an exemplary team leader a healthy team work can be directly proportional to the sustainable development. A flaw in the team leads to disintegration of the organization which intern will cause a downfall of the organization. This can be summed up as negative attitude in the employee.

Challenges Faced by the Business in Sustainable Development due to Dishonesty, Non-Integrity and Unethical Practices and Other Factors

Some of the issues that are constantly perceived to be a significant threat to business integrity and yet relatively little seems to be done. It can be any activity in business or work place which includes employee theft, submitting incorrect time sheets, lying to colleagues and managers and unethical conducts such as harassments, disrespect, discriminations, etc., which can be resulted in the following issues: -

- Lost in revenue: -
- A drop in productivity: -
- Lower morale.
- Small companies are more vulnerable to frauds: - small companies are more vulnerable to fraud because they don't have the resources larger company do, which means they usually don't have processes or controls to migrate fraud risk.
- Creates false persona
- Leads to complexity
- It can destroy a business
- It can ruin your reputation

How to Create an Atmosphere of Honesty in the Business to have a Sustainable Development

- Hold oneself to a high model
- Promote open and honest communication
- Seek an immediate solution to any display or unethical behavior
- Reward employees who follows company's policy

- Allow employee to report unethical behavior in a safe environment.
- Provide training in ethics to the employees
- Punish violators in the company
- Motivate ethical behavior in the business
- Provide encouragement and protection
- Create healthy ambience in the organization

Conclusion

This study contributes to current situations in business and for the little changes and care to be taken for the development in honesty, integrity and ethics which play a very important role in sustainable development of any business. It's very essential to identify the directional aspects which may cause a decline in values of dishonesty, non-integrity and unethical practices. The main objective of this paper is to determine the satisfactory level in sustainability. This paper has also attempted to study the factors responsible for a constructive relationship between the employees and organization. The outcome of the study may help the organizations to create better atmosphere for the sustainable development.

References

1. https://scholar.google.co.in/scholar?
2. Honesty – Wikipedia, http://en.m.wikipedia.org
3. www.acfe.com> acfe-in-the-news
4. www.teamgantt.com
5. Smallbusiness.chron.com

THE FATE OF LAKES BEHIND THE TRICKS OF URBANIZATION

Supritha, M.S
Assistant Professor, Department of Biology, Indo Asian Women's Degree College, Bangalore

Abstract

Water is the basis of life and probably the essential requirement for economic growth and social development. Rivers, streams, creeks, springs, lakes, ponds, and related ecosystems have evolved over time to support an enormous variety of plant and animal species. Freshwater ecosystems offer important cultural and recreational resources for human populations around the world. India has had very little to celebrate on World Wetlands Day this year as it has lost its Wetlands at an alarming rate of 38% in just a decade (1991-2001). Additionally, there continues to be a regulatory vacuum around wetlands, because of which they continue to be ungoverned and unprotected. Nowhere is it more apparent than in the city of Bangalore, once famous for its beautiful lakes created by Kempe Gowda and the Wodeyars of Mysore and then the British. The wetlands in the city are now dying a slow death, thanks to rapid growth and urbanization resulting in encroachment and discharge of sewage and industrial effluents. The degradation of lakes has both direct and indirect consequences for humans. Conservation of lakes requires several actions to be taken together. The first and foremost are the actions required to prevent further degradation by controlling and regulating various activities that cause it. This paper recognizes the many functions and values of lakes, particularly those in our near major urban areas and the need to conserve and manage these water bodies, by highlighting the issues concerned with Lakes in Bangalore. The conservation of water at home is the beginning of conservation of any water body.

Introduction

Essentiality of Water

Water in its pure form is a clear, colourless, odourless and tasteless liquid. It can exist in three states of matter, namely solid (ice), liquid and gas (vapour). The chemical formula for water is H_2O which is interpreted as 2 hydrogen atoms and oxygen in a ratio 2:1. Water is essential for the existence of plant and animal life. Rainfall is responsible for the growth of wild grasses and trees which in turn help protect the earth surface from soil erosion emanating from the effects of wind and rainfall action. Wild grasses are a natural source of animal feed. Grasses are also used for different purposes such as thatching roofs and weaving. Rainfall is also critically important for dry-land crop production; which is a major source of food and commercial crops such as tobacco, cotton and pyrethrum. Water has unique physical and chemical properties many of them significant in biology. A very small amount of the Earth's water is contained within biological bodies and manufactured products. The human brain is 85 percent water. Clean and fresh drinking water is essential to human and other life forms. The adult body requires an average 2-3 liter of water a day in order to function properly. This amount is dependent on the level of activity, temperature, humidity and the body's physical state whether fit or unfit and the presence of disease process. Most of the water is ingested in foods and the rest is taken straight as pure water. Water is a vital solvent in which many of the bodies' solute dissolves. It plays an important role in metabolism (VEFPSA, 2009). There is no life on earth without water. Life almost certainly originated in water. From conception to birth, a child is nurtured in a sac of water (amniotic) fluid) which protects and cushions the foetus against physical harm. The birth of a child is heralded by the "breaking of waters" after a child is fed on breast-milk which is 90% water (Nagin, 2008). Water in its natural form is found in oceans, seas, man-made inland lakes and dams, rivers, streams as well as underground. The water which are in these reservoirs is continuously replenished through the cynical rainfall system.

Glimpse of Bengaluru

Bangalore, officially known as Bengaluru (The Times of India), is the capital of the Indian state of Karnataka. It has a population of about 8.42 million and a metropolitan population of about 8.52 million, making it the third most populous city and fifth most populous urban agglomeration in India. (Population statistics in maps and charts). It is located in southern India, the Deccan Plateau. Its elevation is over 900m (3000 ft) above the sea level, the highest of India's major city (Swaminathan et al, 2009).

The terrain of Bengaluru is such that the water flows out on sloping land, but does not infiltrate quickly into the surface soil horizon. This phenomenon of water repellency is due to crusting of surface soils devoid of vegetation. If this runoff water is not trapped and groundwater aquifers not recharged, the scenario would indeed become bleak. The city of Bengaluru does not have any perennial river. It is dependent on the Cauvery River, about 140 km away. The naturally undulating terrain of Bengaluru city, with its hills and valleys, lends itself perfectly to the development of lakes that can capture and store rainwater. In the urban area of Bengaluru, water bodies cover about 5% of the land. The lakes of Bengaluru have attained an important ecological status as the lakes have turned into lentic-closed aquatic habitats. These lakes form a unique irreplaceable system. The man-made lakes of this zone can be viewed as a basin with several zones of water at varying depths, abutting a deeper zone that lies towards the bund. The zonation is dynamic and promotes the growth of a variety of emergent, floating, anchored floating and submerged vegetation, each of which shows a preference for a particular range of water depths.

The lakes in Bengaluru, which are scattered and placed in all vantage areas, have an important role in recharge of groundwater. The capability of these lakes to trap and store rainwater is enormous. The rainwater that could be harvested through these lakes would meet the city's water requirements partially. A large number of lakes in and around Bengaluru had a vital hydrological role in recharging groundwater in its lower command areas and also in the valley portions enriching the flora and fauna and giving a green belt around every lake. But, with the decrease in the number of lakes year by year, the recharge of groundwater has steadily declined to a very great extent (ENVIS).

The Lake History

Historically, the lakes of Bengaluru were a result of great work of genius from ancestors. The earliest record of the construction of artificial surface water catchment areas of metropolitan Bengaluru dates back to the latter part of the 16th century, when the founder of Bengaluru, Kempe Gowda built the Ulsoor tank covering a huge area of 125 acres for the sustenance of Petta. The British administration then maintained and improved the lake which met the water needs of the city for as long as 200 years. Water from other lakes such as Sankey, Miller's, and Sampangi was also used by the people for their water requirements (Impact of Privatization of Lakes in Bengaluru). For Kempe Gowda, the monsoon rains became the natural asset for sustaining his people and kingdom with what we know today as the municipal water supply system. Moreover, these impoundments helped in checking floods, recharging and maintaining the groundwater table, and establishing agricultural activities. A century later the British, impressed by the pristine local climate and a great work of indigenous municipal water supply engineering, made this man-made oasis into an all-season military garrison for their own empire. Thus we see how Bengaluru was born out of a rainwater harvesting. Over the centuries, Bengaluru continued to maintain its unique status as the city of gardens and lakes. Tourists from all over the world flocked in to appreciate a rare wonder of mutual co-existence between human and nature. Even after Independence, Bengaluru enjoyed a special status as a zone of tranquility and environmental peace. But it was only a matter of time before the urban wetlands of Bengaluru were to start off on a long and a painful journey towards the most horrifying form of environmental degradation and pollution ever witnessed by the local standards (Jumbo et al. 2008).

Bengaluru's Vanished Lakes

Most of the Bengaluru lakes have got encroached and converted to developmental activities. The city has drastically lost its glory by this conversion (ENVIS).

Degradation of lakes

Tanks and lakes play an important role in helping irrigation as well as recharging groundwater in the surrounding areas. Lakes are an inherent part of the society in Indian culture and serve a variety of purposes. There are totally 36,568 inland water bodies in Karnataka. Out of these 33,364 tanks fall under the control of the State Zilla Panchayats and are used mainly for the purpose of irrigation. (Development of lake conservation projects). Urban lakes are the sources of water supplies for irrigation, drinking,

industries, etc all over the country without exception, are in varying degrees of environmental degradation. The disappearance of lakes is also majorly seen in countries like India. The reasons being,

- Population Explosion
- Urbanization
- Pollutants flowing into lakes from point and nonpoint sources
- Diversion of rivers feeding the lakes
- Discharge of untreated wastes into lakes
- Competition for using lakes for irrigation, hydropower, etc

Table 1 The List of Lost Lakes in Bengaluru is as follows

Name of Lake	Status
1. Shoolay lake	Football stadium
2. Akkithimmanhalli lake	Hockey stadium
3. Sampangi lake	Sports stadium
4. Dharmanbudhi lake	Bus stand
5. Challaghatta lake	Golf Course
6. Koramangala lake	Residential layout
7. Nagashettihalli lake	Space department
8. Kadugondanahalli lake	Ambedkar Medical College
9. Domlur lake	BDA layout
10. Millers lake	Residential layout
11. Subhashnagar lake	Residential layout
12. Kurubarahalli lake	Residential layout
13. Kodihalli lake	Residential layout
14. Sinivaigalu lake	Residential layout
15. Marenahalli lake	Residential layout
16. Shivanahalli lake	Playground, Bus stand

The water quality of urban lakes in cities like Bangalore has deteriorated so much as to cause a serious threat to humans, animals, plants and in turn ecosystem. There has been a quantum reduction in the number of lakes as well.

Many lakes and ponds of Karnataka have been lost in the process of various anthropogenic activities and population pressures leading to unplanned urbanization and expansion. The surviving lakes are reduced to cesspools due to direct discharge of industrial effluents and unregulated dumping of solid wastes. The number of lakes has been gradually decreasing because some of the tanks have been converted into residential localities and some have been used by State Departments for public purposes like bus stands, stadiums and residential layouts etc. Most of the live Lakes have silted up due to faulty land management in the catchments and indiscriminate mud lifting from the lake beds consequently their water impounding capacity has been reduced considerably apart from rendering the water turbid. Conflict of interests among various land & water use sectors and their failure to evolve a common strategy for conservation is the main reason for the degradation of lakes in Bangalore. The paucity of overall understanding of the nature and benefits of lakes in economic and ecological terms is another reason as to why the lakes are disappearing at an alarming rate. The emerging realities have put enormous pressure on the government bodies resulting in the overlap of functions with regard to the management of lakes. Improper planning even after rapid urbanization has led to the broken sewerage in the city. This has resulted in the pollution of water making it non-potable. Encroachment hinders bed treatment of the drains, especially desilting and maintenance. Encroachers flush in all their wastes into the drains too which have increased levels of heavy metals and pH of water. This is creating a grave situation in the city.

Methodology

Exploratory surveys involving field visits and literature review were carried out to find out the present status of wetlands, the source of pollution and loss of lakes at various locations in Bengaluru.

Results

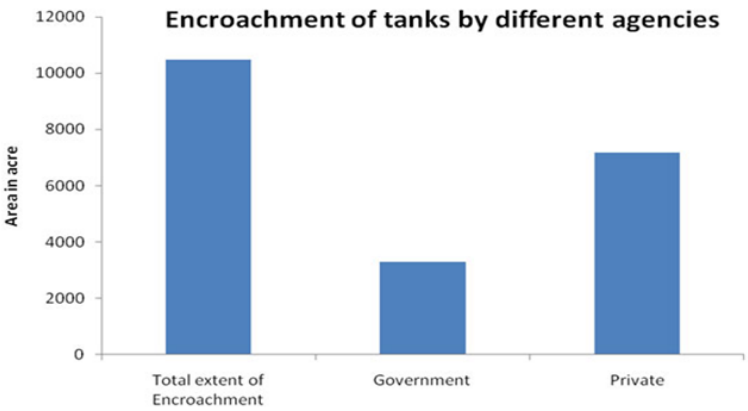
Conservation of lakes can be looked at two major levels one is at the city level where the city planning is focused on drainage of water and revival of the lakes and second is a the lake as such, where the lakes can be checked on a regular basis and more strict actions to protect the lakes is summarized below:

Table 2

At city level	At lake level
● Improvement of urban drainage system: i. Construction of storm water drains and roadside drains; ii. Removing silting; iii. Green area development	● Investigation for Lake rejuvenation ● Design of engineering measures ➔ Source control or catchment treatment, ➔ In-lake treatment, ➔ Details and cost estimation ➔ Beautification of the lake with Public participation.

The Current status of the lake encroachment is given below: The chart clearly depicts of how the land mafia is in full force on encroaching the little water bodies that are left and the major players behind this is the government itself under the hands of private sectors.

Figure 1



The recent report by the committee showed that the total area occupied by the water bodies in urban and rural Bengaluru comes to 23,300 hectares. According to news sources, more than 11,000 encroachers were identified which included government agencies too. Only 19 percent of the tanks have been left which may show encroachment in the coming years if of steps are not taken.

Figure 2

Encroachment of tanks in urban and rural Bengaluru

District	Total Tanks	Total Extent of Tanks	Total Extent of Encroachment	Government Encroachment		Private Encroachment		Remaining extent of encroachment	Tanks not encroached	
Names	Numbers	Acre	Acre	Numbers	Acre	Numbers	Acre	Acre	Numbers	Acre
Bengaluru Urban	835	27604	4277	924	2254	3977	2023	22092	85	1234
Bengaluru Rural	710	29972	6195	319	1032	7618	5162	23050	81	726
Total	1545	57576	10472	1243	3287	11595	7185	45142	166	1961

Source: Karnataka Assembly Secretariat

Conclusion/Discussion

The sponges of the city require immediate conservation—the city has already faced four major flood events post 2000 due to the concretization of lake and tank beds. Poor urban planning and weak wetland rule are responsible for this. [1]

The environment is made up of natural factors like air, water and land. Each and every human activity supports directly or indirectly by natural factors. India is facing a serious problem of natural resource scarcity, especially that of water in view of population growth and economic development. Most of the freshwater bodies are getting polluted, thus decreasing the portability of water. All life depends on water and exists in nature in many forms like ocean, river, lake, clouds, rain, snow and fog etc. Due to the growth of Population, advancement in agriculture, urbanization and industrialization has made surface water pollution a great problem and decreased the availability of drinking water. Many parts of the world face such a scarcity of water. Most of the wastewaters are dumped straight into rivers, lakes and estuaries without any treatment. Lakes are an important feature of the Earth's landscape which are not only the source of precious water but provide valuable habitats to

plants and animals, moderate hydrological cycles, influence microclimate, enhance the aesthetic beauty of the landscape and extend many recreational opportunities to humankind. For the protection of basic needs of various human activities, depend on natural environmental factors they are a one-time origin, they may not be recycled. Hence when disturbed the natural environmental factors like air, water and land beyond their limitations of self-sustainable capacity it wills difficulty to various human activities. Each and every human activity supports directly/indirectly by natural environmental factors. Due to degradation of water bodies (lakes), it will directly/indirectly disturb the quality and quantity of natural environmental factors. Hence protection of natural environmental factors, much essential. [2] The report highlights issues relating to each lake and recommends specific restoration procedures for each. The researchers believe that it is important to develop an integrated approach to lake restoration in Bengaluru. Restoration should facilitate biodiversity, recreation, traditional uses such as idol immersion and domestic usage, and most importantly groundwater recharge since much of the city is reeling under water shortage. [3]

In cities like Bengaluru, lake plays an important role in providing water to the people for various purposes. But, people are not aware of the harmful impacts on lakes like depletion of water quality due to construction activities are observed in the vicinity of the lake, which adds up to the pollutant levels of the water. The best solution for all these activities is "Decongest and decontaminate lakes" so that at least next generation will enjoy the better environment in Bangalore. Clear air, water and environment are the fundamental rights of citizens as per the constitution of the India (Article -21 of the Indian constitution).

Wetlands (and lakes) constitute the most productive ecosystem. This ecosystem serves as a life support system for a variety of organisms like migratory birds for food and shelter. They aid in bioremediation and hence aptly known as 'kidneys of the landscape'. Major services include flood control, wastewater treatment, arresting sediment load, drinking water, and protein production and more importantly recharging of aquifers apart from aiding as sinks and climate stabilizers. The wetlands provide a low-cost way to treat the community's wastewater, while simultaneously functioning as wild fauna sanctuary, with public access. These ecosystems are valuable for education and Scientific endeavors due to rich biodiversity (TOI, 2016). Bengaluru has been experiencing unprecedented urbanization and sprawl due to concentrated developmental activities in recent times with impetus on industrialization for the economic development of the region. This concentrated growth has resulted in the increase in population and consequent pressure on infrastructure, natural resources and ultimately giving rise to a plethora of serious challenges such as climate, enhanced greenhouse gases emissions, lack of appropriate infrastructure, traffic, congestion, and lack of basic amenities (electricity, water, and sanitation) in many localities, etc. Temporal data analysis reveals that there has been a growth of 92.5% in urban areas of Bangalore across four decades (1973 to 2013) sharp decline in natural resources -78% decline in trees and 79% decline in water bodies due to unplanned urbanization process in the city that is an "urban heat island phenomenon" is evident from a large number of localities with higher temperature. The city once enjoyed salubrious climate (about 14-16 c during peak summer-may month in the early 18Th century) now has been experiencing higher temperature (34 -37c) with an altered microclimate and frequent flooding during rainy days. Urban ecosystems are the consequence of the intrinsic nature of humans as social begins to live together (Ramachandra et al. 2012, Ramachandra et al. 2008).

Apart from this, major implications of urbanization are

1. Loss of wetlands and green spaces
2. Floods
3. The decline in the groundwater table
4. Heat island
5. Increased carbon footprint

Unplanned urbanization has drastically, altered the drainage characteristic of natural catchments or drainage areas, by increasing volume of water, and is often blocked due to indiscriminate disposal of solid wastes. Encroachment of wetlands, floodplains etc obstructs flood ways causing loss of natural flood

storage (iisc report-Bangalore lake pdf). To conclude with the paper, it is highly important to understand the significance of lake. Lake degradation due to anthropogenic activity has become the major issue of concern. The destruction & disappearance is a severe threat to Bengaluru city since they are the only source of groundwater, irrigation & Potable water. Public awareness towards lake & water conservation is decreasing thereby deteriorating usable water & increasing water scarcity. Few lakes seem to be in good condition but in due course of time destruction by local people & if not for local people then the builders & constructors will be involved in construction which can destroy the vicinity of the lake. The steps undertaken by the authorities to restore such lakes should be intensified. During the present study, it has been noted that biodiversity of this lake has been adversely affected due to indiscriminate use. The data reveals the decreased number of lakes in Bengaluru since 4-5 decades which has a direct relation to urbanization & industrialization which is going in immeasurable rates. Various Organizations have evaluated the present status of lakes. Wetland ecosystems are interconnected and interactive within a watershed. In Bengaluru, the environmental pressure of unplanned urbanization and growing population has taken its toll of wetlands. The study revealed about 35% decline in the number and loss in the interconnectivity among wetlands disrupting the drainage network and the hydrological regime leading to irreversible (sometimes) changes in wetland quality. The exploratory survey and physicochemical and biological characterization of lakes located all over the city show that lakes are polluted mainly due to sewage from domestic and industrial sectors. The restoration program with an ecosystem perspective through Best Management Practices (BMPs) helps in correcting point and nonpoint sources of pollution wherever and whenever possible. This along with the regulations and planning for wildlife habitat and fishes, it helps in arresting the declining water quality and the rate of loss of wetlands. These restoration goals require intensive planning, leadership and funding along with the financial resources and active involvement from all levels of organization (governmental, NGOs, corporate conglomerates, citizen groups, research organizations, media, etc.) through interagency and intergovernmental processes all made instrumental in initiating and implementing the restoration programs. Various measures including the creation of a Regional Conservation Forum (RCF) represented by a network of educational institutions, researchers, NGO's and the local people are suggested to help restore the already degraded lakes and conserve those at the brink of death. In order to restore, conserve and manage the fast perishing wetland ecosystem, the need of the hour is to formulate viable plans, policies and management strategies. (wgbis.ccs.iisc.ernet.in). The costs for treatment and control are massive, rising, and largely borne by local communities, utilities and industry rather than those who create the problem. Current regulations, guidelines, and practices in place are not sufficient to prevent further urbanization and industrialization. Determination of TSI (Trophic state index) is an important aspect of lake survey and is an aspect of water quality. (www.moef.nic.in). A long run towards urbanization is the key line to the sustainability we as human beings intend to have and believe in. But, in the urge to live with unexceptional luxury and infrastructure that is flawless, we forget that the damage directly or indirectly is falling back on us. In a cycle of life's very existence, the point of realization every man should have is we are the creators of urban lifestyle, we are the protectors of this technology and we will be the reason for the destruction of this entire environment. And, most importantly the reason behind our very own death traps.

The conservation of water, air, or any resource for that matter, begins at our own level. The change that one brings in himself is the very same change a person will bring in, in another person. Conservation of water, by just remembering to turn the tap off is the first change one can bring in. The conservation of water at home is the beginning of conservation of any water body.

Suggestions

Suggested actions and activities to strengthen the science-policy linkage can be generally grouped into the following categories:

- Clarify and reach agreement on priorities
- Plan cooperatively

- Share responsibilities for delivery of programs
- Share resources
- Build partnerships and cooperative relationships.
- Integrate research, monitoring, and management
- Develop new approaches to science, policy, and management issues; and
- Communicate the value and benefits of a strong linkage amongst science, research, policy, and management.

Improvements can be made in each of the above categories and areas. The suggested activities presented above are not comprehensive or perfect but are intended to give practical suggestions to help strengthen the science-policy linkage and provide the necessary foundation for effective Great Lakes management. The rate of change in environmental and resource issues and programs is accelerating. Therefore, decision-makers in research, science, policy, and management cannot be afraid to change.

All policy-makers recognize that sound and credible decision-making depends on good science, good databases, and effective science transfer. Sound science will be even more important in ecosystem-based, decision-making processes that require an understanding of cause-and-effect relationships of persistent toxic substances, exotic species, climate change, changes in food web structure and function, and continued habitat loss and degradation. In addition, sound science is a prerequisite to setting priorities and targeting greatest risks.

References

Primary References

1. Aboud S. Jumbo, N. Nandini, Sucharita Tandon, Sunitha N(2008), Bangalore Lakes – Issues andPerspectives on Pollution, Restoration and Management, Department of Environmental Science, Bangalore University, Jnanabharathi Campus, Bangalore 560056
2. Kiran. R. and Ramachandra. T.V.* Status of Bangalore Wetlands: Strategies for Restoration, Conservation and Management, Centre for Ecological Sciences, Indian Institute of Science, Bangalore 560 012, India.
3. K.V. Shivakumar (2007), Water Quality Monitoring of Lakes in Bangalore - Laboratory Central Laboratory KSPCB, Assistant Environmental Office, Karnataka State Pollution Control Board, Regional Office, Bangalore North, Nisarga Bhavan, 7TH 'D' Cross, Thimmaiah Road, Bangalore-560 010, India
4. Ramachandra T.V and Kumar U, (2008), Wetlands of Greater Bangalore, India: Automatic Delineation through Pattern Classifiers, The Greendisk Environmental Journal. Issue 26 (http://egj.lib.uidaho.edu/index.php/egj/article/view/3171).
5. Ramachandra. T.V., Bharath H. Aithal and Uttam Kumar., (2012). Conservation of Wetlands to Mitigate Urban Floods. Resources, Energy, and Development. 9(1), pp. 1-22.
6. Ramachandra T V, Bharath H. Aithal, Alakananda B and Supriya G, 2015. Environmental Auditing of Bangalore Wetlands, ENVIS Technical Report 72, CES, Indian Institute of Science, Bangalore 560012.
7. Swaminathan, Jayashankar M. (2009). Indian Economic Superpower: Fiction Or Future?. Volume 2 of World Scientific series on 21st-century business, ISSN 1793-5660. World Scientific. p. 20. ISBN 9789812814661.
8. Development of lake conservation projects, IDD, KARNATAKA.
9. Impact of Privatization of Lakes in Bangalore Archived 2008-10-29 at the Wayback Machine
10. Lakes of Bangalore, Parisaramahiti (ENVIS Centre Karnataka), Government of Karnataka
11. Lost Lakes Of Bangalore, Parisaramahiti (ENVIS Centre Karnataka), Government of Karataka
12. http://www.downtoearth.org.in/news/bengaluru-not-yet-learnt-a-lesson-from-chennai-52407
13. https://en.wikipedia.org/wiki/Water_scarcity_in_India

UNEMPLOYMENT AND INEQUALITY: AN OVERVIEW AND SOLUTION

S.Anitha
Assistant Professor, Department of Computer Science, Indo Asian Academy Degree College, Bengaluru

Abstract

The writing of this paper insists me to share common man's feelings towards unemployment in society and which provide drastic changes in sustainability development in global economy and it's an attempt taken to give simple but needed solutions to overcome the problem inequality. The focus is to bring a change in the poor education system and increase in employment rate in order to overcome inequality. Unemployment and inequality go hand in hand. It is clear that, inequality is the outcome of unemployment. Once the education system fails, the jobless workers face financial crisis. The jobless people's families also face a tough time and they end up borrowing money for their day to day life, which adds to their dept. The amount of dept keeps increasing putting the jobless and their family into trouble. This widens the income gap between the employed and unemployed, which in turn leads to inequality. Studies show that unemployment has been the major reason of economic inequality in most of the developing and under developed countries of the world. According to many educationists the quality of education and academic activities has contributed greatly to the problems of unemployment and inequality. The increased unemployment is due to illiteracy or poor education, which has resulted in job shrinkage and that has led to inequality. Positive changes can be bought in the education system by making effective reform policies. The government and people should join hands to bring change in education system, provide quality education which will help in increase of employment and eradicate inequality. Proper utilization of improvement through multidisciplinary educationist, efficient channelization of job-oriented subject, curriculum and effective consumption of original resources seem to be the major way outs in this context.

Keywords: *Quality education, Economic inequality, Multidisciplinary, Consumption, Job Shrinkage, Dept push, policy reforms.*

Introduction

Inequality is the outcome of many factors. Low quality education and unemployment are the two major factors that are associated with inequality. Poverty is either because people find it difficult to find a job that would pay them enough for daily living or couldn't find a job at all. We cannot say that one who is unemployed lives in poverty but, variation in income has an effect on our global economy which results in inequality. Most people accept the fact that education is the key to many significant issues, especially unemployment which would indirectly help us to heal the economic challenges. Unemployment problem can be fixed, by providing better education, skill based training and imparting job oriented practical knowledge which would provide better opportunities for those having difficulty in finding a job. Addressing income inequality is easy: one who has a high educational qualification is obviously qualified for a high paid job. These arguments do make sense, but data over the past several decades provides an opposite answer too: that is more education would neither solve unemployment nor solve inequality problems. In today's technological world education will definitely be helpful to everyone to face the problems in front of us.

Unemployment and income inequality: An Overview

Unemployment and inequality are closely associated with each other. Considering from a large point of view, unemployment is the causal factor of inequality. To meet their day-to-day needs people, rely on borrowing, which ultimately results in dept. The raising amount of interest rate push the concern person to commit suicide which badly affect a whole family. Undoubtedly saying that if unemployment problem prolongs the follow-up generations would get into misery. This picture comes into a screen results widen the income variation between employed and unemployed which meet income inequality. Even though we are improving technologically in a good height some remote villages tend to be uneducated, it is hard to get white collar jobs and due to this illiteracy made them to work for long hours in low – paid, labor – intensive and physically demanding jobs. Which shows that they struggle to bring up their children and give them education. As mentioned above points clearly stated that unemployment and inequality these two threatening phenomena is an outcome of poor education. The sole purpose of this theoretical research

is to discover how education and unemployment affects income of families which in turn lead to ineffective education. Thus, low income affects the quality of secondary education and results in poor education, which results in unemployment, creating a cycle where unemployment again leads to low income, low income leads to poor education and this weakening factor results in unemployment. Obviously, it is necessary to address these problems as early as possible or the problems would get worse as these problems are increasing day by day.

Insufficient qualification and poor knowledge, are the main factors that leads to unemployment, particularly for those who are unskilled and those with low income jobs. It is seen that children don't get enough attention from their parents and that is one of the reason that they are poorly – educated. The vast majority have no higher education. Even if they have education, it is difficult for them to get a good job because they are unaware about the job vacancies around them. Because of which they are ready to do jobs that are low-paid to tackle their necessity, they go for any job like salesman in a shop, drive auto, marketing at door steps, watchman in a house, ladies are inmates, some people good at handmade, tailoring or any job in order to lead their day to day life. Working all day long, they become physically tired and mentally exhausted and they fail to pay attention to their children's education. The other problems such as shortage of schools, willingness of parents to admit their kids in studies also lead to unemployment – poor education – unemployment, even though hardly employed results income inequality.

Essences of Basic Education in Digital Era

The children still not in school are the most marginalized and suffer from multiple factors such as poverty, rural, ethnic, religious, language minorities, being a girl etc., as we move forward to the next generation development one of the goal is all should have basic foundation of education. When**we** focus our attention seriously towards this, definitely the follow up questions will be coming in our mind. Let's have a look at the questions and answers with simple chart and table representation given approximately based on common view.

Is it difficult to provide education to your children?

Table Willingness of providing education

Parental designation	income	status
Teacher	300000	1
Engineer	500000	1
Farmer	100000	1
daily wages	50000	0
Coolie	20000	0

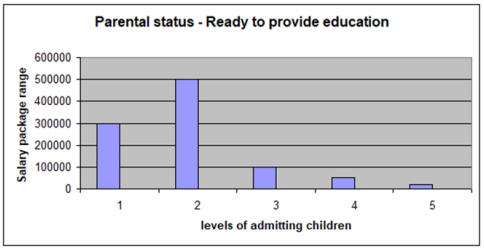


Chart 2.1.2 Willingness of providing education- o- 'No' and 1- 'yes'

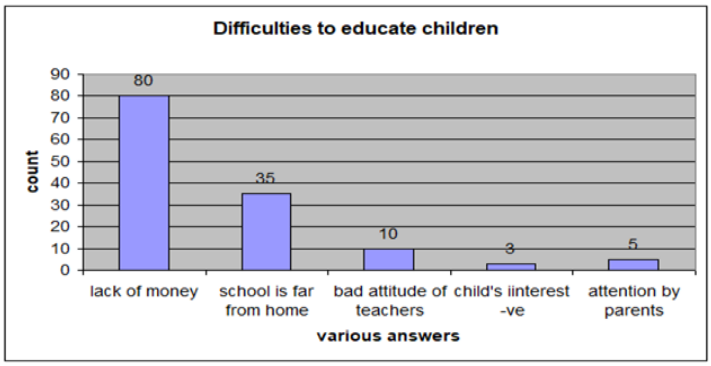
By referring table 2.1.1 and chart 2.1.2 The vast majority of parents 80 % answered "YES" versus 20% who said "NO".

Why it is difficult to educate your children?

Reason	count
lack of money	80
school is far from home	35
bad attitude of teachers	10
child's interest -ve	3
attention by parents	5

Poorly-educated parents mean their children are also poorly-educated because of their economic condition. Lack of money, school is far away from home, kid doesn't want to go to school, the teachers treat kids badly, doesn't aware about the importance of education, don't have a time to sit and teach in home like so many answers are possibility and shown in table 2.2.1 and refer chart 2.2.2

Table 2.2.1. & chart 2.2.2 difficult factors –not admitting in schools



According to the parental position that they do not have enough money to fulfill even the basics need such as uniform, stationery, lunch, and tuition fees. Most of the parents were upset because they could not send their children to curricular activities such as to clear TOFEL, to get coach for preparing Govt., exams, computer, art, , singing, music, dancing etc.

What is the Education level of one parent?

The parent one who is qualified probably want their children to be educated. But what about the other parents who have only secondary, ninth grade and unfinished ninth grade education?

Table 2.3.1 varying earnings depends education level

Education Level	Earnings/per annum
Doctorate	900000
Master's	800000
Bachelor's	600000
Diploma's	500000
Associate's	400000
Higher Secondary	200000
Middle School	50,000
Primary	20,000

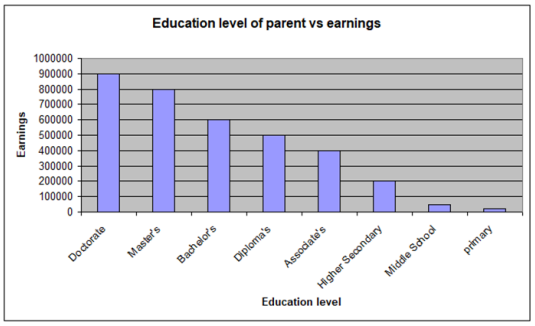


Chart 2.3.2 education level vs earnings

The unanimous answer was that everyone is struggling to provide quality education as a key to open their children's future.

Challenges in a Queue to Face

Unemployment comes in several forms and affects millions of people at any given time.Smart machines are starting to make dramatic changes in the world of work. Some people see this as a boon and some may think curse. Increasing competition and institutional reform, there is an open debate as to the relative roles of labor market reform, technological change. People one who had graduated are having a job and remaining few people are jobless. In addition to that if we take survey about their career, are they signing in their own specialization or something which they adjusted what they got. Reasons may be education, personal skills, internship and majority may be through relatives or friends.

Table 3.1 job guarantee

Job Status	Range
Uncertainty	25%
Confident	45%
Very confident	55%

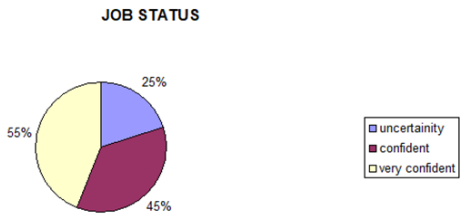


Chart 3.2 Job guarantee

One more important thing in this unemployment problem is how secure the job is. The following table and figure depicts clearly 55% are very confident, 45% confident and rest 25% are uncertain.

Educational System Change - Stone Age to Digital Age

Over the years we have witnessed a significant change in the teaching techniques. An earlier teaching methodology involved recitation and memorization, whereas the modern aids of teaching involves interactive methods. In schools we are following traditional method which is known as conventional system. Ancient times the gurukul system of education, disciples did all the work for their master and which involves listening and writing in sand. The students used to recite lessons by taking turns. Everyone would get a turn to recite lesson. There were no tests. The main focus was on imparting knowledge to children about how to lead a successful life. The pupils were awarded based on their efforts. The traditional method of teaching made with proper time table and have given importance for moral and tune their behavior. The system slowly evolved into class room teaching where board, slates and chalks were used. This system is still in use. The teacher teaches using the board. The children are made to write notes, read and recite them. In this system tests were introduced to check the how well the child has understood what has been taught. The traditional system established customs that had been used successfully over the years. The teachers not only taught lessons but also enforced standards of behavior. Progressive method of teaching focus on addressing individual student's needs. In this modern generation, the way of teaching is to make the students to aware about more activity based, self-learning, encouraging to think and make wonders, clarifying doubts, conducting events to strengthen their academics and personnel skills. Spaced teaching is a modern method of teaching, where the students are taught about a subject using PowerPoint presentation to impart subject based knowledge for a period of 10 minutes and then the students are given a 15 minutes sport session. The aim of this method is to achieve better grades and it is seen that this method does work. This upcoming new style method is more effective than accustom system because this method helps to improve the remembrance power of brain cells to explore knowledge. Traditional techniques use repetition and memorization of information to educate students, because of which the students don't develop the ability of problem solving and decision-making skills. "As with most things, it's all about balance. If our tradition method is ready to cope up with new system is fine or else yet has to be changed to present scenario.

Difficulties faced in today's education

Now a day few people are running education as a business which yields very good profit and entirely commercialized. Each and everywhere, new schools and colleges are being opened, but product's outcome how it is questionable. Getting the quality education is still a dream and don't know when is going to be reality for millions of students.

Poor practical knowledge

In an educational institution we are giving lots of attention to theory and not much concentrate on practical portion and leaving the students to do themselves. Completely ignoring the things and simply focus towards syllabus covering. Once these students clear the exam they forget all the things they have boycotted and appeared for exam sake and clearly shown that they are lack of practical experience.

Lack of research source and skill

Once the course got completed then the students should have the ability to solve any kind of problem which are awaiting in a queue or ready to attempt it. Some students don't want to do research and started to earn money by looking a job which in turn build up their carrier. Still we are lack in exploring our ideas and ideas into action due to the lack of research resources such as persons and components. We are weakening in the part of technological world.

Absence of personality development programmed

Actually, our education system entirely focusing towards securing marks rather than the challenge show to face external world.

Absence of entrepreneurship development scheme

The passed-out students or one who graduated want to get a job immediately their course completion and not think to begin business and hesitating to attempt business flaw suppose happened. They are not ready to take steps to be monopoly in business.

Cast reservation and paid seats

One more toughest challenge what we are facing in Indian education system especially, most of the seats are reserved for some casts and wealthy people. So even some of them are good at academics didn't get chance to come up.

Outdated syllabus

Moreover, we are in the urge position to change the present style of education system in our country. In general, how coin's both the sides head and tail are important like we ensure the value of quality and quantity of educationtoss.

Other

The major problem is that even today the students don't get a chance to choose what they want to study and most of the student study something that their parents decide. Due to this the students don't understand the concept and most of them dropout of the course. Students have poor communication skills and vocabulary. in today's scenario people are having a thought if they don't get any job, safer side thinking to enter into teaching profession with low potential and ready to accept even low basic salary to run their life at least. so, this impact results poor input quality of teachers and their methods exactly repelling a poor output in student's education. Tremendously it affects mass which made a vital role in sustainable dimensions and strategies because teaching is a noble profession and nation building task. The students are suppressed, there is no environment for asking questions or interaction. Last but the most important hurdle, the income of the family also has a great impact on the education. Most of the students don't get an opportunity to study what they want to study because todays education system has become more expensive.

Positive changes needed to reform education/unemployment

Effective measurements, legal actions and procedures are to be taken seriously to bring about some positive changes in the education reformation. The governments both at the national and state levels need to take major policy reforms to increase the scope of quality education and produce employment.

Change in education system

Educational pattern should be completely changed. Course framing should be based on job oriented. Make them too aware about what's happening in and around us and how to jump from hurdles should be given in pragmatism rather than theoretical. We should make our education system one who enroll their admission all should get job guarantee.

Encourage entrepreneur

In India one who don't have a proper platform they are in force to self- employed. They are occupied with different designations such as shepherds, servant made, daily wage, scavengers, and some are standing their own legs by investing small amount of money to start business like idle batter preparation, making flower garlands, beauty parlors etc., but these persons are expecting financial support from us. So rich personalities, kind hearted and broad mind are motivated to come forward to assist them financially.

Think Different

Instead of investing money on machine think in a different way to equip more people will get an opportunity to work and gain money.

Seasonal unemployment

In some sectors such as agriculture, garments, photography, dying industry, printing based industries are seasonal unemployment is found. We can change that by our clever ideas and try to use the technologies which we are having right now.Cottage and textiles should be encouraged.

More importance to placement cell

In our course curriculum plan itself we should give importance to placement which in turn increasing job automatically income inequality to be solved.

In deemed university, govt., institutions, self-financial institutions, autonomous colleges, affiliated colleges under university control all are get together and have a healthy discussion about course curriculum plan and should give emphasis on carrier guidance.

Population control

Periodically Population growth should be checked in order to solve unemployment, problem. Now the trend got changed people all aware about this issue and some of them are innocent have to change. Family planning programmed awareness we should make on those innocence by conduction social responsibility programmes.

Attention to individual's talent

We should give our attention on individual's talent to be identified and guide them in a correct direction and necessary steps to be taken for arranging good platform until they reach their apex.

Conclusion

Education is a powerful weapon to burn the problem unemployment and obviously result income inequality got dramatic change in global economy. As a common person and being in teaching profession my recommendations for better education system would be considering Age factor, in the year 1900 we started our education only at the age of six whereasnow kids are forced to go to school at the age of 2 years because parents both should go to job to balance their economic condition. Second hindrance, in present education system, is an economical factor. Earlier day's single parent was able to take the educational expense of making their child as a doctor. As well said now education is a profitable business with one-time investment, parents are in tough breath to pay the KG fee. Modern generation parents are having a negative thought that if their child admitted in well reputed institution, will get good opportunities and not concentrationthe educational quality. The mind-set of the parents is that once the child is admitted in an institution their duty is completed. Usually in an educational institutions parent teacher meeting held at regular intervals. But how many parents are knowing about this and participating are less count which reveals no proper communication between parents and institution. The syllabus should be more of skill based, practical and job oriented and multidisciplinary. Our educational system should be such that there is job assurance to everyone. Education should be qualitative. Our education system should not only provide subject based knowledge but also train the children to face the challenges in day to day life for their survival in this competitive world.

So, I would finally conclude saying that change can be bought in the system only if everyone joins hands for this cause. Being a teacher and had a healthy discussion with students, understanding the young minds problem and reasonable needs which are come to my eyes induced my mind to pen this paper and as mentioned above are resolved definitely there would be a great impact on the education system which in turn will have an effect on unemployment and inequality.

References

1. Ahmed, M (1965), "Size Distribution of Personal Income and Saving in India 1956-57", in N S R Sastry et al, ends, "Papers on National Income and Allied Topics", Vol III.
2. Ahmed, M, and Bhattacharya, N (1972), "Size Distribution of Per Capita Personal Income in India", Economic and Political Weekly, Special Number, Vol VII.
3. Atkinson, A B (1970). "On the Measurement of Inequality", Journal of Economic Theory, Vol 2.
4. Barchan, P K (1970), "On the Minimum Level of Living and the Rural Poor", Indian Economic Review, Vol 5.
5. -(1971), "On the Minimum Level of Living and the Rural Poor: A Further Note", Indian Economic Review, Vol 6.
6. (1973), "On the Incidence of Poverty in Rural India", Economic and Political Weekly, Annual Number, Vol VIII.
7. (1973a), "The Pattern of Income Distribution in India: A Review", mimeographed. Barchan, P K, anid Srinivasan, T N (1971),

8. "Income Distribution: Pat- terns, Trends and Policies", Economic and Political Weekly, April 24, Vo01 VI.
9. Berge, C (1963), "Topological Spaces", Oliver and Boyd, Edinburgh. Dandekar, V M, and Rath, N (1971), "Poverty in India", Indian School of Political Economy.
10. Dasgupta, P, Sen, A K, and Starrett, D (1973), "Notes on the Measurement of Inequality", Journal of Economic Theory, Vol 6.
11. lyenigar, N S, and Bhattacharya, N (1965), "On the Effect of Differen- tials in Consumer Price Index on Measures of Inequality", Sankhya.
12. Lvdall, H F (1960), "The Inequality of Tndiani Incomes", Economic Weekly, Special Number. Minhas, B S (1970), "Rural Poverty, Land Redistribution and Develop- ment", Indian Economic Review, Vol 5.
13. -(1971), "Rural Poverty and the Minimum Level of Living" Indian Economic Review. Vol 6.
14. Muikherjee, M (1969), "National Income of India: Trends and Structure", Calcutta. -(1972), "Price Information Associa- ted with Principal Distributions of National Income", Economic and Political Weekly, Vol VII.
15. Raj Krishna (1973), "Unemployment in India", Economic and Political Weekly, March 3, Vol VIII.

INTEGRITY AND ETHICS IN BUSINESS

Adhi. Sridevi
HOD, Department of BCA, Vidya Vahini First Grade College, Bangalore

Rudreshwari. G
Assistant Professor, Department of BCA, Vidya Vahini First Grade College, Bangalore

Abstract

Integrity means unity that is the bonding of honest and trust of a person that builds the relationship between his/her co-worker and the organization. It is the basic element that depends on an employee along with ethics i.e. the principles of right and wrong a person should be known at work, which leads to a strong bonding between employee and organization development. Our problem in regarding this topic is that to retain the long-term relationship between the customer and company, since the false promise made by the employee to customer, consumer can lose confidence quickly due bad online reviews and it has to retain consumer loyalty through ethical practices is the main criteria of the presentation. Following are the steps to improve the and retain long term relationship and also to overcome this problem: Accounts and financial works should be transparent that leads to expectation of the company. Selling or marketing product should be genuine: online shopping trusted by the customer when the same is home delivered. Follow-up the promise made to customer leads to outstanding of an organization. Business person should follow the lifestyle of the ethics, be trustworthy in personal life also since it may damage the image of organization. Product name should be genuine to the customer.

Keywords: *Ethics, Integrity in Business, Utilitarianism, Trustworthy, virtue ethics.*

Introduction

"A man is ethical only when life is sacred to him."

- Albert Schweitzer

Business Ethics

It refers to the literature as moral values about right and wrong, honorable conduct reflecting the values. Honesty, responsibility, accountability, diligence are the core elements of ethics. It is a study of proper business policies, corporate governance, insider trading, discrimination and social responsibility. It is to provide quality goods, reasonable price too customer by avoiding adulteration unwanted advertisements. It deals with business situation, activities, and decisions where right and wrong are mentioned. It is just the ethics of responsibility and can be both normative, descriptive disciplines.

Fig. 1: ethics

The term ethics derived from Greek word 'Ethos' i.e. human character deals with right and wrong of actions. Business integrity is a person's level of honesty, moral values, and willingness to do the right things in society. "Success will come and go, but Integrity is forever" that takes a lot of courage to do right things in spite of consequences. Building the reputation takes a lot of time but a second enough to destroy the whole image.

Characteristics of An Ethical and Integral Business

1. **Leadership:** Leader's role is to demonstrate the ethical values in all situations and character depends on decision-making while selecting a path between responsibility and results of profit or gain.
2. **Honor:** it is the basic element of ethics that specifies the sacrifice and contribution towards the organization.
3. **Integrity:** it is combined characteristics of ethical business. It treats the employee with fair, honesty for high quality standard products.
4. **Respect:** to respect the employees by valuing their opinions and equality.

5. **Loyalty:** strong bonding between company and customer leads to future benefits and also to overcome the challenges in worst scenario.
6. **Commitment to Excellence:** performing their duty with well informed, prepared, constant endeavor in work.

"Integrity is doing the right thing, even if nobody is watching."

Ethical Issues in Business

1. **Fundamental issue:** key factor is that relationship of trust between the employee and customer for company success.
2. **Diversity issue:** it is a pool of employees with diverse respect and equal opportunity to work in a comfortable environment leads to business success.
3. **Decision – making issue:** it consist of collecting the data, evaluating and testing, making a decision to reflect the result.
4. **Employee conduct and legal issues:** it depends on employee behavior and work of action.
5. **Vendor/ Customer issue:**to maintain the long-term relationship by preventing the false promise that leads to a good administration work in the company.

Fig. 2:right and wrong in ethics

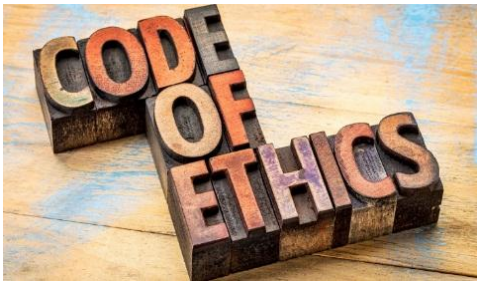


Fig. 3: conduct of ethics

Possible Solutions

1. Educate the staff to overcome the challenges and know about what is at risk in workplace.
2. Truthfulness of employee towards the management and being punctual, genuine.
3. Transparent financial and accounts work for the acceptance of employee.
4. To understand the general rules and regulations to gain good name in the society.
5. Fulfilling the deadlines and positive understanding towards other opinions.
6. Business employee should be trustworthy and lifestyle of ethics to maintain the dignity of an organization.
7. Create a company mission statement that an employee should follow and fulfill his/her commitments towards company.
8. Firm policies for handling critical situations by verbal action or written statements.
9. Training programs at workplaces for employees.
10. Written code of conduct for an employee being a fresher or experienced should know what is and what is not within organization.

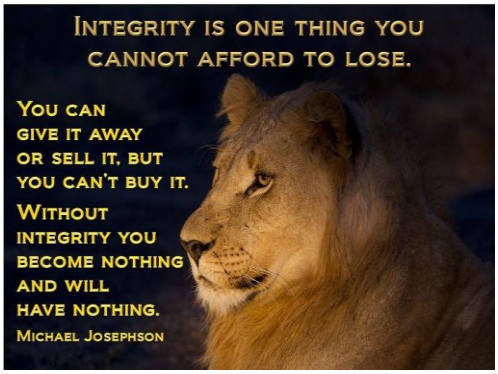


Fig. 4: Power of Integrity

Conclusion

We conclude that **"Business ethics is a straight hard path leads to goal achievement, success."** It is possible only with good ethical behaviour by teaching, demonstrating, being a role model in the work place.

The foundation of **honest organisation built with solid integrity and ethics** value is important to set culture directions and upcoming of nay new company. **Behaviour of conduct** in an employee should adhere as a role model by the junior employee in the company.***"Integrity is telling myself the truth and honesty is telling the truth to other people."***

Spencer Jhonson.

References

1. Andrew crane and Raymond.C. Baumhart- business ethics, safaribooksonline.com
2. Amy Rees Anderson, 2012, simpleeasylearning.com
3. www.smallbusinesschron.com
4. www.enterpreneurship.org
5. Business ethics: Decision making for personal integrity and social responsibility- 3rd edition.
6. www.cheggstudy.com
7. Ashutoshgarg, 2013, business insider – integrity ethics and honesty should be most important aspect of an organization.

SUSTAINABLE TOURISM IN INDIA

Anjali Sankar
Ph.D. Scholar in Economics, Jain University, Bangalore

Abstract

Tourism is one of the major economic activities in the world. Historically, researchers have attempted many definitions of tourism. However, the earliest widely-accepted definition of tourism was given by Hunziker and Krapf(1942). According to the definition, tourism is "a sum of relations and phenomena resulting from travel and stay of non-residents, in so far as a stay does not lead to permanent residence and is not connected with any permanent or temporary earning activity". Tourism has become one of the leading contributors to world Gross Domestic Product (GDP). According to the World Tourism Organization (WTO)'s publication 'Tourism: 2020 Vision', the average annual growth of tourism (world) is forecasted to be around 4.4 percent for the decade ending 2020. According to the publication, the highest growth would be recorded in the East Asia/ Pacific region (6.8%) followed by the Middle East (6.5%) and South Asia (5.8%). Tourism has a number of economic impacts. These include, increase in employment, improvement in the local economy, improvements in social and economic infrastructure, increases revenue to the government, creates new business opportunities. An ideal tourism policy would maximise these positive economic impacts and minimise negative impacts like increase in prices of goods and services, increased cost of living, etc. In addition, there may be possibilities of huge environmental costs which need to be looked into for creating a sustainable tourism destination.

Keywords: *Tourism, Sustainability, Initiatives, Progress*

Indian Tourism Sector

India as a nation is rich in terms of natural blessings, cultural and heritage attractions. Tourism has become one of the leading sectors of the economy and the Ministry of Tourism, Government of India is in charge of the activities of the sector. India has been named by the World Travel and Tourism Council as one of the fastest growing tourism sectors in the world, along with countries like China. The first concrete initiative to develop the sector was in the year 1982 when the first tourism policy was launched. The 'Incredible India' campaign was launched by the Ministry in the year 2011 in an attempt to grab the focus of the world to India as a tourist destination. There are a number of types of tourism that has been promoted in India, which includes medical tourism, pilgrimage tourism, sports tourism and village tourism. A number of collaborations have been undertaken by the Ministry of Tourism with the Ministry of Information and Broadcasting in the past decade to initiate a series of domestic as well as international media promotions on Indian Tourism, especially the scheme of 'Incredible India'. The Rural Tourism scheme was initiated by the Ministry in the year 2002-2003. The major goal of such an initiative was to portray Indian rural life to the tourists and benefit the local economy. Around 186 village tourism sites have been identified by the Ministry from all the States and Union Territories.

Need for Sustainable Tourism

The World Tourism Organization defines Sustainable Tourism as,

"Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities"[1]

Tourism, like any other economic or social activity has its pros and cons. Off late, much has been discussed on the negative impacts of tourism which includes the influences on cultural heritage and environmental degradation of tourism sites. Increasing awareness of these impacts has led our Government to think more in lines of alternative tourism initiatives which are more sustainable in nature.

Sustainable tourism has the following features or characteristics:

1. Sustainable Tourism aims to maintain the significance of local culture and heritage
2. Sustainable Tourism aims to conserve the resources of the destination

[1] http://sdt.unwto.org/content/about-us-5

3. Sustainable Tourism not only tries to let the tourists know about the local culture but also tries to introduce the tourists' culture to the local people
4. Sustainable Tourism encourages the involvement of local people which in turn helps the local people to earn a living

One must be very much aware that sustainable tourism is not to be misunderstood with ecotourism. Ecotourism is basically nature-based tourism but sustainable tourism involves all components of the tourism sector.

Sustainable Tourism in India

The principles of Sustainable Tourism lay a key emphasis on the participation of local communities in tourism. Therefore, active local participation is a major factor in a successful sustainable tourism site. The Indian Government has launched a series of programmes to educate the masses on attitude towards tourism and tourists. The Government had earlier successfully launched the rural tourism sites in India by adding 103 more sites to the rural tourism initiative making the total number of sites 139. The private sector and civil society organizations are also increasingly contributing to these alternative forms of sustainable tourism. A number of seminars and conferences are being held both by the State Governments as well as the Union Ministry on sustainable/responsible tourism. These initiatives have also helped in the economic upliftment of the villages. According to Mr.SujitBanarjee, former Secretary, Tourism, India can take a lead in sustainable tourism and be a model for other countries. He cites the example of Samode village in Rajasthan which is a village economy based on bangle-making and leather and their income has gone up by 300%. Sustainable development thus is a great economic opportunity in front of our villages, without compromising on our traditions.

Sustainable Tourism Initiatives in Selected Indian States

Now let us discuss the status of sustainable tourism in the top nine States in India with the highest number of Foreign Tourist Visit in 2015.

Table 1

Source: India Tourism at a Glance, Government of India, 2015

Share of Top 10 States/UTs of India in Number of Foreign Tourist Visits in 2015

Rank	State/UT	Foreign Tourist Visits in 2015	
		Number	Percentage (%) Share
1	Tamil Nadu	4684707	20.1
2	Maharashtra #	4408916	18.9
3	Uttar Pradesh	3104062	13.3
4	Delhi #	2379169	10.2
5	West Bengal	1489500	6.4
6	Rajasthan	1475311	6.3
7	Kerala	977479	4.2
8	Bihar	923737	4.0
9	Karnataka	636502	2.7
10	Goa	541480	2.3
	Total of Top 10 States	20620863	88.4
	Others	2705300	11.6
	Total	**23326163**	**100.0**

Sustainable Tourism in Tamil Nadu

Tamil Nadu, one among the four South Indian states have clearly topped the list in terms of International tourist arrivals. Chennai, capital of Tamil Nadu, is one of the most preferred destinations after the national capital, New Delhi The Tourism department of Tamil Nadu State Government and the Eco Tourism Society of India (ESOI) have jointly initiated a programme to enhance the sustainable tourism capabilities of the State, to support local communities and to conserve the environment. A number of workshops have been conducted under the Programme with this objective. Administrators in the State have time and again stressed the need for adopting sustainable tourism strategies to improve the socio-economic conditions of the destinations. Highly polluted destinations like the Kodaikanal hills have gained the attention of the administrators and they have acknowledged the need for planned, clean, responsible and sustainable tourism strategies to deal with the issues.

Sustainable Tourism in Maharashtra: Maharashtra has immense tourism potential in terms of its natural attractions. Alongside natural attractions, Mumbai city is one of the most sought after tourist destinations. The Maharashtra Tourism Development Board won the award for Sustainable Tourism at the World Tourism Conclave held in Mumbai in September 2017. The State believes that tourism must be an enjoyable activity but it should not disrespect the environment. Sustainable tourism leads to sustainable development. Sustainable tourism in Maharashtra is currently in its fifth phase of development. Maharashtra also has elaborate ecotourism sites in its Konkan region.

Sustainable Tourism in Uttar Pradesh: Uttar Pradesh, a state in the northern part of India, is one of the most favoured states in terms of Tourist arrivals and has been consistently ranking among the top. The State's rich culture and heritage is one of the major strengths of its tourism industry. The Uttar Pradesh state government has been off late concentrating on the Sustainable development of Varanasi as a heritage site.

Sustainable Tourism in West Bengal: The State of West Bengal has a diverse set of tourist attractions. It is also fast emerging as an all-weather destination. At the West Bengal Tourism Summit of 2018, the Minister of Tourism, West Bengal, had mentioned that the state is growing at a CAGR of 26.5% between FY 2011 and FY 2016, against a CAGR of 14.5% between FY 2001 and FY 2010.One of the major tourism destinations in the State which is of much significance in the cause of Sustainable Tourism development is the Darjeeling Hills/which is already facing a lot of environmental decay due to mass tourism. This is due to the unplanned development of tourism here. The implementation of sustainable tourism concepts can help such destinations immensely to revive and rejuvenate.

Sustainable Tourism in Rajasthan: Rajasthan as a State is highly renowned for its tourism potential. Every year it sees a high demand from domestic as well as foreign tourists due to the highly diversified tourist attractions that is possess, from palaces and forts to desert safari. The role of private players and privatization is being increasingly utilised by the State Government in this sector. In the "Final Report on Perspective Plan for Tourism in Rajasthan" (2017), the Central Government however highlights the need for environmental controls in the sector to ensure sustainable tourism in the State. Rajasthan is one of the leading states in the nation in terms of tourism infrastructure and making the sector eco-friendly would make the State a pioneer in sustainable tourism in India.

Sustainable Tourism in Kerala: Kerala is one of the top tourist destinations in the country, both in terms of national as well as international tourism. In the year 2007, the Government of Kerala launched the Responsible Tourism initiative to address the need for sustainable tourism practices. Kumarakom, a tourist destination in Southern Kerala is the first tourist spot in the country to successfully implement Responsible Tourism. In the year 2013, Kerala Tourism was conferred the United Nations Award - United Nations World Tourism Organization (UNWTO) Awards for Excellence and Innovation in Tourism

Sustainable Tourism in Bihar: Bihar is known for its historical and Buddhist tourism destination. Over the years it has been witnessing a growing trend in domestic as well as international tourist arrivals. In the year 2014, Dr.Deepak Prasad IAS, the then Principal Secretary, Department of Tourism, Bihar, had stated that the Bihar Tourism Development Corporation wished to utilise the inbound tourism potential in the State by integrating the socio-economic activities of the local communities to ensure the development of Sustainable tourism in the State. The Bihar Tourism Policy of 2009 envisages developing tourism as a priority sector of the Government and also ensuring the effective participation of all the stake holders in the community in tourism activities.

Sustainable Tourism in Karnataka: The State Government of Karnataka has launched a programme for community-based sustainable development in Karnataka. The Karnataka Tourism Forum has organized a lot of workshops in the past on the developing sustainable tourism initiatives in the State. The main concentration of the initiative now is small hospitality facilities to ensure more community-n based initiatives. The workshops were held at tourism hubs of the State such as Madikeri, Mysore, Kodagu and

Chikmagalur.Earlier in the year 2013, the Karnataka Eco Tourism Development Board had made an initiative to develop its reserve forests and promote sustainable eco-tourism.

Sustainable Tourism in Goa: Goa, the most popular coastal tourism or beach tourism destination in the country recognised the need for sustainable tourism much earlier. Private players in the sector such as hospitality sector and travel enterprises have recognised its potential and are in a spree to make their brand to fall under the sustainable tourism. There is active participation of local communities in the tourism industry, both in urban and rural areas. Goa is one of the few States in India which have achieved most of the goals on sustainable tourism enlisted by the UN General Assembly. However, there is still a long way ahead of Goa to be able to completely reach its sustainable tourism potential.

Conclusion: One of the most common misunderstandings when it comes to sustainable tourism is that we often consider it to be a synonym for eco-tourism. Sustainable tourism has a wider scope than eco-tourism. Being environment friendly is only a component of sustainable tourism. Sustainable tourism involves the cultural, social and economic sustainability of tourism along with environmental sustainability. India, which is home to diverse cultures, communities and social patterns along with abundant natural resources hence, has a huge potential for sustainable tourism. Though the Ministry of Tourism at the Central level as well as State level departments have initiated sustainable tourism projects we are still in its periphery. There is much to be explored and achieved in this, especially in terms of community-based tourism activities. The topic of sustainable tourism in still confined in academic literature and official discussions and need to be reached out to the public to ensure the effective implementation of sustainable tourism projects.

References

1. 20 Year Perspective Plan for Sustainable 20 Year Perspective Plan for Sustainable Tourism in Rajasthan Tourism in Rajasthan.2017.Department Of Tourism, Department Of Tourism Ministry of Tourism, Art and Culture Ministry of Tourism, Art and Culture, Government of India
2. Bhutia, Sherap. 2014. Growth & Development of Tourism Sector in West Bengal: Issues & Concerns. American International Journal of Research in Humanities, Arts and Social Sciences. 6:3. 239-246
3. Bhutia, Sherap. 2015. Sustainable Tourism Development in Darjeeling Hills of West Bengal, India: Issues & Challenges. Global Journals Inc. 15:3.
4. Bihar Tourism Policy- 2009. 2009. Government of Bihar. Department of Tourism.
5. Final Report on 20 Years Perspective Tourism Plan for the State of Bihar.2003Government of India Ministry of Tourism And Culture Department of Tourism Market Research Division.
6. Ghosh, Prosenjith and Sofique M.A.2010.Sustainability of tourism industry: West Bengal (India) perspective. Proceedings of Regional Conference on Tourism Research, UniversitiSains Malaysia
7. Gunarekha, B. S. and Binoy T. A. 2017.Community Based Sustainable Tourism Development In Karnataka: A Study On Mysuru District. Asia Pacific Journal of Research. 1:L. 121-126
8. Haseena, V. A. and Ajims P. Mohammed. 2014.Sustainable Tourism Strategy Development In Kerala As A Tool Of Growth.Asian Journal of Science and Technology. 5:3. 192-197
9. Making Tourism More Sustainable - A Guide for Policy Makers.UNEP and UNWTO. 2005. p.11-12
10. Mondal, Sanjana. 2016.West Bengal -A Tourist Destination Comparative Analysis of Bengal Tourism Business Model with Kerala & Gujarat. Arabian Journal of Business and Management Review. 6:5
11. Thimm, Tatjana. 2016. The Kerala Tourism Model – An Indian State on the Road to Sustainable Development. Sustainable Development. 25:1. 77-91
12. The New Indian Express. March 4th.Four tourism projects in Kerala under Centre's consideration.2018
13. The Times of India.January 18th.West Bengal Is Fast Emerging As An All-Weather Tourist Destination. 2018
14. http://www.unesco.org/education/tlsf/mods/theme_c/mod16.html 03 March 2018
15. http://sdt.unwto.org/content/about-us-5 03 March 2018
16. https://www.keralatourism.org/responsible-tourism/ 14th March 2018
17. http://www.travelnewsdigest.in/2014/12/bihar-witnessing-growing-trend-domestic-inbound-segments/15th March 2018

THE STUDY OF SUSTAINABLE DEVELOPMENT: DIMENSION AND STRATEGY ON POVERTY (MICRO-FINANCING)

Rabina
Research Scholar, Bharathiar University, R & D Centre, Coimbatore

Abstract

The paper established the facts that poverty is indeed increasing in India based on the poverty eradication on commissioned and sponsored by the World Bank in 1995.The first Sustainable Development Goal challenge to change "End poverty in all its forms everywhere" we analyze the role of microfinance in poverty alleviation by conducting the study of Bangladesh villages. The Agenda of 2030 acknowledges that eradicating poverty in all its forms and dimensions, including extreme poverty, is the greatest global challenge and an indispensable requirement for sustainable development. Sustainable development providing small loans and savings facilities to those who are excluded from commercial financial services has been developed as a key strategy for reducing poverty. Financial sustainability are revolutionizing the sustainable poverty field and suggest that a large proportion of the millions of poor people can be provided access on the institution reducing the strategy of poverty. Understanding how to alleviate poverty is a central concern of development economies, indicated that there are ample evidences that policies designed to foster economic growth significantly reduce poverty, but that policies aimed specifically at alleviating poverty. We provide order of magnitude estimates of financing requirements for sustainable development and identifying financing needs is complex and necessarily imprecise, since estimates depend on a host of assumptions, including the macroeconomic and policy framework, and therefore vary widely. Despite these achievements, there are differences between and within countries, and progress has been insufficient to realize all of the MDGs. Risks and vulnerabilities—including environmental degradation and climate change, as well as risks within the international financial system—have become more pronounced.

Keywords: *Micro finance, poverty eradication, financing eradicating.*

Introduction

The interest in microfinance, during the last two decades: multilateral lending agencies, bilateral donor agencies, developing and developed country governments, and non-government organizations (NGOs) all support the development of microfinance in India many a time the development has taken under conference which should be given ultimate assess that ultimately the problem to develop. The development has wide expansion on micro finance. Practitioners and donors have been developing impact measurement tools and promoting discussion groups to tackle this matter and come up with clear answers.

Objectives of Study

- To study the main points of microfinance.
- To study the effectiveness efficiency of micro finance institution
- To explore knowledge in microfinance in India.

Research Methodology :

The study is a qualitative assessment and quantitative analytical study based on new methods and points occurred in operational research methods of Microfinance Institution .The study is exploratory research in nature, therefore date have been collected from secondary sources like news papers, Journals and others.

Review of Literature :

A review of literature about the microfinance sector in Bangladesh reveals that interest in assessing the performance of microfinance sector is relatively new and modest methods most of the studies were initially conduct to access the impact of microfinance on poverty reduction. Majority of the studies in this area were undertaken from many decade of 2000 mostly by the microfinance institutions and the Bangladesh Poverty Alleviation Programme. A few studies and surveys were also conducted by Bangladesh Institute of Development Economics, State Bank of Bangladesh and the Applied Economic Research Centre. Initially most of the studies examined growth of microfinance by developing measures of outreach and repayment of loans. Such an approach is based on the assumption that if outreach in terms of number of borrowers was increasing and loan repayments were made by the borrowers then microfinance sector was performing successfully in the world.

Find out the different Poverty Reduction

On Poverty Reduction

- Studies have shown that most poor people have benefited from many micro-finance programmes but that narrow targeting is not necessarily a condition for reaching the poorest. Some large-scale non-targeted schemes have proven to reach the poorest in micro finance.
- More poor people can be reached through building competitive, sustainable financial systems which provide a wide range of small-scale financial transactions than through narrow targeted programmes on micro finance.
- Increasing numbers of practitioners are stressing the importance of offering a range of quality, quantity and flexible financial services in response to the wide variety of the needs of the poorest.
- Micro-finance has its limitations. It should not be seen as the only solution to poverty alleviation they should have problem to a solution. In certain circumstances other inter-ventions sometimes could be more effective than micro-finance. For example, in the case of natural disaster situations, micro-finance needs other complementary interventions, like subsidies for responding to the needs of those clients who have lost their capital, revenues from and personal belongings and do not have any liquidity to pay their current debts on it.
- Micro-finance is not appropriate for all the poor and needy people. In some cases micro-enterprises owned by the poor and needy are not ready for to do not need financial products. In other cases, micro-entrepreneurs are not creditworthy on the microfinance.

Major achievements in microfinance: The MFIs and other financial institutions (OFIs) providing microfinance services have expanded their outreach from a few thousand clients from the 1970s to over 10 million in the late 1990s. The developments in microfinance in the Region have set in motion a process of change from an activity that was entirely subsidy dependent to one that can be a viable business. For the coming development the micro finance is giving more benefits and creditability on the bank loans and the debt things.

Microfinance and its impact in development : Microfinance has a very important role to play in development in the scenario to proponents of microfinance states that studies have shown that microfinance plays three key roles in development

- Firstly to Improve the poorest people.
- Secondly to Improve the needy and harms poverty alleviation.
- Thirdly to Improve their upcoming trends in the micro fincance

It helps very poor households meet basic needs and protects against risks,is associated with improvements in household economic welfare, helps to empower women by supporting women's economic participation and so promotes gender equity.

Future Agendas: As explored in this issue, one of the current primary interests of studies on microfinance is its impact on the poor, as it is difficult to modify the designs of microfinance business models without knowing how they affect client welfare and profits. The explore has taken the place to developed in the concern to develop in the knowledge of the people. The poor people should get more and more benefits on the micro finance. We are still in the process of learning, and one must carefully learn from each and every study that is internally and externally consistent to produce the externally applicable knowledge. It is most important to determine the mechanisms making microfinance "successful" in the eyes of the people and how such mechanisms change with the exogenous conditions prevailing in different parts of the world the world is supporting and the main people of the microfinance of the people is also getting more benefits to the needy and poor people in these world.

Conclusion: I have reviewed the evolution of microfinance over the years and examined briefly of the MFI models that exist today. The role of MFIs in development, specifically in relation to alleviating poverty was also examined. The main key challenges facing MFIs today that are affecting their impact on poverty alleviation were seen to be an over-emphasis on the financial sustainability over social objectives, and a failure of many MFIs sustainable development to work with the poorest in society. Therefore, there is a greater need for MFIs to carefully design services that meet the needs of the poor and needy people on this can only be done when MFIs understand their needs and which the poor are working most in need of such services. The impact of microfinance on poverty alleviation is a keenly debated issue.

References

1. www.google.in
2. www.microfinance .in

A STUDY ON "IMPACT OF FURNITURE INDUSTRY'S SALES ON PRE AND POST GST WITH REFERENCE TO BANGALORE REGION"

Sabeeha. S
VI Sem BBA, Koshys Institute of Management Studies, Bangalore

Balakrishnachar. M.S
Assistant Professor, Department of Commerce and Management, Koshys Institute of Management Studies, Bangalore

Abstract

Goods and service tax as it is known is all set to be game changer for the Indian economy. GST had the central objective to provide a uniform taxation system across the country. The implementation of GST will for sure bring about a change in the economy and will have a range of direct or indirect impacts on various financial organisations, consumers, markets, and national GDP. A GST is an all- inclusive tax levied on manufacture, sales and consumption of goods and services at a nationwide level. GST is considered to be a mechanism to enforce the indirect tax on manufacturing, and consumption of goods and service across India, to replace the existing taxation schemes implemented by the central and state governments. The furniture industry is benefiting greatly as a result. In fact, it is estimated that by the year 2019 the global market for furniture will reach an estimated $ 659 billion. As the housing market grows, it is expected that this type of discretionary spending will only increase. In this article, a survey is conducted on the impacts of the furniture industry's sales performance pre and post GST with reference to the Bangalore region. A study finds that the impacts of GST on furniture industry's sales has tremendously increased after the implementation of GST and also has decreased in some series of furniture due to high basic price. Sales has increased due to low tax collection from customers. The study mainly focuses on the sales performance of the furniture series pre and post GST.

Keywords: *Income tax, GST, furniture industry, impact of furniture industry, Bangalore region.*

Introduction

The concept of Goods and Service Tax (GST) was first introduced by a French official during the 1950's. To date, there are 160 countries around the world which have adopted this taxation system. Goods and Service Tax (GST) is an indirect tax levied in India on the sale of goods and service. The tax replaced existing multiple cascading taxes levied by the central and state government." With the implementation of the Goods and Service Tax from 1st July 2017, there will be a substantial amount of changes in the tax rate from the current VAT rate being charged. GST rate play an important role in impacting a business sector. The implementation of GST will significantly improve the competitiveness and performance of India's furniture industry's sales.

Furniture market in India has been witnessing upswings in both office-furniture and household furniture sale for the past few years. It has been estimated that the growth rate of 15 per cent is being achieved every year in the office furniture market.According to a recently published report.The country's furniture market is projected to cross USD32 billion by 2019. The country's furniture market is expected to grow at a rapid pace due to rising disposable income, expanding middle class and growing number of urban households. In addition, the anticipated rise in tourism and hospitality sector is also expected to spur the furniture demand in the country through 2019. Godrej interio, Nikamal, Featherlite, and Durian are currently the leading companies in the Indian furniture market.

Objective of the Study

- To know the important effective impacts of sales from pre and post GST in an Furniture industry.
- To critically analyse the existing procedures relating to implementation of GST.
- To study the effects of GST implementation in the furniture industry
- To compare the existing tax regime with new GST Bill scheme and the transformation in revenue collection.

- To understand the advantages and limitations of the GST implementation on the furniture industry's sales from pre and post GST.

Purpose of the study

The study enables us to have access to various facts of the furniture industry. It helps in understanding the needs, importance and advantages of GST implementation in the organisation. The study also helps us to know the procedures and methods adopted by the furniture industry during the implementations of GST.

Scope of the study

The article involves the study on impacts on furniture industry's sales from pre and post GST that has been conducted in Bangalore region. The project studies various impacts of GST with regarding to sales on pre and post GST.

Review of Literature

Tax policies play an important role on the economy through their impact on both efficiency and equity. The goods and service tax (GST) is aimed at creating a single, unified market that will benefit both the corporates and the economy. The replacement of the state sales taxes by Value Added Tax in 2005 marked a significant step forward in the reform of domestic trade taxes in India (Desai & Patel, 2015). However, like any other policy, implementation of GST has its own implementation effects and many studies in other countries have time to time indicated about people's perception of its impacts. Some studies have also compared people's acceptance of the taxation system between pre-GST and post-GST implementation periods. Australia has experienced significant rises in mortgage costs and sharps declines in housing affordability in the last few decades, particularly since it implemented a new tax system of Goods and Service Tax (GST) in July 2000. Using proprietary data of major buildings societies in Australia for 36 months, the changes of mortgage yield spreads in the pre and post- GST periods for building societies were examined. Results suggested that the lender significantly increased their mortgage charges in the post- GST periods (Liu & Huang, 2011). Ishak, Bin Othman, and Omar (2015) investigated the students' perception towards the newly implemented Goods and Service Tax (GST) in Malaysia. The students'perception was measured through satisfaction analysis. Sets of questionnaire were designed and distributed to 242 students at International Islamic University Malaysia (IIUM) and later analysed using SPSS. Their results showed that majority of the students disagreed with the method taken to implement GST. From this study, it can be concluded that after two months of the society, were not supportive with the implementation of the GST. GST is the most logical step towards the comprehensive indirect tax reform in our country since independence. Garg (2014) reasoned that GST is leviable on the supply of goods and provision of services as well as combination thereof. All sectors of the economy whether industry, business, including Government department and service sector shall bear the impacts of GST. All sections of the economy, that is, big, medium, small scale units, intermediaries, imports, exports, traders, professionals, and the consumers shall be directly affected by GST. He further opined that GST will create a single, unified Indian market to make the economy stronger.

Research Design

Research method

To test the prediction, methodology of comparing the pre and post sales performance of furniture industry after the adoption of GST using the following parameters such as the price list, sales despatch report of pre and post GST. The research has conducted on the Furniture industry. The pre GST (Three months prior) and post GST (after Three months).

Sources of data

Data have been collected from primary and secondary sources.

Primary data: Data that have been collected through direct access research. That is research conducted through direct contacts by interviewing managers of the finance department and calculating the impacts sales on pre and post GST.

Secondary data: Refers to the information accessed based on the findings other than primary sources. Those data are gathered from journals, newspapers, research papers, annual report, account manuals and internet.

Data Analysis and Interpretation

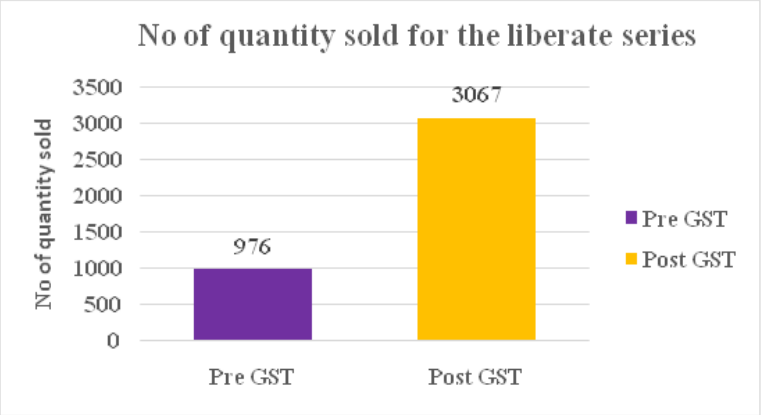
Table 1 Showing sale and tax information for liberate series on pre and post GST

SL. No	Parameters	Pre GST	Post GST	Difference	Changes in percentage
1	No of quantity sold	976	3067	+ 2091	214.24%
2	Tax collection	2918	2836	- 82	2.81%

Analysis

From the above tables represents that, no of quantity sold for the series of liberate pre GST was 976 and post GST was 3067. And no quantity sold increased extremely high by 2091, over all 214.24% sales got increased. With regarding to the tax collection, Rs. 2918 pre GST and Rs. 2836 post GST from customer. It got decreased by 2.81%

Graph 1Graphical representation of sale and tax information for liberate series pre and post GST



Interpretation

From the above graphical representation, we can infer that the sale of liberate series got increased by 2091 quantity i.e., to 3067 from 976 and percentage is 214.24%. It increased due to low cost and low tax collection after GST. Though it had low sale before GST but after GST sales increased tremendously for this series.

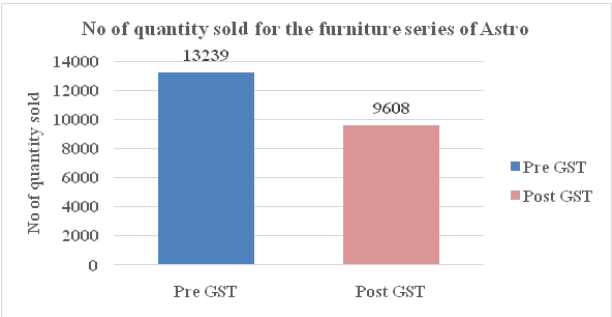
Table 02Showing sale and tax information for series Astro on pre and post GST

SL. No	Parameters	Pre GST	Post GST	Difference	Changes in percentage
1	No of quantity sold	13239	9608	- 3631	27.43%
2	Tax collection	1572	1527	- 45	2.86%

Analysis

From the above tables represents that, no of quantity sold for the series of Astro pre GST was 13239 and post GST was 9608. And no of quantity sold decreased by 3631, overall 27.43% sales got decreased. With regarding to the tax collection, Rs. 1572 pre GST and Rs. 1527 post GST from the customer. It got decreased by 2.86%.

Graph: 2Graphical representation of sales and tax information for Astro series on pre and post GST



Interpretation

From the above graphical representation, we can infer that the sale of Astro series got decreased by 3631 quantity i.e., to 9608 from 13239 and the percentage 27.34%. It decreased due to high cost of the Astro series after the GST implementation. Though it had good sale from the several years.

Findings

- Liberate series extremely got increased by (214.24%).It increased due to low basic price of the product and the tax collection was also less compared to the pre GST. Though the sale was not good from several years but after GST the liberate series sales was too high.

- The sale of Astro series got decreased by (27.43%) due to high basic cost after GST, though the series had good sales from several years.
- (37.55%) of sales is increased for the furniture, Amaze series post GST but the sale pre GST was bit low compared to post GST.
- (37.28%) of sales is decreased for the furniture, bodyline series post GST. The sale pre GST was quite good for this series due to high basic price of the product the sales got too low suddenly after post GST.
- (12.06%) of sales got decreased due to high cost of the Advantage series
- (2.56%) of sales for the contact series got increased due to low collection of the tax money from the customer, and this made the companies to prefer for the contact series to give comfort to their employees.
- The sale for the FB student series got increased by (145%) due to low collection of tax. So the schools and colleges preferred to buy FB student series.
- Bruney series sales got increased by (9.43%) suddenly after GST. These series are basically visitor's chairs which are made of iron, steel on which GST is rate is less, so the cost of this series got decreased. So the sales got increased.
- 95.38% of sales for the costa series got increased post GST. It got increased due to low cost of the series after GST.
- Sale of the focus series got increased by (19.17%) thought it had low sales in several years. But after GST the sale for this series got increased.
- Anatom series sale suddenly got decreased too low by (60.23%). Due to the high basic cost of the series. These series had more demand from the customers but due to high cost the sale got decreased to more extend.
- The sale of forum series got decreased by (41.73%), though the tax collection was less from the customer, the customer did not prefer much to buy these series.
- (2.31%) sale of the Ergon series got decreased, these series sales did not affect much because the GST. the sale got reduced by 19 quantity.
- The sale of I support series had a sudden increase by (192.11%) after GST these series sales got tremendously high, though the sale of these series was low pre GST.
- (2.35%) of sale for the magna series got increased due to low collection of tax, after GST these series are expected to have good sales.

Suggestions

- To avoid losses, the furniture company's has to take corrective measures to overcome the tough competition and reduce cost of production.
- As the actual basic price of the products for the recent years are satisfactory, the furniture company's has to try its level best to maintain the same.
- Some innovative strategies like implementation of new technologies, new marketing techniques etc. have to be adopted to increase the level of sales.
- Educational institutions should be given the knowledge about the furniture company's product. So that the sale will increase when the educational institutions make purchases.
- Make the advertisements on different media such as TV, internet, newspaper and radio and adopt new digital marketing strategy for marketing their furniture etc., so that customers get to know about the product.

Conclusion

Taxation often is hailed to be a crucial factor for the economy. Like many other countries, India has adopted GST after many years of constitutional considerations. This has been said to bring uniform tax system across the country and to bring most of the positive changes to economy and growth in general.

However, with relation to people's perception to possible effects of GST implementation, the study finds that whereas several positive changes are expected to come forward, some unseen and untested components also exist.

The study mainly concentrated towards "The impacts of GST on furniture industry sales performance". And to analyse the sales pre GST and post GST whether the sales is increased Pre GST or decreased post GST. It has found that some series sales has tremendously increased after implementation of GST, at the same time there is sudden decrease in some series of furniture. The awareness among the customer, has to be made as what are the benefits they are getting after the GST implementation. It is expected that the furniture industry's sales will go high due to low tax collection compared to pre GST. Some innovative strategies like implementation of new technologies, new marketing techniques etc. have to be adopted to increase the level of sales.

Most of the general public performs the purchasing decisions from either carpenters or local furniture shops. This is because of the unorganised sectors, this could be cleared by performing excellent branding decisions.

References

1. Indian journal of finance July 2017, December 2017.
2. www.techsciresearch.com
3. Zabri, S. M., Ahmad, K., & He, T.G (2016). Understanding of Goods and Service Tax (GST) and Spending Behaviour among Malaysian Consumers. International Business Information Management Association.
4. Palil, M. R., & Ibrahim, M.A (2011). The impacts of goods and services tax (GST) on middle income earners in Malaysia. World Review of Business Research, 1(3), 192-206.
5. Oladipupo, A. O., & Izedonmi, F.P. (2013). Public perception and attitude towards value added tax (VAT) in Nigeria. I business, 5, 126 – 135. DOI:http://dx.doi.org/10.4236/ib.2013.54016.
6. Liu, B., & Huang, A. (2011). The impacts of the GST on mortgage yield spreads of Australian buildings societies. Journal of modern Accounting & Auditing,7 (9), 986-933.

A STUDY OF INSTITUTIONAL SOCIAL RESPONSIBILITY WITH COMPARISON TO CORPORATE RESPONSIBILITY

Meghana. P.V
Assistant Professor, BMS College of LAW, Bangalore

Gayathri.V
Assistant Professor, BMS College of LAW, Bangalore

Abstract

While Corporate Social Responsibility has already picked pace all around the world, the next big thing is 'Institutional Social Responsibility'. In which educational institutions do their duty towards the society. A concept that includes the dimensions of social responsibility, management model and whose strategic focus is made up of social and environmental responsibility, ethical values and sustainability in its results and impacts. These dimensions should be incorporated and integrated into educational institutions, in an interdisciplinary manner, aligned with the mission, identity and daily activities. Social responsibility is one of the mainstays that support the academic and research work, and it is also one of the strategic priorities, because it is believed that the role of every educational institution involves something more than simply imparting of knowledge and skills to students and, as active agents of social change, finding solutions to social problems. This responsibility implies taking on the role of leader in the creation of a culture of social responsibility in society through ones' own example and action, and holding responsibilities and objectives of a socially responsible academic institution. This research paper will highlight what activities can be conducted as part of 'Institutional Social Responsibility'.

***Keywords**: Corporate Social Responsibility, Institutional Social Responsibility, Educational System, Educational Institutions, Higher Education.*

Introduction

The broadest definition of CSR is concerned with what is or should be the relationship between global corporation, governments of countries and individual citizens. More locally the definition is concerned with the relationship between a corporation and the local society in which it resides or operates. Another definition is concerned with the relationship between a corporation and its stakeholders.

Educational institutions build moral essence and ethical values to produce socially desirable behaviour, personality and character which promote innovation, peace, equal opportunities and justification among individuals, society and nation. There is necessity to reconsider the roles of colleges, curriculum and methods of teaching and evaluation in promoting the Social Responsibility by preparing programs which promote the social awareness and to design courses that enrich the student's humanistic knowledge in different fields that suit Educational Institutional social status.

Institutional Social Responsibility

The economic, political and social changes that took place over the past decades have had an impact also on the European higher education institutions, which have undergone an ample reform process meant to meet the new challenges they are facing. Globalization, the knowledge society, innovation, the development of technologies, a growing emphasis on the market forces are among the key factors, which influence the universities' mission, organisation and profile, the mode of operation and delivery of higher education. Educational Institutions increasingly need professional management structures, similar to corporate type organisations. A highly competitive market requires Educational Institutions to develop competences and skills that were previously not required. Specifically, this refers to resources management and management of the relations to students, or in matters of university branding. The mission of any Educational Institutions has been expanded beyond the framework of teaching and research. Nowadays, it includes service to the community in which the educational institutions are situated, partnership with surrounding communities and other stakeholders, research shows that currently the important stakeholders are students, who are actually studying at a given educational institutions to its potential. Some universities refer to themselves as 'engaged' institutions involved in civil and community

service or 'outreach', such as members of the global Talloires Network of 363 universities in 77 countries. More and more universities around the world are integrating social responsibility into their mission statements, including their research and teaching missions, arguing that higher education is better off when it gives back to the society that is responsible for funding it.

Corporate Social Responsibility Conceptual Framework to Institutional Social Responsibility

CSR must be understood as a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis. Other terms used for CSR in specialty literature are corporate responsibility, corporate citizenship, corporate sustainability or corporate sustainable development. This definition helps to emphasize that: CSR covers social and environmental issues; CSR is not or should not be separated from business strategy and operations: it is about integrating social and environmental concerns into business strategy and operations; CSR is a voluntary concept and a very important aspect of CSR is how enterprises interact with their internal and external stakeholders (employees, customers, neighbours, non-governmental organizations, public authorities, etc.)

Another widely used definition of CSR is that of the World Business Council for Sustainable Development, stating that "Corporate social responsibility is the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large." Trying to explain the concept of CSR, we can simply say: more than ever before, stakeholders require that business should function in a responsible way. While pressures to make profits are higher, stakeholders expect ever increasing standards of accountability and transparency. Business responsibility – and its relationship to the community in which it operates and seeks to serve – is more important than ever. CSR is about the ways an entrepreneur can add value to his business by taking a closer look at some of the social and environmental aspects of the operations.

Social responsibility can be said "obligation of an organization's management towards the welfare and interests of the society which provides it, the environment and resources to survive and flourish, and which is affected by the organization's actions and policies".

Considering the above said, it is difficult to define Corporate Social Responsibility, but it is more difficult to agree on a definition of the Institutional Social Responsibility (ISR). It is about the need to strengthen civic commitment and active citizenship; it is about volunteering, about an ethical approach, developing a sense of civil citizenship by encouraging the students, the academic staff to provide social services to their local community or to promote ecological, environmental commitment for local and global sustainable development.

The concept of ISR is "a policy of ethical quality of the performance of the institutional community students, faculty and administrative employees via the responsible management of the educational, cognitive, labour and environmental impacts produced by the university, in an interactive dialogue with society to promote a sustainable human development." The economic, political and social changes that took place over the last decades have had an impact on the higher educational institutions, which have undergone an ample reform process meant to meet the new challenges. Globalisation, the knowledge society, innovation, the development of technologies, a growing emphasis on the market forces are among the key-factors which influence the educational institutions' mission, organisation and profile, the mode of operation, delivery and standard of higher education.

Educational Institutions as Organizations and the Changing Framework to the Society

A recent change in the higher education system refers to the 'corporatisation' of higher education has the changing forces in higher education in two categories: 'external' to the universities and 'internal'. The former includes: the relative decrease of public expenditure for higher education institutions; a growing emphasis on economic rationality in the understanding and contextualisation of public institutions and services, universities included; the increase of stakeholder intervention in issues perceived until recently

as internal to the institutions of higher education and research; and a perceivable shift in students' expectations and demands vis-à-vis university education" The internal forces to the universities „are often rooted in the apparent tensions between research and teaching structures". In this context, universities as organizations, are supposed to respond to change and adapt in order to meet the challenges of today's and tomorrow's world.

There are some visible trends in the educational sector. Some of these trends are universal, even if there are differences between countries due to culture and demography:

1. The most important development is the growth of the world student number. In other terms, higher education is becoming universal. Another visible trend noticeable especially in several countries refers to age access in the institutions, namely to the growing age range of students in universities. This means that more and more people enter higher education institutions at different times of their adult life.
2. The second trend in the university sector underlined by the above-mentioned study was named 'institutional drift'. This term refers to the fact that in many countries higher education system expanded for a number of institutions offering vocational or professional programmes have recently joined the university community. As a result within the system the relative weight of these programmes have been growing. The system of higher education is growing massively, worldwide, and more and more professional and vocational fields are entering the higher education arena; as a consequence, the tension between the academic and practical approaches becomes perhaps more noticeable.
3. Another obvious trend which manifests both within Europe and beyond, around the globe refers to the fact that higher education becomes to certain extent a business activity.

Institutional Social Responsibility's Community Engagement in India

Despite India's economic growth, the country continues to witness poverty, marginalization and deprivation, structurally located in rural, tribal, slum, homeless, Dalit and Muslim households. New forms of social exclusion, urban poverty, environmental degradation, conflict and violence have also emerged in the past decade. Ensuring inclusive development, democratic governance and sustainable growth require new knowledge, enhanced human competencies and new institutional capabilities in the country. It was expected that education would contribute solutions to these problems to some extent. However, in spite of enhanced investment on expenditure, leading to increased enrolment, these issues remain largely unattended. The role of institutions of higher education in societal development seems to be the potential missing link.

Today the `19th century idea' of the university is undergoing drastic changes. There is conflict between different goals of higher education, social transformation and attainment of social justice through education on the one hand, and on the other, education as means to individual prosperity and advancement. There are divergent opinions between education as a public good and education as a commodity for private consumption. Further, a significant proportion of the new entrants into higher education in India are going to be from groups that have traditionally not accessed the post-secondary education; thereby, making the social composition of the classrooms, more heterogeneous than ever. This creates an opportunity for promoting learning of the students, who come from diverse communities, in a manner that they may take the benefits of higher education back to these communities and at the same time also draw upon the knowledge nurtured by such communities. The question is, importantly, one of integration of knowledge – bringing together education and work, theory and practice, university and society. This kind of integration is an urgent task at a time when India is investing heavily in its higher education sector and would like to see positive transformation in human resources in a relatively short period.

The economic development of the country hasgrown the service sector in the informal and small-scale social economy, which would also entail competency up gradation through new forms of knowledge

systems and educational provisions. The challenging goals of skills development as envisaged in the National Knowledge Commission, and the huge requirements of capacity enhancement in hundreds of municipalities alone would require many more knowledge workers in the next decade. Teachers and students in institutions of higher education can play their roles of public intellectuals in support of such efforts, and institutions of community knowledge can be developed to support such requirements.

As many Indians continue to live in rural India, and many rural communities are disadvantaged, it follows that there should be substantial academic engagement in teaching and research with rural India. Areas of study would come from many disciplines and be interdisciplinary, including best practices in rural development, rural health issues, natural resource management, livelihoods diversification, poverty alleviation strategies and good governance. An emphasis on community engagement is an opportunity to inspire the systematic development of resource materials on the rural sector to build the knowledge and capacity needed to empower disadvantaged rural citizens.

Most of the innovative examples of community engagement by institutions of higher education tend to focus on 'helping' the community through the students. Students volunteer to support local schools, clinics, etc.; they help in tree plantation, or garbage collection. In many such examples, the purpose of engagement is almost welfarist, based on the assumption that community needs knowledge and expertise that students bring. The *second* general purpose in these engagements is learning of students about the local realities through volunteering of their time and efforts, periodically; usefulness to local communities is a secondary consideration, if at all.It is important, therefore, to more clearly and forcefully mandate that the core purposes of such community engagement by institutions of higher education is to serve mutually agreed interests of both communities and institutions. This implies that the partnership is mutually beneficial, and based on give and take by both sets of parties. Its translation in practice would entail recognition of authentic and actionable knowledge that communities have, which institutions can learn from; and empirical and theoretical knowledge of a macro nature that institutions have from which communities can benefit. It also implies that the thrust of this engagement is mutual empowerment, in the quest of supporting more democratic citizenship in the communities, amongst the students, and academics alike. This means that:

1. The engagement must be seen as one of the core purposes of contributions that institutions of higher education make—in addition to teaching and research; this contribution is a combination of citizenship building, public service and social responsibility and accountability.
2. It thus implies that community engagement would be a core mandate of such institutions, integrated in the two core functions of such institutions---teaching (curriculum, local issues, practicum, etc), and, research (accessing local knowledge, identifying local issues/problems for study).
3. It will be applicable to all faculties, curriculum, courses and disciplines, and not 'ghettoised' in social sciences or service oriented faculties alone. Thus, faculties of natural sciences, engineering, arts and music, etc. will also have to creatively think of ways in which their own teaching and research activities can embrace community engagement meaningfully, so that both functions of teaching and research can also improve through such an engagement.
4. iv)This will imply that students get formal credits for the work they do in their community engagement, preferably through their existing courses. It will also mean that faculty get 'recognised' and rewarded for their contributions to community engagements (much in the same way as they do for teaching and research).
5. It will entail mainstreaming community learning and change as essential principles for curriculum development for future citizenship; institutions of higher education thus embed themselves in the larger national efforts of creating active, informed and ethical global citizens of India

Institutional Social Responsibility's Community Engagement on Global Level

The second UNESCO conference on higher education held in Paris in July 2009 recognised the significance of social responsibility and community engagement for institutions of higher education; its

declaration stated explicitly that "Higher education is a public good and the responsibility of all stakeholders". "Higher education has the social responsibility to advance our understanding of multifaceted issues...and our ability to respond to them... It should lead society in generating global knowledge to address global challenges, inter alia, food security, climate change, water management, intercultural dialogue, renewable energy and public health." While progress in science and technology has brought considerable benefits for many, the associated rapid growth, increasing technology and consumerism have left a legacy of poverty, social exclusion, inequality and injustice, cultural corrosion, illiteracy and environmental deterioration. Education Institutions can no longer continue to stand aloof and disconnected but, rather, must create opportunities and become spaces of encounter where students and communities of the 21st century can learn together to become more active, engaged citizens in the creation of knowledge for a more just and sustainable world. In their present formulation, institutions of higher education are expected to serve three missions: teaching, research and service. The mission of "service" is seen independent of teaching (or education) and research (or knowledge). In operational terms, primacy is attached to the teaching and research functions of Educational Institution; "service" is undertaken afterwards. Many connotations of "service" tend to assume that knowledge and expertise available to Educational Institutions will be transferred to communities and thus help them address their problems. No assumption is made that community engagement may sometimes actually contribute to improvements in Educational institutions, especially to their teaching and research functions. It is important to approach the challenge of engagement by Educational Institutions in larger society in an integrated manner, to be able to explore ways in which this engagement enhances teaching (learning and education) and research (knowledge production, mobilization and dissemination). The engagement should be approached in ways that accept multiple sites and epistemologies of knowledge, as well as the reciprocity and mutuality in learning and education through such engagement. In this sense, it calls upon policy-makers and leaders of Educational Institutional around the world to "rethink" social responsibilities of higher education and to become part of the societal exploration for moving towards a more just, equitable and sustainable planet over the next decades.

There is now a growing trend of community-university engagement worldwide:-

1. The **Global University Network for Innovations** (GUNi)Conference is an international forum for debate on the challenges facing higher education. GUNI 2013 wants to focus on Knowledge, Engagement and Higher Education: Rethinking Social Responsibility. In this edition it looks at critical dimensions in our understanding of the roles, and potential roles, of higher education institutions as active player in contributing to the creation of another possible world. It seeks concepts, descriptions, practices, research outcomes and learning methodologies able to show the growth of the theory and practice of engagement as a key feature in the evolution of higher education. Cristina Escrigas, Executive Director of the Global University Network for Innovation (GUNi), agrees it is time to "review and reconsider the interchange of values between university and society; that is to say, we need to rethink the social relevance of universities". Humanity, she continues, "is now facing a time of major challenges, not to say serious and profound problems regarding coexistence and relations with the natural environment. Unresolved problems include social injustice, poverty and disparity of wealth, fraud and lack of democracy, armed conflicts, exhaustion of natural resources and more".
2. GUNI convened its third report on Higher Education in the World in 2008 on 'New Challenges and Emerging Roles for Human and Social Development'. This Report analyses the latest knowledge, research, experiences and practices to rethink and propose new routes for the interchange of values between higher education institutions and society. This may be achieved through reconsidering the role that is assigned to higher education in terms of its contribution to human and social development in economic, political, social, human, environmental and cultural spheres.
3. **Global Alliance for Community Engaged Research** (GACER) began in 2008 with the purpose of promoting community-university partnerships in research in a manner that includes the knowledge of

the community in co-production. It is a global network to influence policy development and to share lessons within key regional and global spaces and it serves as a link to regional and global networks around the world.On September 23, 2010, eight international networks supporting community–university engagement across the globe gathered to issue a call for increased North-South cooperation in community–university research and engagement. They called for "all higher education institutions to express a strategic commitment to genuine community engagement, societal relevance or research and education and social responsibility as a core principle."

4. The **UNESCO Chair** in `*Community Based Research and Social Responsibility in Higher Education'* grows out of and supports the UNESCO global lead to play "a key role in assisting countries to build knowledge societies". This recently created UNESCO Chair uniquely has its home in two complementary but distinct institutions. One of them being the Society for Participatory Research in Asia (PRIA) located in New Delhi, India; headed by Dr. Rajesh Tandon. The UNESCO Chair supports North-South-South and South-South partnerships that build on and enhances the emerging consensus in knowledge democracy. It strengthens recent collaboration between the Higher Education section in UNESCO, the Global University Network for Innovation (GUNI) and the Global Alliance on Community University Engagement (GACER). It co-creates new knowledge through partnerships among universities (academics), communities (civil society) and government (policy-makers) leading to new capacities; new solutions to pressing problems related to sustainability, social and economic disparities, cultural exclusion, mistrust and conflict; generates awareness among policy makers; enhanced scholarship of engagement; and modified pedagogy of community based research.
5. **Living Knowledge Network in Europe**has emerged from the movement of Science Shops supported through many European governments and EU over the past decade.These 'science shops' are intermediary structures between universities and local communities to mediate research on community identified problems jointly. Science Shops have primarily comprised of engineering and natural science disciplines.
6. **PASCAL International Observatory** has focused its attention on promoting university partnerships with regional and local governments over the past decade. The whole essence of PASCAL is on sharing knowledge, experience and mutual learning; and in bringing international knowledge and experience to bear on local issues in a way most appropriate to its members. PASCAL has launched several ground-breaking international research and development projects, using innovative methodologies, and designed to secure practical outcomes at regional level and had helped build relationships and dialogue between the policy and research communities in innovative ways.
7. The **Talloires Network** on Civic Roles and Social Responsibilities of Higher Education began in 2005 and now has more than 200 universities as its members worldwide. Its focus has been on the promotion of university engagement in communities to strengthen democratic citizenship.
8. Another important mechanism is to promote community engagement in specific research projects by creating a window of research funding for joint community-institution proposals. The most innovative early start to this approach came from Canada by its Social Science and Humanities Research Council in 1999. This very popular scheme is called **CURA (Community University Research Alliance)**. Similar models have been adopted in USA for health science research and in Europe for natural sciences research.

   A key principle of this research funding is to incentivize such research where communities see value and are willing and able to participate in the very activities of research; it is thus a promotion of participatory research methodology where research is with communities, and not just 'for' them. This approach also ensures accountability of research process and outcomes to a wider community.
9. In Malaysia, the government had invited universities to develop strategic plans for community engagement, and then selected proposals for funding over 3-5 years. This has generated some very

innovative efforts in several Malaysian universities. Two regional conferences on university-community partnership have been organised in Malaysia in the recent past.

Conclusion

Demand for public accountability and local relevance of higher, post-secondary education is growing rapidly in many societies; this demand is being responded to in many different ways by different types of institutions. Some respond through service learning and student internships; some by co-production of knowledge where local communities act as partners; some others bring in the experiences of communities and practitioners in designing curricula and teaching new problem- and issue-centered courses. This social responsibility is expressed both inside and outside the institutions. Inside, it is expressed in the manner in which institutions are governed, the values and principles of citizenship that are integral to education, and respect for diversity and human rights as guiding beacons for conducting the core business of such educational institutions. Externally, the process of engagement with communities and practitioners – in civil society as well as government and the private sector – is premised on mutual respect, shared influence and openness to two-way learning.Practical manifestations of this take place in partnership projects, education based on lifelong learning and recognition of prior learning based on practical knowledge. Inquiry into the institutional, policy and leadership aspects of such approaches has lagged behind practice in a diversity of settings and contexts.

References

1. Gazdar, K. (2008). In A.Habisch, R.Schmidpeter& M. Neureiter (Eds). Handbuch corporate citizenship.
2. Corporate social responsibility für Manager (pp. 191-197). Berlin: Springer.
3. M.M.B. Slaihate, International Journal of Education, Vol. 6, No. 4, 2014 (71-92)
4. Asia-Pacific Journal of Cooperative Education, 2010, 11(1)
5. Michael, S.O. (2004) ‘In search of universal principles of higher education management and applicability to the Moldavian higher education system‘. The International Journal of Educational Management, vol. 18, no. 2, pp. 118–137. http:// dx.doi.org/10.1108/09513540410522252
6. Baron, D. (2007) ‘Corporate social responsibility and social entrepreneurship‘, Journal of economics and Management Strategy, vol. 16, no. 3 pp. 683-717, http://dx.doi.org/10.1111/
7. j.1530-9134.2007.00154.x
8. (Vasilescu et al., 2010).
9. http://www.universityworldnews.com
10. Commission Green Paper 2001: “Promoting a European Framework for Corporate Social Responsibility”, COM (2001) 366.
11. CSR: Meeting Changing Expectations, 1999
12. Business Dictionary (2009)
13. CSR: Meeting Changing Expectations, 1999
14. Felt (2005) (pp. 17-18)
15. UNESCO (1991). The Role of Higher Education in Society: Quality and Pertinence.
16. UxandraVasilescu et al. / Procedia Social and Behavioral Sciences 2 (2010) 4177–4182
17. TejaswiniNiranjana, Centre for the Study Of Culture And Society.
18. 1979, Prof.UpendraBaxi, former Vice Chancellor of Delhi University, called for "socially relevant legal education" that would address the needs of India's people.
19. Ex-Law Minister M. Veerappa Moily voiced concern by stating that the rural poor “seem to be outside the formal system today”
20. Jane Schukoske, CEO, Institute of Rural Research and Development
21. Society for Participatory Research in Asia, www.pria.org
22. www.communitylearningproject.org
23. www.guni.rmies.net
24. www.communityresearchcanada.ca.
25. Refer to Annexure 2 for details

ENTREPRENEURSHIP EDUCATION: AN IMPORTANT TOOL FOR SUSTAINABLE DEVELOPMENT IN INDIA

Roopa. M.C
Assistant Professor, Department of Commerce, SBRR Mahajana First Grade College, Mysore

Nooruddin.S
Assistant Professor, Department of Commerce and Management, Indo Asian Academy Degree College, Bangalore

Abstract

Sustainable development plays an important role in a developing country like India, which is facing poverty, youth and graduate unemployment, overdependence on foreign goods and technology; Low economic growth and development, compared to other developing countries. Sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It can be obtained by using a tool called entrepreneurship education, as entrepreneurship plays a pivotal role in the economic development of a country. Entrepreneurship is a process where entrepreneur turns his new idea into reality taking on financial risk in the hope of profit. It is a process which helps in poverty elevation, resolve unemployment to the maximum and overall development of the country. Therefore imparting entrepreneurial education becomes very important. This paper stresses the importance of entrepreneurship education towards enhancing sustainable development in India and also argues entrepreneurship education will equip the students with the skills with which they can be self-reliant. The objectives and strategies for re-designing entrepreneurship education are also discussed. The paper also recommends the need of entrepreneurial skills that to be imparted at all levels of education.

Keywords: *entrepreneur entrepreneurship education, sustainable development*

Introduction

The need for entrepreneurship education started emerging in the mid-1980s in India to have an overall development in the economy.Political instability and inconsistencies in the social-economical policies of successive government led to the emergence of unemployment and poverty. To overcome this we need an entrepreneur who creates job for himself and for others, setting stage for a flourishing economy. A job seeker is a burden to the economy and an entrepreneur (manager or CEO) employed by large companies use their intellect and creativity in enriching the corporation, where as an entrepreneurmakes themselves and their nation sustainable and rich. Entrepreneurship is becoming a focal point for the various economies of the world as a result of its potency to greatly influence economic growth and development through entrepreneurial drive and persistence (Kuratko, 2009). Entrepreneurship is a way through which we can check the exploitation of customers from large corporations and MNC's. Since MSME's are the backbone of large industries as it caters their need, if we encourage entrepreneurship we will not only increase their market in India but also help them to create demand for their goods in overseas. They help to make the `made in India` brand more acceptable and export market competitive. To have sustainable development in the country, the Government should realize the importance of entrepreneur who can help the country to grow at desired rate. Therefore the Government should frame the policies to nurture and promote budding entrepreneur. So, there is a need for Indians to step in more into the programme of entrepreneurship, build intellectual property and create wealth, which in turn helps to fund more startups by boosting the economic condition. By doing this India may become hotbed of innovation. To do this, the Government needs to focus on entrepreneur education to create a pool of trained and highly skilled entrepreneurs.

Research Methodology

Objectives

- To study the evolution of entrepreneurship education in India.
- To study the importance and role of entrepreneurs in Indian economy.
- To study the importance of entrepreneurship education for budding entrepreneurs.

- To study the challenges faced by entrepreneurship education in India.

Research Design: Exploratory

Type of data: Secondary data

Sources of data: Books, Journals, Magazines, Internet,

Entrepreneur, Entrepreneurship, Entrepreneurial Education and Sustainable Development

Entrepreneur is an innovating individual who works as a catalyst in boosting the economy. He is one who is imbibed with innovation, creativity and an inner zeal which needs to be sparkled. Meredith (1983) defined an entrepreneur as a person or persons who possesses the ability to recognize and evaluate business opportunities, assemble the necessary resources to take advantage of them and take appropriate action to ensure success. Entrepreneurs are people who constantly discover new markets and try to figure out how to supply those markets efficiently and make a profit. He is a person that searches for change, responds to change, and exploits change by converting change into business opportunities. Entrepreneurship, according to Omolayo (2006) is the act of starting a company, arranging business deals and taking risks in order to make a profit through the education skills acquired. Entrepreneurial education is an education and training given to empower students who has innovative ideas and transforms them to profitable activities. It seeks to provide students with the knowledge, skills and motivation to encourage success at various levels. Sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It can be obtained by using a tool called entrepreneurship education, as entrepreneurship plays a pivotal role in the economic development of a country.

Importance of Entrepreneurship Education

Education is an important factor to orient an individual to entrepreneurship. Education may be formal or informal. The informal learning stresses reinforcement patterns on the acquisition and maintenance of entrepreneurial behavior such as creativity, maximum utilization of resources, ability to drive, ability to take calculated risk among others and also the importance of Role models in that area. Role models may be parents or peer groups who train them in entrepreneurship. Formal education is also positively correlated with entrepreneurship as they try to imbibe the quality of entrepreneur among the students through lectures, presentation, case study and handouts. Also teaching and monitoring them in preparing business plan. It has also been reported that entrepreneurs of healthy units, on an average, had a higher level of education compared to those who own sick units. Entrepreneurship education needs to gain firm ground to change the face of the economy. It is only under such a scenario that we would witness a longer queue of job providers than job seekers. Due to liberalization and globalization in 1990's India has started to give importance to promote and nurture entrepreneurship at various levels. From past two decades it has become a challenge among the developing countries how well to impart Entrepreneurial education. It should be offered at all levels of schooling (primary or secondary schools) and through graduate university programs.

Objectives of Entrepreneurial Education

1. Toenable them to be self-employedand self-reliant.
2. Poverty elevation by reducing unemployment.
3. To serve as a catalyst for economic growth and sustainable development.
4. To train them in risk management and tomake certain bearing feasible.
5. Reduction in rural-urban migration.
6. Balanced regional development.
7. Provide the young graduates with enoughtraining and support that will enable them toestablish a career in small and medium sized enterprises.
8. Easing societal tension by engaging them in any one of the activities.
9. Create smooth transition from traditional toa modern industrial economy.

Challenges Faced by Entrepreneurship Education in India

The present entrepreneurship education in India just concentrates on courses which are similar to the general business courses. There is a demand for education programs specifically designed to expand students' knowledge and experience in entrepreneurship. Entrepreneurship education in India faces cultural and financial constraints along with insufficient government capacity. The significant challenges faced by entrepreneurship education in India are given below:

1. **Designing of curriculum and methodology of teaching and learning:** Due to improper curriculum designing and lack of skill based learning students are facing difficulties in applying the concepts learnt by them. A survey done by the Entrepreneurship Development Institute, India (EDII) in 2003 shows that young people are afraid to start their own business because they are not confident, not capable, and lack knowledge in starting a business this is because of Incomplete Entrepreneurship Education. If they are properly trained they can become entrepreneurs instead of intrapreneurs. The students in India are not confident with the traditional education they receive in the school and university.
2. **Entrepreneur programme lack contact with the business world:** Students and trainers don't have practical exposure to the business environment to learn the problems faced by them in incepting and running the business.
3. **Cultural barriers:** Entrepreneurship can develop only in a society in which cultural norms permit variability in the choice of paths of life. Unfortunately it is difficult in our country where people with different culture are there. For example, Indians believe that being passive and content with the status quo is healthier for the inner soul than striving to improve one's situation. They believe that peace of mind can be achieved from spiritual calm rather than from materialism. People in India are more sensitive to emotional affinity in the workplace than to work and productivity. An entrepreneur needs to work around the clock and this has kept some people away from their own start-ups. After all, compared with other countries, family life in India is more important.
4. **Economic and institutional frameworks are unfavorable to entrepreneurial activity:** It was found that the institutional framework has significant and large effects on the efficiency and growth rate of economies. Politically open societies, which subscribe to the rule of law, to private property, and to the market allocation of resources, etc lacks broad vision, goals, and systematic planning. Even though entrepreneurship education is widely spread, has diverse forms and has a large number of stakeholders but still the overall state of affairs is a confused. The lack of a standard framework is a big challenge to the development of entrepreneurship education in India.
5. **Cross disciplinary approach:** Embedding entrepreneurship and innovation cross disciplinary approaches and interactive teaching methods require new models, framework and paradigms
6. **Difficulties towards Start-ups:** Starting a business in India is costly in terms of the time required and the cost involved. While it takes just five days to start a business in the United States and just two days in Australia, in India it takes as long as 89 days. What really hurts is that even in neighbors Pakistan, Nepal, and Bangladesh, it takes just 24, 21, and 35 days respectively to do so. The reason for such delay is bureaucratic - too many rules and regulations, and too much paperwork (Ashish Gupta, 2004). On an average, it would cost an entrepreneur nearly half of his/her total income (49.5% of the gross national income per capita) to set up a business, which is 100 times more than what is needed to set up a business in the United States. Again poorer cousins Bhutan, Pakistan, and Sri Lanka are better off. Doing business in India is an extremely difficult proposition (Ashish Gupta, 2004). The absence of an appropriate entrepreneurial climate, the lack of required infrastructure facilities, and the lack of access to relevant technology hinder rapid industrial development. Most of the time, the Indian entrepreneurs have to tackle electricity, transportation, water, and licensing problems.
7. **Dependence on government:** Higher degree of dependence on government is another challenge before entrepreneurship education in India. Insufficient private sector participation and lack of sustainable business models in the entrepreneurship education act as barriers to its development in India. The

entrepreneurship education in the higher education system should satisfy the need for entrepreneurship by selecting, motivating, training and supporting budding entrepreneurs. Unfortunately, the present entrepreneurship education in India just concentrates on related courses. Moreover, the so-called entrepreneurship courses are similar to the general business courses. But general business management education has no significant influence on entrepreneurial propensity (Hostager and Decker 1999). The findings of a survey on business owners in India suggest that management education is not an important driver of entrepreneurial attitudes (Gupta 1992). There is a demand for education programs specifically designed to expand students' knowledge and experience in entrepreneurship. The contents and teaching methods have to be differentiated between entrepreneurship and traditional business courses.

Key Areas on Which Entrepreneurial Education Should Concentrate

The key areas on which Entrepreneurial Education should concentrate may be as follows: a) Embedding entrepreneurship as a curriculum in education, b) Curriculum Development, c) Training the trainers, d) Tying with Private Sectors and e) Setting up entrepreneurial cell and incubation centre in colleges.

Embedding entrepreneurship as a curriculum in education

Government should compulsorily include entrepreneurship in the curriculum of primary, secondary and university level. It should be included in the primary and secondary level because they should be familiar with the topic from the beginning which will help them to think in a broader perspective. Sometimes few children dropout from the formal education at primary or secondary, if the concept of the entrepreneur is embedded in them it will help them to grow as a budding entrepreneur. Where as in the university level research and practical knowledge should embedded in the students to motivate them. Entrepreneurial learning should be integrated into the curriculum, rather than offering as standalone courses, in order to change the mindset among students. For example, in 2007, Nigeria included entrepreneurial skills in the new basic education curriculum for its primary and secondary schools.

Earlier we had sanchayaka banks introduced by national savings department in the primary and secondary schools which use to inculcate the habit of thrift and savings, so such small banks concepts should be included. With that different business games and online learning tools may be introduced. At higher education level, elective and/or compulsory courses on entrepreneurship, and participating in more focused activities and projects by the students has proven particularly effective. An example of this is Enterprise Development Services (EDS), established in January 2003, a center within the Pan-African University in Lagos, Nigeria. EDS focuses on entrepreneurship education and on the provision of support services to small and medium-sized enterprises (SMEs) in Nigeria. Within the university, entrepreneurship as a curriculum can play a key role in catalyzing entrepreneurship concept among the students by sparkle their inner Zeal.

Curriculum Development

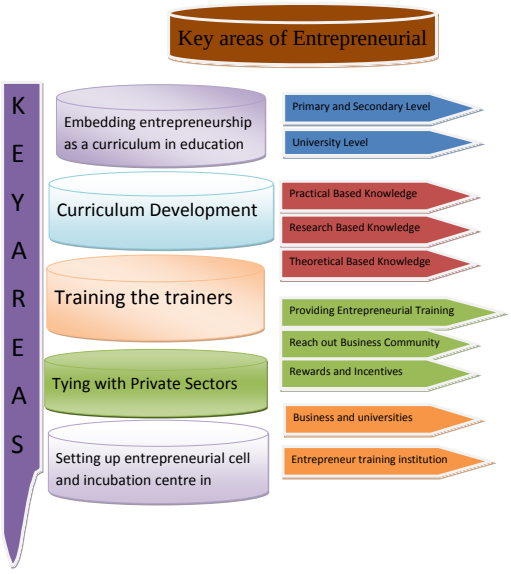
Another key area to be addressed in Entrepreneur education is Curriculum development. Curriculum development should focus on inculcating the habits of entrepreneurship. curriculums that are tailored to the local environment, by leveraging existing resources and by creating new local materials, case studies and examples of role models that entrepreneurs can relate to. These curriculums should include appropriate representation of gender, youth, indigenous people, and people with a disability, informal enterprises, and enterprises based in rural areas. While developing curriculum young brains i.e. students can be included as they have growing interest towards entrepreneurship and student led initiatives provide effective models. Effective entrepreneurship education programmes focus on developing entrepreneurial attitudes, skills and behaviors. This includes building self-confidence, self-efficacy, and leadership skills at all levels. Curriculum should be developed based on these three criteria:

1) Practical based, 2) Research based and 3) Theoretical based.

In the area of curriculum development, international organizations are playing catalyst role. From past ten years European commission is focusing on secondary and higher education and has funded many

programs across the Europe. The United Nations, through organizations such as UNCTAD,UNESCO and ILO, has been developing and supporting programmes on entrepreneurship training and education

Training the trainers



Teachers are the key to entrepreneurship education. Strategies and plans will not have any impact without effective trainers and educators to develop the enthusiasm and understanding among students. The number of entrepreneurship trainers should be increased by training them with best aids and methods, so that further they can train the trainees.

Often, entrepreneurship starts with a commitment by one individual – whether a teacher or another – who starts to develop programmes and/or activities from the ground up. If successful, such individuals attract others to join them, and begin to build momentum. Proper incentives and rewards are to be given to the educators and professor to motivate them to join hand to train the young entrepreneurs'. Professorships or Chairs are effective tools to provide both recognition and resources to key entrepreneurship faculty champions. Awards provide incentives, too. In Brazil, a national award has been created for entrepreneurship educators, with the participation of 46 universities in 16States. Till now, most of the teacher training initiatives and networks developed are at the higher education level. More initiatives are to be taken at primary and secondary levels, by providing entrepreneurship training in teacher training institutes. Entrepreneurship education should be very closely linked with practice. Teachers are to be encouraged to reach out to the business community and to integrate with them to learn more effectively (practical exposure).

Tying with Private Sectors

Education institution tying themselves with the private sectors is one of the key factors for the success of entrepreneurial education. It is nothing but developing networks across sectors to spur partnerships and create an environment of trust and cooperation in the local ecosystem and beyond. Private entrepreneurship centers and foundations play an important role, both in funding and in serving as centers of expertise on entrepreneurship. There are many examples of partnerships with educational institutes and the private sector. Wadhwani Foundation, Mind Bizz many other institutions are there who tie with the colleges to inculcate entrepreneur culture among the students. These institutions play major role in preparing business plan, setting up a venture and also funding the best proposal. So these kinds of tie ups should be there to develop budding entrepreneurs who want to channelize their ideas with some support.

Setting up entrepreneurial cell and incubation centre in the colleges

The scheme for establishment of Entrepreneurship Development Cells (EDCs) in academic support R & D but also help the young mind to develop themselves as entrepreneur by providing different aids through institutions.The past two decades have witnessed the entry of institutions was one such initiative taken by the NSTEDB in 1986-87. The mission of the EDC Scheme is to "Develop institutional mechanism to create entrepreneurial culture in science & technology academic institutions to develop technocrat entrepreneurs for generation of wealth and employment ". So these entrepreneurial cell and incubation centre are to be started not only at university but also at secondary level. These centers not only industry associations, NGOs, consultants and voluntary organizations into the entrepreneurship education space. In general, this time period saw the strengthening of the entrepreneurial ecosystem, with the establishment of modes of education that were not training based.

Examples of such modes include: 1. Entrepreneurship Development Cells (NSTEDB, AICTE, UGC) 2. Incubators at various institutions such as: (i) Technology Business Incubators (NSTEDB) (ii) Engineering colleges (IITs, NITs, leading private colleges) (iii) Management schools (ISB, IIMs, leading private schools).

Conclusion

Attaining sustainable Development through entrepreneurship has become the focus of all countries in the world.By embedding entrepreneurship in the formal education curriculum we can build an innovative culture and create entrepreneurial individuals and organizations which, in turn, can create economic growth and jobs, and can help to improve quality of life around the world. However, economic development through entrepreneurship can very well be sustained with a focus and investment in entrepreneurship education, designing proper curriculum, training the trainers and exposing both trainers and trainees to the practicality of business world. It has become clear that entrepreneurship can be taught and learned. Business educators and professionals have evolved beyond the myth that 'entrepreneurs are born, not made.' Local context must be taken into account in devising and tailoring a set of programmes and initiatives relevant for each area.

References

1. Indian journal of rural and urban development: volume 5, issue 01, April - September 2016 Entrepreneurship Education and Economic Development:An Indian Perspective by Dr. Ashok Kumar Panigrahi, Associate Professor in Finance, NMIMS University, Shirpur and Dr. Vijay Joshi, Dr. Ambedkar Institute of Management Studies & Research (DAIMSR) Deekshabhoomi, Nagpur.
2. International Journal of Engineering and Management Research, Vol. 2, Issue-5, October 2012 ISSN No.: 2250-0758 Pages: 5-14 www.ijemr.net Entrepreneurship Education in India – Scope, challenges and Role of Bschools in Promoting Entrepreneurship Educationby Anisur Rehman, Dr. Yasir Arafat Elahi Department of Business Management, Integral University, Lucknow.
3. Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS) 2 (1): 26-29 © Scholarlink Research Institute Journals, 2011 (ISSN: 2141-6990). Entrepreneurship Education: An Imperative for SustainableDevelopment in Nigeria by Arogundade, Babatope Bukola, Department of Educational Foundations and Management,Faculty of Education, University of Ado-Ekiti, Nigeria
4. The effect of entrepreneurship education on students' intentions. Global Journal of Management and Business Research, 10(6), 49-60 Kuratko D. (2009).
5. Introduction to Entrepreneurship (8th Edition). USA: South-Western Centregate Learning. Mandara, B. M. (2012).
6. Entrepreneurship education: A panacea to economic development. Journal of Business and Organizational Development,Vol. 4 Okhakhu, C.O., & Adekunle, S. A. (2012).
7. Article: June 15. Entrepreneurial Education for Sustainable Development byFrank Alaba OGEDENGBE1 & Clement Osigwe OKHAKHU, Department of Business Administration and Management, Auchi Polytechnic, Auchi. And Simon Ayo ADEKUNLE, Department of Business Administration, Faculty of Management Sciences, P.M.B. 1154, University of Benin, Benin City.

ERADICATING POVERTY, UNEMPLOYEMENT AND INEQUALITY- THROUGH A BIRD'S VIEW

Rumisha Fernando
Mother Teresa Women's University, Kodaikanal, Tamilnadu

Abstract

Poverty, unemployment and inequality plays a major role in developing the country. It is proved that these features of poverty, unemployment and inequality will get worse if the government fail to take proper steps. The depth of these can be a pathway to distinctive topics lie gender, caste and class issues. This paper observes the negative and harmful effects of social-economic structure. The new ways of eliminating the socio-economic development that leads to the economic growth and decimate the problem which India is facing. So' this paper is an attempt to develop a healthy nation by annihilating the three dimensions.

Introduction

India is a country where different types of inequalities and poverty have always been a fact of life, which leads to unemployment. Past three decades have seen the economic emergence of many developing countries, generally exhibiting growth states much higher than those in the industrialized countries. The transformation of economic growth is increasing Poverty, Inequality and unemployment has been disappointing. India has become the second fastest growing economy, next to china. But seriously India has fallen behind economic growth. Youngsters are pushed to work in a sector which they don't like, which resulted in inequality and poverty. This paper offers a brief summary of social issues that must be considered by government to help people in order to lead a good life.

What is Sustainable Development?

According to world commission on Environment and Development, sustainable development is the development that meets the needs of the present without compromising the ability of future generation to meet their own needs. There are two main concepts in developing sustainable development, the concept of 'needs', in particular, the essential needs of the world's poor, to which overriding priority should be given and the second concept is the idea of limitation imposed by the state of technology and social organization on the environments ability to meet present and future needs. The concept of sustainable development has developed to focus on the goals of socially inclusive and environmentally sustainable economic growth. The term sustainable development as used by the United Nations incorporates both issues associated with land development and broader issues of human development such as education, public health, and standard of living. In September 2015, the United Nations assembly formally adopted the "universal, integrated and transformative". It is said as the goals are to be implemented and achieved in every country from the year 2016 to 2030.

Concept of Sustainable Development

The main concept of sustainable development is to satisfy the human needs. The essential needs of vast number of people in developing countries for food, clothing, shelter, jobs are not being met beyond their basic needs and these people have legitimate aspiration for an improved quality of life. Where else poverty and inequality plays a major role, the sustainable development will require the basic needs of all and extending to all the opportunity to satisfy their aspirants for the better life.

Poverty

Eradicating poverty, including extreme poverty, remains the greatest global challenge of our time and an indispensable requirement for sustainable development. Experience has shown that eradicating poverty is a prerequisite to building cohesive, peaceful and sustainable societies. While there has been significant progress over recent decades in reducing extreme poverty, 767 million people, or 10.7 percent of the global population still live in extreme poverty (below $1.90 per person per day in 2013, the most recent year for which data are available). In some regions, impressive growth rates and overall improvements in

healthcare, education and other basic services have not yet been translated into significant reduction of poverty. At the same time, income and non-income inequalities have increased in many countries across regions, with middle income countries experiencing the widest inequality. High and widening inequality threatens to undermine prospects for future growth and weakens the impact of growth on poverty eradication. Countries with higher inequality tend to reduce poverty more slowly, as a smaller share of the benefits of growth trickles down to the poorest. Without a rise in overall inequality, maintaining current growth momentum could potentially lift 1 billion people out of extreme poverty by 20301. Rising inequality within countries could hinder further progress in poverty reduction, or worse, might set back the hard on gains so far made in social and economic development. Poverty and high level of socio-economic inequalities, combined with social exclusion, are often sources of social instability and conflict, which can lead to unmanaged migrations, displacement, and an influx of refugees. They also create a fertile ground for violent extremism and terrorism. Therefore, strategies for eradicating poverty need to tackle inequality in its all dimensions.

The current rate and the pattern of growth do not ensure prosperity for all. While unprecedented scientific and technological advances have accelerated socio-economic progress, not all people have benefitted from them. To reduce poverty and inequalities, growth needs to be inclusive and more equitable, so that its gains reach all segments of the population. It has been recognized that reaching people who are left behind is necessary but a difficult task, as they are often invisible, marginalized, and live in fragile socioeconomic contexts or remote areas. They lack access to quality education, basic healthcare, affordable energy and food, safe drinking water and sanitation, and other essential services. Further, for those who have been able to move out of poverty, progress is often temporary. More needs to be done to ensure that no one is left behind to end poverty as envisioned in the 2030 Agenda.

The 2030 Agenda sets the bar higher, with its universal and indivisible set of Goals that aim to leave no one behind. Realizing this vision requires more coherent, comprehensive and inclusive social and economic policy frameworks and poverty eradication strategies. Such policy frameworks and strategies should reach the furthest behind, in particular women, children, persons with disabilities, youth, older persons, indigenous peoples, and people living in poverty and in rural and remote places; address people's vulnerabilities to potential shocks, such as economic and social instability, natural disasters, food insecurity, or climate change; aim to equip vulnerable social groups and communities with tools that build resilience and self-sufficiency to break the vicious cycle of intergenerational poverty. Decent work and social protection policies and measures are proven tools that can help graduate people out of poverty to Sustainable livelihoods. Today, there is a greater recognition of the multiple causes of poverty and disparities within societies, which enable more effective approaches and tools to eradicate poverty. To eradicate multidimensional poverty requires efforts from all parts of government to construct a broad set of mutually reinforcing social and economic policies and strategies, and leverage the synergies between them. More coherent and integrated approaches should be taken across sectors, focusing on promoting agriculture and rural economic activities, creating decent employment, promoting entrepreneurship and innovation, providing social protection, as well as prioritizing and committing sufficient resources to enhancing human capacity by investing in education, healthcare, and other social services.Further, political will, strong institutional and governmental capabilities are also critical. Effective andinclusive public institutions are important to promote the participation of people in policy-makingprocesses that affect their lives. National capacities to collect disaggregated data and national reportingmechanisms also need to be enhanced to ensure inclusive and focused measures for poverty eradication.

While the 2030 Agenda will guide the efforts to eradicate poverty, a one-size-fits-all approach should notbe applied in its implementation. Instead, strategies tailored to meet the unique needs, priorities andparticular social, economic and cultural backgrounds of each region and country are needed. In thisregard, more effective and innovative national development strategies need to be devised and implemented with participation of all stakeholders and partners. These strategies would be constantly

improved through effective monitoring, evaluation and an exchange of good practices and lessons learned. National efforts to eradicate poverty must be complemented by a favourable international environment, with support measures established at the international level, including the United Nations. In particular, international assistance should recognize the specific needs and challenges facing LDCs, LLDCs and countries emerging from conflicts and disasters to provide enhanced, predictable and sustained financial and technical support. International cooperation and assistance are deemed essential to mobilizing the means of implementation required to achieve the SDGs. To achieve the objective of "leaving no one behind", inequality must be addressed by broadening the scope of the global partnership for development and ensuring that the international trade agenda supports measures towards equalizing opportunities for participation in global markets. Access to global markets is particularly important for LDCs, who should be provided duty free, quota free market access, as agreed at the WTO.

Unemployment

Union Ministry for Labor and Employment claimed national unemployment hovers around 3.7 percent in 2015-16. However, the data is based on usual principal *subsidiary* status (UPSS) approach that requires only 30 days of work in a year to call the person employed. Seventy-seven percent of the families reportedly have no regular wage earner and more than 67 percent have income less than 10,000 per month. Around 58 percent of unemployed graduates and 62 percent of unemployed post graduates cited non-availability of jobs matching with education/skill and experience as the main reason for unemployment. As per the National Skill Development Mission Document, as much as 97 percent of the workforce in India has not undergone formal skill training. About 76 percent of the households did not benefit from employment generating schemes like MGNREGA, PMEGP, SGSY, SJSRY, etc.

A significant change in inequality in income and wealth is possible only in a longer term prospective. Employment structure of an economy is the normal instrument that can cause a change in inequality either way i.e. an increase or a decrease in inequality. Since the government functions within the administrative and fiscal constraints, the target group programmes normally have a marginal impact on income redistribution. Income of labour enables flow of resources across income classes of people and across the social and ethnic groups. Flows of income across locations are influenced both by assets available and modes of creating employment opportunities. However, income generated by employment of migrant labour, facilitates flow of resources across regions of a given regional distribution of capital assets. Employment and equity of income across classes of people and across regions are therefore, closely related to each other in the long term.

Steps Taken by the Government

Mahatma Gandhi National Rural Employment Guarantee Act 2005

The GOVERNMENT OF INDIA has taken several steps to decrease the unemployment rates like launching the Mahatma Gandhi National Rural Employment Guarantee Scheme which guarantees a 100-day employment to an unemployed person in a year. It has implemented it in 200 of the districts and further will be expanded to 600 districts. In exchange for working under this scheme the person is paid 150 per day.

Social Effects

Not only unemployment problem suffers the economy, even there are many social affects too. The following are some of the social effects of unemployment: Loss of skills: when there is unemployment in the society, people lose their skills due to no usage and it causes human capital loss. Mental illness: There will be loss of self confidence, frustration, negative attitudes towards common things when there is loss of income, and a person's self-esteem gets hurt due to these mental illnesses.

Financial obstacles: Unemployment brings financial obstacles in the family. People cannot meet their financial obligations on time and it brings frustration among family members, brings tension at home and may leads to suicides.

Increase crime rate: When there is unemployment in the society crime rate increases. When people don't have disposable income they can go to any extent like theft, robbery and also murders in order to survive their livelihood. Political instability: Due to unemployment people lose trust on government and their administration and this may bring political instability. Insecurity among existing employees: when the economy is facing unemployment problem it brings insecurity among the existing employees and their purchasing power decreases due to fear or insecurity on their jobs. Poor standard of living: Unemployment causes poor standard of living as competition for jobs will increase and people accept for less salaries and their standard of living will decrease due to their low income. Employment Gap: Unemployment brings employment gap in the companies for hiring a suitable person and for an individual who is out of job has to find another one in difficult situations. This brings the gap in income generation (www.enotes.com; www.economywatch.com).

Challenges to Government

Several policies have been made to reduce the unemployment problem in the economy. Government just needs to focus on execution of these policies and work out hard in alleviating this problem. Government can expand capital projects like new roads, constructions of new hospitals and major infrastructural projects which can become a platform in creation for more jobs in the economy. It increases income generation to the economy (Fritz, 2006).

Reduction in taxation can bring higher purchasing power to the consumers. It gives some relaxation to consumers in spending their disposable income. Government should take proper steps in investment decisions on huge projects like iron and steel, aviation etc., proper policies are to be made to boost up these projects thereby creating employment opportunities. Proper recruitment, training and development are to be needed by every company in order to increase the capabilities of employees, and to enhance their skills and shows great performance in upbringing of the organization. Government can take initiation in reducing the interest rates and it enhances the demand for credit and improves savings by the individuals. Necessary steps are to be taken by the government in increasing the productivity for the overall development of the country and reducing the unemployment problem in the economy (Fritz, 2006).

Challenges to Individuals

It is not only the responsibility of the government to take initiation in reducing the unemployment problem, even individuals has to take step to overcome this problem. Lot of adjustments are to be done by the individuals to come out of this situation. Without taking hasty decisions like suicide, frustration they can plan and do proper adjustments like debt adjustments, expend their liquid assets when it is required, cut down their expenditures and also encourage other family members to find jobs so that they can compensate in income generation (Fritz, 2006).

An individual has to increase their capabilities and participate in proper counseling and training sessions to improve their performance levels and enhance their skills. They have to think about self employment apart their job with the help of their family members. This also improves their standard of living (Fritz, 2006).

Conclusion

Unemployment, poverty and inequality is a serious issue for any economy. It creates negative affects to unemployed as they are jobless and suffer from worse prospects to find new job and those who are employed feel less secure to keep their jobs in future. However for overall development of economy, government and individuals has to take initiative steps in increasing the productivity and improving the standard of living.

CHALLENGES FACED BY WOMEN ENTREPRENEURS: A STUDY ON WOMEN SHGS IN TAMILNADU

NikhanthApsana.R.D, Amreen Aisha & AnithaSherine Moses
Assistant Professors, Indo Asian Women's Degree College, Bangalore

Abstract

Women constitute around half of the total world population. So is in India also. They are, therefore, regarded as the better half of the society. In traditional societies, they were confined to the four walls of houses performing household activities. Although efforts have been taken to improve the status of women, the constitutional dream of gender equality is miles away from becoming a reality. There are various poverty alleviation programmes that being run by various departments and ministries for the development of women in India.Therefore, white discussing on entrepreneurial development, if seems in the fitness on the context to study about the development of women entrepreneurs in the country.A number of Women Development programming has laid the foundation for the progress of women entrepreneurship in rural areas.

Keywords: *Women Entrepreneurs, problems, challenges faced by women entrepreneurs in rural areas.*

Introduction

The World Bank has suggested that empowerment of women should be a key aspect of all social development programs (World Bank, 2001). Women in general are the most disadvantaged people in Indian society, though their status varies significantly according to their social and ethnic backgrounds. Although efforts have been taken to improve the status of women, the constitutional dream of gender equality is miles away from becoming a reality. There are various poverty alleviation programmes that being run by variousdepartments and ministries for the development of women in India. Despite the decades of development the fact remains that women in India are a deprived section of society but no country can be deemed developed if half of its population is severely disadvantaged in terms of basic needs, livelihood options, access to knowledge, and political voice. A number of Women Development programming has laid the foundation for the progress of women entrepreneurship in rural areas.

Scope of the Study

The study examines the challenges faced by women entrepreneurs in rural areas. The areas of concern, however, are the economic, socio-cultural and political barrier which hinders the growth of women entrepreneurship in rural India. The research also focuses on giving suggestion to overcome the challenges by women entrepreneurs.

Objectives of the Study

The present study has been carried out with the following primary objective

1) To identify the challenges faced by microenterprises promoted by womenentrepreneurism rural areas.
2) To give suggestions to promote micro enterprises in rural areas.

Methodology

The study is descriptive in nature pursuing with an aim to analyze the challenges faced by women entrepreneurs in rural areas of Kanyakumari District. The analysis is based on primary data collected through semi-structured questionnaire consisting of a mix of factual and attitudinal questions. To analyze the collected data and thereby to draw inference Garrett Ranking technique was used.

The Area of Study

Kanyakumari is situated in the southernmost part of the Indian peninsula surrounded by Kerala state in the west and north-west, Tirunelveli district in the north and east, Gulf of Mannar in the south-east, Indian Ocean in the south and Arabian Sea in the south-west. It is the smallest district in Tamil Nadu and has a total area of 1,684 sq km which is 1.295 percent of the total area of the state. Administrative set-up of the district includes two revenue divisions, four taluk and nine blocks. The District has four Municipalities, six Assembly Constituencies and One Parliamentary Constituency. There are 97 village panchayats and 56 town panchayats. Nagercoil is the headquarters of Kanyakumari District.

Sample Design

As the research focus on the women run microenterprises in rural areas the study excludes the microenterprises belong to town panchayats and municipalities. The list of microenterprises belong to village panchayat was collected from MahalirThittam office of Kanyakumari District. A sample size of 209 microenterprises was selected from the study area.

Nature of Micro Enterprises

The SHGs aimed at establishing a large number of micro-enterprises in rural areas targeting women. The SHGs members who run micro-enterprises are referred to as micro entrepreneurs, as their scale of operations is micro in size. Table 1 furnishes the distribution of SHGs women entrepreneurs who are engaged in various entrepreneurial activities which are suited to their local condition.

Table 1 Nature of Micro Enterprises

Nature of Business	No. of Respondents	Percentage
Tailoring	18	8.61
Banana Fiber weaving	44	21.05
Processed Foods	16	7.66
Bag Making	22	10.53
Consumable Durables	34	16.27
Petty shops	33	15.79
Handlooms	20	9.57
Fancy Stores	22	10.53
Total	**209**	**100.00**
Source: Field Survey		

Table 1 reveals that the SHGs women respondents are engaged in various entrepreneurial activities. Activity-wise distribution of the sample SHG members shows that the majority (21.05%) of them are engaged in the banana fiber making. Petty shops are run by 15.79 per cent of the respondents selling grocery items. They are able to earn subsistence income. Remaining respondents are engaged in other entrepreneurial activities such as processed foods (7.66%), bag making (10.53%), consumable durables (16.27%), handlooms (9.57%) and fancy stores (10.53%). Tailoring has been taken up by 8.61 per cent SHGs members. They stitch dresses of all kinds for the local population and also conduct training classes for SHG women

General Problems of Women Entrepreneurs

Women entrepreneurs had to face some general problems at the time of business. The problems were problem of finance, scarcity of raw materials, stiff competition, limited mobility, shortage of power and high cost of production. The women entrepreneurs are asked to rank the six problems according to their preferences. The preferences of the women entrepreneurs are given in the following table.

Table: 2 – GeneralProblems of Women Entrepreneurs

Sources	I	II	III	IV	V	VI	Total
Problem of Finance	29	57	24	34	39	26	**209**
Scarcity of Raw-materials	39	35	28	37	36	34	**209**
Stiff Competition	32	35	41	32	35	34	**209**
Limited Mobility	41	25	46	41	18	38	**209**
Shortage of Power	34	25	34	40	41	35	**209**
High Cost of Production	34	32	36	25	40	42	**209**
Total	**209**	**209**	**209**	**209**	**209**	**209**	**1254**

Source: Primary data

Garrett Ranking Technique

Garrett ranking technique was used to rank the problems. After assigning points to various ranks, the Garrett mean score was calculated by using the following formula.

$$\text{Present Position} = \frac{100(Rij - 0.5)}{Nj}$$

where,

Rij – Rank given for the ith reason by j^{th} respondents

Nj – Number of factors ranked by j^{th} respondents

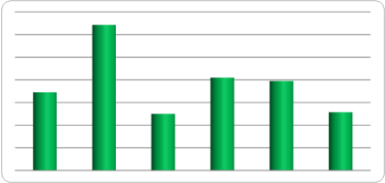
Table: 3 - Garrett Mean Score - Problems faced by Women Entrepreneurs

Problems	Garrett Ranking Mean Score	Rank
Problem of Finance	66.45	IV
Scarcity of Raw-materials	69.43	I
Stiff Competition	65.50	VI
Limited Mobility	67.10	III
Shortage of Power	66.95	II
High Cost of Production	65.57	V

Source: Primary data

From the above table 3 it is clear that Scarcity of Raw-materials was the main problem faced by the women entrepreneurs, which secured 69.43 per cent mean score. Then problem of shortage of power was the second most important problem and it secured 66.95 per cent. Stiff competition (65.50%) was the least important problem faced by the women entrepreneurs

Figure: 1- Garrett Mean Score – Problems Faced by Women Entrepreneurs



Suggestions for Improvement in Micro Enterprises

Suggestions for improvement are necessary for the micro enterprises. Table 4 depicts the suggestions for developing the micro enterprises.

Conclusion

Women entrepreneurs in rural areas are facing some general problems at the time of business.The study reveals that scarcity of raw-materials was the main problem faced by the women entrepreneurs, which secured 69.43 per cent mean score. The reason behind is majority (21.05%) of them are engaged in the banana fiber making work where the supply of banana fiber is seasonal in nature.

Reference

1. Karmakar, K.G., Rural Credit and Self-help Group-Micro finance Needs and concepts in India. New Delhi: Sage Publications, 1999, p.270-271.
2. Arjun Y. Pangannavar, Women SHG Programme and Rural Poverty: A Micro Study, Southern Economist, 49(4): June 15, 2010.
3. BhaskarBagchi and Gangotree Gosh, Microfinance through Self Help Groups Women Micro Entrepreneurs in West Bengal, Southern Economists, 50(11): October 1, 2011, pp.39-43.
4. Chandrakavate, M.S, The SHGs Model of Microfinance: A Silent Movement towards Empowering Rural Women, Southern Economist, 44(17): January, 2006, pp.20-24.
5. KuntalaLahiri-Dutt and GopaSamanta, Constructing Social Capital: Self-Help Groups and Rural Women's Development in India, Geographical Research, 44(3):2006, pp.285–295.
6. Sasikumar, G., and Sethuraman, D., Role of Micro Finance in Women Entrepreneurship Development - A Case Study on making of 'Pickles', Kisan world, 41(4): April 2014, pp.55-57.
7. Shashikala and Uma.,Women Empowerment through SHGs: A Study, Southern Economist, 49(19): February, 2011, pp.51-54.

A STUDY ON POVERTY, INEQUALITY AND UNEMPLOYMENT

Pooja Vishwakarma, Revathy. P & Anitha. V
VI BBA, Indo Asian women's Degree College, Bangalore

Abstract

The main aim of this project is to reduce poverty, inequality and unemployment. Static is a way of reducing poverty among people. This includes transferring wealth from rich to those who are poor. People in rural tend to be poorer than the urban people which leads to the migration from villages to towns rather than from towns to villages. The poverty rates are related to overall wealth of the economy. Poverty can reduce by increasing the supply of basic needs, removing constraints on government services, controlling overpopulation etc. Poverty can be reduce by business solution they are serving the poor market, creating entrepreneurs etc. Main reasons for poverty are health, hungry, education, shelter etc The main reason for most people being poor is because the country is highly undeveloped. There must be enough wealth in order to reduce the poverty, inequality and unemployment. Economy it impacts on employment and local economic development, including competition issues, small enterprise etc.

Inequality in economics is economic inequality, income inequality metrics, international inequality are list of countries by wealth and income inequality. Inequality is main drivers of social tension. 'Social inequality' is currently poorly understood and at best unevenly measured. The important of countries with less social inequality have higher levels of economic performance and stronger political institutions. People have mark of unemployment and it affects the health and well-being. The importance of work more than the loss of job or not being able to find. Unemployment or underemployment is one of the core reasons of poverty. Level of economic growth and inclusive distribution are volumes of employment that any country depends to a great extent.Unemployment refers to the situation when a person is able and willing to work at the prevailing wage rate but does not get the opportunity to work.

Keywords: *Poverty, Unemployment, Sustainability*

Objectives

- To analyse the problems faced by the poor people in poverty, inequality and unemployment.
- To provide solution to overcome the problems.
- To understand the condition and situation of poor people.
- To understand the challenges they face in their daily life.

Poverty

Introduction

Poverty normally refers to a "state of being poor, deprived" where poor refers to anybody who cannot fulfil even their basic needs of life such as minimum food requirements, shelter, clothing, etc. Poor can be included as an individual, family or a part of society. Poverty is both absolute and relative. Countries like Africa, Latin America, Asia and including India faces serious problem of poverty. Poverty is a social phenomenon and threatens to stop the economic and social development process. Indian economy has many worst problems but poverty, inequality and unemployment are once which affect the masses of country. In India, the general definition of poverty emphasises minimum level of living rather than a reasonable living.

Poverty Line

The most common definition is- anybody who is not capable of earning the required income to order to meet their basic needs of life. The above definition is referred as to income poverty. Monthly consumption expenditure is also a way to express the poverty line. Poverty specifies poverty line in terms of income and consumer expenditure which is called as Absolute poverty.

States Most Affected by Poverty

- Orissa being the poorest state with more than 46% of its population.
- Bihar with 41%.
- Chhattisgarh and Jharkhand follow in order with more than 40%.
- Uttrakhand with 39.63%.

- Madhya Pradesh with 38%.
- Dadra and Nagar haveli with 33%.
- Uttar Pradesh with 32.8%.
- Maharashtra with 3.75%.

Reasonforruralpovertyineconomy

High population growth: Natural population growth occurs when the birth rate of country is higher or greater than the death rate of country. Rising population rates can become deemed overpopulation when the ratio of the population to the available resources becomes unsustainable.

Illiteracy: Illiteracy is a state whereby one is unable to read and write. Lack of education is the simplest way to define the illiteracy. Many illiterate parents do not give importance to education as they feel education is not necessary to them and their children.

Large families: The education of children becomes expensive in large family. Household savings is not possible in large families which lead to poverty. The number of children are forced to participate in labour and incomes of parents.

Caste system : The status and position of lowest class remains the lowest in every way such as status wise, work wise and naturally money wise. Caste system makes you poor if your born in poor family it is the hereditary classification of people in a society.

Lack of infrastructure: Means of transport and communication have not been properly developed. The railways are quite less and the road transport is also inadequate. Agricultural marketing is defective due to lack of proper development of road.

Problems of Rural Poverty in Economy: Malnutrition usually refers to a number of diseases, each with their specific cause related to one or more nutrients, for eg : protein, iodine, vitamin A or iron.

Disease: Diseases of poverty are disabilities, health condition that are more prevalent among the poor than among wealthier people. Diseases of poverty are often co-morbid and ubiquitous with malnutrition.

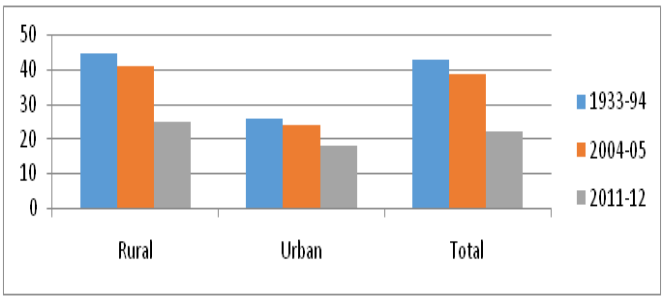
Long term health problems: Effects of growing up in poverty include poor health, high risk for teen pregnancy, and lack of an education. Long term health problem such as tuberculosis and respiratory infection such as pneumonia.

Lack of proper housing: The government of India has launched a massive campaign of providing housing to all citizens by the year 2022. Lack of proper housing leads to death of many poor people due to climatically change.

Steps Taken by Government to Reduce Rural Poverty

- Small famer's development programme
- Integrated rural development programme
- Training rural youth for self-employment
- Development of women and children in rural area
- Rural landless employment guarantees programme
- Employment assurance scheme
- Rural housing scheme
- Drought area development programme
- Minimum needs programme
- National rural employment programme

Poverty Ratio, 1933-94 to 2011-12



Inequality

Introduction

Inequality in terms of healthcare is referred as health equity. Inequality in mathematics is referred as inequality (mathematics) and inequalities (book). In terms of social science it is referred as social inequality, educational inequality, gender inequality, participation inequality, racial inequality and social stratification. Inequality in economic may be referred as economic inequality, in0come inequality metrics, international inequality list of countries by wealth inequality and list of countries by income inequality.

Types of fine quality

Socio-political inequalities: The social rights include labour market, the source of income, health care, freedom of speech, education, political representation, and participation. The basis of the unequal distribution of income or wealth is a frequently studied type of social inequality.

Gender inequality: Health, education, economic and political inequality between men and women in India is referred as gender inequality. A research is done on gender discrimination which is mostly in favour of men over women including the workplace.

Inequality in family: The social, historical and cultural aspects, gender is a function of power relationship between men and women where are superior to women. Women are supposed to be in the custody of their father when they are children's, they must be under the custody their husband when married and under the custody of son in old age or as widows.

Education inequality: Major difference which leads to inequality is educational success or efficiency of these individuals and ultimately suppresses social and economic mobility. Social and economic inequality continues to perpetuate between white students and minority students in educational.

Class inequality: The three most commonly cited classes are lower or working class, middle class, and upper class. Disparities of wealth, income, education, and occupation that any system is able to classify them.

Caste inequality: Inequality is the core of the caste system. "Lesser human beings", "impure" and "polluting" to other caste group which falls outside the caste system. The division of people into social groups where rights are determined by birth are fixed and hereditary which involves caste system.

Economic inequalities: Economic inequality refers to income inequality, wealth inequality or the wealth gap. Economic inequality varies between societies, historical period, economic structure and system. Economic inequality is the unequal distribution of income and opportunity between different groups in society. But, being born into poverty doesn't automatically mean you stay poor.

Employment inequality: Employment inequality is the unequal treatment of people based on gender, sexuality, height, weight, accent, or race in workplace. Mainly it focused on link between occupation and income, and comparing the income of whites with blacks.

Unemployment inequality: Unemployment and inequality are closely related to each other where unemployment is the reason and inequality is the outcome. Unemployment results in inequality when it continues for successive cycles.

Poverty inequality: Unemployment or having a poor quality job is the reason for poverty inequality as the income differs from the type of job. Lower levels of education and skills limits people's ability to access decent jobs to develop themselves and participate fully in society.

Income inequality: The rightward shift in the demand for skilled labour creates an increase in the relative wages of the skilled compared to the unskilled workers and the income gap among workers has widened.

Health inequalities: Health inequalities can be defined as differences in health status or in the distribution of health determinates between different population groups. Health inequalities are avoidable inequalities in health between groups of people with in countries and between countries.

Health disparities: Race, ethnicity, immigrant status, disability, sex and gender, sexual orientation, geography and income are some groups of health disparities. Health disparities refer to differences in the health status of different groups of people.

Food intake inequalities: Poor and rich have different types of food intake in their daily life. Poor cannot afford for nutritional food where as rich people are very concerned and conscious about their health and diet.

Nutritional inequalities: As poor people don't have enough money to buy food items which leads them nutritional deficiency and they cannot survive for a longer life span. Nutritional deficiency also leads to various diseases.

Determinantsofinequality

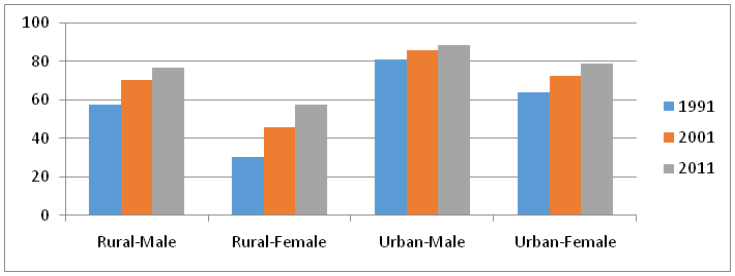
- Biological: Natural inequality on the basis of sex and age.
- Non-biological: It is basically social and economic determinant. Eg: gender norms, economic solvency etc.

Genderinequalitystatistics

- Female foeticide
- Female infanticide
- Child (0 to 6 age group) sex ratio : 919
- Sex ratio : 943
- Female literacy : 46%
- Maternal mortality rate: 178 deaths per 1,00,000 live births.

India'sposition

- Economic participation and opportunity : 134th
- Educational achievements : 126th
- Health and life expectancy : 141th
- Political empowerment: 15th



Unemplyoment

Introduction

Till 5thfive year plan, no serious efforts were taken to solve the unemployment problem. Poverty expands with the increase number of unemployed persons. Every 6th person in the world is an Indian and every 3rd poor person in the world is also an Indian who are unemployed. It was assumed that the gains of economic growth would percolate downwards and the inequalities would decline and problems of poverty and employment would get solved automatically. The main objective of all the economies in the world is to provide gainful employment to its labour force. One of the major objectives of planning in India is to achieve full employment for its population.A job is required for earning some income and leads a peaceful life.

Rural unemployment

India is an underdeveloped though a developing economy. Unemployment in India is structural in nature. To create a sufficient number of jobs the productive capacity is inadequate. Unemployment is found in several forms in rural India. India unemployment is mainly due to the shortage of capital. Rural unemployment is classified in three categories they are: (a) open unemployment (b) concealed or disguised unemployment and (c) educated rural unemployment. The unemployed persons in rural areas are unproductive consumers.

Urban unemployment

Urban areas are known for those economic activities which are non-agricultural in nature such as industry and services. Unemployed persons includes persons without work and those who are available for work, including those who were or were not seeking work or discouraged job seekers. Industry and services these sector mostly requires educated and skilled workers.

Unemployment in urban area is of following nature

- Unemployment among industrial workers
- Unemployment among educated middle class
- Technological unemployment

Types of unemployment

Frictional unemployment: A type on unemployment caused by workers voluntarily changing jobs and by temporary layoffs; unemployed workers between jobs.

Structural unemployment: A type of unemployment caused by insufficient total spending or by insufficient aggregate demand.

Cyclical unemployment: It is the unemployment of workers whose skills are not demanded by employers, who lack sufficient skill to obtain employment or who cannot easily move to locations where jobs are available.

Seasonal unemployment: It is the type of unemployment which is caused by the seasonal nature of some industries like agriculture etc.

Causes of Unemployment in Economy

Low growth rate of agriculture: The growth rate of agriculture in India GDP in the share of countries GDP remains the biggest economic sector in the country. The agricultural sector has always been an important contributes to the India GDP.

Rapid population growth: Increase in the number of people that reside in a country, state or city. Every nook and corner of India is a clear display of increasing population.This is a clear indication of over population in the country.

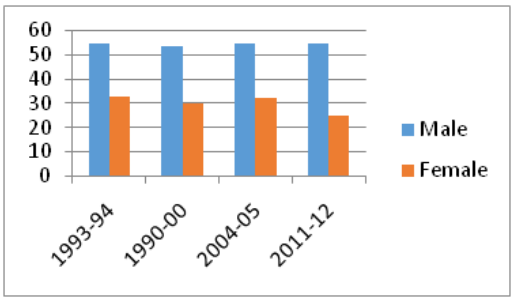
Higher growth rate of population: India is the second most populated country in the world with nearly a fifth of the worlds population. Below the age of 25 and more than 65% below the age of 35 is the population of India.

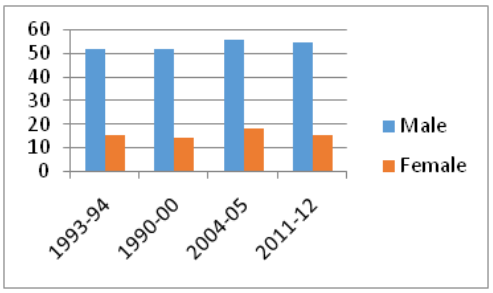
Technology: Technological unemployment is the loss of jobs caused by technological change. Technological change can cause short term job losses in widely accepted. Participants in the technological unemployment debates can be broadly divided into optimists and pessimists.

Effects of unemployment in economy

- Loss of labour efficiency
- Increase in income inequality
- Moral degradation
- Wastage of productive resources
- Increase in exploitation and corruption

RuralUrban





Suggestions

- Poverty can be reduced by controlling the population of the country.
- Developing of agriculture, small scale industries and cottage industries can also reduce poverty.

- Income should be distributed based on the work and on the status which is necessary to reduce the inequality.
- By diminishing or taking action towards racial discrimination, gender inequality, caste, literacy etc can be some of the actions taken to reduce inequality.
- Unemployment can be reduced by changing the education system and also by population control.
- Government can also stop or reduce unemployment by starting the construction of road, expanding the small irrigation facilities etc.

Conclusion

Therefore we have studied about the major issues of poverty, inequality and unemployment which are the main cause of India to be developing country rather than developed country. In this study we have also seen that the poverty, inequality and unemployment are mostly affected to poor people and not the rich people. Even though there are a lot of people trying to stop poverty, inequality and unemployment, it is impossible to stop without the support of rich countries. But poverty, inequality and unemployment can be stopped if people support and help each other.

STUDY OF THE IMPACT OF CORPORATE GOVERNANCE ON SOCIAL RESPONSIBILITY

Deepthi. K.R & Syeda Umme Hani
VI Sem BBA, Indo Asian Women's Degree College, Bangalore

Abstract

This article outlines the relationship between corporate Governance and Corporate Social responsibility. This also creates the harmony amongst individual and shared objectives. The corporate governance system is there to energize the proficient utilization of assets, and similarly to require responsibility for the stewardship of those assets Corporate Social Responsibility can likewise be seen as a worldwide administration instrument understanding Corporate Social Responsibility from the viewpoint is helpful for acknowledging why common society and government are keen on Corporate Social Responsibility. The administration component rises up out of the worldwide Trans – national foundations that created in the twentieth century, such as United Nations, the International labor organizations. Second phase, Coca-Cola India being one of the biggest refreshment organizations in India, understood that Corporate Social Responsibility must be an indispensable piece of its corporate motivation. As indicated by the organization, it knew about the natural, social, and monetary effect caused by a business of its scale and along these lines it had chosen to actualize an extensive variety of activities to enhance the personal satisfaction of its clients, the workforce, and society on the loose. The aim is to align as nearly a possible the interests of individual's corporations and society. The achievement of current business is evident, yet as if there is much worry in business - and - society writing and in the general press on whether business satisfies its social part depends. It also covers the presumptions that underlie speculations of corporate administration and the normal results of different board structures and organizations. To this end business pluralism, responsive codes of practice and re-examination of the business operation could be helpful.

Keywords: *Corporate Governance, Social Responsibility, influence, objectives, aim, brand strategy responsibility, bottom line.*

Introduction

Corporate social obligation is an idea which has progressed toward becoming command in business announcing. Each company has the approach concerning CSR and produces a report yearly enumerating its exercises. Furthermore, obviously every one of us cases to have the capacity to perceive corporate exercises which is socially capable and movement which isn't socially mindful there are two intriguing focuses about this: right off the bat we don't really concur with each other about what is socially capable and in spite of the fact that we case to perceive what it is and isn't the point at which we are requested to characterize it then we discover this unthinkably troublesome. In this manner the quantity of various ideas is colossal and this paper we will take a gander at some of these.

Objectives

1. Brand Strategy
2. To make social obligation
3. To make straightforward working framework
4. To make an administration responsible for corporate working
5. To ensure and advance the enthusiasm of investors
6. To build up a productive social and monetary objectives
7. To enhance social cohesion

Corporate Governance Corporate Governance alludes to the way a company is administered. It is the method by which organizations are coordinated and overseen. It implies conveying the business according to the partners' wants. It is really led by the top managerial staff and the concerned panels for the organization's partner's advantage. It is tied in with adjusting individual and societal objectives, and also, financial and social objectives.

What is corporate governance?

Corporate Governance is the connection between different members (investors, directorate, and friends' administration) in forming partnership's execution and the way it is continuing towards. The connection between the proprietors and the chiefs in an association must be solid and there ought to be no contention between the two. The proprietors must see that person's genuine execution is as per the standard execution. These measurements of corporate administration ought not be neglected.

With globalization and the expulsion of boundaries to the free stream of capital, strategy producers have come to perceive the significance of corporate administration in drawing in capital inflows. Then again frail corporate administration frameworks together with defilement and cronyism contort the proficient allotment of assets consequently undermining the level playing field and eventually frustrating venture and monetary improvement. The Chairman of the United States Federal Reserve Board Alan Greenspan in his comments to the World Bank and International Monetary Fund Program of Seminars in 1999 addressed a portion of the lessons gathered by approach producers in the outcome of the Asian Economic Crisis, which began in July 1997. They incorporated the deliberate disappointment of financial specialist security instruments, feeble capital market direction and in addition the presence of "friend private enterprise". These thus prompted emergencies of certainty, which spread, from singular firms to whole countries. As confirmed by the famous administration master Ira M. Millstein (1998) [henceforth alluded to as Millstein], inadequate money related exposure and capital market direction, absence of minority investor assurances, and disappointment of board and controlling investor responsibility all bolstered loaning and contributing practices in light of connections instead of on a judicious investigation of hazard and reward. Among others Harvey and Roper (1999) have watched how this situation in the end prompted over-interest in non-beneficial and theoretical exercises by organizations. 2.0 THE DEFINITION OF CORPORATE GOVERNANCE the suppliers of back to organizations be it people, shared/benefits reserves, banks, monetary establishments or even governments require affirmations that their ventures are both profitable and secured. Successful corporate administration is tied in with giving those confirmations. As per Millstein (1998), the term corporate administration can be characterized both barely and in addition all the more extensively.

Millstein (1998), in the thin form of her definition, portrays corporate administration as the connection between chiefs, executives and investors. This limited definition includes additionally the relationship of the organization to partners and society. Though in the more extensive variant of her definition, corporate administration includes the mix of laws, directions, posting tenets and willful private segment rehearses that empower the enterprise to pull in capital, perform productively, create benefit and meet both legitimate commitments and additionally the desires of society for the most part. Moreover she expresses that, regardless of what the definition, fundamentally corporate administration concerns the methods by which an enterprise guarantees financial specialists that it has set up well performing administration who guarantee that corporate resources gave by speculators are being put to fitting and productive utilize.

Why is corporate governance important in today'sworld?

Great corporate administration anticipates corporate outrages, extortion, and potential common and criminal risk of the association. A decent corporate administration picture upgrades the notoriety of the association and makes it more alluring to clients, speculators, providers and on account of non-profit associations, benefactors. Privately owned businesses that expect to look for capital from money related foundations and institutional speculators ought to likewise be delicate to their corporate administration picture, since this picture is an essential factor in a definitive choice to give cash-flow to the association. Family-owned privately owned businesses advantage from great corporate administration by maintaining a strategic distance from thestaggering impacts of kin competition and costly suit between relatives who have diverse perspectivesconcerning the business. Some venture and private value stores don't buy the securities of open organizations that have low corporate administration appraisals. Great corporate

administration can be performed in a cost-efficient way by concentrating endeavors on the huge dangers confronting the association as opposed to endeavoring to cover any conceivable hypothetical hazard, and by introducing the best cost-efficient rehearses inside the association. The advantages of good corporate administration, by staying away from legislative examinations, claims, and harm to the notoriety to the association, altogether exceed the cost of good corporate administration. The advantages of good corporate administration are longer term, while the expenses of good corporate administration are acquired for the time being.

Social Responsibility

CSR is an idea with numerous definitions and practices. The way it is comprehended and executed contrasts significantly for each organization and nation. In addition, CSR is an exceptionally expansive idea that tends to numerous and different subjects, for example, human rights, corporate administration, wellbeing and security, ecological impacts, working conditions and commitment to financial improvement. Whatever the definition is, the motivation behind CSR is to drive change towards maintainability.

Albeit a few organizations may accomplish momentous endeavors with exceptional CSR activities, it is hard to be on the bleeding edge on all parts of CSR. Thinking about this, the case underneath gives great practices on one part of CSR –natural manageability.

What is the role of social responsibility

Feasible advancement isn't the sole duty of business. It is helpful to point that we can set reasonable desires, thus that individuals and associations can advance viably. Issues of maintainable advancement for the planet, for agribusiness, and for our industry go well past business. While business assumes an imperative part, without a doubt, and will keep on being a vital piece of the arrangement, we are taking a gander at fundamental issues that will require dynamic cooperation by an expansive arrangement of on-screen characters. However, there is an unmistakable part and explanation behind business to be a dedicated accomplice.

That augmenting of the circle positively does not acquit business and in certainty it does a remarkable opposite by characterizing particular parts and obligations regarding business, for the most part secured under the heading of Corporate Social Responsibility (CSR). CSR relegates a part for business, however puts some sensible edges that enable organizations to keep participating in things that organizations do like developing their business sectors. The new request on business is that it seek after those exercises with a more extensive consciousness of the framework in which it works, as such with attentive thought and significant activity toward natural and social issues.

All the more particularly, CSR is characterized as the intentional duty of organizations to incorporate into their corporate practices monetary, social, and ecological criteria and activities, which are well beyond administrative prerequisites and identified with a more extensive scope of partners—everybody impacted by their exercises. Frequently caught under the more open heading of human planet-benefit, the definition winds up crisper taking a gander at the United Nation's Global Compact, which requests that organizations work inside their range of prominence toward human rights, work rights, natural duty, and hostile to defilement. CSR isn't about generosity, cause-related advertising, nor summed up endeavors at going "green". It is a business procedure and one that set aside opportunity to advance.

Aim of social responsibility on corporate governance

Points are the long haul aims of a business. They give a concentration to its exercises. Old English American’s points are unmistakably set out in its central goal. The points include a triple main concern. Somewhat English American’s "triple main concern" measures its financial, social and ecological

execution. Tasks and activities. This would convert into: making a benefit for investors giving comes back to society by giving employments or indicating duty in worldwide, national and nearby groups limiting any negative impacts on the common habitat. Each business needs to separate its wide points into more particular destinations.

- Comply with SR10 standards: 2011 Management systems for social responsibility and any requirements related to social responsibility entered;
- Account for substantial effects impacts arising from our activity and corporate decisions;
- Disseminate information about our activity and the decisions for which the company is responsible in a comprehensive and transparent manner;
- Pursue values such as honesty, integrity and fairness while carrying out activities and decisions;
- Respect, consider and respond to stakeholders' interests;
- Meet legal applications and observe national and international rules of conduct;
- Pursue the continuous improvement of its own Management System for social responsibility.

Why Corporate Social Responsibility is Essential for Brand Strategy.

Corporate social obligation is commonly connected with extensive organizations, not independent companies. Be that as it may, as organizations of all sizes are rapidly learning, social obligation is a contemporary business basic. Specifically, instruction driven activities are well known with little and average sized entrepreneurs. Two out of three medium sized entrepreneurs say they are looking to enhance group engagement through instruction activities went for more youthful group individuals, as indicated by Business News Daily. Lamentably, in spite of the best of expectations, CSR regularly turns into an after-thought for entrepreneurs who are excessively bustling developing their business, making it impossible to center around optional activities like CSR. It doesn't need to be.

CSR runs as an inseparable unit with a keen brand system. Buyers vote with their wallets, supporting organizations that show worry for worker welfare, group advancement, natural manageability, and human rights.

"We live in a client driven and exceptionally associated world where shoppers not just need to like their buy yet additionally need to make utilization of online networking to share the story behind the buy. Customer supposition can represent the moment of truth a business. Having a positive social reason and a center message that reverberates with your group of onlookers can be the key business differentiator." says Creative Brand Strategist Andrew Miller, who works intimately with independent companies to enable them to structure successful CSR programs.

Share Holders Issues

The contention that we break down can be viewed as a contention between two sorts of investors: insiders, who are partnered with the firm, and different investors, for example, establishments or little singular financial specialists, who are not subsidiary with the firm. Subsidiary proprietors are those financial specialists whose either notoriety, character or legacy is identified with the firm, while non-subsidiary proprietors are the lion's share of financial specialists who hold partakes in the firm as a component of a very much broadened portfolio what's more, have a connection with the firm that does not go past its effect on their portfolio esteem. Our theory is that insiders, the associated investors, may increase private advantages from being related to a firm that has a high CSR rating, or expressed also, insiders bear a cost from being related with a firm which is delegated socially reckless. The gathering of insiders is made out of three subgroups: chiefs, block holders who are not some portion of the day by day administration group, and executives who are not some portion of the initial two gatherings (i.e., hold under 5% of the association's value and not some portion of the everyday administration group). It is difficult to conjecture which gathering would acquire from being related with a socially capable firm.

Notwithstanding, we contend that every one of the three subgroups think about the company's social rating in excess of a broadened investor. For instance, think about the accompanying three people: Steven Jobs, the CEO of Apple Computer, Warren Buffet a substantial block holder of.

The Coca-Cola Company and Roy Disney, a chief of The Walt Disney Company. All three people are emphatically subsidiary with their relating firm. Our claim is that these people pick up from the way that these organizations have a high CSR rating more than a broadened investor, for example, Fidelity, whose picture isn't influenced by the social rating of one particular firm. In what tails, we investigate how this potential CSR strife might be influenced by various properties of the firm; the most vital being the proprietorship and capital structure. In expansion, we talk about how free income and the creation of the top managerial staff may influence the contention.

At a minimum, corporate social responsibility includes environmental issues, but it also takes on social, ethical, governance, health, and other issues.

—Norine Kenned

Bottom Line (Conclusion)

The fluffy lines around the idea of corporate obligation (CR), particularly as far as responsibility, has shockingly brought about organizations abusing or being exhibited as abusing the idea of CR as a major aspect of their green-washing motivation and has thusly damaged the trust of their partners. It is thus winding up progressively vital that organizations are really submitted and demonstrate moral esteems, that they walk their discussion, in a manner of speaking. CR is firmly connected set of accepted rules, which is one method for imparting the engraving of the corporate character.

Another method for working with CR is to formalize the procedures in a confirmation procedure. A accreditation alludes to an outsider conduct evaluations in light of communities‟ request due to the powers of globalization and absence of trust towards organizations. Corporate administration that grasps the triple primary concern is related with testing administration choices. The long haul points of view and destinations of manageability don't coordinate the agent apparatuses that help vital administration choices. Lawful institutional frameworks and desires from certain partner gatherings may likewise cause sub-advancing choices for short term picks up (Mark-Herbert and Rorarius, 2010). We may in this manner finish up - CR is testing. Other than all the apparent advantages, the result is difficult to gauge, as there are just extremely restricted apparatuses accessible to the associations to evaluate the effect of CR exercises on the picture, notoriety and the brand (Paksersht, 2010). Be that as it may, as deregulation and globalization proceeds with, the pattern demonstrates that numerous organizations appear what's more, impart their stretched out responsibility regarding society through CR. This is getting to be progressively vital as innovative headway quickens the stream of data over outskirts.

Reference

1. www.google.co.in, www.yahoo.co.in, Newspapers, journals.

CAPITAL FLOW LIBERALIZATION: A SUSTAINABLE POLICY PROCESS IN INDIA

L.Yashoda
Assistant Professor, Department of Management Studies, Jain University, Bangalore

Introduction

Flexibility or removal of policy measures that will restrict the flow of capital to an economy is termed as capital flow liberalization. The role of capital account flow liberalization was restricted in India pre LPG 1991 allowing only liberalization for current account deficit. The only ray of hope for capital account needs was External Commercial Borrowings (ECB) and Non Residents Indians (NRIs) deposits. With huge borrowings and internal intolerance and macroeconomic imbalance resulted in losing interest and confidence of the international investors. Rangarajan Committee gave views and reforming suggestions to overcome the problem of external debt which the country was facing big time during the term. Replacing foreign equity to foreign debt which would result in availability of capital and portfolio diversification along with slack in macroeconomic volatility. Reserve Bank of India appointed another committee under the governance of S STara pore to have road map for capital account convertibility. With the committee's report provided a condition of flexible exchange rate and sufficient foreign reserves and a domestic financial support system strengthening were achieved. The overall ambition of the country was to sustain than to have growth.

In recent decades, a gradual trend in upward movement of liberalization in capital inflow and outflow is quite evident in India. It is also believed capital flow liberalization can hamper discipline issues in financial markets and public finances. At a bigger picture capital flow would enhance the efficiency of resource and even the competitiveness of the domestic financial players. Capital flow facilitates transfer of technology and cross border capital flows between countries which invariably tightens the bondage between neighbors. Pure Management practices especially FDI (Foreign Direct Investments).

Allowing financial globalization has enhanced Indian authority's capabilities to adapt to different financial conditions and reducing vulnerability in crisis especially during financial crunch. Openness to financial inflow and outflow is always preferred as the best globalization means and reversing this phenomenon would mostly be inappropriate. There are people with different opinion towards financial globalization. Proponents feels cross border flow should allow for a more efficient allocation of financial resources in different countries and also to permit to share their country-specific risk in income particularly hence the economy would prosper and move towards welfare. Whereas another set of individuals Detractors argued financial liberalization would hamper the growth of the economy and would result in financial crisis root cause. They are completely against non-industrial countries having enjoyed few benefits but exposed to huge risk because of capital flow liberalization.However, a major complication in benefit – risk tradeoff is most evident in weak economies that face huge risk and less benefit for opening up their economies for financial capital flow. This was empirical evidence with the incidence of Foreign Direct Investments in India and allowing capital flows especially inflows exceeding the outflow of capital to outside India. Capital flow should be managed well and should be well executed with appropriate sector allocation and required industrial needs. One such great issue related to capital flow liberalization is Management of the flow. India's current account deficit doubled to 1.4 percent of GDP is an evidence to prove miss match and miss management of huge amount of capital inflow is miss used to gain nothing.

Benefits of Liberalization

The trend has been moving upward even in emerging markets (India and China), capital flow inward and outward has become the order of the day even in emerged economies which generally is a rare phenomenon. Countries have announced openness to capital flow liberalization has improved cross border relationships stronger economically as well as socially. The situation is quite natural and obvious in member countries where non financial tie-ups are also strong. Advantage of having capital flow flexibility

can also be expensive to monitor and enforce, well designed liberalization would help in sustaining rapid growth rate. China, for example, has proved inward flows contributed to capital, technology and managerial expertise, building on the progress of China many other countries are moving towards further capital flow liberalization. Financial system stability would grow further and will be able to absorb and manage huge inflow of capital. This in turn, allow firms to engage in productive investment and support household as well as business houses to diversify their portfolios. It is also believed that success rate of capital flow liberalization is partially with the support of sound fiscal, monetary policies. Exchange rate policies and flexibility would greater the trade openness for capital flow.

Risks of Capital Flow Liberalization

Flow of capital would definitely not a easy and convenient for economies who have yet to attain sufficient levels of institutional development and financial development. Inadequate financial regulation and supervision especially in Indian economy have proved capital flow liberalization as a bane. There could be a chance of reversal due to financial institution to indulge in huge risks. Historically it is proved that financial crisis leads to capital flow liberalization in most of the countries across the globe. To name a few Mexico (1994-95), Asian Crisis (1997-98), Russia (1998), Turkey (1994 & 2000). It is wrongly believed that capital flow liberalization is all in all solution for all kinds of situations in all times to all countries possible. There are incidences to prove that long and continuous capital flows could be a great problem for example, advanced countries financial supervision and regulation failed to control unsustainable asset bubbles and prosperity in domestic demand from developing countries.Macroeconomic cushions are ample with huge growth and low inflation and high foreign reserves, also larger economies going for liberalization could affect capital flow across the globe. However the magnitude of the effect is not clear.

Recommendations

Some of the suggestions of Tara pore Committee towards capital flow liberalization and capital account convertibility are: taking out tax benefits given to NRIs was a blissful act which would encourage more of domestic investment and authorities could spend more on social welfare activities. Due to federal system of governance in India, authorities are presumed and provided with huge amount of power and entrusted with autonomy more than RBI which lacks most of it. The committee entrusted RBI to have more autonomy and power related to economic affairs which was a very good move.Fiscal deficit is the order of the day in India. Measures to check fiscal deficit was upheld. Mauritius was disallowed to fund Indian economic affairs was a brilliant move to discourage money laundering. Government stake in banks reduced from 51percent to 33 percent discouraged and reduced the power of government in PSU to encourage private players. Encouraging foreign banks presence in India for more reserves was an excellent idea behind the committee. Nonresident corporate and Non Resident Indians were encouraged to invest in Indian markets. Reducing Capital Account Deficit to 3 percent of GDP by building adequate foreign reserves. All banks to come under the umbrella of Companies Act which was excluded earlier. Committee also suggested domestic investment along with individual and companies participation in correlation with foreign investors.

Conclusion

India is an economy with 7.4 percent GDP anticipated economy according to IMF World Economic Outlook, has always strived towards excellence in all economic means and ways. India also has faced lots of ups and downs with capital flow liberalization, right from inflation to foreign reserves. Both advanced and emerging economies are an example for merits and demerits. India is no exception. With many reforms, macroeconomic policies, international tie-ups and integrations definitely capital flow liberalization would serve as a boon.

References

1. Nair L R, 2010
2. Eswar S. Prasad Cornell University, Brookings Institution, NBER and IZA 2009
3. ADB South Asia Working Paper Series Abhijit Sen Gupta (ADB) and Rajeswari Sengupta (IFMR) March 2013
4. Economic Times – March 2018
5. Tarapore Committee Report
6. IMF working paper.

EASE OF DOING BUSINESS FOR SMALL FAST FOOD JOINTS IN BANGALORE: AN EMPIRICAL STUDY

Kunal Vinod Mohan
Department of Economics, Jain University, Bangalore

Abstract

Business has become difficult with time. Costs are at an all-time high, leading to pressure on the business. This has become one of the major reasons why businesses are failing today. Also, the legal procedure of setting up a business is difficult. Problems arise from various governmental policies and lack of management skills on the businessman`s side. Using these issues and the world bank`s parameters on judging ease of doing business through Ease Of Doing Business Index is taken into consideration to make an analysis. This study is going to be a study exclusively focusing on Bangalore Urban only. The problem therefore is that it has become very difficult to start a business and the study`s aim is to understand the reasons for the same. Food sectors is a booming sector and has tremendous scope for new entrants into this sector to start successful businesses, but then unfortunately around 90% of restaurants fail within a year or two of their operations. There are numerous factors responsible for that. This paper tries to understand ease of doing business for these eateries and fast food joints. This paper tries to identify these problems.

Keywords: *Ease of Doing Business, Fast food joints, Bangalore Urban*

Introduction

Business is a system where goods and services are exchanged for one another through financial transactions. Business System is the very basic foundation of an economy. It requires an individual/company to first make some form of investment to sell its products/services to the consumers and generate profits from this. Businesses can be individual owned, private or not-for-profit state owned organizations. World over, ease of doing business determines potential of a country`s Economic Growth. Now one would like to understand how a country`s Ease Of Doing Business is measured-World Bank prepares reports after serious academic research to determine level of ease of doing business in all countries. There is an Ease of Doing Business Index, created by Simeon Djank ov of the World Bank Group to effectively determine the ease of doing business of various countries. A survey is conducted as a research to prepare this report as the report is above all a benchmark study of regulation. The survey consists of a questionnaire designed by the Doing Business team with assistance of other academic advisors. The questionnaire centres on a simple business case that ensures comparability across economies and over time.Various factors like legality of the business, size, location of business, nature of operations and availability of labour etc. are assumptions based upon which the survey is conducted. Next, lawyers and accountants in 190 countries who deal with business regulations contribute data to the survey. For the 2017 report, the team visited 34 countries to verify data and recruit respondents. The reports have been cross checked and have gone through several rounds of verification. Results are also validated with the relevant government before publication. A nation's ranking on the index is based on the average of 10 sub-indices:

- Starting a business (cost, minimum capital).
- Dealing with construction permits.
- Getting electricity.
- Registering property.
- Receiving credit,financial loans.
- Paying taxes.
- Protecting investors.
- Trade across borders.
- Resolving Insolvency.
- Enforcing contracts.

This research paper deals with business environment in Bangalore Urban and ease of doing business in Bangalore Urban. Bangalore, the city is geographically blessed. It has great weather, located away from bordering areas, enemy countries like China, Pakistan, etc. It is called the Silicon Valley of India. It houses a large number of IT Parks, providing many employment opportunities. The central government promoted investment and setting up of factories in Bangalore. Lakhs of people move into Bangalore everyday and is among the fastest growing cities in India. A lot of start-ups are coming up in Bangalore. This research paper focuses on ease of doing business of fast food joints.

Statement of Problem

Business has become difficult with time. Costs are at an all-time high, leading to pressure on the business. This has become one of the major reasons why businesses are failing today. Also, the legal procedure of setting up a business is difficult. Problems arise from various governmental policies and lack of management skills on the businessman`s side. Using these issues and the world bank`s parameters on judging ease of doing business through Ease Of Doing Business Index is taken into consideration to make an analysis. This study is going to be a study exclusively focus sing on Bangalore Urban only. The problem therefore is that it has become very difficult to start a business and the study`s aim is to understand the reasons for the same. Food sectors is a booming sector and has tremendous scope for new entrants into this sector to start successful businesses, but then unfortunately around 90% of restaurants fail within a year or two of their operations. There are numerous factors responsible for that. This paper tries to understand ease of doing business for these eateries and fast food joints. This paper tries to identify these problems.

Background of the Study

Background of the study will be Bangalore Urban District of Karnataka State. Bangalore is the highest contributor to the state economy. Its total GDP is a INR 993.25 billion contributing 33.3% to state GSDP with the per capita annual income in the district being INR.2, 02, 340. However, the GDDP trend is 5.5% CAGR from 2007-8 to 2012-13; with the services sector reigning supreme at INR 683.30 billion with 39.5% contribution to the state. Bangalore Urban is an alive, lively and vital business hub with 315 Large scale Industries with aggregated investment of INR 147.9249 billion, 211 Medium scale Industries with aggregated investment of INR 134.233 billion and a burgeoning 74,282 small-scale industries with aggregated massive investment of INR 412.13 billion. It has 16 Industrial Areas of which Peenya is the largest industrial cluster in Asia, 13 Industrial Estates and 14 notified operational SEZ in Bengaluru forms the framework to the rich industrial landscape in the region. With 10 % of the total MSME units in the district engaged in Agriculture and Food Processing, there is an imminent opportunity Research & Training institutes, advanced agriculture technology and improvement in seed varieties to add to this sector. Bengaluru is also a growing hub for wellness tourism as the city inches to new milestones every time, currently, it facilitates over 6,000 patients from across the world with a distinction of having the largest number of systems of medicine approved by the WHO in a single city. The above information talks about various industries in Bangalore Urban. The focus of the study is on small fast food joints. Fast food joints, are a specific type of restaurant which serves fast food cuisine and has minimal table service. The food served in fast food restaurants offered from a limited menu, cooked in bulk in advance and kept hot, finished and packaged to order, and usually available for parcelling, seating arrangement may or may not be provided. They are usually casual in ambience and cost lesser than fine dining restaurants. Food habits vary widely across states within India. Idli, Dosa is fast food in Southern India, in Maharashtra it is misal-pav, pav-bhaji, poha etc. In Punjab/Haryana, Chole-bhature are very popular and in Bihar/Jharkhand litti-chokha is the fast food. Maintaining consistency in taste and texture of Indian fast food is a challenge and hence local chains are emerging armed with new food-technology.

Literature Review

Most of the studies have relied upon Secondary Data. KlapperLeora, Laeven Luc and Rajan Raghuram (2006), studied the effect of market entry regulations on the creation of new limited liability firms, average size of incumbents and the growth of new firms. Vivek Moorthy (2016) examined the macroeconomic impact of World Bank's Ease of Doing Business (EDB) rank, of increasing importance to

policy makers, using simple but regression method. Dhiren Jotwani (2016) aimed to research relation between finance and productivity. It relies on secondary data and also makes use of various statistical tools and Econometrics. HarpreetKaur (2015) made a study to determine areas that needed attention in doing business to make Makein India a success. She used secondary data from private agencies, journals, etc. Dalal Karama (2017) made a study on impact of corruption on ease of doing business and found that it did have a negative impact on it.The study used cross-sectional data to assess the extent of the relationship that exists among ease of doing business, corruption, rule of law, GDP growth, and GDP per capita. Ashutosh Gaur and Jasmine Padiya (2017) studied the determinant factors for ease of doing business and finds that effective policy frame work, simplicity in procedure, and effective implementation can be factors that would boost business in India. Hassan Sayed Fahid (2015) made a study which focuses on market analysis in Imatra region, Finland. The purpose of the thesis was to discover new restaurant business opportunities in Imatra Region. Another objective of this thesis was to understand Imatra's prospective customers' requirements, needs and expectations. Sabrina Rodrigues Sousa, Aldo Roberto (2011) `s paper aims to understand how services are being studied using Life Cycle Assessment (LCA), to present an overview of the case studies obtained during the literature review and to start a discussion about the methodological issues which difficult the application of LCA methodology in this sector. George Jacobs and Peter Klosse (2016) study what factors could promote sustainability in restaurants. The study proposes three distinct fields within that research namely – Restaurant as a product supplier, Demand and research on the product itself. Carol Lu Celine Berchoux Michael W. Marek (2015) The purpose of this paper was to determine whether luxury hotel managers and customers have the same understanding of service quality and satisfaction and whether there is a disparity between services offered by luxury hotels and the way customers actually experience them. E. W.Nyoike, L.C Langat , L.M. Karani , A.C. Lagat (2002) `s study was to investigate the factors that influence the growth of small-scale restaurants in Nakuru municipality. The research method used in this study was a survey. A sample of 80 restaurants was selected using stratified random sampling. Hui Guo (2006), purpose of the study was to determine the feasibility of opening a fastfood restaurant selling toufunao in Jingyang living area, Wuhou District in the city of Chengdu. Adepoju Uthman (2017) made a study on impact of ease of doing business on growth rate of GDP Per Capita and found it to be true. FaisalYahya (2006) studied on understanding problems in doing business in India from different investors point of view. PekkaStenholm, Zoltan.J.Acs, and Robert Wuebker (2013) made a study which introduces novel multidimensional measure of the entrepreneurial environment which reveals how differences in institutional arrangements influence both the rate and type of entrepreneurial activity in a country.

Research Gap

None of the studies discussed have made an exclusive study pertaining to Bangalore Urban Region only and study its business environment and ease of doing business of fast food joints.This research will focus on that.

Methodology

The study is based on primary data and secondary data. World Bank`s website and its Ease Of Doing Business Index reports, NITI Aayog`s website and reports. Questionnaires and Interviews are administered to a sample of 70 respondents. Using the data collected graphs tables will be made based on statistical calculations to come up with effective results.

Research Questions

- How easy is it to do business for fastfood joints in Bangalore Urban?
- Do government schemes like Mudra Yojana,etc of good help to start these fastfood joints?

Research Objectives

The objectives of the study are:

- To identify ease of doing business for small fast food joints in Bangalore Urban.
- To find out if government schemes like Mudra Yojana, etc are of any help to these ventures.

Scope of Study

The scope of the study is limited to Bangalore Urban district only excluding Anekal Taluk.

ECONOMICS OF AGEING- AN EMPIRICAL STUDY IN BANGALORE URBAN

Monica Nandeibam
Department of Economics, Jain University, Bangalore

Abstract

As research studies on ageing and older people are scanty and scattered, one has to look at some of the reports and working papers prepared under the various bodies of the United Nations. These studies, while offering statistics-based information, explore less about the 'Lived-experiences' of the ageing and the aged people. A report prepared by WHO (world Health Organization) rightly observes that ageing is both a biological and social construct. Old age is, thus, part of the lifecycle as well as part of social perceptions. Biological changes occur in all forms of life asit ages and grow. Often, environmental factors, such as food in-take, access to resources, and health-care options, accelerate or dwarf the pace of change. Scientifically, ageing represents anatomical and physiological changes that synchronize with bodily changes. Scientists, therefore, argue that ageing starts when development and growth becomes stagnant. Psychosomatic ageing includes a wide-ranging decrease in the psychological capabilities that accompany old age. Normally, bodily deterioration comes before psychological ageing begins, but this is not always true. The process of ageing, according to UNFPA and Help Age International, 'is multidimensional and involves physical, psychological and social changes.Thisstudy focuses on an empirical study of the economics of ageing with respect to Bangalore urban district.

Keywords: *Ageing, Economy; Demography; Bangalore Urban.*

Introduction

The term 'Ageing' or 'Aging' especially when we refer to human being is the changes in different aspects over time such as physical, psychological and social changes but their knowledge of world events and wisdom might expand. This is the age we usually known as the retirement age. Ageing not only affect the person who attains 60 or above but it also affects the society in one way or the other. Ageing is the stage where they are known for risk factors for most human diseases and roughly around 150,000 people die every day across the world and about two-third die because of age related diseases.

As research studies on ageing and older people are scanty and scattered, one has to look at some of the reports and working papers prepared under the various bodies of the United Nations. These studies, while offering statistics-based information, explore less about the 'Lived-experiences' of the ageing and the aged people. A report prepared by WHO (world Health Organization) rightly observes that ageing is both a biological and social construct. Old age is, thus, part of the lifecycle as well as part of social perceptions. Biological changes occur in all forms of life asit ages and grow. Often, environmental factors, such as food in-take, access to resources, and health-care options, accelerate or dwarf the pace of change. Scientifically, ageing represents anatomical and physiological changes that synchronize with bodily changes. Scientists, therefore, argue that ageing starts when development and growth becomes stagnant. Psychosomatic ageing includes a wide-ranging decrease in the psychological capabilities that accompany old age. Normally, bodily deterioration comes before psychological ageing begins, but this is not always true. The process of ageing, according to UNFPA and Help Age International, 'is multidimensional and involves physical, psychological and social changes.

The definition of ageing laid down in the United Nations Report (2002) on World Population Ageing 1950–2050 is that 'older persons are considered to be those aged 60 years or older' is not universally applicable. Help Age International, drawing upon its grass root level interaction with older people, comments that 'in many developed countries, the age of 65 is used as a reference point for older persons as this is often the age at which persons become eligible for old-age social security benefits'. Thus, ageing and old age is culturally defined and in most cultures goes beyond chronological age. Old age as a social construct is often associated with a change of social roles and activities, for example, becoming a grandparent or a pensioner. Older persons often define old age as a stage at which functional, mental, physical capacity is declining, and people are more prone to disease or disabilities.

The world population is getting older day by day and no one knows what exactly will happen in tomorrow's ageing societies and the changes in the demographic can be taken as a revolution as it is the revolution of economy which can change the businesses and consumers of the world by the ageing societies. In fact, there is a strong interrelationship between demographic change and the economy; it can have significant effects in the economic performance as the people economic behavior varies at different stages of life and also in the changes of country's age structure. Economics of aging (economics of the elderly, economics of old age) is a subcategory of population economics (demographic economic) which deals with the economic aspects of societal aging. It can view itself as one of the types of special economics which is similar to "special economics" which includes health economics and education economics. Economics of aging is also a fairly young research area and area of action within Gerontology, whose main focus in Europe is currently on financing social security systems - especially pension systems (Naegele and Schneiders, 2012; Cirkel, 2011; Kruse and Wahl, 2010; WU, 2010; Schneider, 2006; Nyce and Schieber, 2005; Backes, 2004). Lee et al. (2010, p. 15) also emphasizes this aspect with the following statement: "Most analyses of the economics of aging emphasize labor income at older ages because of the important linkages between labor supply and aging-related institutions, e.g. public pensions programs". By contrast, the USA and Japan discovered the economic potential of this demographic development long ago and are looking for ways to link the two objectives of improving the quality of life of older people and acquiring new market and employment potentials (Heinze et al., 2011; Fretschner et al., 2011; Fretschner, 2011; Murata, 2011; Suzman, 2010; Clark et al., 2004; Clark and Spengler, 1980; Clark et al., 1978).

Statement of the Research Problem

Government is facing population ageing as a challenging task to provide social security and public services for the aged while maintaining economic growth. This fundamental issue is common across all economies around the world.The ageing population is harmful for economic growth due to the decline in labor participation rate and gives impact in the economy in many ways mainly increase in the social security tax and decline in productivity growth. There should be quantitative support for social security reform and innovation policies in ageing economy.

Background of the Study

Bangalore/Bengaluru is the capital of the state Karnataka and also one of largest city in India. It has population of over 15 million (as of January 2016), Bengaluru is the third largest city in India and 27th largest city in the world. It is one of the most ethnically diverse cities in India with over 62% of the city's population comprising migrants from other parts of country. As historically a multicultural city, Bengaluru has experienced a dramatic social and cultural change with the advent of the liberalization and expansion of the information technology and business process outsourcing industries in India. IT companies in Bengaluru employ over 35% of India's pool of 1 million IT professionals.

The population density of Bangalore has increased 47% in just ten years due to growing opportunities and growth which brings people from across the country. In 2011, there were 4,378 people per square kilometer from 2,985 ten years before. Bangalore is now growing faster than ever, crossing the 10-million which mark in 2013. The urban region has grown three times faster than the state as a whole, and it is now home to 16% of the state's population. Now, Bangalore's 2018 population is estimated at 11,171,000 but the population of Bangalore was 746,000 in 1950. So, Bangalore has grown by 1,084,000 since 2015, which represents a 3.46% annual change. These population estimates and projections come from the latest revision of the UN World Urbanization Prospects (2017) and these estimates represent the urban growth of Bangalore, which typically includes Bangalore's population in addition to adjacent suburban areas.

Brief Review of Literature

Various researchers have studies on Economics of Ageing, Anita Baruwa studies on socio-economic and demographic ageing with respect to North East India in order to discuss the emerging issues in the

process of ageing. HeeseKlause studies the relationship among age, gender, ethnicity, religion, education as well as the attitudes and perceptions relating to ageing and dementia. Ahamed Javeed, Goli examine the pattern of living arrangements among the aging population and perception about old age support in the Indian aging population. Nobert, Silva are concerned in the area for finding theoretical positioning of Economics of Ageing in Science to unlock the economic potential of the demographic development. Shah Aslam studies about the ageing home based women to seek recognition for women's work that mostly goes unrecorded to draw attention of policy planners, legislators and non- governmental organizations. Yadav Priyanka, Pou Apollo examines the linkages of employment, chronic diseases prevalence and medical care of the elderly population in India. MaharanalBarsharani, LadusinghLaishram aims to study on the changing pattern of gender disparity in health and food expenditure over time among the elderly in India. Lena A, Ashok K, studies the background and socio economic status of the elderly and their attitude towards life. Cramm Murray, Lee Jinkook analyzed the relationships between and predictors of objective and subjective health measures in the ageing population of India. Sharn Ram examined the study of spatial distribution of population ageing in Punjab and it also studies the spatial distribution of population ageing and crude birth rate.

Research Gap

The earlier researchers mainly focus on age related disease that is dementia and other health problems and there is lack of study in financial or economic problems faced by the ageing population in India. There has been fail to take them as resources or include in the development process. The researchers are more concerned in the areas like North East India, Karachi (Punjab), Udupi Taluks. The present study analyze the impact of ageing on the economy of Bangalore Urban district and the study tries to investigate the measures to improve health and longevity for the elderly population.

Research Questions

For analyzing the impact of ageing on economy, some relevant questions are

- How economy is affected by the ageing in Bangalore Urban?
- What are the measures to improve health and longevity for the elderly population?

Objectives

- To analyze the impact of ageing on the economy of the state (Bangalore Urban).
- To investigate the measures to improve health and longevity for the elderly population.

Methodology

The study is focus on the area of Bangalore Urban district with special regards to Sampangi Rama Nagar, Sudhama Nagar, Shanti Nagar and also concerned on the old age home like Nightingales Sandhya Kirana (Shanti Nagar), Help Age India (Lal Bagh Main Road). The collection of data is based on the stratified random sampling by the questionnaires, interviews. Secondary data is collected from various sources like censuses, government publications, and internal records of the organization, reports, books, journal articles, and websites.

Hypotheses

H_0= There is no significance impact of ageing on economy.

H_1 = There is significance impact of ageing on economy.

Variables of the Study

The study focuses on the number of variables such as the government expenditures on pensions, schemes, health care services, retirement system, and labor market system.

Tools of the Study

The methods for analyzing data are chi- square, percentage analysis, and five pointliker scale, Excel, Bar graph and Pie chart.

Scope and Importance of the Study

The study of Economics Ageing will illustrate various factors which affect the economy of Bangalore Urban by the elderly population and suggest measures to improve health care service or system for the longevity of ageing societies. The study concerned the area of Bangalore Urban. Data is collected through questionnaires and interviews, from 100 respondents, 50 respondents have taken from two old age homes that is Nightingales Sandhya Kirana (Shanti Nagar), Help Age India (Lal Bagh Main Road) and remaining 50 respondents from the different household in Bangalore Urban such as Sampangi Rama Nagar, Sudhama Nagar.

EMERGING ISSUES OF CORPORATE GOVERNANCE AND ITS EXPLICATION WITH CONTEXT OF COMPANIES

S.ShabashKalandar
Assistant Professor, SDC College of Arts Commerce Science and Management Studies, Kolar

Abstract

Corporate in this era production mechanism of profit objectivity, irrespective of act, rules, and regulations. They are just concentrating on profit earning in neglect of stake holders as well as public welfare. For having a break on this ***CORPORATE GOVERNANCE*** *concept emerged, which literally means conduct the policy, actions, and affairs of (a state, organization, or people) with authority in respect to corporate. Corporate governance is an ethically driven business process that is committed to values aimed at enhancing an organization's wealth generating capacity. This is ensured by taking ethical business decisions and conducting business with a firm commitment to values, while meeting stakeholders' expectations. Corporate governance mechanisms and controls are designed to reduce the inefficiencies that arise from moral hazard and adverse selection. There are both internal monitoring systems and external monitoring systems. Internal monitoring can be done, for example, by one (or a few) large shareholder(s) in the case of privately held companies or a firm belonging to a business group. Furthermore, the various board mechanisms provide for internal and external monitoring. In companies act, 2013 there will be special provision for governing corporate.*

But irrespective of all above act's it's been witness some of the Emerging Predicaments in governance process so, this paper throws light on predicaments and their prospect with context of Indian Companies Act, 2013 and its role in development of India as whole.

Keywords: *Corporate Governance, Companies Act, 2013, Predicament & Resolution, development of India.*

Introduction

Even a Small number of Task or space is not free from proper Guidance and Governance then how can be A Corporate I.e. , large number of Company or Group of Companies will be free from Governance. Here Comes the concept of **Corporate Governance,** in simple it is The framework of rules and practices by which a board of directors ensures accountability, fairness, and transparency in a company's relationship with its all stakeholders (financiers, customers, management, employees, government, and the community). In deeper sense The corporate governance is a framework which consists of (1) explicit and implicit contracts between the company and the stakeholders for distribution of responsibilities, rights, and rewards, (2) procedures for reconciling the sometimes conflicting interests of stakeholders in accordance with their duties, privileges, and roles, and (3) procedures for proper supervision, control, and information-flows to serve as a system of checks-and-balances. And on the other hand it is been note worthy that Companies act , 2013 Gave special importance to Corporate Governance and it is laid essential that company with Governance will maintain its stable growth in its market. But some of the Emerging issues can be noted as problems in the way of Corporate Governance and it are tried to explicit the problems within the context of Companies act, 2013.

Overview of Companies Act, 2013

Major changes in Companies act, 2013 will be categorized into three

Board Composition

- **Resident Director:** The requirement to have a resident director on the board of companies has been viewed as a move to ensure that boards of Indian companies do not comprise entirely of non-resident directors. This provision has caused significant difficulties to companies, since it has been brought into force with immediate effect, requiring companies to restructure their boards immediately to ensure compliance with CA 2013.
- **Independent Directors:** CA 2013 proposes to empower independent directors with a view to increase accountability and transparency. Further, it seeks to hold independent directors liable for acts or omissions or commission by a company that occurred with their knowledge and attributable through board processes. While CA 2013 introduces these provisions with a view of increase

accountability in the board this may discourage a lot of persons who could potentially have been appointed as independent directors from accepting such a position as they would be exposed to greater liabilities while having very limited control over the board.

- **Woman Director:** While the mandatory requirement for appointment of women directors is expected to bring diversity on to the boards, companies may find it difficult to be in compliance with CA 2013 unless they have already identified or internally groomed women candidates that are qualified to be appointed to the board.

Committees of Board

CA 2013 envisages 4 (four) types of committees to be constituted by the board:

- **Audit Committee:** Under CA 1956, public companies with a paid up capital in excess of INR 50,000,000 (Rupees fifty million only) were required to set up an audit committee comprising of not less than 3 (three) directors. At least one third had to be comprised of directors other than Managing Directors or Whole Time Directors. CA 2013 however, requires the board of every listed company and certain other public companies to constitute the audit committee consisting of a minimum of 3 (three) directors, with the independent directors forming a majority. It prescribes that a majority of members, including its Chairman, have to be persons with the ability to read and understand financial statements. The audit committee has been entrusted with the task of providing recommendations for appointment and remuneration of auditors, review of independence of auditors, providing approval of related party transactions and scrutiny over other financial mechanisms of the company.
- **Nomination and Remuneration Committee:** While CA 1956 did not require companies to set up nomination and remuneration committee, the Listing Agreement provided companies with the option to constitute a remuneration committee. However, CA 2013 requires the board of every listed company to constitute the Nomination and Remuneration Committee consisting of 3(three) or more non-executive directors out of which not less than one half are required to be independent directors. The committee has the task of identifying persons who are qualified to become directors and provide recommendations to the board regarding their appointment and removal, as well as carry out their performance evaluation.
- **Stakeholders Relationship Committee:** CA 1956 did not require a company to set up a stake holder's relationship committee. The Listing Agreement required listed companies to set up a shareholders / investors grievance committee to examine complaints and issues of shareholders. CA 2013 requires every company having more than 1000 (one thousand) shareholders, debenture holders, deposit holders and any other security holders at any time during a financial year to constitute a stakeholders relationship committee to resolve the grievances of security holders of the company.
- **Corporate Social Responsibility Committee ("CSR Committee"):** CA 1956 did not impose any requirement on companies relating to corporate social responsibility ("CSR"). CA 2013 however, requires certain companies to constitute CSR Committee, which would be responsible to devise, recommend and monitor CSR initiatives of the company. The committee is also required to prepare a report detailing the CSR activities undertaken and if not, the reasons for failure to comply.

Board Meetings and Processes

In the backdrop of global corporate transactions, the changes relating to participation of directors by audio visual and electronic means are a welcome step, aimed at keeping pace with technological advancements.Above mentioned are innovative and Effective steps towards Corporate Governance.

Statement of Problems

At most importantly noted that the problem of corporate governance is summarised major problem of Authority towards Internal Official's

- If authorised personnel in BOD will involve in Firm Managerial decision case came into force that Chennai-based Sun TV Network is a case in point. As of June, its promoters own 75 per cent of the media company. Even though Sun TV's remuneration committee is headed by independent director J.

Ravindran, its wages are heavily skewed in favour of its promoter directors. In 2012/13, the company's 1,916 employees together earned Rs 85.7 crore, or Rs 4.5 lakh on average. In comparison, the promoter directors - KalanithiMaran and KaveryKalanithi - each got Rs 56.2 crore as salary and perks. This is a whopping 1,250 times the average staff salary. "It clearly shows the independent directors have failed to implement fair remuneration policies," says J.N. Gupta, Managing Director at SES.

- It is also noted that Kingfisher had five independent directors, including former SEBI chief G.N. Bajpai, who quit between September 2011 and March 2012. Bajpai was appointed to the board of group company United Spirits a few days after he left the Kingfisher board.The airline was grounded in October because of massive debts and failing to pay salaries and taxes for many months. The same month, HMX Acquisition Corp, the US unit of textile company S. Kumars Nationwide, filed for bankruptcy. Its board included former SEBI chief M. Damodaran as an independent director. Damodaran and two other non-executive directors, Suresh N. Talwar and D.D. Avari, resigned soon after the bankruptcy filing.

Objective of Study

- To bridge a Gap between Shareholders and BOD s interest.
- To have Corporate Awareness towards Corporate Governance.
- To make society better and wealth maximised conception.
- To Develop Economy of India.

Research Methodology

This Research article contain Conceptual framework of research design based on Act enhanced with special reference to current issues collected through secondary data source with the scope of Indian context, for finding the exact problem and prospect of Emerging issues of Corporate Governance. As it's rightly said that "Wise Men Learn From Mistakes Of Others".

Analysis and Finding

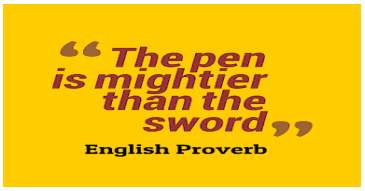
- **Improper Governance of accounting policies**: It is been noted that Accounting practice leads to Strategic planning base and if it is not Governed properly then that of others .The whistle blower letter from the Union government to the RBI regarding the **Dhanalakshmibank's** accounting practices , along with the significant uncertainty surrounding the bank's strategy post the management change, has caused significant losses to shareholders. The brokerage has downgraded its rating to red for the way the bank has handled the events surrounding the management change.
- **Aggressive Revenue Capitalisation by BOD**: It is been noted in most of the companies that Revenue will be capitalised without any prior interest roars share holders. In biocon company ltd, Aggressive accounting treatment of deferred revenue coupled with historic Capitalisation of bio similar insulin R&D will, said the brokerage, likely result in a consistent inflating of EPS for six years in a row from FY10-15. The Axi-Corp acquisition and divestment transactions raise a red flag given the transaction structure and cash in/outflow.
- **Miss-representation of debt** : Its see in 3i Infotech that The company did two back to back QIPs to retire debt. Despite raising Rs 5 billion, debt levels have increased as most of the money has been wasted, the brokerage said. During the quarter following the first QIP massive earn-outs, which were not disclosed in the QIP document, were paid and QIP proceeds were invested into an e-governance business, later discontinue. This warrants a red light, according to the brokerage.
- **lack of consolidated quarterly reporting and disclosures**: It is been witnessed in Financial Technologies Ltd that The brokerage says it maintains its red flag on corporate governance due to lack of consolidated quarterly reporting and disclosures, which it says is below par, and lack of communication with Investors and analysts, for there have been no conference calls or analysts meetings in the past two years. A substantial proportion of the company's standalone revenues are from related parties, the brokerage says.

- **Unethical Transaction**: Not the less in Educomp The brokerage says the key issues for a red flag are, 1) common address of registered office of Edu Smart (SPV, or special purpose vehicle) and its statutory auditor, 2) the cost of resource co-coordinator, that should have been borne by the SPV, is being borne by Educomp and the SPV is not being consolidated, which is negative for minority shareholders of Educomp, 3) high turnover of company secretaries at the SPV which casts doubt on overall compliance policies, and 4) executive director of K-12 segment at Educomp was the first signatory to the MOA of SPV.

Suggestions

As on above mentioned Proverb let's take PEN as suggestion, where PEN stands for

P - Protocol
E - Ethics
N -Notion



Protocol: It is suggested to have firm protocol of **Companies act, 2013** and importantly of its 3 major changes in Directorship, Committees, as well as Meetings. And more over creating an awareness towards Stake holders about their authorities as well as their Role in management.

Ethics: If Governance is Roof of corporate then Ethics is base for corporate and without base it is highly not possible for a corporate to achieve its goals and aims in long run. So every corporate needed trust on one omitted and this will be non doubtfully through proper Ethics. It is suggested that a corporate must be ethical towards its stake holders who were responsible for its Existence.

Notation: New and firm ideations to be given place for discussion of like conference, seminars and Discussions. And steps taken by this should put forth into an action with all needed as well as effective framework.

Conclusion

Through the above mentioned suggestions it is firm that surely we can achieve corporate Governance in the 21st era not immediately but definitely. With all concerned authentication of Companies act, 2013 we can have a firm goal of investors satisfaction which can also leads to long run stability of Corporates. As it is rightly said " Action is the foundational key to all success". So plan of above corporate governance should convert into action.

Reference

1. Business Dictionary "Corporate Governance".
2. Companies Act,2013.
3. NDTV "5 companies that score poorly on corporate governance" dated 18-06-2012.
4. Business Today "The Importance of Being Independent" dated 22-12-2013.
5. https://en.m.wikipedia.org/wiki/Corporate_governance

EXPENDITURE PATTERN AND RETURNS FROM SHOOTING SPORTS – A STUDY IN URBAN BANGALORE

Mohammad Ajmal
Assistant Professor, Department of Economics, Jain University, Bangalore

Abstract

Sports industry is a billion dollar business and has positive impact on local economies, mainly through tourism. Sports create jobs for the society According to Economic Modeling Specialists Intl., as of 2013, the sports industry in America produced 456,000 jobs (average salary $39,000). Like jobs for coaches, referees and agents, many stadium vendors and their employees, front-office personnel. Sports provide a platform for people to come together and support their country. Sports also have the power to lift people up in times of chaos. The Miracle on Ice came at a time when tensions were high in the Cold War, and South Africa's 1995 Rugby World Cup victory helped a nation heal from decades of Apartheid. Sports do not only help children to get fit but also in mental well-being and increased self-esteem. There are different impacts of the sport on the country like economic impact, for example the contribution to employment is even greater – sport and sport-related activity is estimated to support over 400,000 full-time equivalent jobs, 2.3% of all jobs in England. Health impact likes, physical activity, including sport, is linked to reduced risk of over 20 illnesses, including cardiovascular disease. Social and cultural impact like, positive effects of sport on education include improved attainment, lower absenteeism and drop-out, and increased progression to higher education.

Introduction

Sports economics is a discipline of economics that focus on various sports activities and their relationship to human life. It covers the ways in which economist's study the different institutions of sports and the ways in which sports can allow economists to research many topics. Sports economics modules offer a range of adaptable and specific skills that can be applied to a range of job opportunities, particularly in the ever- growing sports and leisure industries, local government and tourism.

Sport is generally recognised as system of activities which are based on physical athleticism, with the major competitions such as the Olympic Games. However, a number of competitive, but non-physical, activities claim recognition as mind sports. Shooting sports is a collective group of competitive and leisure sporting activities involving proficiency tests of accuracy, precision and speed in using various types of ranged weapons, (firearms and air guns, in forms such as handguns, rifles and shotguns and bows/crossbows). Different disciplines of shooting sports can be categorized by equipment, shooting distances, targets, time limits and degrees of athleticism. Shooting sports may involve both team and individual competition. Due to the noise of shooting and the high impact energy of the projectiles, shooting sports are typically conducted at either designated permanent shooting ranges or temporary shooting fields in the area away from settlements.

Shooting has three disciplines in Olympics (1) Rifle (2) Pistol (3) Shotgun. Further the events are again divided into 50m rifle three positions, 10m air rifle, 10m air rifle team, 25m rapid fire pistol, 10m air pistol, 10m air pistol team, Trap and Skeet. The International Shooting Sport Federation world cup was introduced by the international shooting sport federation in 1986 to provide a homogeneous system for qualification to the Olympic shooting competitions. It still is carried out in the Olympic shooting events, with four competitions per year in each event. For the best shooters there is since 1988 a world cup final.For the Shooting event there are different accessories used like, hearing protection, bipods, shooting sticks, shooting glasses, shell bags, rifle scopes, binoculars, targets, ammunition, cleaning supplies. The shooters have to spend a lot on these accessories to play this sport and continue the same.

Sports have a positive impact in society. Whether it's helping children, communities or even nations, sports make a difference on a daily basis. Team and player foundations are raising money for worthy causes, major events are boosting local economies and kids are encouraged to get out and get active.

Sports industry is a billion dollar business and has positive impact on local economies, mainly through tourism. Sports create jobs for the society According to Economic Modeling Specialists Intl., as

of 2013, the sports industry in America produced 456,000 jobs (average salary $39,000). Like jobs for coaches, referees and agents, many stadium vendors and their employees, front-office personnel. Sports provide a platform for people to come together and support their country. Sports also have the power to lift people up in times of chaos. The Miracle on Ice came at a time when tensions were high in the Cold War, and South Africa's 1995 Rugby World Cup victory helped a nation heal from decades of Apartheid. Sports do not only help children to get fit but also in mental well-being and increased self-esteem.

There are different impacts of the sport on the country like economic impact, for example the contribution to employment is even greater – sport and sport-related activity is estimated to support over 400,000 full-time equivalent jobs, 2.3% of all jobs in England. Health impact likes, physical activity, including sport, is linked to reduced risk of over 20 illnesses, including cardiovascular disease. Social and cultural impact like, positive effects of sport on education include improved attainment, lower absenteeism and drop-out, and increased progression to higher education.

Background of the Study

Shooting has his place in the Olympics sport for more than 100 years. After the success of the 1896 Olympics games the shooting community decided to conduct international shooting matches that came to be known as world championships. The first championship was held in 1897 in Lyons, France. The only break in the championships was the two war periods 1915-1920 and 1940-1946. In 1897 the 300 meter free rifle (full bore) was the only event conducted. In 1900 the 50 meter free pistol event became the first pistol event that was added. Women events were added starting in 1958 and a full junior men and women program included in 1994. Over the years the championships progressed from the original four events, eight champions (individual and team) in one discipline to the thirty events, 108 champions in four disciplines (rifle, pistol, running target, shotgun) that are included in the current world championships.

Shooting is an important Olympic sport in India. Of India's 26 Olympic medals, 4 have come from shooting including gold by Abhinav bindra in the 2008 Olympics. Governing body of India is the national rifle association of India. The national rifle association of India (NRAI) was formed on 17th April 1951 with the aim of development of shooting sport in India and to impart training to civilian for self –defence. Shooting (hunting) in medieval times originated as a means of survival, as it was practiced to hunt animals and birds to supplement food requirement. As a result of industrial revolution and increased agricultural output, hunting for food became less necessary. However, affluent people continued to hunt as part of recreation. To preserve wild life and put an end to indiscriminate poaching, the government has almost banned hunting. Some of these people took to target shooting as a sport. Shooting has a varied history in Indian sport and society, ranging it from being a sport for royalty in the past; it is now a major competitive sport among the masses. This sport is extremely popular all over the world.

Shri G V Mavlankar was its founder president who was also the first speaker of Lok Sabha. The national rifle association of India (NRAI) was formed to develop the shooting sport in India and impart training to civilians for self-defence. The national rifle association of India is affiliated to international shooting sport federation, Asian shooting confederation, commonwealth shooting federation, south Asian shooting confederation and Indian Olympic association. We have a network of 53 affiliated state associations and units. Regular competitions are being held at national, state, district and club levels. Some of the universities have recently given recognition to this sport. This will contribute in developing talent and encouraging the youth to take up shooting as a career sport. We will then to able to pick up best talent from grass root level.

Admission of Shooters in Schools and Colleges

Many prestigious schools and colleges have reserved some vacancies for sports persons and many of the shooters have been admitted based on their performance. This is encouraging younger generation to take up shooting sport as a career.

Employment by Corporate Houses, Defence and Para Military Forces

Shooting has become very popular among the masses. As a result, many of our talented shooters have been given employment by corporate houses, army, BSF, CISF, ONGC, Indian airlines, railways etc. This is a great incentive to the shooters and will prove very beneficial towards promotion of shooting sport in the country. In Karnataka the very early days, way back in 1960, a handful of shooting enthusiasts came together to jointly work towards the pursuit of their hobby. Initially, shooters would collect guns deposited at the local police station, and practice at CRA grounds, Bangalore. The shooters had to face many challenges in terms of leasing a proper area for a shooting range; procurement of competition guns; supply of ammunition, and many more. It was during the 4th national games in 1997, that late shri. Nagaraj rao jagdale established the existing KSRA. Ranges at Karnataka state rifle association, which is part of the sports authority of India campus, on Mysore road, Bangalore. A full-fledged modern shooting complex comprising of 50 m range, 25 m pistol range, 10 m indoor air gun range and trap & skeet range are available at the sports authority of India complex since May 1997. During 2009-2011, these ranges were further renovated to match international standards with state of the art electronic target shooting equipment. We have a network of 13 affiliated associations and units.This will contribute in developing talent and encouraging the youth to take up shooting as a career sport. We will then to able to pick up best talent from grass root level.In Bangalore we have around 8 institution and clubs with 10 m range with world class coaching and facility.

Review of Literature

There are many studies done on the sports and its benefits and other related studies. Hallmann and Wicker (2011) his finding confirmed that golf can be an expensive sport and that golfers spend a considerable amount of money on their sport, they spent on average one monthly net income on golf over a 12-months period. Golfers with social motives spent more money on their sport; in particular intrinsic social motives are important for golfers taking part in the sport. Costa (2010) in the study it was found that the marketing activities carried out by the club do not follow a structured plan. By implementing the different techniques proposed for evaluation, soccer clubs would make practical and theoretical contributions to the sports marketing. Manson (2017) Children with attention-deficit/hyperactivity disorder tend to benefit from having their own protected physical space, when involved in focused activities and benefit from participating in target-shooting sport. A. Groslambert (2003) This study reveals that biathlon shooting performance could be significantly improved by using a program that combine shooting training with Autogenic and imagery training. Jeroen Scheerder (2011) The amount of money spent on sport apparel is explained by both socio-demographic variables and sport-related lifestyle characteristics. In the study it is seen that 74.3 percent of the adults spends money on sport apparel. Tim Chapin (2002) the findings were, A pro-facility argument that rests solely on the magnitude of the economic benefits conferred by a new facility is unsustainable, and Traditional project impact assessments tend to focus on the direct economic costs and the direct economic benefits of sports facilities. Henrique Rafael S. (2016) the results of this study indicate that early participation in sport and more advanced loco motor skills in early childhood are important to promote future sports participation. The development of motor skills can stimulate sports participation across childhood, which may promote positive and sustainable trajectories of health-enhancing behaviours. IoanaOproiu (2013) the expression of anger index increases as the professional experience in sport is growing due to aging. The training of future athletes like the improvement of the training programs designed for coaches, training the referees and organizers specialized in children competitions and promoting the sports education for all throughout national and international campaigns on fair-play. Stefan Kesenne (2011) The economic impact analysis indicated that the 2005 Pan-American Junior Athletic Championships generated a net increase in economic activity in the city of $5.6 million. The cost-benefit analysis showed a negative net benefit of $2.4 million. Both methods presented challenges and limitations, but cost-benefit analysis has the distinct advantage that it identifies the net benefits associated with hosting a sport event. Marykate Edmunds

(2014) This study supported the hypothesis by showing that a financial gap exists between a full ride scholarship and athlete expenditures, the gap for all these schools was pretty high at $14, 592. Philip White (2012) socioeconomic status was a significant predictor of sport involvement among 6–9 year-olds, but not for 10–15 year-olds. High income families were much more frequently involved in sport and physical activity compared with those from low income families and neither family income nor parent educational achievement were significant predictors of participation in organized sport and physical activity among 10–15 year-old Canadians. Konttinen, Niilo (2003) The result showed that compared to random triggering, the shooters fired more during the phase of 0-50 percent and in the end 70-99 percent R-wave to R-wave interval. Pamela Wicker (2017) Study lies in a comprehensive analysis of the relationship between various types of public expenditure. If governments want to promote sport participation, which has the potential to generate wider social benefits e.g., health, education, social inclusion, on a short-term basis, expenditure on sport infrastructure can be considered most promising.

Statement of the Problem

Individual shooter who spends on diverse item do not compensate well with the returns accruing from the spending. Shooting is one of the costly sports in Olympics, the shooters spends a lot on the accessories of sports some of them are shooting glasses, hearing protection, rifle scopes, binoculars, targets, ammunition, cleaning supplies. The shooters have to spend a lot on these accessories to play this sport and continue the same, but returns from the sports are very negligible. The present research focuses on the expenditure pattern of shooters and the returns from the shooting sport.

Research Gap

There are several studies have focused on sports related research, there cost and benefits of conducting sports events, sports training and the relationship between sports and aggression but there is a death in literature regarding economic studies regarding shooting sport specifically in Bangalore region. The present study aims to fill this research gap.

Research Questions

In order to understand the shooters spending pattern on diverse item and the returns from the sports we ask few questions such as:

- Does spending on sports events encourage a particular sport?
- Do sports spending generate equitable returns to the individual and society?
- What are the specific returns generated by the shooting sports?

Research Objectives

Shooting sports have several influences on the individual and society. Sports help an individual to obtain a job in their area of interest and expertise which may not be available in the society. This helps the individual to exposes to new things and ways of leading life. The present study aims to analysis the benefits and advantage of shooting sport to individual and society.

The specific objectives of the study are the following:

- Expenditure pattern of shooting sport
- Economic impact of sports on individual and society
- To identify the various schemes prevailing in the sports.

Hypothesis

H_o = There is no signification difference between the expenditure pattern of sports player.

H_1= There is signification difference between the expenditure pattern of sports player.

Operationalization of the key words

- Expenditure pattern
- Equitable returns
- Shooting sports
- Schemes prevailing
- Economic impact

Methodology of the Study

The study is based on primary data as well as secondary data. Primary data is collected by questionnaire which has closed ended and open ended questions are administered to 100 respondents they are professional shooting players selected randomly from the Karnataka State Rifle Association, that include male and female shooters. An interview is administered to professional shooing coaches and sports mangers. The study has also made use of secondary data from Sports Authority of India, Karnataka Olympic Association and Karnataka State Rifle Association.

Data Sources

- Primary Data: 100 respondents they are professional shooting player
- Secondary Data: Sports Authority of India, Karnataka Olympic Association and Karnataka State Rifle Association.

Variables of the Study

The present research focuses on variables such as the number people who spend on the shooting accessories, their income and expenditure pattern, the various schemes prevailing in the sports and specific returns.

Tools of the Study

Statistical tools like Mean/ Median/ Standard Deviation and Ratio analysis and t-Test.

Scope and Importance of the Study

The study will help to understand the expenditure pattern of the shooters; sports spending generate equitable returns to the individual and society and the specific returns generated by the shooting sports. The study includes the city Bangalore and specific sports that is shooting which is the Olympic sport.

Plan of the Study

The study consists of five chapters. The first chapter introduces the research problem, a brief review of literature, research gap, research questions, the research objectives, methodology used, the tools of the study and the scope and limitation of the study. The second chapter present the detailed review of literature with summary. Chapter three gives the conceptual and theoretical framework for the study. Chapter four presents the data and its analysis. Chapter five summarises the finding of the study, gives a few recommendations and conclusion.

COMMUNITY CAPACITY BUILDING - THE MILESTONE IN THE SUSTAINABLE DEVELOPMENT OF AN ECONOMY – A CONCEPTUAL STUDY

Ranjitha. P.K
Assistant Professor, Department of Commerce and Management
Indo Asian Academy Degree College, Bangalore

Abstract

As the statement says "Go global and be local", the concept of community concept building is about promoting the capacity of local communities to develop, implement and sustain their own solutions for the better social change and work. As per the Sustainable Development Growth goals listed by United Nations the Sustainable communities should be there by 2030 with mobilization of financial resources as well as capacity building, as the proportion of sustainability decreasing from 39% to 30%. The developing countries should have favorable and strong community capacity building so that the economic growth of the nation won't be left off because of the smallest poorest community. The fact is that all communities have resources to build a healthier community. The countries like India should recognize the social capital to build capacity and effectively use and develop. Community capacity building has a great influence on the social change of an individual. It refers to the identification, strengthening and linking of the tangible resources as schools, business and local service groups, and intangible resources. This paper gives a light how the community capacity building can help the sustainable growth. It refers to the identification, strengthening of the community's tangible resources, such as schools, business, local service groups and keeps the community spirit high. The community capacity building won't bring profit but it acts as the magnet for the economic growth.

Keywords: *Capacity building, social capital, social change, sustainable growth*

Introduction

The Un Resolution on SDG

According to the SDG goals of UN which they want to achieve before 2030 known as "transforming our world" for sustainable growth. The SDGs build on the principles agreed upon in Resolution A/RES/66/288, entitled "The Future We Want". This was a non-binding document released as a result of Rio+20 Conference held in 2012. The UN goal 11 speaks about the sustainable cities and communities.

Definition

Community capacity building is a conceptual approach to social, behavioral change and leads to infrastructure development in case of water and sanitation that focuses on understanding the obstacles that inhibit people, governments, international organizations and non-governmental organizations from realizing their development goals while enhancing the abilities that will allow them to achieve measurable and sustainable results.

Literature Review

Let's Understand First Definition of Capacity Building

The World Customs Organization – an intergovernmental organization (IO) that develops standards for governing the movement of people and commodities, defines capacity building as "activities which strengthen the knowledge, abilities, skills and behavior of individuals and improve institutional structures and processes such that the organization can efficiently meet its mission and goals in a sustainable way." It is, however, important to put into consideration the principles that govern community capacity building.

Oxfam International – a globally recognized NGO defines community capacity building in terms of its own principals. OXFAM believes that community capacity building is an approach to development based on the fundamental concept that people all have an equal share of the world's resources and they have the right to be "authors of their own development and denial of such right is at the heart of poverty and suffering. The term "community capacity building" has evolved from past terms such as institutional building and organizational development.

The most widely used definition of Community capacity building according to Scottish government which actually successfully do this form The most widely used short definition of community capacity

building is: "Activities, resources and support that strengthen the skills, abilities and confidence of people and community groups to take effective action and leading roles in the development of communities." (Skinner Strengthening Communities 2006)

According to the Western Australian Department for Community Development (2006)

Community capacity building is about promoting the 'capacity' of local communities to develop, implement and sustain their own solutions to problems in a way that helps them shape and exercise control over their physical, social, economic and cultural environments.

Community Capacity Building is much more than Training and includes the Following

- Human resource development, the process of equipping individuals with the understanding, skills and access to information, knowledge and training that enables them to perform effectively.
- Organizational development, the elaboration of management structures, processes and procedures, not only within organizations but also the management of relationships between the different organizations and sectors (public, private and community).
- Institutional and legal framework development, making legal and regulatory changes to enable organizations, institutions and agencies at all levels and in all sectors to enhance their capacities. It also interfaces with some work by the New Institutional Economics association led notably by the 1994 Nobel prize winner Douglass North. It tries to lay out the essential organizational and institutional prerequisites for economic and social progress.

Definitions of Community Capacity Building

Community capacity building is defined as the "process of developing and strengthening the skills, instincts, abilities, processes and resources that organizations and communities need to survive, adapt, and thrive in the fast-changing world".

Community capacity building is the elements that give fluidity, flexibility and functionality of a program/organization to adapt to changing needs of the population that is served.

Statement of the Problem

This is the era of capacity and survival of the fittest. The difference between rich and the poor is not just with the money power it's also with the skill power what one have or inculcates. With which each and every economy will become strong. The areas of which the community capacity building works out are in the skills up gradation, information gathering, in using the resources like natural, financial, and intellectual, knowledge management, technology definition to the people, and speaking about the linkages how to connect to the authorizes.

Objectives of the Study

- To have the conceptual knowledge and uses of the community capacity building
- To know the phases how to develop the community capacity building
- To know the Indian context of community capacity building
- To know the challenges faced by the world in community capacity building

Community Capacity Building and Its Features

Following the study on 52nd LEED committee report it details on the strategies to implement, build, rebuild, and sustain the capacity building especially in deprived communities. It works primarily on the local areas and emphasis on skills that the institutions needed. Community capacity building helps in avoid conflict rather than having the tension between the government and corporate interest; it behaves as the catalyst between the society and the corporate rules and government regulations. It's the continuous process building the leadership skills at all levels starting from the local responsibilities, to take responsibilities of their own. It's a bottom up approach. It enhances the decision making and problem solving process. The community capacity building programmes work with short term goals having some interventions, with long term assessment and update. When social justice is little long process the then it's important to know who head the community development and who being served and protected. It creates the common vision of the future. It encourages the each and every communities understanding and vision

towards a common goal. It promotes the resource allocation for the country, focusing on the practical strategy implementation for the future change.

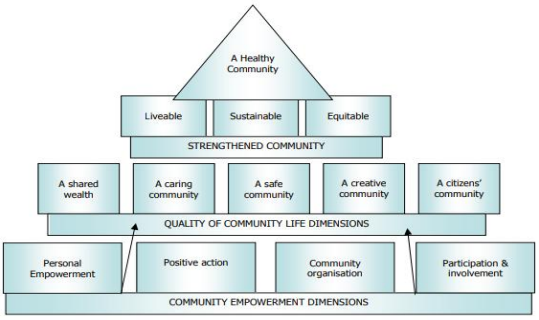
The four building blocks of CCB are building skills, involvement, organizations and equality.

The Fundamental Characteristic of the CCB is that

1. Sense of community in terms of values, norms, and vision.
2. The commitment towards the society problems at all times
3. The ability of solving the problems relating to different types of community
4. The community based levels at individual and also the network level with skills, knowledge, when all this can be utilized at different tasks. The integrated structure should work together to build a strong commitment towards the society
5. The main function of the community capacity building is to work on self reliance, enhance development initiatives.
6. The influence of the CCB makes the local residents to feel so that they also participate in the problem solving activities. Trying to solve the problems regionally, and also creating a sense of safety
7. The CCB designed for the short term interventions which can have positive long term impact on the initiates of the society.

Critique on CCB

1. Some of the CCB activities being used as the political stage the CCB work will be having a marginal difference from the task of accomplishments to the task of community development programmes.
2. The CCB activities and the mechanism actually challenge the existing protocol of the rules and regulation and sometimes which effectively work with the minorities communities.
3. According to Craig (2007) the most important critiques of CCB is that the programmes work on only the deficient capacities, skills rather than enhancing and focusing on the capacity which already exists.



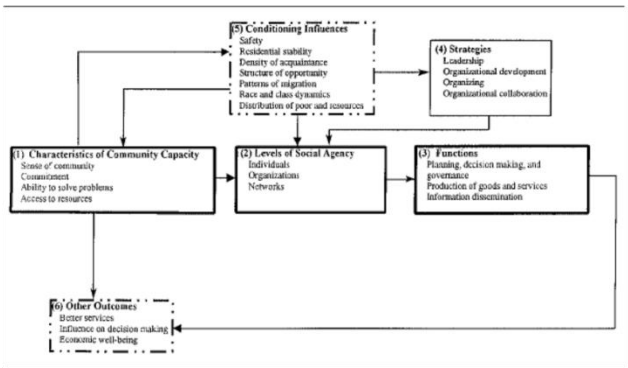
The framework for community capacity building by achieving better company from Scotland government

The community capacity building works and outcomes framework as done by chaskins(2001) the entire framework is illustrated below.

Strategies of Community Capacity Building

1. Leadership development

The leadership programs have the positive impacts on individuals, but there are much long term impacts. The leadership as s are source makes the community stronger and to combat the social issues. The leadership culture is the innate quality of a person. It's for the community to whom he serves. It's not a traditional power. There should be based on Aristotelian philosophy is the best philosophy of leadership style when coming to the CCB, depends on the collective actions. It also depends on the personal concept. Leadership includes the educational qualification to facilitate the development of good proactive culture. It's relevant to have a leader consisting of both men and women.

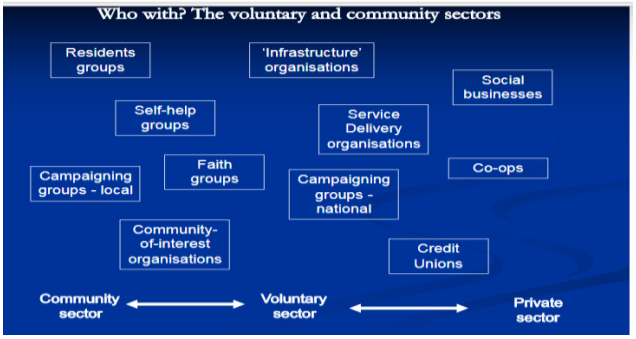


2. Organizational development

The organizational development created on

the basis of producing goods and services. They include community organizatio ns, like service providers, business people, and also local branch workers. CCB often involves various forms of commercial and industrial development. The community group can work on the loan processing for the small finances. Social workers can assist local businesses to form a local community and persuade the work through the social networks and no lobbying should happen. The social workers can apply their skills to build divergent community to promote the economic development.

3. Community organizing



Their needs a collective work from all fronts of society from different communities. Their needs a collective efficacy of the peoples shared belief based on expectation. It should be task specific. Community capacity building if organized has a greater influence. Collective efficacy falls under the framework of CCB and the well being of the given community. It important as it collectively focuses on the capacity building, human agency, empowerment and social change. The CCN actually fills the gap that has been not addressed by the governments and institutions. Components of organizing through the capital efficacy are social trust and social networking.

4. Fostering collaborative relationships

It supports to include wide range of people in the work of different culture, age, gender, backgrounds, and beliefs within their community. There should be a positive contribution that has wide range of experiences, abilities, backgrounds and beliefs. When networks is bigger their will links with different organizations from other communities and build.

Who to be included:

- According to the location
- According to different interest
- According to the people who share same interest or experience or concern
- According to the age factor,
- It might be voluntary organizations too.

The challenges and problems faced by the community capacity building

1. If the social justice not understood properly then there is a chance this can be meant as the ignoring the structural issues solving procedures.
2. There are more people in receiving end than the people who wants to support.
3. There is a problem when it comes to the level of commitment towards the society at all time levels and also at all timings when solving problems.
4. The initiative of the leadership is the challenge faced CCB
5. The leadership skills and knowledge, and also the integrated community tasks can be differed w.r.t to different tasks and cultural issues.
6. There can be a macro level negative influence in the regional economy. The influence of migration or social problems, or distribution among the resources.
7. There will be interventions among the policy makers and the strategy holders, with the municipal, provincial, and central government actions.
8. Leadership and partnership aspects in the community development cannot ser as authentic partner
9. Most of the times community capacity building is being confused with community development and community engagement

10. Most of the times the opportunity and need assessment programmes are not done before the community capacity building program starts.
11. The participation level of people towards this concept is not happening as they are not getting enough support from all the areas.
12. There is a lack of motivation and encouragement for the work of the volunteers and also there is challenge of what kind of action plan to be selected without showing nay partiality to any community.
13. There is a chance that some communities are left off while considering other communities. There might be negative cohesion.

Some Suggestions from the Whole Study

Some of the findings with the respective suggestions of my study for the community capacity building are

1. The concepts should be approached by higher authorities from all levels of people so that their lies the social harmony in all the developing countries.
2. The community capacity building should not be confined to the skills and knowledge sharing, it should reach the different horizons to reach nuke corner of all the cities and villages
3. The concept should widely discuss and a frame work should be built so that no country will be poorer just because they have so many villages with a great treasure of knowledge of different arenas.
4. Their needs a wider area where people should work to find out what opportunities and needs are there for community programmes. Then we should according to their confidence levels and skills levels.
5. The communities should be promoted, so that they can take an active action plans and action research plans can be undertaken focusing on the community perspective by supporting the volunteers and community people.
6. Their needs through networking of people from different diversity of people so that there can be proper exchanging of ideas, reviews and planning advice can happens the community networks.
7. The motivation programmes for the community programmes should be undertaken.
8. Community capacity development programmes work with individuals, community groups, and whole communities and also with community networks.
9. The best community capacity building networking can influence greatly the change in the environment and a continuous change.
10. We should find out some genuine partnership programmes to facilitate to reach the goal and also for the better consultation works.

Conclusion

We will not able to solve the dilemmas or the problems through traditional management strategies, or the cultural norms and through some institutions funded sources also. There is a need of changes for the sustained economy. People should change to make the system better. We cannot wait for the system to change.

Their needs a perception to be shifted that, families and communities are the best position to take primary responsibility for the health and well being of all members. The perception shift will make sure that there is clear and meaningful way of interdependent systems, providing bridge services to the people with a good Community capacity building programmes.

References

1. http://www.scdc.org.uk/media/resources/what-we-do/building-comm-cap/building_community_capacity_resource_for_cld.pdf , Building Community Capacity Resources for Community Learning & Development Practice A Guide Complied by the Scottish Community Development Centre for Learning Connections, ISBN: 978-0-7559-5515-2 Produced for the Scottish Government by RR Donnelley B52954 Published by the Scottish Government, December 2007

2. Mark Holmgren Consulting, by, LIZ O'NEILL, NANCY PETERSON, ROD RODE, ANNE SMITH MARK HOLMGREN, FACILITATOR, Published on Nov 18, 2011. From a presentation given at the Learning Our Way Symposium hosted by the Alberta Association of Services for Children and Families (AASCF). Published in: Business, Technology
3. Capacity Building The way forward?. This morning's themes: Who do we 'do' capacity building with? Who do we 'do' capacity building with? What approaches., published by dominic craig, in slidepalyer forum on 2016
4. https://democracycollaborative.org/content/building-community-capacity-energy-democracy-deck-strategies, article on Building Community Capacity for Energy Democracy: A Deck of Strategies, by democracy collaborative , posted by John Duda, Thomas Hanna, and Matthew Burke, August 18th, 2016
5. http://www.un.org/esa/socdev/social/meetings/egm11/documents/Costa%20Pinto-Leadership,%20capacity%20building.pdf, article on " leadership, capacity building, and governability in cooperatives. At Stock home, April 2011, Armando Costa pinto, Swedish cooperative centre.
6. http://cancer.ca.ccsbcy.org/sites/cancer.ca.ccsbcy.org/files/content_author_uploads/ccbs/documents/ccs-cbia-full.pdf, article on" community capacity building on action" by An initiative of these BC Healthy Living Alliance Members
7. https://www.oecd.org/cfe/leed/44681969.pdf, article on "Community capacity building: fostering economic and social resilience" by Antonella Noya and Emma Clarence in OECD LEED Programme in 2009
8. https://sustainingcommunity.wordpress.com/2014/03/10/ccb/, article on sustaining community, by convener report for the 2014 Transition Newcastle AGM
9. Department for Community Development. (2006). Contemporary literature on capacity building and the strengths perspective and good practice wisdom for the Capacity Building Strategic Framework 2005 to 2007. Perth: Government of Western Australia, Department for Community Development.
10. http://www.scdc.org.uk/community-capacity-building/,
11. https://en.wikipedia.org/wiki/Capacity_building

META PREFERENCE FOR MALE CHILD: A STUDY OF BANGALORE

Joelene Fernandes
Department of Economics, Jain University, Bangalore

Abstract

Gender preference for children has been widely observed across the globe. East Asia is one of the most rigorously examined regions, especially concerning the situation of China and South Korea, where son preference has bought adverse socio-demographic consequences. Preference for son in India is a well-documented phenomenon. Due to this, India suffers from problems like skewed sex ratios, female feticides and high child mortality rates. Sex ratio is an index that illustrates the place of women in the society. According to the Ministry of Home Affairs, Government of India, sex ratio is defined as, "the number of females per thousand males. It is an important and a useful indicator to assess relative excess of deficit of men or women in a given population at that given point of time." As per the Indian census report of 2011, the sex ratio for the state of Karnataka is 973/1000. This census report reviews disproportionate child sex ratio in the state of Karnataka.

Keywords: *Meta Preference; Male Child; Sex ratio*

Introduction

Women are not going to be equal outside the home until men are equal in it – Gloria Steinem.

Gender preference for children has been widely observed across the globe. East Asia is one of the most rigorously examined regions, especially concerning the situation of China and South Korea, where son preference has bought adverse socio-demographic consequences. Preference for son in India is a well documented phenomenon. Due to this, India suffers from problems like skewed sex ratios, female feticides and high child mortality rates. Sex ratio is an index that illustrates the place of women in the society. According to the Ministry of Home Affairs, Government of India, sex ratio is defined as, "the number of females per thousand males. It is an important and a useful indicator to assess relative excess of deficit of men or women in a given population at that given point of time." As per the Indian census report of 2011, the sex ratio for the state of Karnataka is 973/1000. This census report reviews disproportionate child sex ratio in the state of Karnataka.

A gentlewoman frames the wheels of fortune of enlightenment. This is the humor of divine will, that the lovely imagination of God, a girl child is in the present day the matter of gravest worry facing by the society, amidst a storm of events, seminars, workshops, conferences and research papers adhered for the motivation, along with the dominant world dignitary at the driver's seat. Unwritten laws and customs blueprint the big game of Indian girl child, with free for all gender parity and law obligations feminine newborn are deathly quiet the ball rolling to be sniffed in the womb. Molded with injustice and inequity by rituals, the civilizations take the girl child with a bearded grasp and this has been started right in the days of the yore birth until the dark of life. In the northern states of India like Haryana, Rajasthan, Utter Pradesh; boys are breast fed prolonged than girls (Karnataka Report 2005). Because of the parent's eagerness of having a male child, girls with older blood sisters probably deteriorate in the string of fitness as well as nourishment.

Background of the Study

Preference for boys over girls is deeply culturally embedded. The existence of gender preferences for children in less developed countries is well documented. Most past studies have been specific country studies. Globally, sex preferences for children have been a prominent issue in demographic work because of its potential negative social and demographic implications (Arnold, 1992; Fuse, 2010). There is no much difference in sex ratio at birth (SRB) in most countries. Countries with effective birth registration data report SRBs of around 104 to 107 male births for every 100 female births (Chahnazarian, 1991). When the SRB is above or below the biological average range of 104-107, other factors such as sex preference, may override the biological forces, biasing upwards, or downwards, the Sex ratio at birth (Bumiller, 1990; Guttentag and Secord, 1983). The availability of scientific equipment such as ultrasound

machines and amniocentesis in health facilities for determining the sex of a foetus demonstrate that expectant parents desire to know the sex of their unborn foetus. This desire to know the sex of the unborn child is strong in societies partly because parents have a preference for one sex or the other (Fuse, 2010). Son preference is prevalent in many parts of the world particularly South Asia, East Asia and parts of the Middle East and North Africa. In Bangladesh and Nepal, more than 95% of parents preferred to have a son. Similarly, in Burkina Faso and Senegal, more than 30% of women had a son preference. Daughter preference has also been observed in some West African countries including Ghana (21.3%), Malawi (21.2%) and Liberia (22.2%) (Fuse, 2010) Son preference has been documented in India through sex-selective abortions that lead 2 to abnormally high sex ratios at birth (Arnold, 1992), contraceptive use behaviour and gender bias in the allocation of food and health care (Das Gupta 1987; Clark 2000; Arokiasamy 2002).

The economic importance of male children is also evident from the fact that while less pressure is put on the daughters to make contributions towards the support of their parents, sons are morally obligated to take care of their parents in old age. Also, compared to daughters, sons can put more hard work on fishing and farming for providing support to their parents and other relatives (Bhatia, 1984). Also, succession and inheritance devolves through the male line in patrilineal societies in Ghana (Nukunya, 2003). In some systems the daughters are totally excluded while in other societies, both sons and daughters share the property, but the shares of the daughters are smaller. For instance, among the Anlo Ewe, personal property, landed or otherwise, passes from father to sons and daughters. As a rule, sons take precedence over daughters, though the latter are not entirely excluded from the share. Similarly, in polygamous families among the Krobo, property is shared equally among the eldest sons of all wives that is women who had male children for the deceased. Under Krobo law women do not own or inherit land. The Tallensi system of inheritance is similar to the Krobo in that women do not feature in the inheritance of landed property. As such, a man's personal property devolves only to his son. For this purpose, males are more likely to be preferred than females in such societies (Nukunya, 2003). Variations in sex preferences among countries and regions have been linked with a wide range of factors. These factors can be classified into micro-and macro-level factors. Among the macro-level factors that are expected to have an impact on sex preference include population policy, modernization, cultural settings, and socio-economic and political 3 transformation. Micro-level factors involve the individual characteristics of parents, especially their level of education (Wongboonsin and Ruffalo, 1995).

Review of Literature

There have been various studies that have been conducted on social preference for male child in India and other parts of the world. These studies have analysed that there is male preference that was seen in many families(Michael Kevane and David I. Levine (2003)). Studies have found out out factors like economic utility of the son, the patrichial system, the kinship sytem etc. that has caused male preference in the society (Bhavna Hammad (2013)).Studies have shown that women are generally seen as a burden to the society and thus parents, especially mothers prefer having sons rather than daughters (Vannenan R, Desai S and Vikram K (2005)). Studies have also shown low sex ratio in different parts of India. However, there are studies that contradict the main findings of social preference for males and have revealed that gender preferences are not at all seen in some parts of the world (Fuse Kana (2013)).

Research Gap

Several studies have been conducted with respect to social preference for male child. However, there are limited studies that have focused finding the social preference for male children in Bangalore Urban. The meta preference for male child in Bangalore has also not been evaluated by researchers. This research study tries to analyse and focus on the same.

Statement of the Research Problem

Social preference for male child is an ongoing phenomenon in today's era. Due to various socio, cultural and economic factors many parents prefer to have male children. The upbringing of the child is

also different due to cultural and societal norms. The statement of the problem for the following study is to analyse the meta preference for male child amongst citizens that has lead to an adverse sex ratio in Bangalore Urban.

Research Questions

Son preference has not only exposed by the unequal sex ratio in various parts of India, but is also reflected by the attitudes and expectations of the people. The socio and cultural belief system has led families to have a social preference for a male child. The following study focuses to find out and understand gender preference for children, to find out how many families have a meta preference for male child and to analyse the economic impact on selective gender preference.

Research Objectives

The main objectives of the study are as follows:

- To understand gender preference for children.
- To evaluate the Meta preference for male child.
- To analyse the economic impact on selective gender preference.

Hypothesis

The main hypotheses for the study are as follows:

H_0-Parents decision to continue having children is uncorrelated with previous birth being a son/daughter.

H_1 - Parents decision to continue having children is correlated with previous birth being a son/daughter.

H_0- there is no social preference for male children.

H_1- there is social preference for male children.

Operationalisation of Key Constructs

Some of the key words of the study are social preference, meta preference, sex ratio and male child. They are defined as follows:

- Social preference: Social preferences are one type of preference investigated in behavioural economics and relate to the concepts of reciprocity, altruism, inequity aversion, and fairness.
- Meta Preference: Meta-preferences are preferences over preferences. In this study, it refers to have a strong desire that atleast one of the children being born should be a male child.
- Sex ratio: The proportion of males to females in a given population. It is usually expressed as the total number of males per 1000 females.
- Male child: A child who is born as a boy.

Methodology of the Study

The following study will be based on primary and secondary data. A questionnaire is directed to 100 respondents from the localities of Bangalore Urban. An interview is then conducted with the family members. The questionnaire will be made using the Linkert Scale and the ranking and rating technique. The Linkert scale is used to analyse individuals' attitudes towards a given topic. In the ranking and rating technique, respondents are asked to indicate their personal levels on things such as agreement, satisfaction or frequency. Rating scale questions are best used when you want to measure your respondents' attitude toward something. The ranking scale is helpful when you are forcing your respondents to choose between two things.

The study is based on explorative research. Exploratory research is an examination into a subject in an attempt to gain further insight. With an exploratory research, a researcher starts with a general idea and uses research as a tool to identify issues that could be the focus of future research. The sampling technique that is used is random sampling. The sample will consist of about 100 respondents who will be chosen randomly in clusters from different cities located in Urban Bangalore. Thus the sampling technique is called as systematic clustered sampling. Cluster sampling (also known as one-stage cluster sampling) is a technique in which clusters of participants that represent the population are identified and included in the sample. Cluster sampling involves identification of cluster of participants representing the population and their inclusion in the sample group. The main aim of cluster sampling can be specified as cost reduction

and increasing the levels of efficiency of sampling. The study will be based on a survey conducted in the urban area of Bangalore.

Data Sources

The study has also made use of secondary data from the UN report, Karnataka report, Economic Survey, Reports of the Ministry of Children and Development, other government websites, published journals and research articles.

Variables of the Study

The following research focuses on variables like educational levels, social beliefs, income and nutritional status of the children of the respondents in the city of Bangalore Urban.

Tools of the Study

The various tools that will be used for the analysis include MS Excel and SPSS. Descriptive tools of mean, median and standard deviation will be used. Descriptive statistics are used to describe the basic features of the data in a study. They provide simple summaries about the sample and the measures. Together with simple graphics analysis, they form the basis of virtually every quantitative analysis of data. Other statisticaltools include chi square, factor analysis, skewness, regression and percentage. The chi square test is applied when you have two categorical variables from a single population. It is used to determine whether there is a significant association between the two variables. Factor analysis is a technique that is used to reduce a large number of variables into fewer numbers of factors. This technique extracts maximum common variance from all variables and puts them into a common score. As an index of all variables, we can use this score for further analysis. Factor analysis is part of general linear model (GLM) and this method also assumes several assumptions: there is linear relationship, there is no multi-collinearity, it includes relevant variables into analysis, and there is true correlation between variables and factors. Skewness is asymmetry in a statistical distribution, in which the curve appears distorted or skewed either to the left or to the right. Skewness can be quantified to define the extent to which a distribution differs from a normal distribution. Regression analysis to describe the relationships between a set of independent variables and the dependent variable. Regression analysis produces a regression equation where the coefficients represent the relationship between each independent variable and the dependent variable. Regression equations are also used to make predictions. Histogram and graphs will also be used for the purpose of data analysis.

Scope and Importance of the Study

The following study will help to understand the gender preference for children and meta preference for male child. The study also lays emphasis on the economic impact of selective gender preference. The following study also helps analyse whether factors like income, education and size of family lead to gender preference or not. This research will also give insights about the social preference for male children in the cities of Bangalore. The study is being conducted in Bangalore Urban.

Limitations of the Study

Though the research has achieved its desired objectives, there are some unavoidable limitations.

- Because of the time limit, research was conducted only on a small size of the population.
- The study was also limited only to the families in the urban areas of Bangalore. Thus, no generalization statements can be made.
- The respondents may have not answered the questions correctly.

SUPPLY OF HEALTH SERVICES BY FITNESS CENTER: A STUDY OF BANGALORE URBAN DISTRICT

Laishram Robert & Richa Gupta
Assistant Professors, Department of Economics, Jain University, Bangalore

Abstract

Health is something we cannot buy with money as it doesn't have its price but it is the most valuable and important element in a person's life. Mahatma Gandhi once said "It is health that is real wealth and not pieces of gold and silver". The World Health Organisation (WHO) and other organisations, like the American College of Sports Medicine recommended the adults required to be engage in specialized exercises. This will helps to reduce the risk of several major chronic disease including coronary heart disease, colon and breast cancer, type 2 diabetes, Alzheimer's disease and depression. The American Heritage Medical Dictionary had defines the terms 'wellness' as the 'condition of mental and emotional health, good physical, especially when maintained by an appropriate diet, exercise and other lifestyle modifications.' In other words it means having good looks on the outside and having good feeling on the inside. Wellness has five segments; beauty services and cosmetic products, fitness and cosmetic products, nutrition, alternate therapy and rejuvenation. Fitness center is considered as one of the most important segments of the wellness industry that provides many health services such as personal training,group fitness classes, spinning classes, kinesis station, weight management, nutrition counseling, spa, full locker room services, internet cafe, physical therapy, Zumba, resistance training, aerobics, aerial yoga, Pilates, MMA, kickboxing etc. Fitness centers have an important position in social sporting service and they also reflect the importance of health care. Fitness centers may include profit organizations and non-profit organizations. The profit organizations, fitness centers can also be known as commercial health & fitness club. It plays a vital role in promoting the local economy. It also helps in producing better social benefits in strengthening the cultural and spiritual construction and improving residents' well-being index.

Introduction

Health is something we cannot buy with money as it doesn't have its price but it is the most valuable and important element in a person's life. Mahatma Gandhi once said "It is health that is real wealth and not pieces of gold and silver". The World Health Organisation (WHO) and other organisations, like the American College of Sports Medicine recommended the adults required to be engage in specialized exercises. This will helps to reduce the risk of several major chronic disease including coronary heart disease, colon and breast cancer, type 2 diabetes, Alzheimer's disease and depression. The American Heritage Medical Dictionary had defines the terms 'wellness' as the 'condition of mental and emotional health, good physical, especially when maintained by an appropriate diet, exercise and other lifestyle modifications.' In other words it means having good looks on the outside and having good feeling on the inside. Wellness has five segments; beauty services and cosmetic products, fitness and cosmetic products, nutrition, alternate therapy and rejuvenation.

Fitness center is considered as one of the most important segments of the wellness industry that provides many health services such as personal training,group fitness classes, spinning classes, kinesis station, weight management, nutrition counseling, spa, full locker room services, internet cafe, physical therapy, Zumba, resistance training, aerobics, aerial yoga, Pilates, MMA, kickboxing etc. Fitness centers have an important position in social sporting service and they also reflect the importance of health care. Fitness centers may include profit organizations and non-profit organizations. The profit organizations, fitness centers can also be known as commercial health & fitness club. It plays a vital role in promoting the local economy. It also helps in producing better social benefits in strengthening the cultural and spiritual construction and improving residents' well-being index.

Background of the Study

It is believed that Greece is the root of the modern health club or gym. The word 'gym' is the short form of gymnasium which is originated from the Greek work "gymnos" which means naked exercise. The ancient Greeks designed these gymnasiums only for athletes to train for open games such as the Olympics. In 1847, French physical culture pioneer and strongman Hippolyte Triat founded a huge

gymnasium in Paris where the bourgeois, aristocrats and spirited youth joined in an enthusiastic pursuit of fitness.In the 1870s, Physical education became a primary focus in French schools as battalions of young men were giving training to avenge the country.In Scotland, the Highland Games began during the Romantic trend of the 1830s, and included traditional physical challenges distinctive to Scottish culture such as caber tossing, hammer throwing, and the stone shot put, along with running, wrestling, and jumping.

Fig: 1 (University of Oxford gymnasium).

The exercise methods introduced by German physical culturists influenced English physical education. In England, Charles Darwin's concept of "survival of the fittest" gave that country's growing physical culture movement a boost. They wanted to be strong enough to rise to the top of nature's hierarchy. The first English athletic competition was held at the Royal Military Academy in 1849. In 1858, Scot Archibald MacLarenlaunch a proper gymnasium with well-equipped at the University of Oxford, there he gave training to 12 army officers who then implemented his physical training regimen into the British Army.

In 1862, the Czech Sokol movement was started, this youth sports and gymnastics organization was inspired by the German Turnverein (Gymnastic Movement) and providedmoral, physical, and intellectual guidance for the nation in the course of fitness programs (mostly centered on marching drills, fencing, and different forms of weightlifting), lectures, group outings and massive gymnastics festivals. This training spread to men of all economic classes, eventually to women, and ultimately to the entire Slavic world.

The Polish Falcons (1867) had similar desired. Besides physical training and athletic contests, such cultural groups often sponsored national or traditional dances, songs, and language revivals. In Europe everyonewere developing a fitness culture rooted in their cultural or national identity. As Europe entered the 20th century, French navy officer and physical educator Georges Hebert played a prominent role in moving physical culture forward and did so by taking a cue from the cultures of the past. Having studied the principles espoused by his predecessors, including Jahn and Amoros, he pioneered his own "natural method." His method was completely based on natural movement skills such as walking, running, balancing, jumping, crawling, climbing, manipulative skills (lifting, throwing, etc.) and self-defense all of which were frequently practiced on obstacle courses. All the responsibility for the physical training of all sailors in the French navy was taken by Hebert. After this in 1913, he established the largest and most modern indoor/outdoor training center in Reims. The first commercial gym was introduced by a French gymnast and vaudeville-strongman, Hippolyte Triat. The first club was opened in Brussels and then opened in Paris in the late 1840s. The world's first physique competition was started by Eugen Sadow in 1901 and later promoted the growing fitness lifestyle by making various publications, equipments and dietary products and by operating a chain of fitness centers throughout Great Britain. However, the history of health clubs for the general public can be traced back to Santa Monica, California in 1947. Jack Lalanne was the person who established the first American fitness club 1936 in Oakland, California. During this time doctor advised people that there were dangers associated with lifting weights and rigorous exercise. He designed and introduces many of the equipments which are still found on traditional gym floors like leg extension machines and pulley-cable based strength equipments. As the current generation is focusing on staying healthy and fit the fitness industry is becoming a profit earning industry all over the world. Thus many people start up different business concerned with this sector. Such as manufacturing of equipment, food supplement, fitness application, etc. Now a day this industry holds a significant share in the market.

According to the International Health, Racquet and Sports club Association (IHRSA) reports (2017) the total global estimated fitness industry revenue is UD$83.1 billion in 2016, around 200,000 clubs served 162 million members across the world. According to this report Latin America was posted as the strongest performances in this market. The health club market in Europe serves more than 56 million

members, with around 55,000 health and fitness clubs and it generates US$29 billion in revenue. Europe boasts the largest health and fitness market across the world. 65 percent of the total European market is represented by the Germany, United Kingdom, Italy, Spain and France. Approximately 6,728 facilities, 9.7 million people in UK and US$6.1 billion is generated in the industry's revenue. The market in Germany attracts more than 10 million members and generates US$5.6 billion in industry revenue. Other than these countries Russia, Turkey and Poland has a strong prospects and good potential for growth.In the Asia-Pacific region the fitness industry served 17 million members at 31,000 health clubs across 14 markets in 2016. Fitness industry revenue totals US$14.4 billion in this region. Most of the maturing industries are located in the cities of Asia, including Beijing, Shanghai, Kuala Lumpur and Jakarta, while future growth is anticipated in other expanding cities, as well as the Asia-Pacific region overall.The benefit for the fitness industry abounds in the global economic powerhouses of India and China, which had infiltration rates of 0.12 per cent and 0.4 per cent, respectively. China has roughly 2,700 health clubs with a total of 3.9 million members in 2016. The health club industry in India has around 3,800 health club facilities and nearly one million members.

	Europe	Asia-Pacific	The Americas	Middle East & North Africa
Private clubs	55,000	31,000	107,540	5,600
Members	56 million	17 million	83.2 million	3.4 million
Revenue	US$29 billion	US$14.4 billion	US$36.2 billion	US$2 billion
Leading countries in region	UK and Germany	Australia and New Zealand	USA	Saudi Arabia and Egypt
Biggest potential for growth	Russia, Turkey and Poland	China and India	Latin America	Entire region

Fig.2 IHRSA 2017 GLOBAL REPORT

The Fitness Industry in India

In India, the fitness industry is not properly organized, fragmented, uneven and shapeless sector which is about to be consolidated into a proper organized entity. Fitness industry in India is a first growing sector and constitutes of more than 20 percent of the overall wellness industry. This includes yoga, spa, beauty services, beauty products, personal health counselling, rejuvenation, etc. The growth of this fitness industry starts to accelerate rapidly in the recent years. Before, there was less numbers of people who were interested in this sector. Spending on gym was earlier considered as a luxury, but now it becomes a way of life. Today, in India fitness industry is mainly driven towards heath, well-being, looking good and confidence have become the fitness trends over a few years in India. The celebrities and fashion icons coupled who has muscular and toned bodies with healthy lifestyles are making Indian consumers holds fitness like never before. India has around 21,000 health and wellness centres. The Indian overall healthcare market has been generating revenue around Rs.10000 crores and is considered to increase to Rs.28000 crores by 2020, a Compound Annual Growth Rate (CAGR) of 22.9 per cent.

India has a market share of 15 percent compared to 40 percent in Japan and Singapore and about 20 percent in China, Australia and New Zealand. As there is a high scope for growth, there is tremendous opportunities for new players to bring brand differentiation, affordable pricing and qualified trainers.
Some of the most popular and key expansion plans for these clubs are given below:

- **Talwalkar's Gym**
  CEO: Prashant Talwalkar
  Total centres: increased from 63 gyms in 2010 to 144 gyms in 2013
  Total members: 1, 33,000 in 2013
  Presence: have existence in 75 cities and 19 states.
  Fitness chain Talwalkars recently made a deal hat-trick. It bought 51 percent stake in Chennai based In shape Health and Fitnez Private Ltd (IHPL), 19 percent stake in Gym trekker Fitness and 49.5 percent stake in Sri Lanka's Power World Gyms (PWG).
- **Fitness First**
  CEO: Andy Cosslett
  MD, Fitness First India: Vikram Aditya Bhatia

Total centres: 7 gyms as of 2014
Expansion plans: It is planning to invest Rs.160 core in order to open 30 new first-class fitness clubs in Delhi, Mumbai and Bangalore over the next five years. The extension drive will take its memberships to over 45,000.

- **Gold's Gym**
  Owner: Robert Rowling
  Total canters: 80 centres as of 2015
  Expansion: Plans to open 30 new centres in 20 cities with and investment of Rs.90 crore.
- **Fitness One**
  Founder: Vivekanand Palaniappan
  Total centres': 100 centers in India as of 2016.
  Ozone Fitness and Spa
  MD: Naveen Kandahar
  Total centres: 17 centres as of 2015 out of which 4 centres are being owned by the company and rest are franchised
  Total membership: over 10,000 members as of 2015

Review of Literature

Most of the desired of customers were related to the tangible elements of the facilities, attitudes and abilities of staff members, cost of participation and programming and scheduling of the services provided (Afthinos Yanni, 2005). that the women who scored high on self-objectification and disordered eating (Prichard Ivanka, 2005).The fitness trainers used information from textbooks, seminars and mass media sources like scientific journals and found out that there were no known of fitness expert (Stacey Down, 2010). The fitness centers did not contribute importantly to socioeconomic inequalities in physical activity and health in Calgary due to the large proportion of facilities that promote inclusion over exclusivity (McLaren Lindsay, 2012. The customer' demographic and psychological profiles can be different depending on the company and region's profile (EfiTsitskari, 2013). Significant positive effects were found for anaerobic fitness, aerobic fitness and muscle strength after a fitness training (Kotte Elles M.W, 2014). Only a fewer fitness trainers were working in the areas with high levels of socioeconomic disadvantaged areas while comparing with lower level of disadvantage areas (Bennie A. Jason, 2014). Practicing and improving fitness has positive effects such as healthy future life, reduction of fat mass and increased insulin sensitivity (Paoli Antonio, 2015). The reality of the low-cost fitness center consumer which could possibly be extrapolated to other countries with an emerging fitness industry (García-Fernández Jerónimo, 2016). Social network should be a part of the marketing strategies of sports organization as it generates a good content and value via their posts, thus the users have a greater sense belonging towards these fitness centers (Jeronimo, 2017)

Research Gap

Even though there are many research done related to the fitness centers and fitness industry. Some of them study the used of social networks and other market strategies. But there is a limited paper which studies the factors which needs to be prepared before opening up of a fitness centers especially in India. There are a very less number of researches done related to Indian fitness centers. This present study will focus on preparation before doing this business and how the fitness centers used different marketing strategy.

Statement of the Problem

There are difficulties or problems for fitness centres to compete and stand out in an overcrowded marketplace where boutique style gyms and studios are popping up on every street corner.The reason is competition but it's not a big issue because in every business there will be competition and this is how they grow. So, the business owners need to identify how they can represent themselves different in this competitive market. The first priority should be customer satisfaction so it needs to keep an eye on their expectation and the second priority is how to manage the fitness studio to make their business better.

Research Questions

In order to understand the services provided by the fitness centers and the role of the fitness centers, we ask some questions such as whether fitness centers are profit earning sectors. What kinds of fitness centers are chosen most by the customers?

Objectives of the Study

The purpose of the study is to identify the main services provided by the fitness centers and the factors that growth and smooth running of the fitness centers.

The specific objectives of the study are as follows:

- To study the health services provided by the fitness centers.
- To evaluate the income being generated by the health services provided by the fitness center.
- To find out the major problems faced by fitness centers from producer's perspective and analyze economic losses.
- To analyze future prospects of the fitness sector

Methodology of the Study

The fitness centers selected for this study is located at Bangalore Urban, a district of Indian state of Karnataka, with a population of approximately 9,588,910 people living within the metropolitan area. The research will be based on data gathered from fitness centers of this area. The data for this study will be suing both primary and secondary data. The data will be collected using questionnaire method from 50 random fitness instructors and 70 clients of the fitness center. The questionnaire will be of two types; one is for trainers and another for customers.

This study will include questions about general demographic factors including sex, age and region and other factors which affect the growth of the fitness sector. Descriptive statistics will be used to analyse the data.

Variables of the Study

This study focuses on variables such as the services provides and its quality, cost of the gym per month, nutrition and diet, income of the trainers and customer satisfaction.

Tools of the Study

Quantitative data will be analyzed using SPSS, means (M) and standard deviations (SD) for calculating Analysis of variance (ANOVA) will be conducted to examine whether differences existed between type of user, importance of climate, perceptions of the caring and staff behaviors. Not only these, other tools like excel, percentage and other test like t-test, F-test and chi square will also be used in order to analyse the data.

Hypothesis of the Study

H_o = There is no significant changes in the health of a person after joining the fitness center.

H_a = There is significant changes in the health of a person after joining the fitness center.

Operationalization of the Key Constructs

Fitness centers

Trainers

Gym Equipments

Scope and Importance of the Study

This study will helps to understand the services provided by fitness centers and it's important. This study will also gives an idea of the things or factors which needs to take care before opening such business. The business which related to health, food and education are said to be the best business because the demand will increase day by day. And the business which offers us a healthy lifestyle is the business which is related to sports. Now people are more interested in having a healthy lifestyle. Thus, this study will encourage in setting up of fitness centers.

Limitations of the Study

The study has several limitations. First is the time limitation. Within this given time this study could not cover a large size of the sample. There will be some restrictions on collecting the data from fitness centers. One of the limitations of this study is the fact that the sample of centers was convenient rather than statistical because there is no official database with a complete list of fitness centers in Bangalore.

THE ROLE OF TECHNOLOGY IN SUSTAINABLE DEVELOPMENT

Uma Devi
Lecturer in Computer Science, Sarojini Naidu Vanitha Maha Vidyalaya, Hyderabad

Abstract

The purpose of this paper is to study the role of Information Technology/Information and Communication Technology (IT/ICT) in sustainable development of the nation. Technology plays a vital role in sustainable development. Many technology users agreed that due to the geographical separation and multifaceted nature of national sustainable development, it cannot be carried out without ICT support. To get sustainable development the organization must adopt knowledge oriented infrastructure. SUSTAINABLE DEVELOPMENT is achieved by decision quality, knowledge sharing, inter organizational skills. The domains of sustainable development are environment, economy and society. It outlines the potential of ICT to support education, public awareness and policy making.

Keywords: *Sustainable development, Information Technology, knowledge management, Decision making, Environment, Economic Growth.*

Introduction

Development is an endurance exercise with incremental improvements. In general development is integrating material growth with proper distributive justice. This includes growth with balanced principles. Presently, development is termed as the systematic use of scientific and technical knowledge to meet specific objectives.Even though the development is a continuous process, but sustainable development is important for the growth of nation. Sustainability Development refers meeting the present needs without compromising of future generation's ability. According to the Brunddand Commission, sustainable development is defined as development which meets the needs of the present without compromising the ability of future generations to meet their own needs. While achieving the sustainable development, equilibrium between exploring resources and their natural redemption is managed. Sustainable Development also refers the use of resources to meet human needs ensuring sustainability of nature and environment with economic welfare.

Concept

One of the concepts in SUSTAINABLE DEVELOPMENT is that technology can be used to assist people to meet their development needs. Technology often referred as appropriate technology which is n ideological movement articulated as intermediate technology by the economist E. F. Schurnedes. Appropriate technology uses open source principles leading to Open Source Appropriate Technology (OSAT) and it is available on internet. OSAT is proposed as new work enabling innovation for sustainable development.

To Achieve Sustainable Development

- Proper Education of the people
- Improving awareness of the technology
- Preserving future needs well within the reach of every one

The pillars of the sustainability are environment, Social and Economic. Sustainable Development must take account of the effects of technology on the environment and society. Technology by itself is neither good nor evil. It is a tool which can be used in different ways resulting good and specified results. Sustainable development is closely linked to the use of technology. Causing many problems such as those concerning the environment, are the direct result of the use of technology. This leads to undesirable side effects. Thus technology and sustainability are in an ambiguous relationship. The use of modern technology is the need for more sustainability depends to a considerable extent on new technical solutions. A sustainable society will make use of reliable technical systems. These systems should be highly efficient, benefits health, be renewable, reusable, socially affordable etc. Fundamental criteria for sustainability must be taken into account as early as possible in the development of new technologies.

Importance of Sustainable Development

- Protect Technological resources
- Provide Basic Human Needs
- Agricultural Necessity
- Accommodate City Development
- Control Climate Change
- Sustain Biodiversity

Technologies are various types for different applications to provide and improve energy services for developing world populations

1. Agricultural Technologies: Improve productivity and soil and water conservation, and maintain reasonable costs of food and fiber. Improving soil fertility, improving water availability and efficiency of use reducing food losses Enabling farmers to modernize as this becomes feasible to them. Use of ICT in agriculture industry is an advantage for the youth agro-based entrepreneurs

2. Energy Technologies: Technologies to provide and improve energy services for developing world populations, more efficient biomass stoves to reduce fuel use and reduce the hazardous smoke emissions, simple motor-driven systems for pumping water or grinding grain to reduce the burden of these physically demanding tasks on women, and energy-efficient pumps, fertilizers, and mechanical traction to improve agricultural productivity

3. Environment Technologies: For many developing countries, provision of basic water, sewer, and refuse disposal services are major environmental priorities. These are the areas where spending on environmental technologies is concentrated. Developing countries need more sanitary services systems serving rural and urban areas. Electric power, chemical, petroleum refining, steel, and paper, food, textile, and other process industries are potential major buyers of environmental technology. Environment Technologies uses "Green Engineering Technologies which uses 7 R" 7 R's are: Reuse, Reduce, Repair, Reliable, Resource, Re-cycle, Replace, which are used for environmental protection

4. Technologies for city/local development: Conducted of community-based projects for resource efficient residential architecture, solar greenhouses, small farm systems, farmers markets, resource recovery from municipal solid waste, wastewater treatment, energy generation, and health care systems

5. Communication Technologies: Communication and information technologies are playing an increasingly important role in business, trade, health, and education. Information and Communications Technology (ICT), by its performance and potential, offers numerous options to *help* realize the Millennium Development Goals, providing a roadmap for sustainable development.

Recommendations of ICT for Sustainable Development (SD)

1) Improve ICT across the 4C dimensions
   Computing, Connectivity, Content, (human) Capacity:.
2) Success of ICT for SUSTAINABLE DEVELOPMENT requires Integration, Scalability, and Sustainability:
   - ICT can only help achieve development – it is a means and not an end:.
   - Active efforts must be undertaken for global inclusiveness:.
   - ICT for SUSTAINABLE DEVELOPMENT must be economically viable, and provide value for end-users:.
   - ICT for SUSTAINABLE DEVELOPMENT research must be participatory and collaborative for the solutions to be globally relevant and sustainable:
3) ICT for SUSTAINABLE DEVELOPMENT must become a recognized and funded enterprise:
   - Bring together all the stakeholders and increase their interactions:.
   - Develop metrics for success and efficacy, and introduce academic rigor:
   - Focus on real innovations and new challenges: R
   - Develop new models for R&D:.

Strategies& Guidelines

Sustainable development relies on economic, social and environmental foundations in the framework of co-ordinated worldwide governance. Any policy involving a strategy in favour of sustainable development must include the following guidelines

1. Becoming more responsible with regard to the future and future generations: promoting the precautionary principle, the 'polluter pays' principle, and the general principle of responsibility.
2. Taking into account the three aspects, which assumes that the environmental responsibility economic capacity and 'social solidarity' areas must be handled equally in a balanced manner
3. Incorporating sustainable development in all areas of politics.
4. All activities and all processes in the city must be concerned
5. Increasing the co-ordination between political areas and improving consistency. Any political decision must be preceded by an early evaluation of its social, economic and ecological consequences. This approach requires transparent decision procedures and the involvement of all participants concerned, as well as the prior determination of conflicts of interest
6 Achieving the sustainable development objectives through partnership. All institutional levels must work together constructively and fully assume their role as an interface with civil society and the private sector

Challenges

In the process of achieving sustainable development, there are many major challenges to be addressed. They require us to re-think our economy and our growth in the favour of a society that is more economical in its use of raw materials and energy. Some challenges are climate change, energy consumption, waste production, threats to public health, poverty, social exclusion, management of natural resources, loss of biodiversity, and land use. In this context, sustainable development approaches are now essential obligations. Sustainable development must mainly be able to respond to the various problems raised by demographic growth, the planet's limited capacity, and social inequality. This means that the future development of all species living on earth, ultimately including human beings, is under threat. In order to be sustainable, development must also be harmonious.

Conclusion

Sustainable development relies on technological change to achieve its aims but will governments take the tough steps that are required to force radical technological innovation rather than the technological fixes that have been evident to date? Such measures would require a long-term view and a preparedness to bear short-term economic costs while industry readjusts. It would appear that so long as sustainable development is restricted to minimal low-cost adjustments that do not require value changes, institutional changes or any sort of radical cultural adjustment, the environment will continue to be degraded. Kurzweil (2005) speculates about the possibility within the next twenty to thirty years of a human-machine "singularity": the merger of human and machine computational intelligence to create something that goes far beyond human intelligence. Kurzweil bases his speculation upon the likelihood that computation will increase exponentially. Kurzweil's projections exemplify the technological determinism approach and tech-fix thinking. He even claims that hunger and poverty may be eliminated by these new technologies. His overarching view sees technology itself as an exponential, evolutionary process, the continuation of the biological evolution that created humanity. Even if people believe in the technology, they should not change their life style. They cannot ignore the necessity to redesign our technological systems rather than continuing to apply technological problems those are seldom satisfactory in the long term. Technological optimism does not escape the need for fundamental social change and a shift in priorities. That was the mistake by many in the Appropriate Technology Movement made. It takes more than the existence of appropriate or clean technologies to ensure their widespread adoption. Sustainable Development is continuous process to upgrade the needs to future generations.

References

1. Essays on Contemporary India by Alok Ranjan,
2. Council, 2003, Golombek, 2002
3. Website: www.doi.org/ 10.118/13673271011074872
4. The role of ICT by Alexandar Schatter
5. Website: Wikipedia.org/wiki/sustainable development
6. Technology, Globalization, and Sustainable Development: Transforming the Industrial State, by Dr Ralph P Hall Dr Nicholas A Ashford Hall Ashford,
7. www.springer.com/gp/book/9788132220558
8. https://www.uow.edu.au/~sharonb/RoleTech.html
9. Meeting the Challenge of Sustainable Mobility: The Role of Technological Innovations, by Harry Geerlings,

INVESTORS PREFERENCE TOWARDS MUTUAL FUNDS

Brijesh Singh
Research Scholar, VTU, Belagavi

Dr.Eti Khatri
Research Guide, VTU, Belagavi

Abstract

This paper aims to study the investor's preference in selection of Mutual fund and measuring thefund sponsor quality. A mutual fund is a common pool of money into which investors place theircontributions that are to be invested in accordance with a stated objective. Being a part offinancial markets although mutual funds industry is responding very fast by analyze investor'sperception and expectations. In this paper, research of 305 mutual fund investors was conductedin Bangalore using non-probability convenience sampling. After using One-Way ANNOVA,researcher had come to a conclusion that Funds reputation, Withdrawal facilities, brand name,Sponsor's past performance in terms of risk & return varies among the investor's of different agegroup & investor's different occupation group.

Keywords: *Behaviour Finance, Investment Decisions, Fund Performance, Sponsor Quality, etc.*

Introduction

This Mutual fund industry is playing an important role to provide an alternative avenue to theentire gamut of investors in a scientific and professional manner. Mutual funds have played asignificant role in financial intermediation, the development of capital markets and the growth ofthe Indian Economy. The Indian mutual fund industry has been no exception. Though it isrelatively new, it has grown at a dynamic speed, influencing various sectors of the financialmarket and the national economy. The Indian economy is under transition on account of theongoingstructural adjustment programs and liberalization. The money market mutual fund segmenthas a total corpus of $1.48 trillion in the U.S. against a corpus of $100 million in India. Theownership of the fund is thus joint or "mutual"; the fund belongs to all investors. He or her bearsin the same proportion as the amount of the contribution make a single investor's ownership ofthe fund to the total amount of the fund.

Literature Review

Brown & Goetzmann(1997) emphasis on mutual fund styles. Mutual funds are typically groupedby their investment objectives or the 'style' of their managers. This approach is simple to apply,yet it captures nonlinear patterns of returns that result from virtually all active portfoliomanagement styles. Classifications are superior to common industry classifications in predictingcross-sectional future performance, as well as past performance, and also outperformclassifications based on risk measures and analogue portfolios. Interestingly, 'growth'funds typically break down into several categories that differ in composition and strategy. Syriopoulos (2002) gave its review on an analysis of investor's risk perception towards mutualfunds services. Financial markets are constantly becoming more efficient by providing morepromising solutions to the investors. Being a part of financial markets although mutual fundsindustry is responding very fast by analyze investor's perception and expectations. Spiegel(2004) covers analyzed the security returns follow linear factor model with constant coefficients.This paper develops and estimates a Kalman filter statistical model to track time-varying fundalphas and betas. Several tests indicate that relative to a rolling OLS model the Kalman filter model produces more accurate fund factor loadings both in and out of sample. Cederburg (2008) reviewed on the mutual fundinvestor behavior across the business cycle. Mutual fund investor behavior changes across thebusiness cycle. In economic expansions, investors strongly display the documented behaviors ofchasing returns and searching for managerial skill. In contrast, recession investors do not chase returns and exhibit a weaker tendency to seek alpha. Even before controlling for momentum, nosmart money effect exists in recessions. Zhao (2004) reviewed **f**und families typically claim thatclosing a fund protects the fund

superior performance by preventing it from growing too large tobe managed efficiently. Even though funds with better performance and larger size are morelikely to be closed, there is no evidence that closing a fund can indeed protect its performance.

Research Methodology

Research Objective

The objective of this research paper is to examine and analyze investor's preferences for fund performance and fund sponsor qualities of mutual funds in Bangalore city.

Hypothesis

H1 : There is no significance difference between respondents of different age group andtheir preference for fund related questions.

H2 : There is no significance difference between respondents of different age group andtheir preference for fund sponsor qualities.

H3 : There is no significance difference between respondent having different occupationand their preference for fund related questions.

H4 : There is no significance difference between respondent having different occupationand their preference for fund sponsor qualities.

Research Design

Aim of this paper is to study investor's behaviour pertaining to the mutual fund & to fulfil the objective, various past literatures were reviewed & hence suitable research design is Descriptive Research. The research is being carried with the use of primary data in which structured questionnaire is used as a tool for data collection. The questionnaire has been personally administered on the sample size of 305, chosen on a convenient basis from Bangalore city. Questionnaire was prepared keeping in mind the various outcomes possible. It was taken care to minimize the possibility of wrong interpretation and biased views. The five-point likert scale was used to analyze the different variables and their relationship. For the analysis of data statistical methods are applied with the aid of SPSS (Statistical Package for Social Science) software, version 19.0 and excel.

Data Analysis

For the data analysis, research has applied one-way ANOVA. Researcher had tried to find out the factors affecting an investor's preferences for fund performance and sponsor quality taking the demographic variables like age and occupation into the consideration.

One-Way Anova

1. Age and preference for fund related questions and fund sponsor qualities

ANOVA fund Related Questions							
		Sum of Squares	Df	Mean Square	F	Sig.	H0
Fund performance record	Between Groups	5.359	3	1.786	1.517	0.210	D0 not rejected
	Within Groups	366.228	311	1.178			
	Total	371.587	314				
Fund reputation and brand name	Between Groups	8.586	3	2.862	2.731	*0.044	Rejected
	Within Groups	325.878	311	1.048			
	Total	334.463	314				
Scheme's expenses ratio	Between Groups	.699	3	0.233	0.201	0.896	Do not Rejected
	Within Groups	360.273	311	1.158			
	Total	360.971	314				
Reputation of the Fund Manager/ Schemes	Between Groups	3.473	3	1.158	1.557	0.200	D0 not Rejected
	Within Groups	231.276	311	0.744			
	Total	234.749	314				
Scheme's portfolio of investment	Between Groups	2.520	3	0.840	0.835	0.476	D0 not Rejected
	Within Groups	313.067	311	1.007			
	Total	315.587	314				
Withdrawal facilities	Between Groups	6.439	3	2.146	2.087	0.102	D0 not Rejected
	Within Groups	319.815	311	1.028			
	Total	326.254	314				
Favorable rating by a rating agency	Between Groups	0.976	3	0.325	0.262	0.853	D0 not Rejected
	Within Groups	386.439	311	1.243			
	Total	387.439	314				
Innovativeness of the scheme	Between Groups	1.840	3	0.613	0.509	0.676	D0 not Rejected
	Within Groups	374.604	311	1.205			
	Total	376.444	314				

Entry and exit load	Between Groups	3.514	3	1.171	1.144	0.331	D0 not Rejected
	Within Groups	318.486	311	1.024			
	Total	322.000	314				
Minimum initial investment	Between Groups	14.896	3	4.965	4.027	*0.008	Rejected
	Within Groups	383.453	311	1.233			
	Total	398.349	314				
Note: Grouping variable Age. * Significant at 5% significance level.							

Analysis

The result of the test shows that age does not have any impact on investor's preference for Fund performance record, Scheme expense ratio, Reputation of fund manager, Scheme portfolio, Withdrawal facilities, Favorable rating by rating agency, Innovativeness and Entry & exit load.

However, age is an important variable that affect investor's preference for Funds reputation and brand name and minimum initial investment.

Respondents Age and Fund Sponsor Qualities

ANOVA: Fund Sponsor Qualities							
		Sum of Squares	**Df**	**Mean Square**	**F**	**Sig.**	**H0**
Reputation of sponsoring firm	Between Groups	0.645	3	0.215	0.168	0.918	D0 not rejected
	Within Groups	398.009	311	1.280			
	Total	398.654	314				
Sponsor has a recognized brand name	Between Groups	4.513	3	1.504	0.961	0/412	D0 not Rejected
	Within Groups	486.998	311	1.566			
	Total	491.511	314				
Sponsor has a well developed agency and network	Between Groups	2.768	3	0.923	0.765	0.515	D0 not rejected
	Within Groups	375.219	311	1.206			
	Total	377.987	314				
Sponsor's expertise in managing money	Between Groups	11.003	3	3.668	2.576	0.054	D0 not Rejected
	Within Groups	442.851	311	1.424			
	Total	453.854	314				
Sponsor has a well developed research and infrastructure	Between Groups	6.517	3	2.172	1.886	0.132	D0 not Rejected
	Within Groups	358.232	311	1.152			

	Total	364.749	314				
Sponsor's past performance in terms of risk and return	Between Groups	6.755	3	2.252	1.627	0.183	D0 not Rejected
	Within Groups	430.375	311	1.384			
	Total	437.130	314				
Note: Grouping variable Age. * Significant at 5% significance level.							

Analysis

The result of the test reveals the fact that investors of different age groups do not have any strong preference for Reputation of sponsoring firm, Sponsor has a recognized brand name, Sponsor has a well-developed agency and network, Sponsor's expertise in managing money, Sponsor has well-developed research and infrastructure and Sponsor's past performance in terms of risk &return.

Respondents' Occupation and Preference for Fund Related questions and Sponsor Qualities

ANOVA: Fund Sponsor Qualities							
		Sum of Squares	**Df**	**Mean Square**	**F**	**Sig.**	**H0**
Fund performance record	Between Groups	2.156	3	0.719	0.607	0.611	D0 not Rejected
	Within Groups	368.244	311	1.184			
	Total	370.400	314				
Funds reputation and brand name	Between Groups	17.152	3	5.717	5.570	*0.001	Rejected
	Within Groups	319.248	311	1.027			
	Total	336.400	314				
Scheme's expense ratio	Between Groups	3.440	3	1.147	0.997	0.394	D0 not Rejected
	Within Groups	357.532	311	1.150			
	Total	360.971	314				
Reputation of the Fund Manager/Schemes	Between Groups	5.391	3	1.797	2.391	0.069	D0 not Rejected
	Within Groups	233.752	311	0.752			
	Total	239.143	314				
Scheme's portfolio of investment	Between Groups	5.802	3	1.934	1.922	0.126	D0 not Rejected
	Within Groups	312.852	311	1.006			
	Total	318.654	314				
Withdrawal facilities	Between Groups	11.243	3	3.748	3.722	*0.012	Rejected
	Within Groups	313.157	311	1.007			
	Total	324.400	314				
Favourable rating by a rating agency	Between Groups	3.660	3	1.220	0.996	0.395	D0 not Rejected
	Within Groups	381.051	311	1.225			
	Total	384.711	314				
Innovativeness of the scheme	Between Groups	4.714	3	1.571	1.323	0.267	D0 not Rejected
	Within Groups	369.457	311	1.188			
	Total	374.171	314				
Entry and exit load	Between Groups	5.916	3	1.972	1.922	0.126	D0 not Rejected
	Within Groups	319.081	311	1.026			
	Total	324.997	314				

Minimum initial investment	Between Groups	6.925	3	2.308	1.840	0.140	D0 not Rejected
	Within Groups	390.206	311	1.255			
	Total	397.130	314				
Fund Sponsor Qualities							
Reputation of sponsoring firm	Between Groups	2.104	3	0.701	0.558	0.643	D0 not Rejected
	Within Groups	391.178	311	1.258			
	Total	393.283	314				
Sponsor has a recognized brand name	Between Groups	33.610	3	11.203	7.689	*0.000	Rejected
	Within Groups	453.133	311	1.457			
	Total	486.743	314				
Sponsor has a well developed agency and network	Between Groups	3.015	3	1.005	0.843	0.471	D0 not Rejected
	Within Groups	370.972	311	1.193			
	Total	373.987	314				
Sponsor's expertise in managing money	Between Groups	15.471	3	5.157	3.642	*0.013	Rejected
	Within Groups	440.383	311	1.416			
	Total	455.854	314				
Sponsor has a well developed research and infrastructure	Between Groups	5.512	3	1.837	1.582	0.194	D0 not Rejected
	Within Groups	361.218	311	1.161			
	Total	366.730	314				
Sponsor's past performance in terms of risk and return	Between Groups	18.198	3	6.066	4.511	*0.004	Rejected
	Within Groups	418.202	311	1.345			
	Total	436.400	314				
Note: Grouping variable Occupation. * Significant at 5% significance level.							

Analysis

Occupation and Preference for Fund Related Questions

The result of the ANNOVA stipulates that occupation does not play an important role ininvestor's preference for Fund performance record, Scheme expense ratio, Reputation of fundmanager, Scheme portfolio, favorable rating by rating agency, Innovativeness of the scheme,Entry & exit load and minimum initial investment. However, Funds reputation, Withdrawalfacilities, and brand name gets vary among the investors having different occupation.

Occupation and Fund Sponsor Qualities

The result of the test show that investors of different occupation groups do not have anypreference for Reputation of sponsoring firm as Sponsor has a well-developed agency & networkand Sponsor has well-developed research and infrastructure. However, differences were found tobe significant for Sponsor has a recognized brand name, Sponsor's expertise in managing moneyand Sponsor's past performance in terms of risk & return in term of sponsor qualities.

Conclusion and Scope for the Future Research

Indian Mutual fund industry is gradually moving towards growing phase. Over the last few yearslevel of awareness has increased. But level of awareness has not yet reached to mass investors.Two demographic variables: Age & Occupation have taken for the study & researchers havetried to study the impact of the two variables on investor's preference towards funds reputation& brand name and minimum initial investment. Study has concluded that occupation is avariable that affects investors' preference for Fund Sponsor qualities, brand name, Sponsor'sexpertise in managing money and Sponsor's past performance in terms of risk & return where asage does not play any role in building the investor's preference for Fund Sponsor qualitiesMutual fund is a very popular concept among the investor's but it requires more awareness to bespread among the target audience. One major limitation of the study is that sample does notrepresent the whole population as research is restricted to Bangalore city only. Respondent biasis another limitation of the study. It can be concluded in nut shell that the future of mutual fund industry is very bright and many aspects of behavior finance in mutual fund have not been covered in the current research that can be studied in the future.

References

1. Brown & goetzmann (1997) Mutual fund styles. Journal of Financial Economics, Volume 43, Issue 3, March 1997, Pages 373-399.
2. Fama, Eugene F. and French, Kenneth R., Luck Versus Skill in the Cross Section of Mutual Fund Returns (December 14, 2009). Tuck School of Business Working Paper. No 2009-56.
3. Marco,et.al (2011) Ethical and conventional mutual fund managers show different risk taking behavior? The Spanish Review of Financial Economics, Volume 9, Issue 1, January-June 2011, Pages 11-19.
4. Zhao (2004), why are some mutual funds closed to new investors? Journal of Banking &Finance, Volume 28, Issue 8, August 2004, Pages 1867-1887.

A STUDY ON "IMPACT OF GST ON LOGISTICS SECTOR IN INDIA"

Girish.G.N
Student, Department of Commerce, Koshys Institute of Management Studies, Karnataka

Kavita Mahar
Assistant Professor, Department of Commerce, Koshys Institute of Management Studies, Karnataka

Abstract

The overall objective of this study is to examine the impact of Goods and Services Tax on the Consumer Goods and logistics sector in India GST stands for "Goods and Services Tax", and is proposed to be a comprehensive indirect tax levy on manufacture, sale and consumption of goods as well as services at the national level. It will replace all indirect taxes levied on goods and services by the Indian Central and State governments. GST could be the biggest reform in India. France was the first country to introduce this system in 1954 and in India on 1st July 2017. Nearly 160 countries are following this tax system. The entire Indian market will be a unified market which may translate into lower business costs.

GST and its possible impact on Logistics Sector: *GST is expected to create a single market for the whole nation. All the logistic companies can now focus on creating regional hubs rather than maintaining warehouses in each state. The logistics industry can therefore be expected to become more efficient with better usage of warehouses whilst bringing in higher level of automation. This will also help in bringing down the cost of logistics companies. This research paper shows the impact of GST on consumer goods and logistics sector.*

Keywords**:** *GST, Indian Economy, Logistics, Consumer Goods, Tax impact*

Introduction

The road transport in India as emerged as a dominant part of the transport system in India, it has come to occupy a pivotal position in the overall transport system in India. The sector is growing at the rate of 10% per annum. Several factors are helping the growth of logistics industry in India over the decade that includes changing tax system, rapid growth in industries such as automobile, pharmaceuticals, FMCG and retail. Infrastructure is one of the biggest challenges faced by the Indian logistics sector and has been a major deterrent to its growth. Infrastructural problems like Poth holes on road, no proper connectivity, inadequate air and sea port connectivity and lack of modes of transports like railways, transport and domestic aviation are the main constant. Due to the infrastructural hurdle costs per transaction in Indian logistics sector is very much high compared to those in the developed markets. Due to high split up, lack of skilled labor and manpower are one of the major challenges for the logistic sector.

Indian logistics industry has gained immense significance. The India logistics industry is projected to grow at CAGR of 15-20% during the financial year 2017 to the financial year 2020. The main hindrance in impellent the economic growth of this sector is "multiple tax" charged by authorities. This results in high logistics costs putting extra cost burden on the customers. The logistics costs in India is high (13 per cent of GDP) as compared to developed countries (8-9 per cent of GDP).

The Indian logistics sector can be sub classified into:

1. Transportation,
2. Warehousing,
3. Freight forwarding and
4. Value-added logistics.

Transportation: Itholds 60 percent share of the logistics industry and rest 40 percent is contributed by warehousing, freight forwarding and value-added logistics. Implementation of GST will be a game-changing scenario for businesses andespecially for organized logistics players. Logistics is considered to be the backbone of manufacturing and trading activities in the economy. It plays a crucial role to play for developing countries like India wherein consumption is growing and demand is always high.

In simple words, logistics can be considered as the movement of goods from its point of origin (from point x) to the point of consumption (to point z). A well-planned logistics and supply chain ensures delivery of right product in right quantities at the right time to the right place for the right price in the right condition to the right customer.

Review of Literature

Introduction of GST would make Indian products more competitive in the domestic and international markets. This would instantly increase the economic growth. (Girish Gang-2014- Basic concepts and features of GST in India- International Journal of Scientific Research and Management- vol. 2 ISSUE 2 PP 542-549). The efficiency of the transport sector would increase after implementing of the GST. It will also help in reducing the logistics costs. GST will help the country in two areas- logistics cost will come down and efficiency will increase both within India and exports. (Deccan Chronicle May 15, 2016).

As per World Bank estimates, delays are caused by road blocks (Traffic jams), checkpoints (Check Post) could cut freight times by 25 to 30 percent and logistics costs by 35 to 40 percent. With proper GST implementation, this can boost India's manufacturing sectors by almost 3 to 4 per cent of net sales.

Objectives of the Study

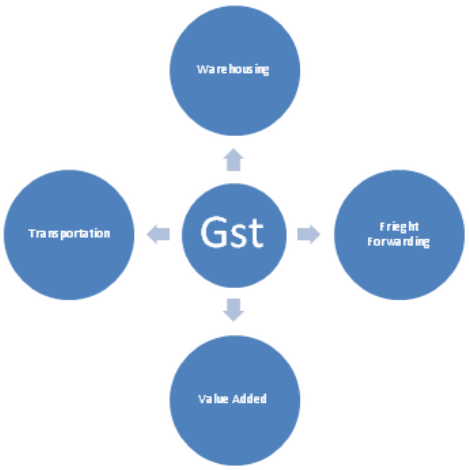
- To analyze the impact of GST on various sectors of logistics
- To present the advantages of post GST in logistics sector

Methodology of the Study

Being an explanatory research, the methodology is based on secondary data that comprises research articles of the experts from journals, newspaper and magazines.

Overview of Indian Logistic Industry

The Indian logistic industry is expected to grow speedily. After GST implementation and government initiatives like "Make in India", National Integrated Logistic Policy, 100% FDI in warehouses, food storage facilities etc., are expected to grow in a significant manner. In India this sector remains complicated in several complexities like higher logistic costs and complex tax structure. The implementation of Goods and Service Tax (GST) will trim the logistic costs up to 23% from the current levels, however, the current logistic costs could only be resolved by the development of logistics infrastructure. The Indian logistic sector sub classified as under:



The transportation comprises of various means such as road, rail, air and water. India being emerging country with prime dependency upon transportation through land, via road and rail together which contributes about 65% followed by Warehousing 26.5% compromising industrial and agricultural storage.

Impact of GST on Logistics Industry

Taxation on goods and services consumed on value additional basis is the directive in the Indian tax reforms with effect from July 1, 2017. It is expected to play a crucial role in combining the split up of logistics industry, a major contributor in improving supply chain efficiency and product cost. The $140 billion Indian logistics industry is growing at 16% CAGR. The real backbone of the Indian economy, it is currently reeling under heaviness, making it unattractive, the main reasons for it being the unorganized players, absence of clarity in taxation, multi-layered effects, and harassment at each check post, all adding to the cost to the customer and productivity delays.

According to the study, Tata Motors holds 57 per cent market share in the overall M&HCV industry. However, it lost market share over the last few years with other OEMs expanding market share like Hinduja Group's flagship Ashok Leyland.

Overall, the industry is dominated by Tata Motors and Ashok Leyland with 80 per cent share across majority of segments, the report said. GTA or courier service agencies are the main service provider who are the main debated discussion in the Pre-GST regime, GTA services drives all operators to declare them as courier service agency. Post-GST, it is expected to have a clear understanding, bifurcation of services, and classification of appropriate taxes enabling a seamless flow of credit in the entire chain.

So far, logistics players in India have been maintaining multiple warehouses across states to avoid CST levy and state entry taxes. Most of these warehouses are operating below their capacity and thus adding to their operation a sun productive. However, after implementation of GST, most of the current challenges of this industry will become the history of India, and it will become one single market wherein goods can move freely inter-state without any levy.

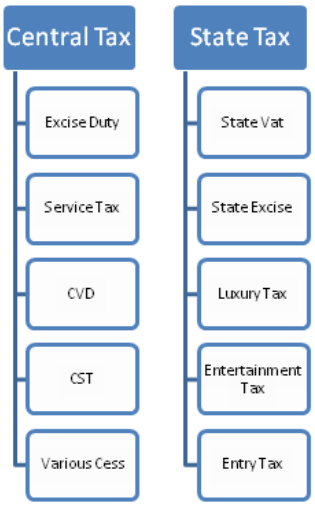
This will bring warehouse consolidation across the country and we can witness mega logistic hubs and high investments in infrastructure wherein 100% FDI has already been allowed. As an outcome of GST, warehouse operators and e-commerce players have already shown interest in setting up their warehouses at strategic locations such as Nagpur, which is the zero-mile city of India and is well connected throughout. We are sure to witness more transformations as we go forward. Initial uncertainties, courtesy goods and services tax (GST), could affect profitability of the logistics sector in the short run, but operational efficiency is bound to improve in the long run. The logistics sector broadly comprises the road transport sector (consisting of unorganized small businesses, trucking, fleets and large transport companies), the storage and warehousing sector and finally third-party logistics (3PL).

The two key indicators measures— Profit after Tax as percentage of Income and Profit before Interest, Taxes, Depreciation and Amortization as percentage of Income. Between 2009 and 2016, PAT has declined for all sub sectors and shows volatility for the logistics and the storage sector.

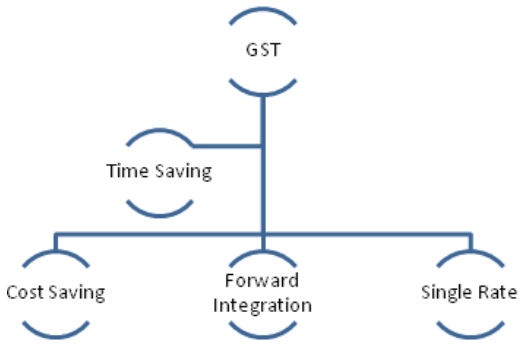
PBITDA is an important measure that reflects operating efficiency and ranges between a low of 8% for the road transport sector to a high of approximately 25% for the storage sector.

How the Introduction of Goods and Service Tax (GST) would be Benefiting the Indian Logistic Industry?

In India the planned dual GST model (central GST and state GST) implement to replace around 29 state. GST is a destination based tax levied on the single point of transaction .The current combined Centre and State statutory rate for most goods works out to be 26.5% (CENVAT of 14%, and VAT of 12.5%), whereas post GST implementation the same is expected to reduce to standard rate of about 18-21% which will be levied on most goods and all services. GST – BEFORE AND AFTER.



Let us consider the example of a manufacturing company in Bangalore, which moves its goods to Goa. The actual sale happens in Goa and the finished goods have to be transported from Bangalore to Goa across different states. As per the current taxation norms, one has to pay Central Sales Tax (CST) when moving a good to another state and selling it in the other state. However, if the good is moved for stocking and not for sale, then CST need not be paid. So many companies in order to avoid paying CST, they show this movement as moving to stock and not moving to sell. To do this, companies have warehouses in every state where the finish goods are stored and then the goods are transported for sale from the warehouse in each state.



Let us consider another example of a city called Mysore in Karnataka which is approximately 150km from Bangalore. Shipping the goods from Bengaluru warehouse to Mysore requires the company to pay CST as and Bengaluru is in Karnataka. So, the companies ship goods from Mangalore warehouse, which is approximately 250km to Mysore to avoid CST.

With the implementation of GST, it will be easy for companies to setup their own warehouses at lower cost hence, it will improve the customer service. The following central and state taxes are integrated into GST.

Advantages of GST to Logistic Companies

Cost / Time Saving : Big warehouses and end market logistics will plan for costs savings. At the time of entry taxes and heavy paper work at state check posts, there will be some additional 6-9 hours added to the transit time for inter-state transport of goods. Elimination of entry tax will make tax compliance procedures easy and it will likely result in easier movement of goods across the country.

Forward Integration: Companies at a larger scale will enable to offer services at lower costs. As a result, companies for whom transportation is not a core part of their business will increasingly outsource their logistics operations to third party logistics (3PL) and fourth party logistics (4PL) service providers.

One Rate: Standard tax rates will allow corporations to do things properly. Practice of building a warehouse in different states to adhere to each state's tax code will be difficult but, after the implementation of GST, the scenario would change.

Limitations

1. GST will accelerate growth in the logistics industry.
2. State-border check post, which are tasked with material scrutiny and location-based tax compliance, negatively impact the overall production and logistics time and account for roughly 70% of a truck's transit time.
3. With implementation of GST the logistics sector should start diversifying the supply chain models with their clients and at the same time develop a completely synchronized ERP accounting system to support inventory supply management?

Logistic Industry after GST

GST will help companies to reduce logistics cost by re-structuring their supply chains with four key indicators.

1. India will become one big market with more warehouses.
2. GST would result in large number of trucks on road. The new tax will result in huge warehousing, cold chain, container freight stations and inland container depots.
3. It will also bring in scale to logistics companies as there will be a lot of savings, stoppage of wastage and lower delays. Hence it will lead to greater economies of scale for transport operators.

Conclusion

From the above analysis, we can easily understand that the implementation of GST will have a significant impact on logistics sector in India. If it is properly implemented, then it will have a positive impact on the logistics industry, which will helps in reducing the logistics costs and efficiency will increase both within India and exports. The GST implementation will also lead to emergence of organized service providers since taxes will not be added costs for the business. In the current scenario, the logistics sector is a highly fragmented industry with very few large organized players. The unorganized sector should re structure their policies with the organized players for setting up economies of scale. In a nut shell, the successful implementation of GST could reduce transportation cycle times, enhance supply chain decisions, lead to consolidation of warehouses etc. which could help logistics reach its potential in terms of service and growth. So, it will be great boom for the logistics sector which leading to accelerated economic growth. Overall, one can say that the impact of GST on the logistic sector is positive. It provides a unique opportunity to streamline business operations and to become more compliance with profitability rather than tax-oriented. It puts power in the hands of business leaders to bring about positive change and steer their enterprises on a growth path, powered by GST-compliance.

References

1. Girish gang- 2014- basic concepts and features of GST in India- international journal of scientific research and management- vol.2 issue 2 pp 542-549
2. https://brandalyzer.blog/2011/12/02/impact-of-gst-on-supply-chain/
3. http://www.ctrpfp.ac.in/gst-supply-chain-management.pdf
4. http://www.itcinfotech.com/uploads/gui/knowledgecentre/gst_wp _revised1.pdf
5. http://www.sclc.in/pdf/india-after-gst-presentation/diesl.pdf
6. http://www.business-standard.com/article/news-ians/petroleum-products-alcohol-excluded-fromgst-regime-115050600638_1
7. http://economictimes.indiatimes.com/wealth/personal-finance-news/gst-will-have-double-positive-impact-in-transport-sector-study/articleshow/47515738.cms

VENTURE CAPITAL AND INVESTOR

Brijesh Singh
Research Scholar, VTU, Belagavi

Prof. Sandhya Prashanth
HOD of Commerce, The National College, Bangalore

Abstract

Much of the government intervention into the market `gap' for start-up and early-stage equity finance in the UK is based on the belief that the problem is on the supply side. Based on ananalys is of the informal venture capital market this paper argues that there is no shortage of finance available. A survey of business angels reveals that many are willing to allocate a higher proportion of their investment portfolio to investments in unquoted companies, with recent tax incentives having a positive effect on their willingness to invest. Over 90% are currently looking to make more investments. However, there are constraints on their ability to invest: they do not see enough deals that meet their investment criteria, the majority of the investment proposals that they receive are of poor quality, and they are often unable to negotiate acceptable investment terms and conditions with entrepreneurs. The implication is that there is a need for further interventions by policy-makers to remove these barriers so that more small firms can take advantage of the substantial pool of angel finance that is available.

Keywords: *venture capital, business angels, investment potential, investment criteria, small firms policy, etc.*

Introduction

In recent years there has been much debate in the UK, as well as elsewhere in the European Union and beyond, about the availability of risk capital for businesses at their seed, start-up and early growth stages. The popular view is that there is a lack of what might be termed ` adventure' capital because most investors are unwilling to invest in new and recently started businesses, especially if they are in technology sectors, because of perceived high risks and low returns. This view underpins the thinking of policy-makers and is reflected in a range of interventions to increase the supply of early-stage capital, such as the Regional Venture Capital Funds initiative(Department of Trade and Industry 1999), and tax incentives and support for business angel networks (services that ` introduce' entrepreneurs to potential investors) to expand the pool of business angels. Thus, there is a need to consider a wider range of factors that on the one hand prevent business angels from investing as frequently as they would wish and, on the other hand, prevent more entrepreneurs from accessing the substantial pool of finance that business angels have available to invest. The aim of this paper is therefore to take a broader perspective on the barriers that business angels encounter in investing. First, we identify the size of the pool of uncommitted business angel finance. Second, we identify the key barriers which impede the flow of this finance to new and early stage ventures. Finally, we summarize some of the implications for the development of public policy.

Methodology

The inherent difficulties involved in identifying samples of business angels are well understood. Business angels are an invisible population who are not listed in any directories and there are no public records of their transactions. Most studies therefore, of necessity, are based either on snowball survey techniques or use samples of convenience. Moreover, the strong desire of most business angels for anonymity(Benjamin and Margulis 2000) and the private and sensitive nature of the subject matter (Haar *et al*. 1988) generally results in low response rates to postal questionnaire surveys and requests for interviews. Thus, any sampling approach has multiple sources of potential bias. However, as the size and characteristics of the population are unknown and probably unknowable (Wetzel 1983), it is not possible to assess theextent of bias in any individual sample. The paper is based on a postal survey of investors registered with the National Business Angels Network (NBAN). NBAN was formed in 1999 on the initiative ofthe Department of Trade and Industry and is built upon a number of pre-existing local and regional business angel networks with the intention of significantly enhancing and increasing the flow of investment opportunities to investors. Other aspects of its remit are to help raise awareness of the role of

business angel finance and encourage more investment into growth businesses. NBAN is structured as a federation of independentlocal/regional and national business angel networks -termed special associates- who ` pool' information on their investment opportunities so that they areavailable to all investors across the system. This is achieved by means of the following services: (1) a `Best Match' service, a web site containing searchable business opportunities;(2) a monthly Bulletin, listing new business opportunities; and (3) regular presentations by businesses to investors at locally held meetings. NBAN currently(April 2001) has 26 special associates.4

Discussion and Analysis

Table 1 Regional Distribution of Survey Respondents

Region	Number of respondents	%
London	22	32.8
South East	8	11.9
Eastern	6	9.0
South West	12	17.9
East Midlands	3	4.5
West Midlands	6	9.0
North West	3	4.5
Yorkshire and The Humber	4	6.0
North East	0	0
Wales	1	1.5
Scotland	1	1.5
Northern Ireland	0	0
Overseas	1	1.5
No information	(7)	
Total	**74**	**100**

Investment Potential

Income and Net Worth

Most business angels have a high net worth and significant income. Just under three quarters (71%) of respondents to our survey have a net worth (excluding principal residence) in excess of £500 000, with millionaires comprising 62% of all respondents. In terms of income, 12% had £250 000 or more, 43% were in the £100 000- £249 000 range with a further 39% in the £50 000 - £99 000 range. However, whereas wealth is a necessary condition for someone to become a business angel, in most cases it is not sufficient. This is reflected in this study: 71% of our respondents had founded one or more businesses; on average the respondents had started two businesses and 9% of respondents had founded five or more businesses. Thus, as previous research has suggested, one of the very few sustainable generalizations that can be made about business angels, who in most other respects are a very heterogeneous population, is that they are typically successful cashed-out entrepreneurs.

Motives for Investing

Business angels invest in unlisted companies predominantly for financial reasons (table2). By far the most important reason is ` the potential for high capital appreciation', with current/future income ranked third. However, confirming previous research, non-financial motives emerge as a very strong secondary consideration for becoming a business angel. Indeed, personal satisfaction from being involved with entrepreneurial businesses' is the second most important reason for investing. Another significant non-financial reason for investing in unlisted companies is a way of having fun with my money'. For most of these business angels there is no trade-off if between financial and non-financial motives: it is both/and rather than an either/or choice.

Significant secondary considerations for investing include to make use of tax breaks' and the desire to support the next generation of entrepreneurs'. However, in other respects business angels are not motivated by altruistic concerns, with 85% stating that the support of socially useful products and services is not a reason for investing. As other research has suggested (Barker 1999), most business angels regard their investment activity as totally separate from their philanthropic activities. Finally, most business angels do not invest to receive personal recognition in the community: respondents were almost unanimous in stating that this is not a consideration. Business angel investment is, therefore, primarily an economic phenomenon, undertaken by investors in the expectation of significant returns. However, the secondary importance of a desire for involvement in the entrepreneurial process emphasizes that business angel investors bring more than money to the deal, and seek to contribute their experience and knowledge

to their investments. Indeed, 94% of respondents describe themselves as hands-on investors who bring a wide range of experience interms of functional expertise, length of senior management or professional experience and industry knowledge to their investee businesses.

Table 2 Motives for Investing

MOTIVES	PERCENTAGE OF RESPONDENTS		
	Very important	Quite important	Not important
To support the next generation of entrepreneurs	9	36	55
Personal satisfaction from being involved with entrepreneurial businesses	53	36	11
Potential for high capital appreciation	72	24	4
To help a friend/friends set up in business	3	10	87
For current or future income, e.g. dividends, fees	41	32	27
Support socially beneficial products or services	5	10	85
Way of having fun with some of my money	14	46	40
For positive recognition in the community	1	3	96
For non-financial perks, privileges and benefits	1	8	91
To make use of tax breaks, e.g. Enterprise Investment Scheme	19	41	41

Table 3 Investment portfolios of Business Angels

Asset Class	*Percentage of respondents investing in this asset class (%)*
Stock market	93
Property (other than principal residence)	62
Bank/building society	57
Bonds	49
Gilts	36
Art/ Antiques	31
Collectibles: e.g. coins/stamps, vintage cars, etc.	12
Fine wines	12
Racehorses	4
Other	7

Table 4 Maximum proportion of portfolio that Business Angels are willing to invest in Unlisted Companies

Percentage of portfolio	Percentage of respondents
Less than 5%	2
5-9	3
10-14	23
15-19	3
20-24	23
25-29	10
30% and above	36

However, many business angels are prepared to allocate a higher proportion of their investment portfolio to investments in unlisted companies (median= 20%) (table 4).

Time Constraints

The process of investing involves considerable time: there is a need to identify potential investment opportunities; once identified, the process of assessing, structuring and negotiating the investment can be lengthy; and having invested, most business angels then devote significant amounts of time to supporting their investee businesses. Respondents to this survey work an average of 6 days per month in each of their portfolio companies. Moreover, for most business angels, investing is a part-time activity. Thus, while business angels may have additional capital available, they may not have sufficient time to add to their existing portfolio of investments in unquoted companies. Indeed, previous studies have confirmed that the lack of time to search for and evaluate investment opportunities are significant barriers to investment (Mason and Harrison 1999). In this survey more than one-half (57%) of the respondents confirmed that there is an upper limit to the number of investments in their portfolio that they are capable of managing effectively. The average maximum portfolio size is five investments but one in ten investors gave a limit of more than 10 investments. The key constraints are, first, insufficient time to monitor the performance

of additional investments (45%) and, second, the time available to play a hands-on role (45%). However, the vast majority of business angels in this survey reported that they have not reached the limit of their investment capacity.

Table 5 Amount that Business Angels have available for investment

Amount	Percentage of respondents
< £25 000	7
£25 000± 49 000	2
£50 000± 99 000	18
£100 000± 249 000	43
£250 000± 499 000	15
£500 000± 999 000	10
> £1 million	4

Indeed, more than 90% of respondents are currently looking to make further investments. The amounts that they have available to invest range from around £10 000 to over £1 million, with an average of £100 000 (table 6) and in aggregate terms is very significant, exceeding the amount that they have collectively invested in the 3 years prior to the survey. Extrapolating from this sample to the population of angel investors registered with NBAN, this suggests that NBAN members have around £70 million available for investment.

Barriers to Investment

A useful way in which to structure this discussion of potential barriers to investmentfor business angels is in terms of the three key stages in the investment decision-making process: screening, evaluation and negotiation (Mason and Rogers 1997, Feeney *et al*.1999).

Table 6 Situations when Business Angels are prepared to relax their investment criteria

Situation	Percentage of respondents
None: never invest outside of investment criteria	11
High credibility of entrepreneur/management team	53
Small investment required	31
Location of business very close to home/workplace	31
Recommendation from trusted source	30
Prospect of very high returns	27
Intuition/gut feeling	27
Availability of co-investor/syndicate	22
Convincing presentation by entrepreneur	20
Referral from a business angel network	10
To diversify my portfolio of business angel investments	7
Opportunity to syndicate with other investors	5

Investors will also be more likely to invest if the referral is recommended by a trusted source (Harrison *et al*. 1997). Other factors that encourage some investors to relax their investment criteria are the location of the business close to the investor' s home which has the effect of reducing transaction and monitoring costs and a small deal size which may encourage a speculative investment.

Conclusion

The study underlines the significance of the informal venture capital market as a source of finance for unlisted companies. Business angels registered with NBAN have made an estimated 600 + investments involving an investment of some £60 million in the 3 years prior to the survey. As most business angels do not register with business angel networks this scale of investment activity represents just the tip of the iceberg. Furthermore, their investment potential is enormous: business angels registered with NBAN have an estimated £70 million available for investment in unlisted companies and the average business angel is willing to double the proportion of his/her investment portfolio that is currently allocated to unlisted companies. The government can take some of the credit for helping to create this pool of finance. Business angels are highly sensitive to the tax regime, and the willingness of active investors to increase the proportion of their investment portfolio that they allocate to investments in unlisted companies can be attributed, in part, to the effect of tax incentives such as the Enterprise Allowance Scheme and the Capital Gains Tax taper. These initiatives may also be expected to have encouraged other high net worth self-made individuals to become business angels. However, there are significant constraints on the ability of business angels to invest as frequently as they would wish, or as much as they would wish business angels

do not see enough businesses that meet their investment criteria, and their ability to relax these investment criteria is limited by their reluctance to invest in unfamiliar industries and markets; the majority of the investment proposals that they see are of poor quality to a lesser extent, they fail to negotiate acceptable terms and conditions with entrepreneurs. The clear implication of this study is that the effectiveness of current government interventions in the informal venture capital market to increase the amount of equity capital that is channeled to new and growing businesses ± involving the provision of tax incentives and contributing to the operating costs of business angel networks ± will be limited because of the existence of various barriers that prevent business angels from investing as often as they would like to. This evidence therefore suggests that the time has come to fundamentally redesign the concept of business angel networks. As originally conceived, business angel networks were based on a diagnosis of information inefficiencies in this capital market. As a result, they have been established to provide a channel of communication between investors and entrepreneurs in order to minimize the cost of the entrepreneur' s search for capital, and enabling investors to examine investment opportunities that meet their screening criteria, without compromising their anonymity.

In examining the role of the informal venture capital market in the funding of ventures at their seed, start-up and early growth stages, it is no longer sufficient to de® ne the problem as a lack of available capital: business angels have significant funds available and are prepared to invest more. Nor is it a matter of the mobilization of the capital that is available, which intermediation initiatives such as BANs address, as a significant proportion of investors report receiving poor quality (non-investable) business opportunities being presented to them from this source.

References

1. Advisory Council on Science and Technology (ACOST) 1990 The Enterprise Challenge: Overcoming Barriers toGrowth in Small Firms (London: HMSO).
2. Benjamin, G. A. and Margulis, J. 2000 Angel Financing: How to Find and Invest in Private Equity (New York:Wiley).
3. Feeney, L., Haines, G. H. and Riding, A. L. 1999 Private investors' investment criteria: insights fromqualitative data, Venture Capital: An International Journal of Entrepreneurial Finance, 1: 121 - 145.
4. Freear, J., Sohl, J. and Wetzel, W. E. Jr 1996 Technology due diligence: what angels consider important,paper presented at the 16th Babson-KauÚ man Foundation Entrepreneurship Research Conference,Seattle.
5. Haar, N. E., Starr, J. and MacMillan, I. C. 1988 Informal risk capital investors: investment patterns on theEast Coast of the USA, Journal of Business Venturing, 3: 11 - 29.
6. Harrison, R. T., Dibben, M. R. and Mason, C. M. 1997 The role of trust in the informal investor' sinvestment decision, Entrepreneurship Theory and Practice, 21 (4): 63 - 81.
7. Wetzel, W. E. Jr. 1981 Informal risk capital in New England, in Vesper, K. H. (ed.), Frontiers ofEntrepreneurship Research 1981 (Wellesley, MA: Babson College) pp. 217 - 245.

TEACHING AND LEARNING WITH ICT

Fazila Begum. N
II Sem, M.Sc(CS), Indo Asian Degree and PG Center, Bangalore, India

Abstract

ICT enables self-paced learning through various tools such as assignment, computer etc as a result of this the teaching learning enterprise has become more productive and meaningful. ICT helps facilitate the transaction between producers and users by keeping the students updated and enhancing teachers capacity and ability fostering a live contact between the teacher and the student through e-mail, chalk session, e- learning, web-based learning including internet, intranet, extranet, CD-ROM, TV audio-videotape. Edusat technology has become very powerful media for interactive participation of experts and learners and it reaches the unreachable. Emerging learning Technology (ELT) of bogging, Integrated Learning Modules, a pod cast, Wikis, Enhancement of Browsers, e-learning, M-learning, U-learning have started making rapid strides in teaching learning processes.

Keyword: *Web Browsers, Technology enhanced learning, Self paced learning, Instructional software, Interactive learning, Integrated Learning Module, U- learning. E-learning, M-learning.*

Introduction

The world that awaits us is a world of huge technical change presently the world is inhabited by very large number of scientist and technologies and they are more than the scientist and technologist that have lived on it during the history of mankind. All developments mainly on the economic growth of the nation are based on updated knowledge and information into economic activity has resulted in a profound structural and qualitative change. There is a window of opportunity for Indian because youth power in India is 59% in the age group of 15-59%. Most ageing nation in Asia is Japan, over 10 lac citizens are over the age of 90 years. Finland which is known as the proud nation of producing NOKIA mobile and earning over 40 billion dollars per year from it is the most ageing nation of Europe.

According to Dr Kastusiranjan one of the noted scientists of India has observed that global development over the past two centuries have already demonstrated that the central role of advances in science and technology and their applications in the social economic and cultural transformation of the world is tremendous. Human experience with technology is constantly evolving and is finding expression in myriad dimension. Technology has been affecting every part of human endeavor.

Appropriate use of ICT can transform the whole teaching-learning processes leading to paradigm shift in both content and teaching methodology. ICT has the potential to transcend the barrier and space. ICT integration in the field of education has impacted hugely in improving the quality education services available to even students in far-flung remotest corners of the country.

The new environment of interactive learner-centered approach of ICT has completely meta-morphosised the process of education i.e delivery and dissemination. The technological creativity learner will help generate sharing of knowledge to perform tasks in a better way and to develop their capacity and skills to keep pace with the rapid changes but the pace of change is so fast that what was avant-grade few years ago is just a thing of past. We must not allow the ICT related opportunities to slip out of our hands.

We must empower our youth with the latest technology to tap the latest skills and hidden potential of our youth population. There is considerable hope that technology can expand and improve education in all levels with special reference to design and content of instructional materials, delivery, and assessment and feed back. The Appropriate use of ICT can transform the whole teaching-learning processes leading to paradigm shift in both content and teaching methodology. ICT has the potential to transcend the barrier and space. ICT integration in the field of education has impacted hugely in improving the quality of education. It is widely believed that ICT integration will help us in making education more accessible and affordable. Increasing role of ICT will make education more democratic that is improving the quality education services available to even students sitting in far- flung remotest corners of the country.

New environment of interactive learner-centered approach of ICT has completely meta-morphosised the process of education i.e delivery and dissemination. The technological creativity learner will help generate sharing of knowledge to perform tasks in a better way and to develop their capacity and skills to keep pace with the rapid changes but the pace of change is so fast that what was avant-garde few years ago is just a thing of past. We must not allow the ICT related opportunities to slip out of our hands.

In technology enhanced learning (TEL) teacher's role will be more challenging and definitely different from what is presently the traditional class room teaching. In the new role he will be more a director/coach or a facilitator, because the ET enhances the quality of teaching and learning by arousing inquiry, curiosity and exploration. ICT will afford opportunity to the individual for self-paced learning, which caters to learner's abilities and aptitude. The paper attempts to discuss the role of ICT to meet the challenges of knowledge economy and to explain the development of new methodology of learning and teaching aptitude in the changing context i.e. privatization, liberalization and globalization.

One of the major advantages of using ICT's in the class room has been to prepare. The present and next generation of students for a workplace where ICT's particularly computers internet and others related technologies are becoming more and more important. These computer savvy and technologically literate students possess the desired competencies to use ICT's effectively. These knowledgeable persons possess the competitive edge in an increasingly uncertain globalizing job market. Along with the technology literacy development of specificity skills are also required. For well paying jobs specifically of skill is of the primary importance.

ICT which includes radio and television as well as other high technology newer digital devices such as computers and Internet have been treated as generally powerful enabling tools for educational change and reform. On-line teaching as innovative teaching has been accepted widely, which includes on-line net working, role of e-moderator, e-learning? Web –sites which are very popular with teachers and students are Google, Yahoo, Gmail, Rediffmail, Wikipedia. The modern concepts of ICT have helped professionals to cope the challenges for digital information and technology through the development of digital literacy resources. This can be built by:

- Acquiring Digital Media
- Buying Access etc

The role of computers in Education computers is generally helpful for educational activity which requires significant interaction for that instructional software should be highly interactive. Interactive learning environments are called Intelligent Testing System. Because of their interactive capability computers provide individualized and self-paced learning. SW may be customized to meet the specific requirements of the individuals depending upon their diverse background and abilities. The use of word Excel, Access, PowerPoint, animation, graphics can be utilized to enhance the learning of content. Computers are good for explaining complex processes. Computer-aided learning is not a replacement technology but a complementary tool. Computers are useful for teaching, problem solving and decision making skills. UGC has also initiated the process of computerization of University and College libraries providing internet connectivity and now through UGC-INFONET which is planning to provide those facilities like E- access to journals, CAL and E-governance to become reality. Electronic journal may be defined as any journal, magazine, e-zine, Webzine, news letter or type of electronic serial publication which is available over the internet and can be assessed using different technologies such as World Wide Web (WWW). From the year 1980 Gopher, ftp, telnet, e-mail or listserv a few publishers namely Elsevier, Academic, Springer etc had offered access to their on-line journals free of cost.

Use of Emerging Learning Technologies (ELT)

We may have heard the names of following terms without understanding. Here are few ELT which are in use:

Blogging: Blog (a blend of the term web log) is a type of website or part of a website. Blogs are usually maintained by an individual with regular entries of commentary, descriptions of events, or other material

such as graphics or video. Most blogs are interactive, allowing visitors to leave comments. The ability of readers to leave comments in an interactive format is an important part of many blogs. Most blogs are primarily textual, although some focus on art photographs, videos, music and audio.

Integrated Learning Modules: An Availability of open source software has enabled development of content management system and learning management system such as a Module. Integrated Learning Module (ILM) is thematically focused classes, delivered primarily over Internet. The course content is integrated and comprehensive creating a unique perspective on course themes without the potentially repetitive requirements of separate stand-alone courses. Content and language integrated learning is an approach for learning content through an additional language (foreign or second language) thus teaching both the subject and the language.

A podcast A podcast (or non-streamed web cast) is a series of media files (either audio or video) that are released episodically and often downloaded through web syndication. The mode of delivery differentiates podcasting from other means of accessing media files over the Internet, such as direct download, or streamed web casting. A list of all the audio or video files currently associated with a given series is maintained centrally on the distributor's server as a web feed, and the listener or viewer employs special client application software known as a pod catcher that can access this web feed, check it for updates, and download any new files in the series.

Wikis: A Ebersbach et al (2006) note that the following basic features are common in wikis:-

Editing: The Most of the wikis use the same basic page editing function such as Text editing and image, table list hyperlink and file insertion.

Links: A Each article can be linked to other articles and thus form a new network structure.

History: The function which saves all previous version or modifications of any single page. It allows tracking of the editing processes of an article since all changes have been documented.

Recent changes: The features can provide a current overview of a certain number of recent changes to wiki pages or all changes within a predefined time period.

Search function: The Most wikis also offer a classic full text or title search for wiki pages.

A well known wiki is wikipedia (http:// www.Wikipedia.org) online collaborative encyclopedias where anybody can edit update the site content as they see fit. The homepage of wikipedia can be accessed easily on browsing the website.

Enhancement for browsers: Web browsers are adding functionality for their uses. Del.icio.us is a program me which helps you to favorite online and then access in another computer instead of a dedicated computer. Thus these are all additional plug ins that add functionality to the browser. Now it is an information technological era. The students are willing to learn new technologies like mobile phones, i-pod, i-phone, computer and internet. This is an era of technological creativity. To keep pace with latest trends one should make use of electronic technology in teaching learning processes. The recent technology of our world is all pervasive and omnipresent and is developing at a higher speed. Let us encourage the use of ICT in teaching-learning processes in our educational institutions.

Now U-Learning (ubiquitous) is making another leap-frog progress emerging through the concept of ubiquitous computing. After the use of computer in education the use of e-learning and mobile learning has made a transformative progress in the field of education. U-learning means everywhere, every time, every content learning (the, internet etc). Various devices retrieve the information in appropriate format (PDA, cell-phone lap top or any other technological gadgets). U- Learning consists of two components e-learning and m-learning. E-learning includes a wide range of application and processes including computer based learning, web-based learning, virtual class room, digital content. Delivery of content through e- learning is via all electronic media including internet, intranet, extranet, CD-ROM, interactive TV audio-videotape. M- Learning is mobile learning environment and is a sub-set of e-learning through mobile computational devices, palms, windows etc.

The ICT in India advancing very rapidly from single channel transmission in 1962 to about hundred channels. The use of satellite Instructional Television Experiment (SITE) in 1974-75 has reached country wide classroom (CWCR). GyanDarshan, vyas higher education channel, Eklavaya Technological channel and worldwide internet communication are providing interactive multi-media, on line learning's. IGNOU is creating a cooperative radio network known as Gyan-Vani all over the country so that everyone desirous of learning gets the benefit of it. Edusat's technology has an-in-built-mechanism for many of the existing inter related problem felt during teleconferencing. Time will not be a problem anymore with the off line access to the tele lectures. Through these interactive participation it-reaches the unreachable in the remotest corner and to far flung areas.

Conclusion

The advantages of ICT on education overweighs the disadvantages in ICT, therefore it can be said that ICT has a positive impact on education but nevertheless the manner in which the subject is taught has a larger effect than the mere use of ICT. i.e. if the teacher does not adapt their methods in order to make best use of ICT, then the purpose of using ICT becomes defeated and also the attitude of the educational establishment also seems to have a greater effect, when the people running them do not have the knowledge and experience, or often the money, to enable widespread and effective use of ICT in their schools, it becomes a disadvantage. Finally, the attitude of society and government has a large impact of how ICT is perceived and thus how effectively it is used. Countries where the government encourages ICT usage and where the majority of the people use ICT on a daily basis are likely to make better use of ICT in education as well as in the larger society.

References

1. Building capacity of teachers / Facilitators in Technology- Pedagogy Integration for improved Teaching and Learning (UNESCO2003)
2. GOI (2007). National knowledge commission Report, Libraries Gateways to knowledge: A Roadmap for Revitalization.
3. Kamal, V. (2005).ICT Initiatives in Teacher Education.University News. Vol.43 (18), May 2005, Pp.103- 108
4. Khajapeer, M (2001). The Teacher Education in 21st century in India challenges ahead. University News. Vol. 39, No.8
5. Mathur, Kalpana. (2005). E-education and EduSat: The journey has just begun. University News. Vol.43 (18), May 2005, Pp. 122-123
6. Nasrin (2006).Training teachers for Digital World University News.Vol.44 (10). Pp. 14-17
7. http :// www.bhojvirtualuniversity.com/ict/ssa.jsp
8. http :// www.education.nic.in/htmlweb/draft_ict_schools.htm
9. This academic article was published by The International Institute for Science, Technology and Education (IISTE). The IISTE is a pioneer in the Open Access Publishing service based in the U.S. and Europe. The aim of the institute is Accelerating Global Knowledge Sharing.
10. More information about the publisher can be found in the IISTE's homepage:
11. http://www.iiste.org
12. Lopez, V. (2003). An exploration of the use of information technology in college classroom, College Quarterly, B(1) http://www.Collegequarterly.Ca/2003-vol06-num01-fall/lopes.htm. Retrieved November 1st 2014.Magbagbeola, N. O. (2004). Information and Communication Technology in Nigeria: A Critical Assessment. Moursund, D. G. (2005).Introduction to Information and Communication Technology in Education, University of Oregon, Eugene, http://uoregon.edu/%7emoursund/Books/ICt/ ICTBook.pdf.Retrieved November 1, 2014.Ofojebe, W. (2006). The Place of Teacher Education in Manpower Development in Nigeria, Onitsha: West and Solomon Publishing Co. Ltd.
13. Okeh O. D. &Opone, M. C. (2007). Information and Communication Technology (ICT): A veritable tool for national Educational Growth, Journal of Academics, 2(3), 234 – 246.
14. Yusuf, O. Y. (2000). Integrating Information and Communication Technologies (ICT) in Nigeria tertiary education, The African Symposium, An on-line Journal of African Educational Research Network

SUSTAINABLE DEVELOPMENT IN INDIA WITH REFERENCE TO AGRICULTURAL SECTOR

Sindhu. G & Sanketh. R
Assistant Professor, Department of Commerce and Management
Indo Asian Academy of Co-Ed & PG Center, Bangalore

Abstract

India has been witnessing an excellent speed of growth and development in recent times. Being the biggest private sector 'agriculture' use a really important position in Indian economy. Because it has relation from varied sectors like production, process and marketing; agriculture continuously dominate to change in India. In spite of quick evolution in varied sectors, still agriculture remains the pillar of the Indian economy. This paper makes an attempts to tackle and explore the difficulty of sustainable development of agriculture by using the secondary data. Further it aims to compare the sustainable agriculture to increase the productivity, efficiency and level of employment and further aims to protect and preserve the natural resources by the over exploitation. It additionally provides mechanism to cut back the soil degradation through multiple cropping systems and through the deforestation and far alternative reason

Keywords: *Sustainable Development, Agriculture, Biodiversity, Ecological Sustainability, Economic Sustainability, Social Sustainability, Water resources*

Introduction

Being the biggest private sector 'agriculture' enjoys a really important position in Indian economy. Because it has link from numerous sectors like production, process and marketing; agriculture continuously dominate to change in India. The role of agriculture in developing an economy can be analyzed by the GDP (Gross Domestic Product) contribution created by it. The agriculture sector additionally contributes to the sustainable development of a country. Sustainable agricultural development depends upon the provision of the natural resources of the country. India is a country wherever about 2 third of the population lives within the rural areas and having agriculture as their livelihood. In few decades because of urbanization a fall in agriculture is recorded which look a really unhealthy sign. The productivity of agricultural sector is hyperbolic by two ways- firstly it can increase output by efficiently utilizing the available resources and secondly output can be increased by variation of input. In a country like India productivity is incredibly necessary to satisfy the requirement of individuals as we have got an outsized population

The issue related to agriculture can be studied through three basic categories. As follows

- Traditional production system
- Modern agricultural system
- Sustainable agricultural system

Naturally much work is needed to grow the agriculture to a level where it is least affected by vagaries of monsoon and needs little from outside the farm, Instance: lesser dependence on chemical fertilizers and waste.

Objectives of the Study

- To study the extent of sustainable development in the agricultural sphere in India.
- To measure the performance of agricultural sector as a part of GDP (Gross D0mestic Product) in India.
- To examine that how and to what extent sustainable development is affecting the production policy in agricultural sector in India.

Significance of Study

The descriptive paper design to study the extent and importance of sustainable development its impact and effect on the agricultural practices in India, and how the industry policies are changing in accordance with changing scenario of the world.

Method of data Collection: The data used to study the effect of globalization on employment is based on the secondary data purely. The journals, clause, web links, books have been used as source of information. There is no empirical touch to this paper. Sustainable Agriculture Development. The issue of sustainable development can be studied under three broad areas farming system of rules which consist- traditional production system, modern agriculture system and sustainable agriculture system. Further we can compare them by three dimensions, ecological, economic and social sustainability.

Ecological Sustainability: Under this we can say that most of the traditional practices are not ecologically sustainable. It does not use natural resources properly, reducing the fertility of soil which causes problem of soil erosion. The sustainable development in agricultural sector has come up to with major benefit to reduce the effect of these causes.

Soil Erosion: Soil erosion is the major problem in the agricultural sector. This can be rectified with the practices of sustainable development.

Water resources: Major portion of the fresh water is used in the irrigation purpose and fertilizer and pesticides contaminate both surface and ground water. Sustainable agriculture facilitates to increase the quality of top soil, by facilitating to store and retain the rain fall water.

Biodiversity: The concept of mixed cropping was introduced by which increasing the diversity of crops can be produced and raising the diversity of insects and other animals and plants in and around the field of operation. Sustainable development facilitate the optimum utilization of the available natural resources

Health & Pollution: Use Chemicals, pesticides and fertilizers adversely affect the total ecology as well as the population. Improper use of pesticides, improper storage etc. may lead to health problems. Sustainable develop of agriculture reduces the use of hazardous chemical and control pests.

Pattern of using land: Now a day the because of multiple cropping system soil (land) is over utilized. This over utilization of land causes degradation of soil quality and further productivity decreases. By the practice of sustainable agriculture we can defeat by this serious issue.

Economic Sustainability

To make agricultural sector sustainable it should be viable over long period. Some time the government also aims to enhance the production of such products which is export oriented. This is not right policy as export involves many cost like transportation, packing, packaging import duty of other countries, taxes etc are included despite its earning. Production should not be export centered only it should also focuses on domestic supply. As agriculture is the main source of employment in rural arena. It should focus on specialization of the skills. Specialization will help in enhancing the efficiency level and greater yield viz. in other words productivity will increase. It is an illusion that by producing the specific commodity production will contribute to earn more. Cheap products from the developed countries are demanded more as they are good in quality. Sustainable development of agriculture tries to accomplish this objective through the production of quality and environment friendly product.

Social Sustainability

The sustainable development aims at increasing the productivity as well as increasing the level of employment in the country. Development is meaningless if it is not able to reduce the level of poverty. Social sustainability great deal with social acceptability and justice. Many modern technologies are failed because of their limitation like complexities in use and are not easily accessible to poor farmers. In old method of agriculture the women's had more effect of work

Total Area	7th
Irrigated Area	1st
Population	2nd
Rice Production	2nd
Tea	2nd
Jute	1st
Bananas	1st
Onions	2nd

India's position in world's agriculture is given in the table below:

Impact of Economic Reforms Process on Indian Agricultural Sector

Agricultural sphere is the pillar of the rural Indian economy around which socio-economic privileges and deprivations revolve, and any change in its

structure is likely to have a corresponding encroachment on the existing pattern of social equality. No scheme of economic reform can succeed without sustained and broad based agricultural evolution, which is critical for

- raising living standards,
- alleviating poverty,
- assuring food security,
- generating market for expansion of industry and services, and
- Making substantial contribution to the national economic growth.

Issues & Challenges

The central issue in agricultural development is the necessity to improve productivity, generate employment and provide a source of income to the poor segments of population. Studies by Food and agriculture organization have shown that small farms in developing countries contribute around 30-35% to the total agricultural output. Some of the basic issues for development of Indian agriculture sector are revival of co-op institutions, improving rural credits, research, human resource development, trade and export promotion, land reforms forwarding, estate reform and education.

Conclusion

The agricultural technology necessary to move from production oriented to profit orientated sustainable farming. The conditions for development of sustainable agriculture are becoming more favorable. New possibility are opening the eyes of farmers, development workers, researchers and policy makers like agri related business concern, dairy farming, poultry farming castle farming and fisheries. Now the time is to see the potential and value of these practices not only for their economic interest but also as the basis for further increase and ecological sustainability. To validate, a small-farm management to increase productivity, profitability and sustainability of the farming system will go a long way to ensure all round sustainability.

References

1. Dr. Deepashri (2010) , Indian Economy' ,Ane Books Pvt. Ltd.
2. C.Jeevanada (2006), 'International Economy', Sultan Chand and Sons, New Delhi
3. Bhattachary B.B. (2003), "Trade Liberalization and Agricultural Price Policy in India since Reforms", Indian Journal of Agricultural Economics, Vol.58, No.3
4. Braun, Joachi von, Gulati, A., Hazell, P., Mark W. Rosegrant and Ruel, Marie (2005) Indian Agriculture and Rural Development- Strategic Issues and Reform Options.

A STUDY ON IMPACT OF TECHNOLOGY AND INNOVATION ON SUSTAINABLE DEVELOPMENT

Mohsina Banu
Assistant Professor, Department of Commerce and Management
Indo Asian Academy Degree College, Bangalore

Abstract

The study examines the various views on impact of technology and innovation on sustainable development with the help of Primary data using simple percentage method were the reports helps to analyze what role does technology and innovation play which leads to have sustainable development, rate of growth in performance by Technology and Innovation and this study even concentrates on the utilization of resources available using technology and innovated techniques which contributes in growth of economy and sustainable development.

Keywords: *Utilization of resources, Technology and Innovation, Sustainable development, Educational level.*

Introduction

As per the plans, in coming 2 decades development is expected in order to have sustainable development a technology and innovation are taken as a major factor to reach the goals. When technology and innovation are used effectively that helps to analyze the problems or barriers come in a way of sustainable development and it even helps in getting the solution for those barriers.

United Nation system have even considered science policy a very important factor which will provide the evidence based guidelines to proceed with policy formation, designing, implementation, following and review. Science policy even helps in recognizing current need, requirements, challenges, barriers etc. and helps to build a bridge between barriers and sustainable development. Science and technology helps in formulation of long term sustainable plans and strategies which are formulated and help in knowing the potential benefit and risk associated with planning, design development etc. through innovation.

Technology is more focused on innovation which helps to understand the situation better in terms of social, economic and environmental impact of innovation for sustainable development. In one word "leave NO one behind" is the only source which will help plan of United Nation system to reach sustainable development by coming 2 decades. Ultimately at the end current state tell innovation play a vital role in system development.

Meaning

Economic development characterized by low growth rate, absence of pollution, and greatly diminished environment impact. Described by the Brundt land report as the "Development meets the needs of the present without compromising the ability of future generations to meet their own needs".

Review of Literature

Year	Author/ Researcher	Focus	Key Words
2007	MC Gill - Dr JoumanaAbou Nohar	On pollution and Environmental issues on sustainable development	Water source Optimization, Water quality, Environmental issues
2015	Claire Martin	Social responsibility and development	Sustainability issues including food, renewable energy, education, Energy efficiency awareness raining
2017	Linnaeus university	Knowledge in sustainable issues	Book club, Information campaign, dress exchange day, public lecture, Innovation

Statement of the Problem

Sustainable Development relate in having a constant growth and development in economic terms without compromising the current needs and requirement. What's the contribution of technology and

innovation in sustainable development, to what extent available resources can be utilized which results in greater change in sustainable development and does educational level contributes in sustainable development.

Objectives of the Study

- To study the impact of technology and innovation on sustainable development.
- To Study the rate of utilization of available resources this contributes in sustainable development.

Research Methodology

This research covers the methodology by using the convenient sampling method. The people who are easily accessible have been chosen for the study. A total of 100 questionnaires were distributed in Bangalore city. Secondary data was collected from various sources like Journals, Websites, Articles and other relevant documents.

Plan of Analysis

The research for the present study comprises plan of analysis by following the techniques of percentage basis in order to overcome finding, suggestion and conclusion.

Sl No	Questions	Options		Percentage	Total
1	Gender	Male	56	56	100
		Female	44	44	
2	Age	18-25 years	15	15	100
		25-40 years	25	25	
		40-50 years	40	40	
		50 and above	20	20	
3	If a recycling program was set up would you be willing to separate recycling waste for better utilization of resources available	yes	65	65	100
		No	35	35	
4	Can you explain the importance of sustainable development for you	Majority of respondents say sustainable development is must in India in order to see India a developed nation in future			100
5	Do you think solid waste management has impact on sustainable development?	yes	35	35	100
		No	65	65	
6	Do you think new innovation as paytm, Airtel money (virtual money) etc contributes towards sustainable growth of our economy	yes	45	45	100
		No	55	55	
7	Do you think companies are significantly using improved technology to render best service	yes	50	50	100
		No	50	50	
8	Do spending on training or other expenses gearing related to employees or profession is equally important as spending on owning technology to have sustainable growth	Agree	30	30	100
		Strongly agree	50	50	
		Disagree	15	15	
		Strongly disagree	5	5	
9	Does educational level of our youth play a vital role in sustainable development?	yes	55	55	100
		No	45	45	
10	Does increase in standard of living leads in growth	yes	75	75	100
		No	25	25	
11	What is the reason behind not adopting new innovation or technology available in the market?	High cost	10	10	100
		Complex to use	10	10	
		Network error	15	15	
		All the above	65	65	
12	How do you relate Educational level and technology and innovation under one concept called sustainable development	Majority of respondents say increase in education level and technology and innovation leads in growth of sustainable development			100

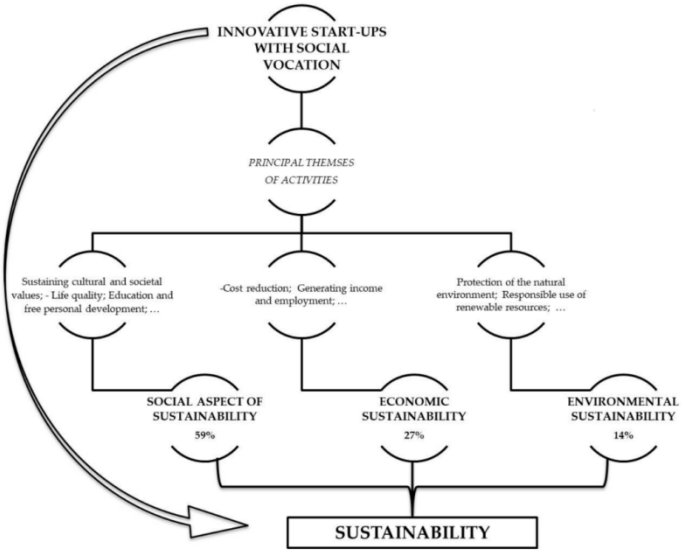
Limitations

1. Time constraint
2. Study is consigned only to Bangalore.
3. Sample size is limited to 100.

Data Analysis and Interpretation

Findings and Suggestion

A study reviles, majority of respondents say there should be a constant growth in India in order to see India a developed Nation in coming decades for which sustainable development play a vital role. In order to have sustainable development majority of respondents give their support in terms of segregating the recyclable waste in order to use material available in best possible manner.



50% of respondents agree and 50 % don't agree in terms of Indian companies using advanced technology and innovation available in the market reason behind are costly to acquire the advance technology, complexity in its usage, Lack of skill to operate etc. because of which majority of respondents don't agree that innovation contributes in sustainable development and tells spending on training and other expenses referring in usage of technology adopted is equally important as spending on acquisition of technology which results in better out comes that leads in increase in standard of living and ultimately contributes in sustainable development.

Companies have to use advanced technology and innovation available to maximum extent and in proper way which leads to sustainable development as the contribution of technology and innovation in sustainable development in low compare to other sectors ultimately improvement in usage of technology helps in better utilization of resources, improves the standard of living and Education should be stressed little more as its contribution is low.

References

1. http://www.businessdictionary.com/definition/sustainable-development.html
2. http://www.ed.ac.uk
3. www.luther.edu.com
4. Singh Saroj, L. April-june 2016. The international journal of Indian psychology. Volume 3, Issue 3, No. 6, DIP: 18.01.104

GOAN DIASPORA IN UK AND FOREIGN REMITTANCE

StesaPereira
II MA Economics, Department of Economics, Jain University, Bangalore

Dr.V.K.Xavier
Professor and Head, Department of Economics, Jain University

Abstract

The phenomenon of migration has caused an inflow of remittances at the cost of the outflow of valuable human capital out of the state of Goa. Migration creates a problem of brain- drain especially of the youth. There is an outflow of valuable skilled labour from the state to foreign countries. This drains the availability of human resource within the emigrating state. However, the advantage to the state comes from huge remittances which the migrants send back to the source country. The present research focuses on migration dynamics and the economic perspectives of migration with respect to the state of Goa. Migration is determined by a number of factors and its consequences are numerous both to the host countries as well as destination countries. Goans have been always migrating due to lack of an employment option in the state regardless of whether it was Portuguese regime then or an Indian rule now. Goa, a small territory with very limited population has a vast international Diaspora.The major destination of migration for Goa is the gulf region according to the economic survey 2008. According to the migration survey the Goan Diaspora is spread over 50 countries of the world with 56 percent of Goan migrants live in Gulf region, 13 percent of Goan migrants live in Europe, 11 percent of Goan migrants live in South & South East Asia, 10 percent of Goan migrants live in North America & 7 percent of Goan migrants are working aboard ships.The destination context of the present study is UK. This is because of the ease in the migration process for Portuguese passport holders. The study attempts to understand the reasons for Goan diaspora in UK, and various influences that the external migration spills on individual as well as the society as a whole.

Keywords: *Migration; Diaspora; Household remittances; Remittances; Consumption pattern*

Introduction

Migration is a phenomenon that has had close links with the very core of the human race right from the beginning. We have been a part of it which has led to the movement across different corners of the world. There are a variety of reasons behind the migration of people including social, political and economic reasons as well. These are inclusive of forced migration i.e. refugees or collective movements of communities or groups as indentured labourers from India as well as individual and voluntarily migration. When communities have migrated to the distant land and established themselves as a part of a particular community of the country of origin, such communities in recent times have been referred by the term ‘diasporas’ meaning ‘to spread’ or ‘to disperse’ in the Greek language. The term diaspora was originally used to depict the Jewish Diaspora, who were found in America and the Europe and had migrated due to social and political suppression. From then on the term ‘diasporas’ has been evolving due to the process of international migration among varied nation/states thereby contributing to the emergence of various heterogeneous diasporas, which in turn adds to the complexity of the term ‘Diaspora’.

Diaspora is a term used to describe the mass, often involuntary, dispersal of a population from a center (or homeland) to multiple areas, and the creation of communities and identities based on the histories and consequences of dispersal. The word Diaspora is not new. Initially it was used to for Jewish, Greek, and Armenian dispersion which was often referred to as the “classic” Diasporas. Various practices of global movement and community formation have been explained by the term Diaspora which has gained prevalence recently as both a conceptual and analytical tool for the same. The use of Diaspora appeared in various academic disciplines in the second half of the 20th century both in conjunction with and as an alternative to other terms expressing global shifts in movement and identity formation, sharing meaning with a broader semantic field that includes such terms as transnationalism and globalization. Diaspora entered the anthropological lexicon through the early ethnographic and theoretical work on the communities of African descent in the New World and has since attained new epistemological and political resonances. The term has been deployed within the discipline to cover a wide range of

collectivities and experiences—a catchall to represent diverse movements and dislocations, and myriad forms of difference, heterogeneity, and, in particular, hybridity.

Studying Diaspora is a staggering task for several reasons, the most important being that it is so diverse and heterogeneous. For this reason the study is limited to only one of the categories of Indian diaspora i.e. The Goan Diaspora. The Goan Diaspora is a product of the Goan emigration. Historically, the Goan emigration can be broadly classified in to colonial period (early 16th till the first half of the 20th century) and post colonial (1961 till date). However, the reasons for migration in the colonial and post colonial period differ for Goa in comparison to India. The reasons being religious persecution, the policy of no development by the Portuguese and the confiscation of lands belonging to the village communes, whereas, for India the reason for migration was employment opportunities in different colonies 5 of the western powers. Goan migration was neither indentured like India nor promoted or sponsored by the government. The Goan migrants were free and had to pay for themselves. Thus, the historical context and the reasons for emigration from Goa to the different parts of the world makes Goan migration unique as compared to India. Hence, Goan Diaspora is a unique category as compared to the Indian Diaspora. It is in this view that the present study is limited to the Goan Diaspora. The economics of Diaspora is interested in the study of Diaspora with reference to two situational contexts, 1) The experience of Diaspora in the host nation and 2) the linkages of the Diaspora with the sending nation and the dynamics. The study mainly considers the Goan Diaspora and the economic implications brought about due to their linkages with the sending Goan society.

There is a considerable flow of remittances in the emigration country due to the departure of their labour force. Being viewed as the main gain of the loss of labour force, the true value of these remittances can be determined at the macroeconomic level depending on the growth of the economy. The emigration of the labour force may have a positive or a negative influence on the economy of a country according to the way in which remittances received are used by emigrants.

As per the Goa Migration Survey (GMS) conducted among 6000 households in 2008, in Goa, 12 per cent households had an emigrant currently living abroad and another 4 per cent of the households had a return emigrant who was abroad.

Background of the Study

Right from ancient times, till date, from being colonized and turning into a democratic, globalised world, migration has been a phenomenon by itself. Goans have been migrating before, during and after colonial times. The reason behind migration was unemployment, as the Portuguese did not do anything to generate employment in a small state like Goa for the common man. In search of better opportunities, the citizens of Goa found it better to migrate. According to sources in the year 1930's seventy thousand Goans had migrated from Goa out of which 2/3rd settled in British India and in 1960, 1/6th of the total population of 6 lakhs were immigrant.

Most of the Goans immigrated to the neighboring Indian states, as Goa being a Portuguese colony, any migration to India was considered international then. The places like Pune, Dharwad, Calcutta, Karachi and Mumbai, where Goans began working in the British Naval fleet between 1797 and 1813. In order to obtain a livelihood , they began looking for opportunities in different areas in faraway places. From the last decades of the 19th century to the early decades of the 20th century, the Portuguese and British colonies of East Africa were considered as a viable option for Goans to migrate to. The rich cultural syncretism gave Goans a more inclusive identity which facilitated their adaptation and integration into new and different cultures of the host countries. According to the statistics, Christian Goans had a higher geographical and occupational mobility because of their cultural openness and liberal attitude, which helped easy adaptability to any environment. There was a steady outflow of semi-skilled and skilled labor force from Goa in the mid 60's in the wake of an oil boom in West Asia & Gulf. Hundreds of thousands of Goans had settled in the Middle East & Gulf Countries. This was followed by an outflow of entrepreneurs, store owners professionally employed businessmen to European countries primarily to

U.K. A little later, professionals and educated elite began seeking economic betterment in more advanced countries in the world. According to the Goa Migration Survey, the Goan Diaspora is spread over 50 countries of the world with 56 percent of Goan migrants in the Gulf region, 13 percent of Goan migrants living in Europe, 11 percent of Goan migrants live in South & South East Asia, 10 percent of Goan migrants living in North America and 7 percent of Goan migrants working aboard ships.However, remittances by the Goan Diaspora have a significant effect on Goa's economy.

The migration which is currently taking place at an alarming rate together with the emigration of Goans is causing a great damage to Goa's identity and culture. This study is concerned with the migration to UK which has also increased phenomenally over the last decade. This movement has been facilitated by the citizenship which is obtained by the Goans by taking advantage of the of the eligibility for Portuguese nationality. A lot of Goans have used this as a means of going to the UK with ease . The economy is benefitting through the remittances and a better way of life for the migrants and their families. However, there are repercussions in the form of dilution of the culture and a high level of neglect of the state with the valuable human resources being lost. The study thus aims to bring forth this impact and bring into light this impending issue from a fresh and economic perspective.

Statement of the Research Problem

The phenomenon of migration has caused an inflow of remittances at the cost of the outflow of valuable human capital out of the state of Goa. Migration creates a problem of brain- drain especially of the youth. There is an outflow of valuable skilled labour from the state to foreign countries. This drains the availability of human resource within the emigrating state. However, the advantage to the state comes from huge remittances which the migrants send back to the source country. The present research focuses on migration dynamics and the economic perspectives of migration with respect to the state of Goa. Migration is determined by a number of factors and its consequences are numerous both to the host countries as well as destination countries.Goans have been always migrating due to lack of an employment option in the state regardless of whether it was Portuguese regime then or an Indian rule now. Goa, a small territory with very limited population has a vast international Diaspora.

The major destination of migration for Goa is the gulf region according to the economic survey 2008. According to the migration survey the Goan Diaspora is spread over 50 countries of the world with 56 percent of Goan migrants live in Gulf region, 13 percent of Goan migrants live in Europe, 11 percent of Goan migrants live in South & South East Asia, 10 percent of Goan migrants live in North America & 7 percent of Goan migrants are working aboard ships.The destination context of the present study is UK.This is because of the ease in the migration process for Portuguese passport holders.

The study attempts to understand the reasons for Goan Diaspora in UK, and various influences that the external migration spills on individual as well as the society as a whole. To be precise, the study aims to analyse the effect of the external migration from the vantage point of Goa as a source state.

Review of Literature

There are many studies conducted on migration by different researchers like the study conducted by Davis J.and Lopez-Carr D. (2010), which analysed the effects of migrant remittances on population. They studied the environment dynamics in migrant origin areas including migration, fertility and consumption in highland Guatemala.Stoian, Ladaru, Marin (2017), studied the causes and effects behind unemployment and the migration of the Romanian labour force. Straubhaar, Thomas (1985) examined migrant remittances and economic activity in order to find out the approximate contribution that migrant remittances made to GDP, saving, private consumption expenditure and imports in five European Mediterranean countries from 1960-1981. Chirila,V. and Chirila, C. (2017), analysed Romania's external migration and causality between remittances and Romania's economic growth. Simionescu, Bilan and Mentel (2017), studied the economic effects of migration from Poland to UK. Simionescu and Dumitrescu (2017), analysed the impact of migrants remittances on fiscal sustainability in dependent economies. It studied the effect which remittances had on private consumption and investments, economic growth and

government tax revenue in low and upper middle-income countries. Sultana, Fatima (2017), conducted a study on the factors influencing migration of female workers with respect to Bangladesh.

The main observation from these studies are that people migrated in order to avail of better opportunities in terms of jobs, better standard of living, education as well as health facilities. The impact of this migration was found to be minimal for the destination countries. However, the remittances thus earned had a positive impact on the domestic countries' GDP and economic development in the long run.

Research Gap

Although, studies have focused on remittances and their impact on the economy of the domestic country, there is a death in literature regarding economic studies regarding migration specifically from Goa to UK. There is no published research about Goan diaspora other than the Goa Migration Study 2008 and there is no published research regarding the Goan Diaspora with respect to the UK in particular. The present study aims to fill this research gap.

Research Questions

In order to understand the migration determinants and consequences, we ask some questions such as what are the contributing factors for Goan migration to UK? What are the special benefits accruing to the remittances received from the migrants to the state? What are the types of jobs held by the migrating individuals? How has external migration affected the consumption pattern of the migrant families in Goa? What is the impact on the Goan economy of migrant activities?

Objectives of the Study

Based on these research questions, research objectives have been framed. Migration has got several influences on the individual migrants as well as the economy in general. Migration helps an individual to obtain a job in their area of interest and expertise which may not be available in the domestic region. This exposes an individual to external habits, cultures, customs, opportunities and new avenues. For a society, migration helps mutually the immigrant as well s immigrant countries; for mixing of cultures, sharing of resources, and particularly remittances are huge benefits to the domestic economies. The present study, aims to investigate the benefits and advantages of migration in general and particularly to the individual migrants.

The specific objectives of the study are the following:

- To identify push and pull factors of Goan Diaspora to UK.
- To examine the remittances of Diaspora Goans to the state GDP of Goa.
- To study the change in consumption pattern before and after migration to the UK.

Methodology

The study is based on primary as well as secondary data. A questionnaire is administered to 100 respondents who are Diaspora Goans. An interview is administered to Goan families who have at least one family member working in the UK.

The study has also made use of secondary data from consulates of UK, state surveys, embassy reports, government gazettes, published journals and newspapers. For remittances the trend analysis has been used. The CAGR, OLS (ordinary Least Square Method) Regression and ANOVA methods have also been used for analysis.

Tools for the Study

Excel , statistical tools of mean, median and mode are used.

Hypotheses

H_0 = There is no significant difference in consumption pattern before and after migration.

H_a= There is a significant difference in consumption pattern before and after migration.

H_0 = There is no significant relationship between foreign remittance flow and GDP of Goa.

H_a= There is a significant relationship between foreign remittance flow and GDP of Goa.

Variables of the Study

The present research focuses on variables such as the number of Goan migrants to UK, their income and consumption pattern and the amount of inward remittances.

Scope and Importance

The study will help to understand various determinants of diaspora Goans towards UK. The area of study includes the state of Goa. There is a heightened number of Goans choosing to move and work in foreign countries. This phenomenon has seen a rapid increase over the years. This study has focused upon the UK as Goans can easily attain citizenship by submitting the required documents proving that individuals were born or are decendents of those born in Goa before 19th December 1961. This has led to a trend of flow of human capital from Goa to Europe and the UK in particular. The rising interest surrounding this phenomenon with increasing trend of migration along with the consequences of Brexit on the Goandisapora in UK is the reason behind the study. The study will provide an overview of the economic impact of the Goan Diaspora which will provide a statistical base for policymakers.

References

1. Chirila,Chirila (2017). 'The Analysis of Romania's External Migration and of the Causality between Remittances and Romania's Economic Growth', Amfiteatru Economic Journal, ISSN 2247-9104, Vol. 19, Iss. 46, pp. 696-710.
2. Simionescu, Bilan, Mentel (2017).' Economic Effects of Migration from Poland to the UK', Amfiteatru Economic Journal, ISSN 2247-9104, Vol. 19, Iss. 46, pp. 757-771.
3. Simionescu,Dumitrescu (2017).' Migrants Remittances Influence on Fiscal Sustainability in Dependent Economies', Amfiteatru Economic Journal, ISSN 2247-9104, Vol. 19, Iss. 46, pp. 640-653.
4. Stoian, Ladaru, Marin, (2017).'Unemployment and the Migration of the Romanian Labour Force. Causes and Effects', Amfiteatru Economic Journal, ISSN 2247-9104, Vol. 19, Iss. 46, pp. 901-917.
5. Straubhaar, Thomas (1985).'Migrants' remittances and economic activity',Intereconomics, ISSN 0020-5346, VerlagWeltarchiv, Hamburg, Vol. 20, Iss. 2, pp. 87-92.
6. Sultana, Humera and Fatima, Ambreen (2017).'Factors influencing migration of female workers: a case of Bangladesh', IZA Journal of Development and Migration, ISSN 2520-1786, Vol. 7, Iss. 4, pp. 1-17.
7. http://goadpse.gov.in/Economic%20Survey%202016-17.pdf
8. http://www.oxfordbibliographies.com/view/document/obo-9780199766567/obo-9780199766567-0091.xml
9. https://www.scribd.com/doc/85304160/Goa-Migration-Study-2008
10. https://www.incrediblegoa.in/feature/goan-migration-began-10th-century-still-continues-goans-abroad/

GROWTH TRENDS IN ECOMMERCE – A STUDY OF APPARELS IN BANGALORE

Rezania Pereira
Department of Economics, Jain University, Bangalore

Richa Gupta
Assistant Professor, Department of Economics, Jain University, Bangalore

Abstract

E-commerce refers to the term used for all kinds of business that includes the exchange of information, goods and services across the internet. In other words ecommerce or electronic commerce can be termed as any sort of transaction made using the internet. Any purchase or sale online whether electronic books or otherwise, results in the engagement of ecommerce. It is currently one of the most powerful elements of trade and has emerged as a boundary less medium of exchange with the introduction of globalization. The introduction of ecommerce has provided its customers the advantage to electronically exchange information, goods and services with little or no concern about time or distance. This study focuses on the growth trends in ecommerce in apparels industry.

Keywords: *E-commerce; Apparels; menswear; women swear; kids wear; sportswear.*

Introduction

"If your business is not on the internet, then your business will be out of business."

-Bill Gates

Ecommerce refers to the term used for all kinds of business that includes the exchange of information, goods and services across the internet. In other words ecommerce or electronic commerce can be termed as any sort of transaction made using the internet. Any purchase or sale online whether electronic books or otherwise, results in the engagement of e-commerce. It is currently one of the most powerful elements of tradeand has emerged as a boundary less medium of exchange with the introduction of globalization.The introduction of ecommerce has provided its customers the advantage to electronically exchange information, goods and services with little or no concern about time or distance.

E-commerce operates in six major segments of the market namely, Business-to-Business (B2B)- this type of ecommerce business model consist of exchange or electronic transactions of good and services. This usually takes place between companies and consists of wholesalers and producers directly doing transactions with the retailers. In this type of ecommerce there is no third party involvement. Business-to-Consumer (B2C) – this is the most common and widely used ecommerce business model. In this type of ecommerce the transaction of goods and services takes place between the business and the ultimate customer. With the introduction of the internet, the business to consumer e-commerce business model has gained popularity to a large extent. Today, we can see a number of online shopping sites, selling different varieties of products. Consumer-to-Consumer (C2C) – in this type of ecommerce model the exchange of goods and services takes place between customers itself. Under the consumer to consumer business model there is third party interference and these parties or sites provide a platform to the customers to buy and sell goods and services to other customers by paying a small commission to the site. Consumer-to-Business (C2B)- In this type of ecommerce business it is the consumers who sell goods and services to the businesses. This model is the most significant in for projects done collectively. In this case, individuals make their items or services and sell them to companies. Some examples are proposals for company site or logo, royalty free photographs, design elements and so on. Business-to-Administration (B2A): In this kind of Ecommerce transaction, there are dealings between companies and public administration. It encompasses different services, such as social security, fiscal measures, legal documents, employment and so on.Consumer-to-Administration (C2A): In this Ecommerce model, electronic transactions are carried between individuals and public administration. Some examples are distance learning, information sharing, electronic tax filing, and so on.

Background of the Study

The Internet has revolutionized the computer and communications world like nothing before. The invention of the telegraph, telephone, radio, and computer set the stage for this unprecedented integration of capabilities. The Internet is at once a world-wide broadcasting capability, a mechanism for information dissemination, and a medium for collaboration and interaction between individuals and their computers without regard for geographic location. In the early days, the internet was primarily used by academicians, research scientists and students for academic purpose; but due to the impact of globalisation a movement of commercial organization for including the World Wide Web into their promotional campaigns has taken place and started offering the facility of ecommerce.

Ecommerce was introduced 40 years ago and, to this day, continues to grow with new technologies, innovations, and thousands of businesses entering the online market each year. The convenience, safety, and user experience of ecommerce has improved exponentially since its inception in the 1970, when technological developments meant that data could be exchanged electronically for the first time. It was only in the 1990s where the first online purchases took place. One of which was a large pizza from Pizza Hut, and another was a Sting CD, sold by US retailer, Net Market on 11 August 1994. The Ecommerce industry quickly grew from this point onward and by the end of 1997 Dell became the first company to announce a single day sales record of $1 million online. In 2003, more than 20% of Americans had broadband in their homes, meaning that more people were beginning to have permanent access to the internet - and more access to online shopping and in 2004, online sales increased by 26%, and Amazon alone reported a 28% sales increase year-on-year. However, the introduction of broadband to people's homes didn't only mean that more people were buying online, it also meant that people were starting to conduct more research before placing an order. With easy access to the internet increasing, the average time spent researching products and searching for more competitive prices also increased.

The internet has also evolved into a worldwide accessible marketplace for exchanging commercial information and is also used for personal shopping by the online customers. Online shopping is the shopping done by consumers in an online store or a website used for the purpose of purchasing goods and services online. Online shopping has grown in popularity over the years, mainly because people find it convenient and easy to shop from the comfort of their home or office. One of the most enticing factors about online shopping is that it alleviates the need to wait in long lines or search from store.

The history of online shopping can be dated back to 1979 when Michael Aldrich 'invented' online shopping in the UK. It was only in the 1981 where the first business to business transaction by UK based Thomson holidays took place. However, in the year 1982 Mintel, a videotext online service accessible by telephone lines, could be used to make online purchases, train reservations, check stock prices, chat and search a telephone directory. Which was followed by Nissan carrying out the first online credit check in the year 1985. A drastic change or improvement in the online shopping segment came with the founding of SWREG in 1987. This offered businesses a chance to sell products online. As it is today, SWREG offers many payment options, as well as customization and distribution into international markets. Users can purchase items with their currency of preference using all major debit and credit cards.

This was followed by the introduction of the WWW server and browser by Tim Berners-Lee in 1990 which revolutionarised the online shopping segment. The mantra 'If it isn't on the web then it isn't happening'. Amazon started selling books online since 1995 and currently it sells almost anything. Companies like Dell and Cisco started using the internet for all their transactions. This slowly led to the introduction of other online shopping sites and by the 1997 a number of online sites were established.

Today shoppers combine online shopping with real life shopping, using access to Wi-Fi and the show rooming trend. They often make purchases in a retail stores at the same time as using mobile devices to buy something online.

Review of Literature

There have been a number of studies conducted by researchers on e-commerce. From the various studies analysed it was found that ecommerce is the most convenient and time saving measure as compared to physical shopping. The most influencing factor towards online shopping was found to be price and security of the product .while; information privacy and description of the goods were least influencing factors as was examined by (Shanthi and Kannaiah, 2015). It was analysed by(Kothari and Maindargi 2016) that although majority of the respondents used the internet a large number of people still continued using the traditional methods of shopping.

Statement of the Research Problem

The number of online users has increased tremendously over the last two decades and there are a number of researches conducted on online shopping. Since, the consumer's belief to online shopping is increasing, but how much does a consumer spends on the apparel segment of online shopping will be studied in this dissertation. Statement of the problem for this study is to analyse the consumer expenditure patterns towards online products and to know the economic performance and contribution of online shopping sites on the Indian economy.

Research Gap

Several studies have been conducted with respect to online shopping. However, very limited studies have focused on the contribution of online shopping towards the Indian economy and also about the expenditure patterns of consumers towards online shopping in Bangalore and therefore this study aims to focus on the same.

Research Questions

The introduction of ecommerce can be dated back to the early 1960s and since then the ecommerce industry has undergone tremendous changes. Ecommerce is the buying and selling of goods and services online. This study focusses on how much do consumers spend on online apparel segment? What is the most preferred online shopping site? And what is the economic performance and contribution of online shopping sites on the Indian economy?

Objectives

- To investigate the consumer expenditure patterns on online apparels.
- To find out the most preferred online shopping site.
- To study the economic performance and contribution of Ecommerce sites on the Indian economy.

Hypothesis

- H_0 -Consumers do not prefer to purchase apparels online.
- H_1 _ consumers prefer to purchase apparels online.

Methodology of the Study

For the purpose of this study both primary and secondary methods of data collection are adopted. Primary data was collected through a questionnaire which included both close ended as well as open ended questions. For some research questions Likert scale and rating scale have been used. This study was confined to the urban parts of Bangalore and the sample size chosen for the same was 100. The technique of stratified random sampling was used in order to obtain the data. Secondary data on the other hand, was gathered from published government reports which will help to understand the overall impact of online shopping on the Indian economy.

Data Sources

The primary data was collected from 100 respondents and secondary data was collected from published government reports.

Variables of the Study

The variables in this study include consumers, income, choice, occasion, purpose, trends and fabric.

Tools of the Study

For the purpose of the analysis SPSS and MS- excel had been used. The various tools used for this study were chi- square, regression and standard deviation. Percentage method, graph method and descriptive method was also used for this study.

Scope and Importance of the Study

This study will help to understand the overall growth as well as the impact of online shopping on the Indian economy. The study also analysis and helps to find out how much the consumer spend on the apparel segment of online shopping. This study was conducted in Bangalore urban.

Limitations of the Study

Though the research has achieved its desired objectives, there are some unavoidable limitations.

- One of the major limitations of this study was the time limit and hence this research could be conducted only on a small size of the population.
- Another major limitation may be the inaccurate answers given by the respondents.

Plan of the Study

This study consists of five chapters. The first chapter introduces the research problem, research gap, the research questions, the objectives of the study, methodology, the tools used for analysis, limitations, the scope of the study, variables of the study, and the hypothesis. Chapter two presents the detailed review of literature with a summary. Chapter three gives the conceptual and theoretical framework for the study which is followed by chapter four which provides the data and its analysis and chapter five summarizes the findings of the study, gives a few recommendations and provides a conclusion.

SELF HELP GROUP AND WOMEN EMPOWERMENT: A STUDY OF SAMASTHAIN BANGALORE URBAN DISTRICT

Sumaiya Chand
Department of Economics, Jain University, Bangalore

RichaGupta
Assistant Professor, Department of Economics, Jain University, Bangalore

Abstract

Self-Help Group (SHG) is becoming one of the most important concepts for empowering of poor women in almost in all the developing country including India. Self-help group in India represents a unique approach to financial intermediation. Self-help group are formed and supported usually by non-government organisation by government agencies. SHGs are linked not only banks but also to wider development programmes. Self-Help Group system is to give social empowerment to women. In India before introducing this scheme for rural women were largely negligible. But in recent years the most significant emerging system called Self Help Group is major breakthrough in improving lives of women and alleviating rural women. This study attempts to understand the activities of Samasta in Bangalore towards socio-economic empowerment of women.

Keywords: *Self-Help Group; Women Empowerment; Social Security; Micro credit*

Introduction

In India women are important for the national development because the constitute half of countries human resource. However, the result of national sample survey showed that women economic activities are on the decline. This trend is supported by the World Bank development indicators (2001), which showed the only 27 per cent of women age group of 15 or elder than that participated in the labour force, declined from 34 per cent in the year 2000. This decline was concentrated among the poor and rural women who are in need of job opportuneness. Therefore, to improve the socio-economic has launched and implemented several programmes towards poverty alleviation and the women empowerment but it has been seen that women in rural areas remained poor.

Self-Help Group is becoming one of the most important concepts for empowering of poor women in almost in all the developing country including India. Today in India self-help group represents a unique approach to financial intermediation. Self-help group are formed and supported usually by non-government organisation by government agencies. Linked not only banks but also to wider development programmes. Self-Help Group system is to give social empowerment to women. In India before introducing this scheme for rural women were largely negligible. But in recent years the most significant emerging system called Self Help Group is major breakthrough in improving lives of women and alleviating rural women.

In 1991-92 NABARD (National Bank for Agriculture and Rural Development) started promoting SHGs on a large scale. SHGs borrow from banks once they have accumulated a base of their own capital and have established a track record of regular payments. SHGs bank linkage programme is emerging as a cost effective mechanism for providing financial services to the “unreached poor” which has been successfully not only in financial needs of the rural poor women but also strengthens collective self-help capacities of the poor, leading to their empowerment. According to NABARD estimates there are 2.2 million SHGs in India, representing 32 million members that have taken loans from banks under linkage programme. The SHGs southern region Andhra Pradesh Banking Linkage Programme (APBLP) since its beginning has been predominant in certain states, showing spatial preference especially for southern region-Andhra Pradesh, Tamil Nadu, Kerala, and Karnataka. The number is still sustainably less than 79.60 lakh now stands 74.3 lakh with the membership of over 96.6 million poor. Women empowerment refers to increasing the spiritual, political, social, educational, gender and economic strength of individuals. Women empowerment is the creation of an environment for women were they can make

decision making of their own for their personal benefits as well as the society. Across the globe, educating women and giving them the ability to stand on their own feet has been a priority. Women can also contribute the social welfare of the country. Women in urban and rural areas should be given access to good opportunities so that they can bring about positive social change and contribution to the growth of the country. SHGs are seen as an instrument for a verity of goals, including giving control to women, increasing management ability among adverse people increasing school enrolments. SHGs prove to be effective tools for poverty reduction and capacity building of rural natives. It provides women an opportunity to be to become socially and economically self-sufficient. SHGs help to create knowledge among its members about social evils, the right of women, about the laws and regulations of government in general. In the recent years, empowerment has been recognized as the central issue in determining status of women. Since women become more potent source of development empowering them is prerequisite for over all development. By empowering women not only make them to share in the development progress but also bring out their lasting efficiency. Empowerment of women is to achieve the goals of social development. It is necessary that women must be brought in the main stream of national development. The empowerment of women through SHGs would lead benefits not only to the individual women but also for the family and community as a whole through collection action the development. These SHGs have collective action. Empowering women is not just for meeting their economic needs but also more holistic social development. The SHGs empower women and train them to take active part in socio-economic progress of the nation.

Formation of SHGs with women has empowered them largely SHGs are now gaining acceptance as an alternative system credit delivery for meeting the credit needs especially to the people who are the poorest of poor generally comprising small/marginal farmers and landless agricultural labours.A SHG is a small economically homogeneous affinity group of the rural poor voluntarily coming to gather to save small amount regularly. The self-help group are voluntary association of 15-20 people formed to attain a collective goal. SHGs members are homogenous with respect of socio-economic background. SHGs could be traced to mutual aid and trust in Indian rural society. Self Help Groups (SHGs) is the brain child of Noble Peace Prize Winner Prof.MohammedYunus who started Grameen Bank of Bangladesh as early as in 1976. Self-help groups (SHGs) and Microfinance (MF) is the recent past has emerged as a potential instrument for poverty alleviation and financial inclusion and women empowerment. The basic principles of the SHGs are group approach, mutual trust of small and manageable group, spirit of thrift, demand based lending, collateral free, poor-friendly loan, peer group pressure in repayment, skill training, capacity building and empowerment (Lalitha 1998). In the decade of nineties and twentieths National Agriculture Bank for Rural development (NABARD), Government Organization, Non-government Organizations (NGOs), Micro Finance Institutions(MFIs), initiates and started Self-help groups for microfinance, micro credit activities for the objectives of poverty alleviation, women empowerment and financial inclusion. Government of India had decided to restructure the self-employment programmes, the earlier programmes were no long in operation. A new programme known Swarnjayanti Gram SwarozgarYojana (SGSY) has been launched from April 1999.

Poverty line is a financial figure, below which an individual would be considered to be unable to access a minimum acceptable quality of life in terms food, shelter, clothing, and health. Poverty in India has predominantly rural characters. The narrow materialist conceptualization of poverty was as an inability to meet the minimum income requirements or basic needs. Deaton (2007) finds property in India declined from 36.2 per cent in 1992-94 to 28.8 percent in 1999-2000. Poverty occurs when people experience severe form of deprivation, the nature of those deprivations remains, however, a keenly debated topic as Amartya Sen has observed, “Poverty must be seen as the deprivation of basic capabilities rather than merely as low income.” (Amartya Sen1999) The poverty comes in many forms and causes multiple harms.

SHGs programme proved that it is an effective tool for poverty alleviation programme in which poor need for their basic requirement is not available in the formal credit system. In these circumstances, SHGs services not only fulfil their productive needs but also satisfy their consumption needs. Overall SHGs can help low income people to reduce risk, improve financial activities, raise productivity, increase their income and improve the quality of their lives and empower them for economic growth in India. SHGs Programmes have become a popular mechanism for poverty alleviation, financial inclusion in many developing countries including India. SHGs members usually create a common fund by contributing their small savings on a regular basis groups manage pooled resources in a democratic way considers loan requests and loans are disbursed by purposes. The rates of interest vary from group to group and the purpose of loan, interest rates are higher than that of banks but lower than moneylenders. The average deposit and loan size of SHG account is larger than individual accounts under the priority sector, bank transaction cost of dealing with SHG's is obviously lower than that of individual borrowers; the rate of growth of credit absorption of SHG's is much higher than individual borrowers under the priority sector.Banks can reduce the operating costs of forming and financing of SHG's, involving NGO's or youths for forming and nurturing SHG's.

The innovative forms of financing is imperative to supplement credit strategies for meeting the needs of the poor by combining the flexibility, sensitivity and responsiveness of the informal credit system with the technical and administrative capabilities and financial resources of formal financial institutions and also to build material trust and confidence between bankers and the rural poor and to encourage banking in a segment of population that formal financial institutions usually find difficult to reach.

The entire process of internal savings and credit is backed by financial and management counselling, promotion of new avenues of employment and motivation for enhancement of earnings from the on-going activities. The groups develop their own management system and accountability for handling the resources generated. The interaction among the members is based on participatory mechanism in terms of decision-making. Small savings of rural women can generate the required resources. Thus, the voluntary savings constitute the key for economic progress. Promotion of SHG's can bring women into the mainstream of economic development.Credit through SHG's is being regarded more suitable by banks and NGO's since creditability of SHG's regarding utilization and recovery is praise worthy. Credit accessibility through SHG's is cost effective and group approach can ensure wider coverage of poor families through bank credit.SHG's can create a unique, alternative need based credit-delivery-mechanism by pooling their meagre resources for catering to their consumption and production requirements.

The first organised initiative in this direction was taken in Gujarat in 1954 when the Textile Labour Association (TLA) of Ahmedabad formed its women's wing to organise the women belonging to households of mill workers in order to train them in primary skills like sewing, knitting embroidery, typesetting and stenography etc. In 1972, it was given a more systematized structure when Self Employed Women's Association (SEWA) was formed as a Trade Union under the leadership of Ela Bhatt.

In the 1980s, MYRADA – a Karnataka based non-governmental organisation, promoted several locally formed groups to enable the members to secure credit collectively and use it along with their own savings for activities which could provide them economically gainful employment.Major experiments in small group formation at the local level were initiated in Tamilnadu and Kerala about two decades ago through the Tamilnadu Women in Agriculture Programme (TANWA) 1986, Participatory Poverty Reduction Programme of Kerala, (Kudumbashree) 1995 and Tamilnadu Women's Development Project (TNWDP) 1989. These initiatives gave a firm footing to SHG movement in these States.

The SHG movement in India is basically aimed at utilizing the SHG's as an intermediary between the banks and the rural poor to help drastically reduce transaction costs for both the banks and the rural clients (Nanda, 1995). NABARD with its headquarters at Mumbai is an Apex Development Bank in India for financing and promoting agriculture, small scale industries, cottage and village industries, handicrafts and other rural crafts so as to promote integrated rural development.Sheokand (1998) has indicated that as the

rural poor's share in availing formal sector credit got further marginalized, NABARD, in 1992 launched the SHG - Bank linkage programme with the policy backup of the Reserve Bank of India. The SHG - Bank linkage programme initiated by NABARD, in active collaboration with Non-GovernmentalOrganisations (NGOs), aimed at enhancing the coverage of rural poor under institutional credit thereby focusing on poverty alleviation and empowerment.

As per a NABARD report (1995) the scheme on SHGs was made applicable to RRBs and co-operative banks of the country in 1993 and in April 1996, RBI advised the banks that lending to SHGs should be considered as an additional segment under priority sector advances and it be integrated with mainstream normal credit operation. SHG-bank linkage programme has gained considerable movement in southern region of the country, though the northern states too are also now catching up fast and an overwhelming 78 per cent of the listed SHGs are Women Self Help Groups (WSHG's) that is the SHGs which constitute of only women members. The concept and importance of SHGs has been accepted and adopted by policy makers and they will form the backbone of rural poverty alleviation strategies, implemented by Government of India.

The Indian Experience of SHG Linkage Programme is unique in some respects. RBI and NABARD have tried to promote relationship banking that is improving the existing relationship between the poor and bankers with the social intermediation by NGOs. The Indian model is predominantly linkage model, which draws upon the strengths of various partners - NGOs (who are the best in mobilizing and capacity building of poor) and bankers (whose strength is financing). Thus, as compared to other countries, where parallel model of lending to poor that is NGOs acting as financial intermediaries is predominant, the Indian linkage banking tries to use the existing formal financial network to increase the outreach to the poor while ensuring necessary flexibility of operations for both the bankers and the poor. Thus, the SHG Linkage programme offers a win-win situation for the credit delivery system comprising banks of all types.

An SHG is seen as an instrument for achieving a variety of goals, including empowering women. Data from NABARD, which pioneered the concept, shows that 90 per cent of members in the SHG are women and most of them do not have any assets. It also helps in developing leadership abilities among the poor, increasing school enrolments, improving nutrition and in birth control. A SHG is generally started by non-profit organisations, such as an NGO with broad anti-poverty agendas. It is also a popular channel of micro-lending by commercial banks, particularly government-run banks.

Statement of Research Problem

Self-help groups (SHGs) or thrift and credit groups are mostly informal groups whose members pool savings and re-lend within the group on rotational or needs basis. These groups have a common perception of need and impulse towards collective action. Many of these groups got formed around specific production activity, promoted savings among members and use the pooled resources to meet emergent needs of members, including consumption needs. Women self-help groups, formed exclusively for rural women, being an effective medium for community involvement in developmental activities can be a powerful tool for alleviating rural poverty through the empowerment of women, by freeing themselves from the clutches of usurious moneylenders. Hence the present study attempts to assess the role of self-help groups in improving the socio-economic status of the rural women and evaluate the role played by the self-help group imparting social, economic, financial, and personal empowerment to the rural women in Bangalore urban.

Background of the Study

Self Help Groups (SHGs) is the brain child of Grameen Bank of Bangladesh founded by Prof. Mohammed 1975, who tried out new approach to rural credit in Bangladesh. In India NABARD initiated SHGs in the year 1986-1987 but the real effort was taken after 1991-92 from the linkage of SHG with the bank. A SHG is a small economically homogenous affinity group of the rural poor voluntarily coming forward to save a small amount of money regularly, which is deposited in a common fund to meet the

need in emergency and to provide free loans decided by the group. It is now address th issues of poverty alleviation and empowerment of poor, health, nutrition and other support services especially women, in the rural area of the country.

Literature of Review

SHGs are seen as an instrument for a verity of goals, including giving control to women, increasing management ability among adverse people increasing school enrolments. SHGs prove to be effective tools for poverty reduction and capacity building of rural natives. It provides women an opportunity to be to become socially and economically self-sufficient. SHGs help to create knowledge among its members about social evils, the right of women, about the laws and regulations of government in general. In the recent years, empowerment has been recognized as the central issue in determining status of women. Since women become more potent source of development empowering them is prerequisite for over all development. By empowering women not only make them to share in the development progress but also bring out their lasting efficiency. Empowerment of women is to achieve the goals of social development. It is necessary that women must be brought in the main stream of national development. The empowerment of women through SHGs would lead benefits not only to the individual women but also for the family and community as a whole through collection action the development. These SHGs have collection action. Empowering women is not just for meeting their economic needs but also more holistic social development. The SHGs empower women and train them to take active part in socio-economic progress of the nation. SHGs Programmes have become a popular mechanism for poverty alleviation, financial inclusion in many developing country es including India. SHGs members usually create a common fund by contributing their small savings on a regular basis groups manage pooled resources in a democratic way considers loan requests and loans are disbursed by purposes. A number of income generating activities were undertaken by the members after joining SHGs. The result showed positive change in indicators of economic empowerment, income, employment and savings after joining SHGs.

Research Gap

The literature concerning the SHGs and their economic contribution of participating women is varied and dynamic. As such gap in existing research follows firstl, the studies bypassed the real problems of women. Secondly, the findings are mixed and diverse. They represent the issues in general perspective and failed to examine the specific problems of women in SHGs at micro level.

Research Question

It is considerable interest to study the role of SHG in the socio-economic status of women in Bangalore urban. But considering the empowerment of SHG members, this study is undertaken to find out the answers to following question.

1. What are the socio-economic characteristics of the respondents?
2. What are the problems faced by the women in self-help group?

Objectives of the Study

1. To study the socio-economic background of women
2. To find out the problems faced by the women in self-help group

Methodology

The study descriptive in nature both primary data and secondary data were used for the study purpose. Primary data are collected through the interview schedule to the selected beneficiaries. Secondary data essential for the study are collected from books, published research papers, and other periodicals and reports of the Government and other agencies.

Source of Data

The study is predominantly depends on primary data, the data is collected from the sample of 100 members from Samastha Micro Finance located in Bangalore.

Tools of the Study

Both primary and secondary data are used for the study, the primary data were collected by using a structured interview schedule and the secondary data was collected from various publications of both central and state governments and NABARD.

Hypothesis

Hypothesis Based on the above objectives the following hypothesis is formulated.

Ho : There is no improvement in the economic empowerment of women through SHGs.

Ho : There is improvement in the economic empowerment of women through SHGs.

Scope of the Study

The present study covers only the SHG members Bangalore urban with reference to samastha micro finance. It is confined to demographic aspects of the sample respondents and the empowerment of women in the study area.

Analysis and Interpretations

The appropriate statistical tools have been used such as correlation percentage, ANOVA,graphs, factor analysis and Garrett's ranking principle and other relevant statistical tests.

The inferential analysis of multivariate impact of women empowerment through SHGs is done. The broad categories of analysis of women empowerment through SHGs discussed through chi-square test, correlation, factor analysis and Garrett's ranking principle. It is supported by interpretations and brief explanation for better understanding of the results and observations. The brief explanations are providing on the basis of feedback provided by the SHG members while responding to the questions in the interview schedule. The feedback provides the clarity and the reasons for preferring particular option in the interview schedule. Thus, it helps to provide the essence of impact of SHG membership.

Limitations of the Study

The respondents have provided information from their memory, hence the data may suffer recall bias.The opinions of the respondents are also limited to the situation which existed during that period only.

SOCIO-ECONOMIC SITUATIONS OF CARDAMOM CULTIVATORS IN ZUNHEBOTO IN NAGALAND

Loino Sema
Department of Economics, Jain University, Bangalore

Jennifer Fernandes
Assistant Professor, Department of Economics, Jain University, Bangalore

Abstract

Cardamom is one such spice which plays a major role in the spice history. Over time, Indian spices have gained much popularity owing to traditional flavours in both the domestic and foreign markets, which are also incorporated in the now more contemporary culinary cuisines as well as in methods of treating the sick. They are widely used in different medicines because of their carminative, preservative and simulative properties. Some of the common Indian spices include cinnamon, cardamom, pepper, turmeric, chilli. Presently, India produces 2.5 million tonnes of different spices which is valued at approximately 3 billion US$ and holds the premier position in the world. In each of the 29 states and 7 union territories of India, at least one type of spice is grown in abundance. It is recorded that India grows so many different kinds of spices that no other country in the world can compete with it. This study focusses on the Socio-economic Situations of Cardamom Cultivators in Zunheboto District in Nagaland.

Keywords*: *Socio-economic conditions; large cardamom Cultivators

Introduction

Time immemorial has shown us that India holds the renowned reputation of the **"Land of Spices"**. Over time, Indian spices have gained much popularity owing to traditional flavours in both the domestic and foreign markets, which are also incorporated in the now more contemporary culinary cuisines as well as in methods of treating the sick. They are widely used in different medicines because of their carminative, preservative and simulative properties. Some of the common Indian spices include cinnamon, cardamom, pepper, turmeric, chilli. Presently, India produces 2.5 million tonnes of different spices which is valued at approximately 3 billion US$ and holds the premier position in the world. In each of the 29 states and 7 union territories of India, at least one type of spice is grown in abundance. It is recorded that India grows so many different kinds of spices that no other country in the world can compete with it.

Cardamom is one such spice which plays a major role in the spice history.

Cardamom, scientific name *Elettaria cardamomum*, is one of the world's oldest spices. It is also known as the *"Queen of Spices"*. This spice has similar names in almost all languages of the European countries. For instance, in German and English it is called *'Cardamom'*, *Kardemomme* in Norwegian and Danish, *cardamom,o* in Italian, Portuguese and Spanish, *Kardamom* in Polish Croatian, Bulgarian and Russian, *cardamome* in French, etc. Its local name in the South Asian tongue of Hindi is *elaichi*, aka *'green cardamom'* and *alaichi* in Nepali which is *'black cardamom'*. A few examples in India alone are: *'Alainchi'* in Nepali, *'Bada elaichi'* in Hindi, *Sthulaila*, *Bhadraila* in Sanskrit, *Bara llachi* in Bengal, Peralam in Malayalam, Periya elam, Kattelam and Perelam in Tamil Nadu, Pedda Yelakaya in Telegu and *didda yelakki* in Kannada (V.K. Bisht, 2011).

If we trace the DNA of Cardamom, we find that it comes from the seeds of a ginger like plant. The small, brown-black sticky seeds are meticulously contained in a pod, in three double rows with six seeds in each row. The pods are 5.20mm ¼ - ¾ long. The larger variety is known as black cardamom being brown and, the smaller being green. The pods are roughly triangular in cross section and oval in shape. Cardamom is characterised by a colourless to pale yellow liquid with a sweet-spicy and warming fragrance with a woody-balsamic undertone.

Large cardamom is another variety of cardamom. Its scientific name is *Amomum subulatum Roxb*.. It is also known as black cardamom or greater Indian cardamom and it belongs to a family of

Zingiberaceae. Large cardamom is ranked as the world's third most expensive spice after saffron and vanilla.

Large cardamom has a distinctively powerful aroma due to which it is widely used for flavouring vegetables and in many food preparations all across India. Apart from the aroma, large cardamom also has a high medicinal value. It contains 2-3% essential oils; The volatile oil of large cardamom seed contains 1, 8-cineole, α-terpineol, α-pinene, β-pinene and allo-aromadendrene' (Gurudutt et al.1996).

This spice is commonly used in the preparation of Ayurvedic medicines. The seeds are also used as an ingredient to gargle in teeth and gum infections. The large cardamom seed is also considered as an antidote for snake and scorpion venoms. It further acts as a preventive measure for throat troubles, congestion of lungs, eyelid inflammation, digestive disorders, effective cardiac stimulant and serves as an effective treatment for tuberculosis.

Large cardamom is a perennial soft-stemmed plant which is mainly grown in the sub-Himalayan region as it is very adaptive in the mountainous landscapes. The crop grows in the vicinity of mountain streams- mostly in swampy, cool and humid areas under shades of trees. Large cardamom is found at altitudes between 800 to 2000 m above the Mean Sea Level (MSL). In order to grow as a healthy plant, it needs high humidity, more than 90 percent and, soil moisture of more than 70 percent. It grows best with an annual rainfall of 2000-4000 mm with an air temperature of 10-20° C. The crop does not grow well when it is exposed to direct sunlight and therefore, it is cultivated under forest trees which provide adequate shade.

Over the recent years, large cardamom has dominated as the main agricultural cash crop of the Southeast Asian countries because it is a low-volume and a high-value crop. It is one of the newly introduced high-value cash crop and an important source of livelihood for people in the Himalayan region due to its high market value.

Large cardamom is mainly cultivated in the sub-Himalayan region of the north-eastern Indian states, Nepal and Bhutan. Production of these cash crops has increased with high market prices, benefiting the farmers and motivating them, in turn, to produce more which facilitates in creating high revenue across the globe. The world's production of large cardamom is estimated by the sum of production in three countries, namely Nepal, India and Bhutan. Total world production of cardamom is about 12,278.20 metric tons where, Nepal (52 percent) is the highest producer followed by India (37 percent), and Bhutan (11 percent). Large cardamom originated from Sikkim, India and grows in the Eastern Himalayan Countries only. "In India, it is cultivated in Sikkim, Darjeeling district of West Bengal, Arunachal Pradesh, Nagaland and, Uttarakhand" (Sharma et al 2009; Bisht et al 2010).

In India, the major portion of production is consumed domestically, about 1500-1800MT, because just as much as potatoes are a staple food for Indians, cardamom is considered as the staple Indian spice which is at par with turmeric. The rest is exported to countries like USA, Iran, Afghanistan, UAE, South Africa, UK, Japan, Malaysia and Argentina with Pakistan having the larger share, importing upto 9,000 MT of large cardamom annually. The major domestic markets in India are Delhi, Kolkata and Guwahati. 'During the year 2011-2012 India exported 935 MT of large cardamom with a value of Rs. 68.30 crores. Resulting in registering a rise of 21 percent in volume and 51 percent in value than the previous year' (spice India 2012). The total area and production of large cardamom in India estimated by spice board during the year 2013-2014 was 26060 ha area and 4465 tonnes production.

Sikkim is the largest producer in India, and second largest in the world after Nepal. The major challenges faced by the cardamom farmers are the institutionalization of the spice, lack of market intelligence and periodic market chain analysis. Due to lack of proper institutional support, the growers receive proportionately very less price for their product. If the R&D institution such as the Spices Board and the respective state government line departments in India work cohesively on this front, India could potentially surpass Nepal as the highest producer of cardamom in the world within a span of five years; yielding positive results for the Indian market.

Large cardamom plantation has only been introduced to the north-eastern states of India since the last decade. There are 12 local varieties of the cultivated cardamom and seven species of wild relatives which have readapted to different agro-climatic conditions of the Eastern Himalayan regions. The plantation of large cardamom in the other Indian Himalayan regions comprises of 550 ha which is spread over five states, vis. Nagaland and Mizoram with 35 ha each, Meghalaya with 10 ha, Manipur and the central Indian Himalayan state of Uttaranchal with 41 ha collaboratively covering a total of 34,252 ha in India. In the cardamom-based agro forestry system, along with cardamom, about 92 species of multipurpose tree species are also grown. The trees in the area are socio-culturally important as they have multiple benefits because they serve as wild edibles, medicinal plant, mushroom and timber trees which are a constant source of income for the farmers. The use of the Alnus- cardamom systems thereby leads to the conservation of tree biodiversity in the region which has also recently proven to be more profitable in the long run.

To compete with other spice growing countries in the world spice market, propping up productivity and tapping of the potentiality of the nonconventional spice growing areas is gaining importance. The North Eastern region is famous for its rich flora on account of its varied topography, climate and altitudes which has a huge potential for the development of horticultural crops like spices. In this region, huge quantity of good quality spices are produced but, most of the growers sell their products at throwaway prices in the local market or to the commission agent during peak seasons because of their lack of proper information about the market status and unavailability of proper markets.

The need for the hour is to promote public-private partnerships so that the production technology of important spices is taken to every nook and corner of this region; to improve infrastructural extension network; to carry out focused A good suggestion would be to form farmers' organisations both at the local level as well as at the regional level for better marketing of the produce.

Nagaland is the 26th state of India. Nagaland is also called as "the land of festivals". Total area of the state is of 16,579 square kilometres with a population of 1,980,602 as per the 2011 Census of India. The state is located in the north eastern region of India and shares the international border with the country of Myanmar. It also borders the state of Assam to the west, Arunachal Pradesh and part of Assam to the north, Burma to the east, and Manipur to the south. The state capital is Kohima, and the largest city is Dimapur. Agriculture is the main occupations in Nagaland with more than 70 percent population are working in agriculture sector. Nagaland has a suitable climate for agricultural and horticultural produce. It supports multiple crops viz., rice, maize, millet gram, mustard, bean, sugarcane, rubber, tea, banana, pineapple, orange, jackfruit, pear, plum, passion fruit, litchi, mango, lemon, sweet lime, potato, sweet potato, tapioca, tomato, pea, chilly, ginger, garlic, cardamom, etc. Large cardamom cultivation started in Nagaland in the late 2000s. A variety of spices like Cardamom, Black Pepper, Turmeric and Naga chilly are grown in Nagaland. During 2014-15 the total area under spices was 5, 682 hectares achieving a production of 19, 765 MT.

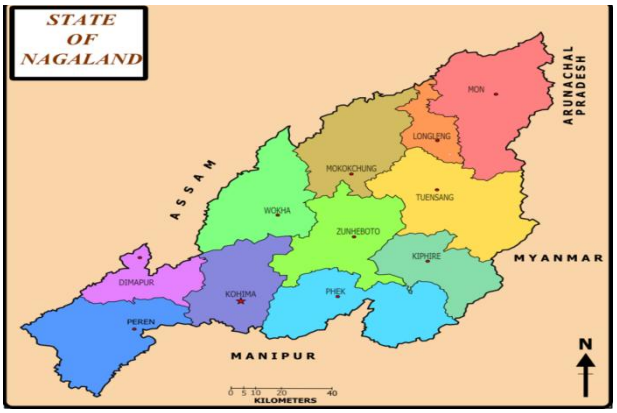
The Economy in the state of Nagaland is dependent mainly on agriculture. The economy's remarkable feature is that there are no landless peasants in the state. In Nagaland, large cardamom is mostly grown in Mon, Kiphire and, Tuensang. However, recently, districts like Wokha, Phek, Zunheboto, Mokokchung and Kohima have also started cultivating it. Because its aromatic seed capsules have a great demand both in the domestic as well as the international market, many young men in Nagaland have begun the cultivation of the tropical plant.

Zunheboto is one of the district of Nagaland, located in the heart of the state. Nagaland and is bounded by Mokokchung on the North, Tuensang district on the East, Phek district on the South and Wokha on the West. Zunheboto district lies at an altitude of 1874.22 meters above sea level. The total area of the district is 1255 sq. km. (2011 census) the sex ratio is 981 females per 1000 males (2011 census)

Zunheboto district is a home to sumis and has six subdivisions- Akuloto, Satakha, Atoizu, Aghunato, Suruhuto and Pughoboto. The total population of the district is 141014. The district falls under the Agro climatic zone of eastern Himalayan region with an annual rainfall of 2340 mm. The variety grown in Zunheboto district is large cardamom which is darker and larger than the commonly found green cardamoms. Extraction of cardamom is a labour intensive process hence, paving the way for many young workers to provide for their own livelihoods.

Satakha sub-division is under zunheboto district of Nagaland. Satakha is bounded by Zunheboto towards North, Tokiye towards East, Ghathashi towards west, Sitimi towards East. It is one of 13 Taluks of Zunheboto district. There are 35 villages and 1 towns in Satakha sub-division. As per the Census India 2011, The total area of Satakha is 138.47 sq.km with 2,984 households, population of 15,103 of which 7,796 are males and 7,307 are females. The sex-ratio of Satakha Taluk is around 937 compared to 931 which is average of Nagaland state. Cardamom cultivatin in satakha sub-division has recently started and many people has stated the cultivation as it give high return in a short period of time.

Background of the Study



Nagaland became the 16th state of Indian Union on 1st December 1963 by an amendment in the constitution of India. Nagaland is also called as "the Land of Festivals". The state is located in the north eastern region of India and shares the international border with the country of Myanmar. It also borders the state of Assam to the west, Arunachal Pradesh and part of Assam to the north, Burma to the east, and Manipur to the south. The state capital is Kohima, and the largest city is Dimapur.

The state lies between the geographical location of 25°6' and 27°4' North latitudes and 93°20' and 95°15' East longitude. The state has a climate condition that falls under monsoon zone with average humidity of 70 to 80 percent, average temperature of 2°C to 38°C, rainfall of 2000 to 2500 mm. It has an area of 16,579 square kilometres with a population of 1,980,602 as per the 2011 Census of India. The state is divided into eleven districts: Kohima, Dimapur, Peren, Phek, Wokha, Zunheboto, Kiphire, Tuensang, Mokokchung, Longlen and Mon. 114 Sub districts, 26 towns and 1428 villages. The state is home to 16 different tribes, each of whom has their distinct customs, attires, languages and dialect. The state has a Sex Ratio of 931 female per 1000 males

Nagaland State is largely a hilly state endowed with rich forest soil and rich biodiversity with favourable agro-climatic conditions varying from sub-tropical to temperate and altitude ranging from 300 MSL to 3000 MSL. A huge part of the economic activities in Nagaland consist of agriculture wherein more than 70 percent of the population are employed in the agriculture sector.

The Zunheboto district is the home of Sumis tribe. It is situated in the heart of Nagaland and is bounded by Mokokchung on the North, Tuensang district on the East, Phek district on the South and Wokha on the West. Zunheboto is the district headquarters that lies at an altitude of 1874.22 meters above sea level. The total area of the district is 1255 sq. km. (2011 census). It also has six subdivisions- Akuloto, Satakha, Atoizu, Aghunato, Suruhuto and Pughoboto. The

total population of the district is 141014. The density of population is 112 persons per sq. km. And the sex ratio is 981 females per 1000 males (2011 census). Literacy rate is 86.26 percent of the population, and the literacy rate of male and female is 88.86 percent: 83.61 percent.

Like most of the districts of Nagaland, is situated on the Hills with its mountain ranges spread northeast to Southwest. The district is hilly and is covered by evergreen forests and surrounded by small streams and rivers. The district falls under the Agro climatic zone of eastern Himalayan region with an annual rainfall of 2340 mm. The hill varies from 1000 to 2500 meters and the average height of the district is 1800 meters. Most of the people live between 1500 and 2500 meters altitude. The inhabitants of every Sumis are living together in harmony without any discriminations or distinction, speaking the one language i.e. Sumi. The people are hard workers, the main stay of people's livelihood is shifting cultivation except the people living on the bank of Tizu river, where 70% practice terrace cultivation.

Satakha sub-division is under Zunheboto District, in the state of Nagaland. Satakha Tehsil is bounded by Zunheboto Tehsil towards North, Tokiye Tehsil towards East, Ghathashi Tehsil towards west, Sitimi Tehsil towards East. It is one of 13 Taluks of Zunheboto district. There are 35 villages and 1 towns in Satakha Taluk.

As per the Census India 2011, Satakha Taluk has 2,984 households, population of 15,103 of which 7,796 are males and 7,307 are females. The sex-ratio of Satakha Taluk is around 937 compared to 931 which is average of Nagaland state. The literacy rate of Satakha Taluk is 78.61percent out of which 81.02 percent males are literate and 76.04 percent females are literate. The total area of Satakha is 138.47 sq.km with population density of 109 per sq.km.

The climate is warm and temperate in Satakha. In winter, there is much less rainfall in Satakha than in summer. This climate is considered to be Cwb according to the Köppen Geiger climate classification. The temperature here averages 16.9 °C. The average annual rainfall is 1893 mm.

Statement of the Research Problem

Agriculture is the main source of livelihood and major occupation of about 71 percent of people in Nagaland; it is fast turning into a producer of large cardamom as the state is endowed with ideal climatic conditions for the cultivation of large cardamom. As large cardamom turns out to be the most profitable cash crop in the state, residents are adopting in large scale. There are thousands of people depending on the cardamom sector for their livelihood including the producers, domestic traders, exporters and the workers. We have the best quality cardamom, the government and other agencies are trying their level best to increase production and export, but still our cardamom sector is facing a total doom. The problems associated with cultivation are irrigation, seeding, fertilizers and pest control. The expenses related are transport, loan interest for initial investment. The cultivators are mostly affected by the cost of labour frequently. Hence an attempt has been made in this research study to identify the cultivation problem of large cardamom growers in Nagaland, state of India in order to arrive at meaningful findings that could help in improving the socio economic condition of the cultivators.

Research Gap

The earlier researchers focussed mainly on the large cardamom cultivation of Nepal, Districts of Sikkim Himalayas, Districts of Arunachal Pradesh, Uttarakhand, Central Himalayas, kerala. But the present study is focusing on cultivation of large cardamom in the four villages under Satakha taluk of Zunheboto district in Nagaland. The present study also tries to analyse their socio-economic condition of the large cardamom cultivators which the previous researcher have failed to analyze. The study tries its best to come up with the suggestions to improve the livelihood of the large cardamom cultivators.

Research Questions

To understand the socio economic condition and the constraints faced by the large cardamom cultivators we ask questions like what are the factors to understand the socio economic condition of the cultivators. What are the constraint that effect the large cardamom cultivation? What measures have been taken by the government to improve the problem faced by the cultivators?

Objective of the Study

Keeping the above question in view, the current study is conducted with the following objective

1. To investigate the constraint faced by the large cardamom cultivators in the study area.
2. To analyse the socio-economic condition of the large cardamom cultivators.
3. To analyse the initiatives taken by the government in encouraging the large cardamom cultivators.

Hypothesis

Cardamom cultivation is a significant contributor to the socio-economic conditions of cultivators in Zunheboto in Nagaland.

Research Methodology

The study is conducted on the socio-economic transition of large cardamom cultivators in Satakha subdivition under Zunheboto District of Nagaland. The research method and procedures for conducting the study are presented under following points

- Study area
- Selection of sub-division
- Selection of villages
- Selection of respondents
- Methods of collecting the data
- Tools used for analysing the data

1) Study area: Nagaland the 16th state of India, it is located at the north eastern part of India with Kohima as its capital,and having 11 districts namely, Dimapur, Kohima, Zunheboto, Kiphire, Mokokchung, Longleng, Wokha, Tuensang, Mon, Phek, Peren. The total population of Nagaland is 19,80,602 with the sex ratio of 931 female per 1000 males as per. 71 percent of the population and is still dependent on agriculture sector. The state is home to 16 different tribes with their own distinct attires and dialect. The study was conducted in Zunheboto District covering 4 village in Satakha sub-division where cardamom plays a very vital role in the socio economic development in the area and could provide all the relevant information and hence can conveniently be obtained for conducting this study.

2) Selection of Sub-division: The Zunheboto districts of Nagaland is divided into six sub-division out of which one sub-division is randomly selected due to the presence of large cardamom cultivators.

3) Selection of villages: A list of villages growing large cardamom from the selected sub-division, from which, Four villages were selected using stratified random sampling.

4) Selection of respondents: After the selection of villages, list of large cardamom growers were obtained from the village heads and village elders of the respective villages and twenty-five large cardamom growers from each village were selected using stratified random sampling method to obtain a list of one-hundred respondents. The respondents were then divided into three categories depending on the land under large cardamom cultivation.

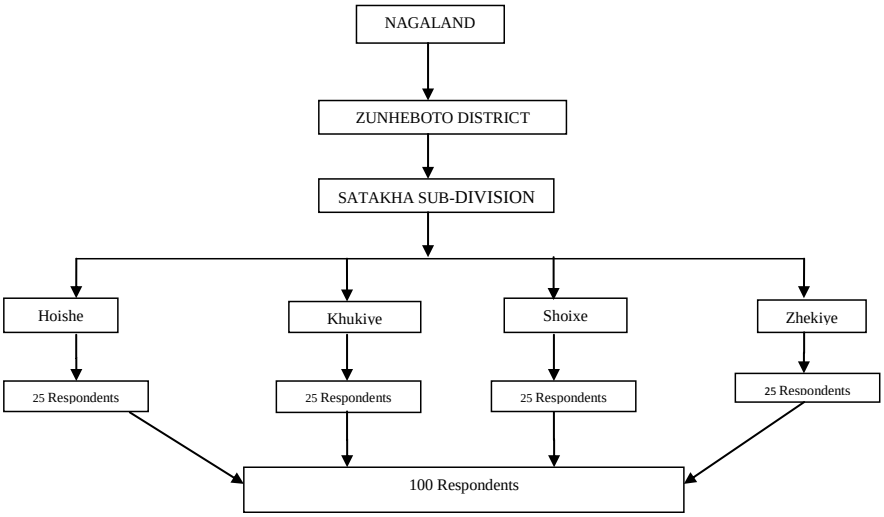
5) Methods of Collecting the Data: The study was conducted based on the primary and secondary data of Various socio-economic characteristic, constraints faced by the large cardamom cultivators and measures taken up by government from the selected household. The primary data was collected with the help of structured questionnaire and personal interview. The secondary data was collected from the government records, government website, published journals, Spice board.

6) Tools Use For Analyzing the Data

The data collected from the respondent were scored, tabulated and analyzed using suitable methods. The statistical methods used in the present study are percentage, graph, bar chart, pie chart, likert scale and Chi-square 25 respondent are selected randomly from their respective village to get the total of 100. The selection process was done using stratified random sampling respondent.

Category	Land Under Large Cardamom Cultivation (ha)
Small	< 1ha
Medium	1-2 ha
Large	>2ha

7) Methods of Collecting the Data: The study was conducted based on the primary and secondary data of Various socio-economic characteristic, constraints faced by the large cardamom cultivators and measures taken up by government from the selected household. The primary data was collected with the help of structured questionnaire and personal interview. The secondary data was collected from the government records, government website, published journals, Spice board.



8) Tools Use For Analysing the Data: The data collected from the respondent were scored, tabulated and analyzed using suitable methods. The statistical methods used in the present study are percentage, graph, bar chart, pie chart, likert scale and Chi-square

Variables of the Study

The present study focuses on the variables like socio-enonomy of the large cardamom cultivators, their land holding size, annual income, production and also the constraints and measures of the large cardamom cultivation.

Scope and Importance of the Study

The present study is an attempt to highlight the socio-economic condition of large cardamom cultivators in the study area, its impact towards the livelihood of the cultivators. The study was conducted to find out the socio-economic condition of large cardamom cultivators, their constraint faced and measures taken up in the large cardamom cultivation. The present study concentrates on Satakha sub-division of Zunheboto districts, Nagaland.

Cardamom cultivation gives high return at a short span of time, therefore many people in the study area has started cultivating large cardamom. Large cardamom also plays an important role in the livelihood of the cultivators. The study on the socio-economic condition of large cardamom will help the cultivators with some important aspect in the developing aspects to perform their role with greater efficiency for further improvement in the cardamom cultivation.

Limitation of the Study

The study was subjected to the limitation of time, financial resources and other facilities which compelled the researchers to limit the area and the size of the sample of the study

Plan of the Study

The study consists of five chapters. In the first chapter, Introduction, research problem, a brief review of literature, scope and importance of the study, objective, hypothesis of the study, research methodology, Limitations of the study and plan of the study have been discussed.

The second chapter deals with the review of the literature with a summary. Theoretical framework for the study is presented in the third chapter. Fourth chapter deals with the data and its analysis. The fifth chapter gives a summary of findings, conclusion and offers suggestions based on findings presented.

SWACHH BHARAT ABHIYAN AND WASTE DISPOSABLE MANAGEMENT IN INDORE

ShreshthaKothari
Department of Economics, Jain University, Bangalore

RichaGupta
Assistant professor, Department of Economics, Jain University, Bangalore

Abstract

The Present study is located in a Indore a district in Madhya Pradesh (MP). Indore is the most populous and the largest city in MP. Locate at the southern edge of Malwa Plateau at a average of 500 above sea level. The city is 190 km of the state capital of Bhopal with a estimated population of 4.16 million in 2017. If we go back to the year 2011, Municipal Solid Waste (MSW) had become one of the major causes of pollution for Indore; it acted as an obstruction in the development of Indore. The rapid growth of population, industrialization, urbanization and economic growth of the city lead to generation of thousands of tons of municipal solid waste daily. Poor collection and inadequate transportation were responsible for the accumulation MSW. More land was needed for the disposal of these solid waste. The management of MSW was going through a critical phase, due to unavailability of suitable facilities to treat and dispose of the large amount of MSW generated daily. Things changed for the city after introduction of SBA. In the year 2017 it became the cleanest city in the country. In order to achieve this, a plan of action was developed. It was a mix between awareness plans implemented by the government and the implementation of the admistrative policies. Some of the changes adopted by the government includes door to door garbage collection. Beside this the Government initiated various awareness campaign on radios and TV. The Civil community assured that cleanliness is maintained by charging fines to people violating.

Keywords: *Swachh Bharat Abhiyan; Waste Disposable Management; Hygiene;*

Introduction

Swacchta is the state of being clean and the habit of achieving and maintaining that state. Cleanliness may imply a moral quality. Bhagavad Gita describes it as one of the divine qualities which everyone must practice, cleanliness is related to hygiene and diseases prevention. Mahatma Gandhi said “Sanitation is more important than independence”. He made cleanliness and sanitation an integral part of Gandhian way of living. His dream was total sanitation for all. He use to emphasize that cleanliness is most important for physical wellbeing and a healthy environment. An estimate of 11.2 billion tonnes of solid waste is collected worldwide per cent of global greenhouse gas emission. The solution to this is the recycling of waste where waste cannot be avoided, recovery of materials and energy from waste should be included in practices and converting waste into usable products. Recycling leads to substantial resource savings. For example, for every tonne of paper recycled, 17 trees and 50 per cent of water could be saved. Moreover, recycling helps in job creation.

In the light of the above, the GoI launched the Swachh Bharat Abhiyan (SBA) - Clean India Mission on 2nd October 2014. The 'Swachh Bharat Abhiyan' is a massive mass movement that seeks to create a Clean India. SBA was launched throughout the length and breadth of the country. The SBA is the most significant cleanliness campaign by the Government of India (GoI). The campaign aims to achieve the vision of a ‘Clean India’ by 2nd October 2019. Some of the objectives of SBA includes:

1. To bring improvement in the quality of life in rural areas by promoting cleanliness hygiene and eliminating open defecation.
2. To achieve complete ‘Clean India’.
3. To motivate communities and panchayats to adopt sustainable techniques of waste disposable and create awareness about health education.
4. Encouragement of cost effective techniques for safe and sustainable sanitation.
5. To develop communities to maintain and check overall solid, liquid and waste management systems in rural areas.

The Present study is located in a Indore a district in Madhya Pradesh (MP). Indore is the most populous and the largest city in MP. Locate at the southern edge of Malwa Plateau at a average of 500 above sea level. The city is 190 km of the state capital of Bhopal with a estimated population of 4.16 million in 2017. If we go back to the year 2011, Municipal Solid Waste (MSW) had become one of the major causes of pollution for Indore; it acted as an obstruction in the development of Indore. The rapid growth of population, industrialization, urbanization and economic growth of the city lead to generation of thousands of tons of municipal solid waste daily. Poor collection and inadequate transportation were responsible for the accumulation MSW. More land was needed for the disposal of these solid waste. The management of MSW was going through a critical phase, due to unavailability of suitable facilities to treat and dispose of the large amount of MSW generated daily. Things changed for the city after introduction of SBA. In the year 2017 it became the cleanest city in the country. In order to achieve this, a plan of action was developed. It was a mix between awareness plans implemented by the government and the implementation of the admistrative policies. Some of the changes adopted by the government includes door to door garbage collection. Beside this the Government initiated various awareness campaign on radios and TV. The Civil community assured that cleanliness is maintained by charging fines to people violating.

Background of the Study

The Nirmal Bharat Abhiyan (NBA) which was the successor of SBA was launched on 01.04.2012. The objectives of NBA included acceleration of sanitation coverage in rural areas and create Nirmal Gram Panchayats. Under NBA , incentives for IHHL was increased and further support was obtained from MNREGA. But due to difficulties in implementation and convergence of NBA with MNREGA as funding from different sources created delays in implementation mechanism. Later in the year 2014 to achieve the goals of clean India GoI introduced SBA. The Abhiyan was coordinated under Ministry of Drinking Water and Sanitation (MDWS). MDWS divided SBA into two sub-missions Swachh Bharat Mission (SBM) Gramin and SBM (urban). The GoI launched first time the Swachh Bharat Mission at Rajpath in New Delhi. The GoI also invited nine people to join the cleanliness drive and requested each of them to draw nine more into the initiative. By inviting people to participate in the drive, the Swachhta Abhiyan has turned into a National Movement. A sense of responsibility has been evoked among the people through the Clean India Movement. With citizens now becoming active participants in cleanliness activities across the nation. The Government has helped spread the message of Swachh Bharat by urging people through his words & action. The GoI carried out a cleanliness drive in Varanasi, he also wielded a spade near River Ganga at AssiGhat in Varanasi under the Clean India Mission. The GoI was joined by a large group of local people who cooperated in the ‘Swachhta Abhiyan’.

The Present study is located in a Indore a district in Madhya Pradesh (MP). Indore is the most populous and the largest city in MP. It is also considered as a educational hub and first city to have campuses of both IIM and IIT. Locate at the southern edge of Malwa Plateau at a average of 500 above sea level. The city is 190 km of the state capital of Bhopal with a estimated population of 4.16 million in 2017.The city comes under 2-tire cities in India. Indore apart from being considered as the state's commercial capital, is also known for mouth-watering culinary experience. It is in the first 20 cities to be developed as smart cities. Indore is additionally home to the Madhya Pradesh Stock Exchange (MPSE), the country’s 3rd oldest stock exchange.

Now, let us look at the timeline of the city on waste disposable management. We go back to the year 2014, Municipal Solid Waste (MSW) had become one of the major causes of pollution for Indore; it acted as an obstruction in the development of Indore. The rapid growth of population, industrialization, urbanization and economic growth of the city lead to generation of thousands of tons of municipal solid waste daily. Poor collection and inadequate transportation were responsible for the accumulation MSW. More land was needed for the disposal of these solid waste. The management of MSW was going through a critical phase, due to unavailability of suitable facilities to treat and dispose of the large amount of MSW

generated daily. Indore the state's largest and most populated city was painted in a picture of dismissal for not maintaining cleanliness and sanitation. Indore ranked at 149th position in the Swachh Bharat survey in 2014. The bad rank secured by the district was enough to put a shame on the administration. And from there began the story of a great turnaround.

A year later in the same survey Indore jumped to 25th position, recording multi-fold growth. In the year 2017, Union minister of housing and urban poverty alleviation Venkaiah Naidu on 4th May declared Indore the cleanest city in India. This position achieved is due to efforts made by the Indore Municipal Corporation and with the health corporation by the public.

Review of Literature

Study of the status of hygiene and sanitation practices of the individual and the level of awareness of respondents under Swachh Bharat Abiyan (Pushpanjali2016). It further revealed that the solid waste was dumped in open spaces polluted the air by emitting greenhouse gases and served a breeding ground of dangerous insects such as mosquitoes and flies (Patrick AkataNwofe). The study accessed the current status and level participation of the respondents in the cleanliness initiative (Dr. BadraShailja2015).The study also evaluated the patterns of solid waste management in two residential zones in Eldoret, Kenya and the composition of household waste and management practices adopted by low and middle income estates (Okalebo 2014). It studied the sustainable technologies used for fulfilment of the objective of cleanliness and develop a required committee for promotion and management of the solid and liquid waste management system for maintaining cleanliness in rural as well as urban slum (Thapa Suman (2016). It evalusated the contribution made by the funding agencies and companies towards Swachh Bahrat Scheme through Corporate Social Responsibility (CSR) activities (Dr. AgwanAtul 2014). The author also analyzed the establishment of scientific sanitation system, and scientific disposable system of solid, liquid, waste, found out the level of awareness among the people about the Swachh Bharat Scheme (TripathiVibhuti 2016).It assessed that solid waste have become potential cause of various water born and other diseases (Odile 2008). . It also revealed and analyzed regional and geographical-specific waste generation patterns for urban towns (Joshi Rajkumar 2016). Also assessment of the quantity of waste generation in various cities in India and the different sources of waste generation was studied and analyzed (Kumar Vijay 2013).

Statement of the Problem

The collection of municipal solid waste is a public service and which has a important impact on the public health and the functioning of the country. Unfortunately many urban administrations seem to be losing the battle of coping with the ever-increasing quantities of waste. The challenge is made greater by the diversity of waste materials in the waste, which along with food waste includes plastic packaging, paper and discarded electronic equipment etc. The main goal in front of the government is to maintain cleanliness by using sustainable technologies and equipment.

Objectives of the Study

1. The objectives of the study includes:
2. To identify methods used by the government to bring cleanliness in the city under SBA.
3. To identify the extra charges and taxes paid by the public under the SBA.
4. To weigh the before and after in the overall development in the economy of the city after the implementation the SBA.

Methodology of the Study

The study is based on primary and secondary data. Primary data will be collected from using questionnaire and interviews from a sample of 100 respondents from different localities in the city. The sample will be selected based on systematic random sampling. The questionnaire will include both open ended and close ended questions The scaling technique to be used will be liquid scaling and ranking techniques. The secondary sources of data will be collected from report issued by United Nations (UN), and Ministry of Drinking Water and Sanitation.

Variables of the Study

The variables used for the study influence are as follows:

1. Sanitation
2. Awareness
3. Societal background
4. Literacy
5. Income

Tools of the Study

Tools used in the study are Microsoft excel, and SPSS Statistics Software. Descriptive statistics will be used to evaluate mean median and mode, KAI Square test will be used which will help to make comparison using frequencies. The factor test analysis will be used which will help to find the dominating factors toward the research.

Hypothesis

Ho : To signify that implementation of SBA have brought positive changes in the lifestyle and has lead to economic growth in the city.

H1 : To signify that implementation of SBA have not brought positive changes in the lifestyle and has not lead to economic growth in the city.

Scope and Importance of the Study

The study helps to understand the solid waste disposable methods and techniques implemented by the government. The study is based on district Indore. It covers habit, culture, and customs and other factors that influence the waste disposable. The opportunities created under SBA. Changes in the living patterns and impact of it on the overall economy of the city.

Limitations

1. The study fails to include whole of the city for data collection and analysis.
2. It fails to consider the effects of extraneous factors on the study.
3. It takes into consideration respondents from small sample size.

ANALYSIS ON THE PROGRESS OF MICROFINANCE PROGRAMMES LED TO SUSTAINABLE DEVELOPMENT

Rayees Ahmed. L
Assistant Professor, Indo Asian Academy Degree College, Bangalore

Introduction

A nation's development will be based on free flow of cash and movement of liquidity position in financial institution. Micro-finance is one of the ways to build a good society among lenders and depositors. Need for education, job opportunity and a sustainable income are the basic necessity of people. The SMEs, MSMEs are creating job opportunities with a factor of limited skills and development. Unto the growth of these industries will give a greater opportunity to the poor. The schemes of government of India are beneficial to a limited number of people. And hence, it is not up to the fulfilment of maximum number of people as when Noble prize winner Dr. Mohammed younus, for adopting the best micro finance programme in Bangladesh. Find a solution for needy and poor people giving micro finance for start-up fund, small credit, and short term loans and linked with SHG. The Indian government agencies and NGO's are implementing a number of development assistance programs promote rural areas as a means of micro finance and micro credit facilities.

Microfinance serves asa credit on short and long term assistance to poor individuals (below poverty line) The creation of social responsibility includes poverty alleviation and the broader impact of improving livelihood opportunities through different Government schemes piloted national programs for the development of villages, towns and other backward areas.

- Loans to rural for start up of agriculture, forestry, fishing, and other cottage industry
- Loans to poor and unemployed people
- Members of SHGs may get benefit by availing micro finance
- Maximum limit of loan under micro finance Rp25,000/-
- Terms and conditions offered to poor people on loan amount.

Microfinance is more popular than Microcredit, under micro credit small credit given to the borrower with interest. Microfinance deals with financial services including savings accounts and insurance. Microfinance defines the activity to target the poor and low-income individuals for the provision of financial services. Provision for savings and insurance, capacity building, and agricultural business development services

Approaches

1. Micro finance comprise that the borrowers are not 'weaker sections' in need of charity, but can be treated as responsible people on business terms for mutual profit .
2. Every poor household are getting benefit out of it.
3. Subsidized credit
4. 'Peer pressure' in groups helps in improving recoveries.
5. Maximum benefit of society's

Litrature Review

Mallory A. Owen (2006) the profound demand of Microfinance has excelled in and almost development of society and the increase of ideology among rural has increased a lot. Some of the village who opt microfinance in a fishing village in Senegal, has grown in innumerable transformation of business held with the driving microfinance movement and also brings a debate of pros and cons among public to the credibility of its widespread implementation programme, the greater task of lifting people out of poverty and empowering women, microfinance may have regressive long term potential for borrowers.

Crabb, P. (2008) critics are still in argument whether the microfinance institutions are currently self-sustaining the need of poor and a committee of researcher found that the economic environment in which the institution operates is a basic need factor in the ability of the institution to reach this goal, further its mission of outreach to the poor with along-term benefit should be associate. The sustainability of the micro lending institutions is analyzed here using a large cross-section of institutions and countries. The results show that microfinance institutions operate primarily in countries with a relatively low degree of overall economic freedom and that various economic policy factors are important to sustainability.

Muhammad Younus, a Nobel Prize winner, introduced the concept of Microfinance in Bangladesh in the name of "Grameen Bank". the Indian agriculture bank which has adopted the idea of (NABARD)The National Bank for Agriculture and Rural Development and started using the concept of microfinance in rural and urban India. Under this method the link between SHGs (Self-help groups), and NGOs banks will increase and the presence will grow. The SHG-Bank linkage programme, which has been in place since 1992 in India, has provided about 22.4 lakh for SHG finance.

Chintamani Prasad Patnaik (March 2012) the advent of microfinance development could be the best solution to all the problems in rural and urban areas will increase the contribution of finance in among the villagers. The development of microfinance is growing very mass and improving access to finance to each household. Basically, due to lack of knowledge the poor can't afford the loan from a commercial bank and also it visualization of the growth of self-help groups in many business areas. But there is a need for structural orientation of the groups to suit the requirements of new business.

Hunt, J &Kasynathan (2002) Microfinance should increase the viability of business among the poor and bring the light of evidence that the poorest families and the poorest women are not able to access credit. A different qualities and different type of schemes in microfinance packages is required to meet the needs of the poorest, both women and men. Donors need to revisit arguments about the sustainability of microfinance programmes. Financial sustainability must be balanced against the need to ensure that some credit packages are accessible to the poorest.

Objectives of the Study

1. To reach ultimate user of funds andproviding the maximum benefit of out of funds
2. To know the credit requirements and helps to grow the Small scale industries and trade.
3. To motivate the start up industries and provide them adequate facility for development
4. To maximise the network and planned procedure of utilization of finance
5. To remove imbalance in the society

Research Methodology

Research methodology is a framework for the study and is used as a guide in collecting, deriving and interpretive the data, it also explain the total no issued loan and collected from time to cost, since most studies are done under these two constraints.

Types of Research

Descriptive Research

In the study descriptive research design has been used. the researcher has no control over the variables; he can only report what has happened or what is happening, characteristics of particular individual or of the group. In descriptive and diagnostic study the researcher must be able to define clearly what he wants to measure and must find adequate method for measuring it.

Methods of Data Collection

Primary Data

The primary data are collected for the first time observation, communication with respondent in one or another form

Secondary Data

Secondary data are collected from various sources for e.g. books, magazine, newspaper, Internet, articles, journals and other reports

Features

1. Authorize and responsible for the development of micro finance group.
2. Liberation of Self Help Groups (SHGs) to issue loan.
3. Promotion of self-employment, and helping through
   - Education
   - income generation
   - arrangement of assets and liabilities
   - Consumption of goods and services
4. Bring a social change for women employability
5. Micro credit
   - Whenever needed
   - Flexibility of repayment
   - Fixed loans

Financial needs and financial services

Financial needs, services, activities of rural areas

- Prospect of microfinance: Microfinance brings a change in rural development by making the best of entrepreneur to do business in rural areas and to increase the market penetration for the goods and services.
- Poverty cycle: to improve the standards of household demand, and bring the needy things to home for improve in life such as e-stove, e-cooking methods etc.
- Lifecycle Needs: basic need for hospital, funerals, childbirth, education, homebuilding, widowhood, old age etc.
- Personal Emergencies and aid: to protect from sickness, injury, unemployment, theft, harassment or death.
- Overcome Disasters: such as fires, floods, cyclones and man-made events like war or bulldozing of dwellings.
- Investment Opportunities: expanding a business, buying land or equipment, improving housing, securing a job (which often requires paying a large bribe), etc.

Role of Microfinance

The micro credit of microfinance programme was first initiated in the year 1976 in Bangladesh with promise of providing credit to rural people and poor without collateral demand, alleviating poverty and unleashing human creativity and endeavour of the poor people. The catapult of economies which are affected by serious condition on poor and middle-class families. To overcome the obstacles in life and survive, the government initiation of programmes such as self help group

Stages Micro Finance

Awareness among the poor and needy

- To create awareness among the poor and need through community gatherings, association gatherings and empowerment forums.
- To build a strong relationship with customers
- To rely on one self and not expecting any other external assistance

Opportunities for development

Microfinance helps the poor to save and building opportunities for financial Resources and forecast the development of business by different ideas, creativity and other tools which can impart the knowledge for poor. To raise the start-up capital, and other investment to micro-bank

Business Model

To build a business model for every user who wishes to avail Micro loan from micro finance bank, that will allow the individuals to earn and generate more business and other Activities using resources mobilized in stage.

Economic Projects

At this stage of Micro-bank becomes involved in community development economic activities such as hospitals, health centres, community halls, schools and public taps. **Stage 5-**

Different Models Follow By Banks

Grameen Bank Model

- Allows Volunteers to form a 5 people in a group
- Mutual co-operation and moral binding and guarantees in lieu of collateral required by conventional banks
- documents are not necessary
- Runs on trust, accountability, participation and creativity
- Thus micro-credit/finance in issues to small group to enable them the opportunity to purchase equipment and other inputs.

Village Banking Model (Finca) Model

Progressive development of financialaid and create sustainablegroups. Community groups are trained on a module programme to form Community Credit Enterprise (CCE). Here small enterprises are allowed to permit members to buy shares as shareholders and generate capital to offer sustainable credit business models and allows to increase the investment.

The SKS & Non Banking Finance Company (NBFC) Model

The investments are most often through capital markets and the poor are bankable and lending to them can be commercially viable it is not necessary to depend on low cost funds to lend to them. The financial markets are only way to mobilize resources. This would mean mobilizing debt at market rates of interest. These institutions make use of debts and mezzanine assets. They accept investment from capital markets, complimented by borrowings from commercial banks and in turn the money is used for financing of micro projects and activities of the poor that ends up pushing the poor further below poverty line.

Policy by government of India

- Promoting working group on credit to the poor through SHGs, NGOs, NABARD, and other banks
- Microfinance Development and Equity Fund, NABARD, 2005
- Working group on Financing NBFCs by Banks- RBI

Self Help Groups (SHGs)

- Self- help groups (SHGs) have a tremendous role in reducing poverty in rural India. A growing number of poor people (mostly women) in various parts of India are members of SHGs participate and engage in savings and credit (S/C), as well as in other activities (income generation, natural resources management, literacy, child care and nutrition, etc.). The SHG system has proven to be very informative and reliable in offering services to women and other backward section of people

Microfinance Institutions

The increase phase development of a country will depend on the availability of credit to poor and small scale businessmen although the microfinance institutions is one of the most important tools to reach the rural poor. They give best finance at one end and other few people are not aware of micro finance. the focus to eradicate the poverty and bring a change in society While NGOs have to straddle with various non-financial and financial services activities and commercial bank with other operations. MFIs can solely focus on providing the financial service to the poor since the very objective of starting this kind of institution is to provide financial services in the rural areas. There are many examples of MFIs that has done some stellar work in this area such as ACCION International, Banco Sol and Grameen Bank. These institutions have helped many people in enhancing their lives and achieving a decent social status in the societies that they are living.

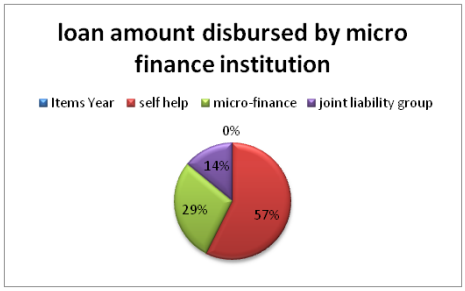
Overcoming the Challenges

Training programme operating in several states helped NGOS-MFIs provide their microfinance clients different set of skills for successfully running enterprises.

- To get trustfulness among customers that, microfinance is lending a hand on business
- Livelihood support for day to day and enterprises development.
- Motivating small and women entrepreneur to utilize the loans for productive purposes and have the potential to become entrepreneur.
- Establishing sources of credit.

The chart shows distribution of loan on the progress of microfinance programmes Rupees in billions

Items	Self-Help Groups		Micro-Finance Institutions		Joint liability group	
	Loans disbursed by banks		Loans disbursed by banks		Loans disbursed by banks	
Year	Number (in Millions)	Amount	Number (in millions)	Amount	Number (in Millions)	Amount
2016-17	1.9	388	2314	193	0.7	95
	(1.0)	(200)				
2015-16	1.8	373	647	208	0.57	62
	(0.9)	(194)				



Figures in brackets indicate the details about Self Help Groups (SHG) covered under National Rural Livelihoods Mission (NRLM) and National Urban Livelihoods Mission (NULM) for the years 2014-15, 2015-16 and 2016-17, earlier year data in brackets cover only NRLM/SGSY groups. The details of National Rural Livelihoods Mission (NRLM) and National Urban Livelihoods Mission (NULM) are not shown in chart.

Findings

- The depiction of picture shows the self-help group are contributing a highest of 57% in the society, micro finance group constitute a 29%, and 14% of joint liability group.
- Creation of SME and MSME a prior importance.
- Skill based training needed for illiterate and Women including creation (women empowerment forum).
- Provide short term assistance and loans to cottage and industrial workers.

Conclusion

To enable the microfinance activities in all the rural and urban areas profoundly, since many areas are not covered the schemes of micro finance, some areas it is assumed as short term credit with high interest. The Indian government has to bring a special awareness programmes by meeting, stage drama, cinema, short film, and advertisement are the special tools to promote the programme of micro finance roles, responsibilities and functions. The description of detailed functions will allow the customer to understand the theme of micro finance and maximise the presence throughout India with a vision and mission to establish the poverty by education, short term credit, finance, job opportunity and so on. Microfinance offers social recognition and empowerment. To bring a change in the society's environment and contributes a s account in micro finance to solving the problems of inadequate housing and urban services as an integral part of poverty alleviation programmes. A guaranteeing solution is to provide multipurpose loan or composite credit for income generation, housing improvement and consumption support. Consumption loan is found to be especially important during the gestation period between commencing a new economic activity and deriving positive income.

Suggestion

- Enable each poor section of people and women and small scale industries to overcome their poverty.
- Allow them to understand the benefits of microfinance.

- Micro credit should be available to all petty shop holders
- Offeringbest service of scheme to adopt.
- To reduce the gap between rich and poor.

References

1. Cooper, Donald R.; Schindler, Pamela S. (2003), "Business Research Method", 8th
2. Edition, McGraw-Hill Higher Education, Boston, USA
3. Easterby-Smith, M.; Thorpe, R.; Lowe, A. (2002), "Management Research – An
4. African Journal of Business Management Vol.3 (4), pp. 136-140, April, 2009
5. Available online at http://www.academicjournals.org/AJBM
6. American Development Bank, Washington, Dc.
7. PremaBasargekar, N.(2009), "How Empowering is Micro Entrepreneurship Developed through MicroFinance",Asia-Pacific Business Review, Vol. V. pp. 67-76
8. PawanGarga, N. (2009), "A Comparative Study of Opportunities, Growth and problems of Women Entrepreneurs", Asia-Pacific Business Review, Vol. V. pp. 87-94
9. VidyaSekhri, N. (2007). "Growth and Challenges Faced in Micro –Finance", Journal of IMS Group, Vol. (3), pp. 71-76
10. Geneva, Switzerland: World Health Organization; 2002: 89–121. Available at: http://www.who.int/violence_ injury_prevention/violence/world_report/en/full_en.pdf. Accessed July 23, 2007.

Website

1. http://www.microfinancesouthasia.net
2. http://www.worldbank.org
3. http://www.microfinance.com
4. http://www.grameen.org
5. http://www.microfinancegateway.com
6. http://www.cgap.org
7. http://www.adb.org/Microfinance/default.asp

TRENDS AND PATTERNS OF TRAFFIC VIOLATIONS IN BANGALORE

Mallikarjun. M
Department of Economics, Jain University, Bangalore

Jennifer Fernandes
Assistant Professor, Department of Economics, Jain University, Bangalore

Abstract

Traffic violation is a violation of vehicle laws that is committed by the driver of a vehicle, while the vehicle is moving. Such violations are also referred to as moving violations. Laws relating to moving violations and the associated penalties vary by jurisdiction. Road safety was treated as a transportation issue which is becoming a major health concern worldwide. A road traffic accident is caused by vehicle and secure on a road or in a place which the public have access, this include footpaths and bridle ways. World Health Organization and World Bank jointly had issued the report on road traffic injury prevention on World Health Day 2004 and among its findings 3000 people died each day and 75,000 were injured on account of poor road safety. The world report on road traffic accidents was well on their way to become the third leading cause of global death and its increasing day by day. Traffic accidents became a major problem in big cities. Traffic violation becomes one of the severe problems today because of the growth of industrialization and population there has been a tremendous growth in traffic. With the increase in traffic there arise a number of problems such as traffic jam, violation of traffic rules etc. Traffic accidents have become a major problem in Bangalore, not only health problem but also Bangalore's society problem.

Keywords: *Trends, Patterns, Traffic Violations*

Introduction

Traffic violation is a violation of vehicle laws that is committed by the driver of a vehicle, while the vehicle is moving. Such violations are also referred to as moving violations. Laws relating to moving violations and the associated penalties vary by jurisdiction. Road safety was treated as a transportation issue which is becoming a major health concern worldwide. A road traffic accident is caused by vehicle and secure on a road or in a place which the public have access, this include footpaths and bridle ways. World Health Organization and World Bank jointly had issued the report on road traffic injury prevention on World Health Day 2004 and among its findings 3000 people died each day and 75,000 were injured on account of poor road safety. The world report on road traffic accidents was well on their way to become the third leading cause of global death and its increasing day by day. Traffic accidents became a major problem in big cities. Traffic violation becomes one of the severe problems today because of the growth of industrialization and population there has been a tremendous growth in traffic. With the increase in traffic there arise a number of problems such as traffic jam, violation of traffic rules etc. Traffic accidents have become a major problem in Bangalore, not only health problem but also Bangalore's society problem. Deaths and injuries from road accidents increased rapidly due to the rapid growth of population. The negative effect of rapid growth of population in Bangalore has resulted in rapid growth of road accidents. However there was less road accidents before industrialization but after industrialization the number of accidents has increased. Not only in Bangaloreis traffic conditions very bad in other cities like Mumbai, Chennai, and Delhi. The accidents associated with these violations cause a huge loss to life, money and property, same is the case in every cities. Being a metro city and a highly populated one also, has a lot of road accidents every year, many people disobey the rules every day sometimes willingly and sometimes because they are forced to do so because of others. Also it has a vast population which causes a lot of traffic on the roads. Overcrowded roads because of a population, Maximum traffic is observed during office hours between 8.00-10.00AM and 5.00-8.00PM. Road accidents are the main cause of death of young men worldwide, and in these traffic accidents 60 percent are the boys. Many got injured while riding mini bikes, motorcycles etc. Motor vehicle accidents are the leading cause of death. Automobile accidents are more common among young drivers who use alcohol, or other drugs while driving. Young drivers and riders had seen more risk of crash accidents. Young often tend to be over confident, less experienced, drive with high speed and use of alcohol makes the worse combination for accidents. Safety

studies have found that a majority of accidents occur either due to driver's error or due to negligence of the safety. The actions like dangerous overtaking, lane cutting, jumping of signals, wrong parking, can be conducted as major cause for traffic violation s on the road. The traffic police manpower is found to be inadequate in the background of the huge growth in motor vehicles in Bangalore city. Every day thousands of people are killed and injured on our roads. Men, women or children walking, biking or riding to school or work, playing in the streets or setting out on long trips, will never return home, leaving behind shattered families and communities. Millions of people each year will spend long weeks in hospital after severe crashes and many will never be able to live, work or play as they used to do. Current efforts to address road safety are minimal in comparison to this growing human suffering. Road traffic injuries are a growing public health issue, disproportionately affecting vulnerable groups of road users, including the poor. More than half the people killed in traffic crashes are young adults aged between 15 and 44 years – often the breadwinners in a family. Road traffic injury prevention must be incorporated into a broad range of activities, such as the development and management of road infrastructure, the provision of safer vehicles, law enforcement, mobility planning, and the provision of health and hospital services, child welfare services, and urban and environmental planning. The health sector is an important partner in this process. Its roles are to strengthen the evidence base, provide appropriate pre-hospital and hospital care and rehabilitation, conduct advocacy, and contribute to the implementation and evaluation of interventions. Traffic system in India has been checked physically by the city's traffic police. This framework experienced clear time and area requirements. Traffic violations in India are reliably on an ascent in India, even in the metropolitan urban communities that are seen to have vigorous components to police and punish traffic guilty parties. The traffic violation management in India is not completely automated at whatever point a violation happens the traffic police charge fine for the violation. With increasing number of vehicles on road, heavy Traffic jams have increased in cities. This happened usually at the main junctions commonly in the morning, before office hour and in the evening, after office hours. The main effect of this increased time wasting of the people on the road. The solution for this problem is by developing the program which different time delay settings for red, orange and green signals at different junctions. The delay for junctions that have high volume of traffic should be set longer than the delay for the junction that has low traffic. At certain junctions, sometimes even if there is no traffic, people have to wait. Because the traffic light remains red for the preset time period, the road users should wait until the light turns green. The solution of this problem can be obtained by developing a system which detects traffic flow on each road and set timings of the signals accordingly. Usually, during traffic jam, the emergency vehicle, such as ambulance, fire brigade etc. gets struck in the traffic. This is because the road users wait for the traffic light to turn green. This is very critical problem because it can cause the emergency case to become complicated, involving life. Advanced transportation systems (ATS) are built from technologies such as sensing, controlling, engineering, and computing to solve traffic violation problems. Automobiles were at the core of transforming lives of individuals and nations during the 20th century. The century started with production of a few hundred automobiles per year and ended with over 50 million units produced for global consumption annually. Unfortunately, along with the growth of the automobile usage, the numbers of accidents leading to mortality and serious injuries have seen dramatic increases. Traffic-related accidents are become as a serious and growing problem. As many as 10,000 Delhiites violate traffic rules every day; so do 4,500 Mumbaikars. But Bangaloreans take the cake: 16,000 of them commit traffic violations daily. While 8,000 traffic violations are captured on roads, the other half are booked with the help of surveillance cameras, said by Bangalore City Traffic Police. Though Bangalore (38 lakh) and National Capital Region (35 lakh) have almost the same number of vehicles, traffic violations in the Karnataka capital are over one-and-a-half times those in NCR. Mumbai's vehicles (20 lakh) number a little over half of those in Bangalore, but that city has relatively fewer violations. In Bangalore, up to June 30, 4.45 lakh cases of riders not wearing helmets had been booked, 1.45 lakh were found speaking on mobiles while driving and 6.19 lakh motorists had parked their vehicles wrongly.

Bangalore, with a two-wheeler population of 28.8 lakh, saw 10.35 lakh riders being slapped with fines till June-end. Drivers of light motor vehicles, including cars and auto rickshaws, are second only to two-wheeler riders. Nearly 7.75 lakh of them had violated one rule or the other. When the alcohol content of a person driving/riding a motor vehicle is above 30mg per 100ml of blood, the person will be booked under Section 185 of the Motor Vehicles Act, which is a traffic offence. Once a person is caught for drunken driving, the traffic police issues a notice/challan along with a copy of the alcometer reading. Thereafter, the person caught will have to submit all the original motor vehicle documents or leave the motor vehicle at the Police Station in case he or she does not have the original documents. If the offence is committed for the first time, the punishment is six months imprisonment or payment of fine upto Rs. 2000/- or both. If the offence is being committed for the second time, the punishment is two years imprisonment or payment of fine up toRs. 3000/- or both. Bangalore City, has witnessed a phenomenal growth in vehicle population. As a result, many of the arterial roads and intersections are operating over the capacity and average Journey speeds on some of the key roads in the Central Area are lower than 10 km/h in the peak hour. Advance transportation system (ATS) are built from technologies such as sensing, controlling, engineering, and computing to solve transportation-related problems. A recent study by world Health Organization mentions that annually, over 12 million mortality and over 20 million serious injuries occur worldwide. Enhancement of traffic safety is pursued as a high priority item not only by various government agencies such as National Transportation Safety Administration but also by most major automobile manufactures. Road traffic fatalities have been increasing at about 8 percent annually for the last 10 years and show no signs of decreasing. Road transport sector plays a vital role in the development of a country. Ironically, this sector is also the most unsafe, responsible for deaths and injuries of millions of people, especially the young working population, throughout the world. Road travel brings society benefits, but the price society is paying for it is very high. As per WHO (2013) report, 1.24 million people were killed and 20 to 50 million sustained injuries on the world's roads in 2010.

Background of the Study

Bangalore is one of the fastest growing metropolitan city of Indian and it is also a fastest growing cities in Asia, it is the capital of state Karnataka. The name Bangalore is a new version of the city's name in kannada language called Bengaluru, it is globally recognized as IT capital of India and also as a well-developed industrial city. Bangalore city was built by Kempegowda in 1537. Bangalore developed as a center for colonial rule in South India. The development of Bangalore infrastructure brought many migrants from places like Tamil Nadu, Andhra Pradesh and also from the north parts of India. New places were added to the old town by creating new places like Chamrajpet, Sheshadripuram, Nagasandra, Yediyur, Basavangudi, Malleshwaram, Kalasipalya, Gandhinagar etc. During post-independence period Kumara Park and Jayanagara came into existence. Bangalore city was originally developed as a garden city but now slowly transformed into a software and industrial city, due to the establishment of the silicon park on the outskirts and establishment of large number of Information Technology companies located in the city has converted the Bangalore and its surroundings into Silicon Valley of the country. It is also known as the residential paradise with well-developed residential area, good roads with well grown trees, good commercial establishment, shopping malls etc.

Bangalore is located in the south east part of Karnataka. Bangalore district borders with Tumkur district in northwest, Mandya district in the south west, and Kolar district in the northeast, Chamarajanagar district in the south. Bangalore enjoys a pleasant climate throughout the year and it also receives both incoming and outgoing monsoons because of its geographic location. Bangalore city is a headquarters to several public manufacturing industries like Hindustan Aeronautics Limited (HAL), Hindustan Machine Tools (HMT), Bharat Heavy Electricals Limited (BHEL) etc.,

Due to the growth of these industries and IT companies in Bangalore city even the population of the city is also growing day by day, many people are migrating from other places to Bangalore in search of jobs, good education etc., many people are not using the transportation service provided by the

government but they are using their own vehicles like two wheelers and four wheelers, because of this rapid growth in population day by day in the city even the number of vehicles has increased and this growth of vehicles increased traffic in the Bangalore city. The traffic condition of the city is very bad at present. Growth of the motor vehicles causes air pollution, sound pollution and also road traffic accidents are increasing day by day in the city. Not only Bangalore is facing this road traffic accidents problem but also other metropolitan cities like Chennai, Mumbai, Delhi and Kolkata are also facing this problem. Many people will die in road traffic accidents and the main reasons for this are signal jump, over speed, drink and drive, riding without helmet, overtaking with high speed, driving on one way entry. These road traffic accidents are mainly depend on the driver, his carelessness, rash driving will also lead to accidents, many people have lost their lives in road traffic accidents on spot, many have died while taking them to the hospital, some people have lost their legs and hands etc.

Statement of the Research Problem

Traffic violations happens every day throughout the world, many people have lost their lives in road traffic accidents the main reason for this accidents are drivers and also the poor condition of the vehicles. The present study focuses on the factors responsible for traffic violations and to investigate the initiatives taken by the government to avoid traffic violations.

Research Gap

Although studies have focused on drink and drive, over speed, rash driving, children safety. The present study focuses on the factors which are responsible for traffic violations and investigating the initiatives take by the government to avoid traffic violations.

Research Question

In order to understand the factors responsible for traffic violations in Bangalore Urban city, we ask some questions like will you drive a car or any other vehicles after drinking? How many vehicles are there in your home? Will you ride a two wheeler without wearing a helmet?

Objectives of the Research

- To analyze the factors responsible for traffic violations in Bangalore urban.
- To examine the economic impact of traffic violation in the study area.
- To investigative measures initiatives taken by the government to avoid traffic violation.

Methodology

The study is based on primary as well as secondary data. A questionnaire is administered for 100 responds in the study area to collect the information. Secondary data will be collected through government websites, journals and research papers.

Tools of the Study

Statistical method, ANOVA, regression, correlation.

Excel, statistical method tools of mean, median and mode.

Hypotheses

Ho = There is no significance in the trends and patterns of traffic violations.

H1 = There is a significance in the trends and patterns of traffic violations.

Variables of the Study

The present study focuses on the factors which are responsible for traffic violations and investigating the initiatives take by the government to avoid traffic violations.

WORK-LIFE BALANCE OF WOMEN EMPLOYEES FOR IT SECTOR IN BANGALORE

Gita Thakkar
Department of Economics, Jain University, Bangalore

Jennifer Fernande
Assistant Professor, Department of Economics, Jain University, Bangalore

Abstract

Work-Life balance is the term used to describe practices in achieving a balance between the needs of the family, employees and work life. Work-Life balance is like a pendulum which moves back and forth and, as it is said, extremes are easy, strive for balance! It is a broad concept including proper prioritizing between "work " on one hand "life "on the other. It requires achieving equilibrium between personal work and professional work, so that it reduces the clashes between the domestic and official life. The fact that employees in huge buildings of booming Indian firms take home huge pay every month, can paint a rosy picture of their lives in anyone's mind. However, when we take a closer look, we see another reality that is not so clear. In reality, the lives of these individuals are marked by increasing responsibilities such as work pressures, volunteering, spouse and elderly parent care, agitating schedules, and extremely long hours at work which takes a toll on their health, and also relationships at home and social engagements. The idiom 'work-life balance' is rather more recent in origin, and has however, taken on a new meaning with the recent technological changes that have made it possible for workers to stay in touch 24 hours a day, seven days a week. It is true that there is no substitute for hard work, especially for the Indian professionals who are beginning to make a mark in the global business world. But, striking a balance between work and personal life is equally crucial. Smart phones, notepads, remote working technology and the like have meant that, even on holiday, people find it hard to 'switch off' and truly rest, and the complaint is often that people are expected to be 'on-call' at all times, without being allowed to have a life outside work. Employees are said to be the gigantic/largest resource of an organization. Attracting and recruiting the right people is very essential for the success of any organization.

Keywords: *Work-Life Balance: Women Employees; IT Sector*

Introduction

I am no bird; and no net ensnares me: I am a free human being with an independent will - Charlotte Bronte, Jane Eyre.

The term "work" can be defined as exertion or effort directed to produce or accomplish something; labor; toil.[3] It is used to paid employment or work. Work identifies a person's worth and place in a society and it influences one's psychological identity and sense of well being. It links a person to others, gives purpose to one's existence and advances the goals of culture. The term "Work-Life Balance" was first used in the United Kingdom in the late 1970's in order to portray the balance between an individual's personal and work life. In the United States this expression was first used in 1986 which meant creating a balance to schedule an equal number of hours for each of the various work and personal activities.

"Work-Life balance is defined as an employee's perception that multiple domains of personal time, family care, and work are maintained and integrated with a minimum of role conflict"(Clark, 2000; Ungerson & Yeandle, 2005).

Work-Life balance is the term used to describe practices in achieving a balance between the needs of the family, employees and work life. Work-Life balance is like a pendulum which moves back and forth and, as it is said, extremes are easy, strive for balance! It is a broad concept including proper prioritizing between "work " on one hand "life "on the other. It requires achieving equilibrium between personal work and professional work, so that it reduces the clashes between the domestic and official life.The fact that employees in huge buildings of booming Indian firms take home huge pay every month, can paint a rosy picture of their lives in anyone's mind. However, when we take a closer look, we see another reality that is not so clear. In reality, the lives of these individuals are marked by increasing responsibilities such as work pressures, volunteering, spouse and elderly parent care, agitating schedules, and extremely long hours at work which takes a toll on their health, and also relationships at home and social engagements.

The idiom 'work-life balance' is rather more recent in origin, and has however, taken on a new meaning with the recent technological changes that have made it possible for workers to stay in touch 24 hours a day, seven days a week. It is true that there is no substitute for hard work, especially for the Indian professionals who are beginning to make a mark in the global business world. But, striking a balance between work and personal life is equally crucial. Smart phones, notepads, remote working technology and the like have meant that, even on holiday, people find it hard to 'switch off' and truly rest, and the complaint is often that people are expected to be 'on-call' at all times, without being allowed to have a life outside work. Employees are said to be the gigantic/largest resource of an organization. Attracting and recruiting the right people is very essential for the success of any organization.

Back in olden days only man was considered as breadwinner and women were considered as home makers. From the very down to the human civilization, women have been playing very important character mostly in the family not only by rearing offspring and doing household work but also brining about income through handicrafts and many other ways. Women of the early centuries were mostly cramped to their kitchens. However, at a slow pace women started employing themselves in small factories, farms or workshops. Earlier, very small number of women had access to higher education. Whereas now, with passage of time and due to the increased pace of urbanization and modernization, the Indian families are undergoing rapid changes and women now have been subjected to higher educational opportunities, especially in the urban setting. Economic pressures over the last decade have remarkably increased the need for dual- earner families to the point that the majority of families now require two breadwinners to meet the rapid increase in the cost of living.

The role of women is so salient/crucial, that ignoring their role means no society will progress and process in a balanced and meaningful way. The working sphere of Women in India is changing at implausible pace due to progressive decline in trade barriers, modern innovation in technologies, globally interconnected market place, cut throat competition and business enmity and changing family and population patterns. These factors bring out tense fretfulness into the life of the women and then it is magnified many times if both the husband-wife work and they have children of growing age and old age parents. This constant worry can cause disorder on the psychological comfort of the women due to a feeling of diminished control over one's life and a discouraging perception that there is never enough time to have a reasonable stability and balance in life.

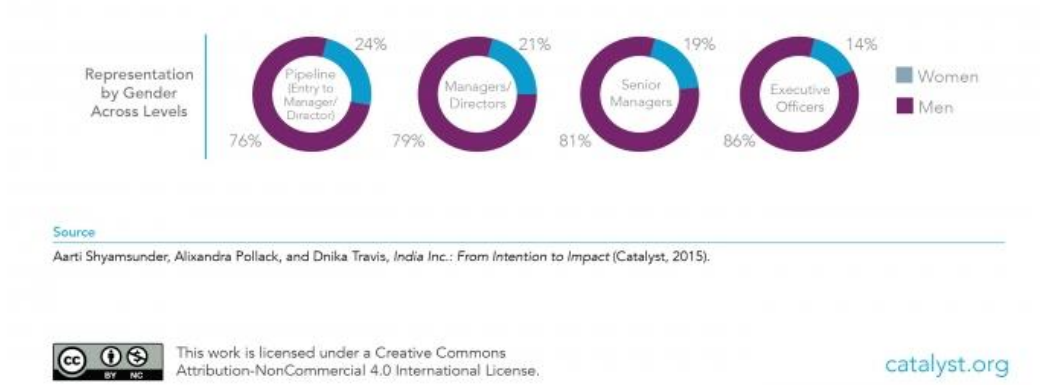
The nature and types of roles of women are changing in different cultures and society's. Each role have different set of demands and when such role demands overlaps, multiple problems arise. In India, the concern over Work-Life balance is steadily becoming a common talk especially for women employees. A Balanced work life for female employees is one where they extend their energy and effort between key areas of importance. Women employees havedual responsibility of work and home and therefore are expected to satisfy both the family as well as the work efficiently. A women of today is very ambitious and career oriented. They are even choosing to delay or forego child-bearing to pursue fulfilling careers.One of the economists commented on this trend claiming, "Women's economic empowerment is arguably the biggest social change of our times" (Anna,B.,2010).

Previously, the female workforce in India was mainly employed in non- managerial, subordinate or low profile positions. Now, they occupy almost all categories of positions in the workplace. These changes in work culture have added to women's duties and responsibilities to their family as well as to society (Mathew &Panchanatham 2009a; 2009b). The ever increasing work pressure is harming the working women leaving them with less time for themselves and increase in the level of stress. This mental stress for women leads to physical stress and causes ill health, headache, gastritis, body ache, de-motivation, low morale etc., leading to long term cardiac problems, diabetes or other psychiatric problems, high blood pressure, and low level of job performance etc. All these troubles create Work life conflict and job dissatisfaction especially for women employees, which results in: Increased Absenteeism, Increased Employee Turnover, Reduced Productivity, and Reduction in Job Satisfaction, Increased

Managerial Stress, Damage of Social relationship and Family. But, sometimes stress is essential as leads to some positive outcomes. Stress can sometimes motivate, refresh, and enable the employees to achieve more; the key appears to be in the capacity/ability of the employees to cope up with it. A healthy and positive employee oriented culture translates into enlarged job satisfaction and productivity while work life imbalance causes relationship deprivation and job dissatisfaction for women employees because working too much may cause women to miss family interactions as well as important events.

India is the second most populous country in the world out of which women comprises of 48.5 per cent of the population. Women Are Closing the Higher Education Gap as 46.8 per cent of all enrolled undergraduate students in India are women and 40.7 per cent of all enrolled PhD students are women.

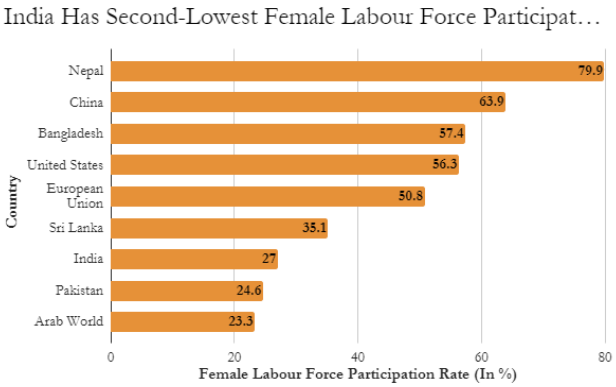
The Pipeline for women starts small and continuous to shrink.



Women hold only 7.7per cent of board seats and just 2.7per cent of board chairs.The industries with the highest percentage of women on boards are technology, media, and telecommunications.

Out of 323 total executive directorship positions (generally considered to be prerequisite to becoming CEO) on the Bombay Stock Exchange 100, just eight (2.5per cent) are held by women.54per cent of companies on the *Bombay Stock Exchange 100* have no women board directors.[1]

Rising income levels and stability in families are disincentivising women from joining the labour force, according to *Reassessing Patterns of Female Labor Force Participation in India*, a March 2017 report by the World Bank, which analysed government data from 2004-05 to 2011-12. As many as 19.6 million women–equivalent to the population of Romania–dropped out of the workforce during this period, of which rural women accounted for 53per cent, the report said.In its three year (2017-20) 'action agenda draft released on April 23, 2017, NITI Aayog, a government think-tank, stressed on the importance of promoting equal participation of women in the Indian economy. Only 27per cent Indian women are in the labour force–the lowest among BRICS countries; among G-20 countries, it is better only than Saudi Arabia, India Spend reported on April 9, 2016. The labour force does not include women who do "unpaid care work", which refers to all unpaid services within a household including care of people, housework and voluntary community work. India Has Second-Lowest Female Labour Force Participation Rate In South Asia.[2]



Background of the Study

Bangalore is the capital of Karnataka and also one of the metropolitan cities of India. It acquires population of over 15 million (as of January 2016), Bangalore is the third largest city in India and 27th largest city in the world. It is popularly known as the Silicon Valley of India. Bangalore is one of the most ethnically diverse cities in the country, with over 62% of the city's population encircled with migrants from other parts of India. Historically a multicultural city, Bangalore has experienced a dramatic social and cultural change with the arrival of the liberalization and expansion of the information technology and business process outsourcing industries in India. The economy of Bangalore plays an important role in the economy of India as a whole.

Review of Literature

Number of researchers have addressed the issue of work life balance in different angles. Some of the papers associated to the subject are reviewed. Julka Tapasya, Mathur Urvika in 2017, analyzes the problems faced by married working women in the process of handling their family and work life and foundthat working women had a tremendous pressure of work which resulted to an increase in stress.Tasnim Mayesha, Hossain Muhammed, Enam Fabiha, in 2017analyzes the causes of work- life imbalance among the working women in Bangladesh and found professional challenges which include lack of supervisory support, work overload, etc. that they face as the main cause of work life imbalance. Shalini in 2017, identifies the satisfaction level of employees in work- life balance and revealed that 49 per cent of the respondents are satisfied with the work life balance provided by the organization. Sastry P. Srinivasan, Nagajyothi in (2017), determines the level of satisfaction of work-life balance among the working women in unorganized sector in Brick Kiln in Ammenpur Mandal and found that are dissatisfied at work and personal needs. Yadav Rajesh, Dabhade Nishant, in 2014, studies the working environment in Banking and Education sector for the point view of Work- Life Balance and job satisfaction, and found 48 percent and 30.66 percent of respondents working environment in the organization as participative and autonomy. Sigroha Anju, in 2014, compares the perception of the women employees in three sectors regarding impact of Work-Life balance facilities on their performance. Shiva, in 2013, studies about the challenges faced by working women in their career development and analyses how working women balance their family life and work life. Delina G., Raya R. Prabhakara, in 2013, analyzes the Work-Life balance problems of married working women across their demographic characteristics such as age group, number of children and spouse's profession. Mehtha Vijayshri, in 2012, identifies the perception of women employees towards the benefits and challenges in Work-Life balance.

Statement of the Problem

The statement of the problem of the study is to analyze the factors like long working hours, traveling hours, attitude of superiors and work on holidays that have an adverse effect on the work life balance of the working women of IT sector in Bangalore.

Research Gap

Although studies have focused on the work life balance, work life imbalance, how the work life imbalance affects the employees performance which in turn affects their relationship with the employer. Not only have these, studies also been conducted on the effect of work life imbalance on the health of the female employees. Large number of research work have been conducted in various sectors such as the unorganized sector, the educational sector, the healthcare sector, the banking sector among the female employees working in Bangladesh, Nepal, in Brick Kilns, Tamil Nadu, Pune city, Haryana, Mathura, etc. Not much research has been undertaken on the female employees in Bangalore city especially with reference to IT sector; Bangalore being the IT hub. The present study aims to fill this research gap.

Research Questions

The various research questions of the study are:

1) What are the factors that affect the work-life balance of women employees of IT sector in Bangalore urban?

2) What are the various policies adopted by the organization in order to facilitate the work life balance for the female employees.
3) What are the various strategies used by women employees in order to maintain a balance their work and family life.

Research Objectives

1) To determine the factors affecting the work life balance of women employees in IT sector.
2) To identify the policies used by the women employees and the organization to facilitate work life balance.

Hypotheses

H_0: The factors do not have a significant impact on the work life balance of the female employees.

H_1: The factors have a significant impact on the work life balance of the female employees.

Methodology

The research design proposed for the study is descriptive type of research. It means that it deals with the quality of responses from the respondents, interest, attitudes, behavioral, beliefs and values, emotions, personality, self concept etc. The study is based on primary as well as secondary data. The technique of random sampling method is used in order to obtain the data. A schedule is executed to 100 respondents from various firms of the IT sector in Bangalore Urban. The secondary data and information is obtained throughavailable published articles, journals related to work life balance.

Tools of the Study

The study uses Chi square in order to test the hypotheses. The responses are measured on a five point Likert scale namely, highly dissatisfied, dissatisfied, average, highly satisfied, and satisfied. Percentage analysis is used to analyze the collected data.

Variables of the Study

The present study focuses on variables like work life balance, married and unmarried employees. An employee is termed as an individual who works either part time or full time under a deal of employment, whether on paper or oral, express or oblique, and has documented rights and duties; also called as worker. Work-Life balance is the term used to describe practices in achieving a balance between the needs of the family, employees and work life.It is a broad concept including proper prioritizing between “work “ on one hand “life “on the other. The work life balance is said to be the independent variable, whereas whether the female employee is married or unmarried is the dependent variable.

Scope and Importance

The study examines the work life balance of females employed in IT firms in Bangalore urban. Information is gathered from 100 female white collared employees with the purpose to gather more details about work and family life balance. This paper gives a brief understanding about the work life status of female employees in Bangalore.

Limitations of the Study

The study is focused only to literate working women. It does not cover all the companies of the IT hub in Bangalore. Further studies can include sample from the whole country of India employing other sampling techniques and data can be analyzed by more sophisticated statistical tools with a view to explore more reliable and interesting facts. Besides, the fact that the information given by the respondents might not be always fully accurate cannot be ignored.

GRADED INEQUALITIES: THE ROLE OF CASTE IN DEVELOPMENT OF RURAL INDIA

Tabassum Sultana & Justin Johnson
St Joseph's College, Bangalore

Abstract

Caste discrimination is visible in every sphere of the Indian society and culture. Rural India is not excluded from the caste system and discrimination. Caste system prevails in politics, business and economic field also. Caste system in the rural India divided people on the basis of graded inequality. Caste system is strongly rooted in the Indian rural system and it became a strong obstacle for the growth of rural areas. It prevents Dalits from economic, social and political rights. Caste discrimination forces Dalits and other marginalized communities to migrate from rural to urban area. Social exclusion is a multidimensional concept that incorporates various aspects of development. Within the discourse of social exclusion, caste based discrimination occupies a fundamental place incorporating vital aspects like class and gender. As a developing country, India is undergoing tremendous reforms in terms of democratic, economic, policy making, and rural development. This modern values and reforms have not done away with caste based inequalities in rural villages of India. All the government policies and schemes initiated for the rural development are affected by caste based discrimination. Addressing caste based discrimination in rural India is one of the crucial aspects in the process of development. The main objective of this paper is to study caste as a sociological problem for rural development in India. This paper analyses the emerging dynamics of caste based discrimination in rural development. It also examines the process of addressing caste as a form of discrimination in policies and legislations in rural India. It reflects the significance of addressing caste based discrimination as a major challenge for rural development. In addition it also examines the Dr. Babasaheb Ambedkar views on rural development and caste system in India. This paper includes statistical data of rural India, government policies and programmes; it also includes various international and national organizations like UNO, UNICEF, WTO, WB, NCDHR, AIDMAM, and IDSN.

Keywords: *Rural-development, Caste discrimination, Dalits, Inequality, Untouchability and Democracy*.

Introduction

History of Caste System in India

Historically the caste system has formed the social and economic framework for the life of the people in India. In its essential form, caste as the system of social and economic governance is based on principles and customary rules that: involve the division of people into social groups (castes) where assignments of rights are determined by birth, are fixed and hereditary, the assignment of basic rights among various castes is unequal and hierarchical, with those at the top enjoying most rights with least duties and those at the bottom performing most duties with no rights. In India, caste discrimination is traditionally ingrained in the Hindu caste system, according to which Dalits are considered 'outcasts'. However, caste systems and the ensuing discrimination have spread into Christian, Buddhist, Muslim and Sikh communities. They are also found in Africa, other parts of Asia, the Middle East and the Pacific and in Diaspora communities.

Caste discrimination affects an estimated more than 260 million people worldwide, the vast majority living in South Asia. It involves massive violations of civil, political, economic, social and cultural (Human Rights) rights. Caste systems divided people into unequal and hierarchical social groups. Those at the bottom are considered lesser human beings, impure and polluting to other caste groups. They are known to be untouchable and subjected to untouchability practices in both public and private spheres. Untouchables known in South Asia as Dalits are often forcibly assigned the most dirty, menial and hazardous jobs, and many are subjected to forced and bonded labour. Due to exclusion practiced by both state and non-state actors, they have limited access to resources, services and development, keeping most Dalits in severe poverty (IDSN 2016).

After independence, Indian government adopted new policies and laws to protect Dalits from the caste based violence and discrimination. Dr. Ambedkar, father of the Indian constitution inserted certain provisions like affirmative action policy and formation SC/ST commission to protect Dalits from Caste

system. Even though the government of India is taking certain measures to eradicate caste based inequalities, but still violence and atrocities on Dalits is very high.

Caste System and Rural Development

India lives in villages. More than seventy per cent of total Indian population as per Census 2001 lives in villages. A typical rural India reminds one of a small rural economy with agriculture and caste based occupations. Inspite of rapid economic reforms, massive industrialization, literacy growth, exposure to media- still rural India has preserved its ancient character of caste system (Rana 2008). Villages are segregated on the basis of caste; people are divided on the basis of their occupations, separate schools and separate temples are constructed to Dalits, and we can find caste discrimination in every corner and in every aspect of village system in India. In rural India to this day, those from higher castes will not marry Dalits. Dalits are the only ones who do the occupations considered degrading in Indian society, such as cleaning human waste, giving news of death and working with leather. Most of caste Hindus refuse to eat or drink with Dalits. In India, Dalits who showing signs of economic or social mobility or emancipation are cut down to size by the dominant castes via shocking acts of violence and humiliation known officially in India as 'atrocities'. With these features caste has become as a monster for rural development.

Patterns of Caste Discrimination in Rural India

These are main patters of caste discrimination and untouchability in rural India. This study explains how caste has become one of the major obstacles for the rural development in caste affected countries like India.

A. Residential segregation: Caste segregation is one of the primary features in all villages across the country. In almost all villages colonies are divided on the basis of caste and Dalits are forced to stay away from the main stream village. Caste discrimination is reinforced by state allocation of resources and facilities in villages; separate facilities are provided for separate caste-based neighbourhoods. In many villages, the state administration installs electricity, sanitation facilities, and water pumps in the upper-caste section, but neglects to do the same in the neighbouring, segregated Dalit area. Basic amenities such as water taps and wells are also segregated and medical facilities and the better, thatched-roof houses exist exclusively in the upper-caste colony. All these are evidences of caste discrimination and untouchability in rural India.

B. Caste, labour and land: Division of labour on the basis of caste is an essential feature of caste system in rural societies. Indian villages strongly practiced chaturvarnya system and the menial jobs were given to Dalits. In all villages land was controlled by dominant castes and they exploited other marginalized communities as labourers. Most Dalit victims of abuse in *India* are landless agricultural labourers who form the backbone of the nation's agrarian economy. Despite decades of land reform legislation, over 80 percent of Dalit households today are landless. Land is the prime asset in rural areas that determines an individual's standard of living and social status. As with many other low-caste populations, lack of access to land makes Dalits economically vulnerable; their dependency is exploited by landlords and allows for cast based discrimination and abuse.

C. Education and caste discrimination: Education is an essential instrument for the emancipation of humankind. Eminent philosophers of education such as John Dewey and father of sociology Emile Durkheim perceived education as a vehicle for social transformation and as a means of individual and community emancipation. According to Indian social reformer Mahatma Phule "Lack of education leads to lack of wisdom, which leads to lack of morals, which leads to lack of progress, which leads to lack of money, which leads to the oppression of the lower classes. See what state of the society one lack of education can cause. Although the Indian state proclaims education as a fundamental right for its citizens, almost one third of children of school-going age do not attend school. Sections of Indian society which are not in a position to access even a primary level of education include marginal groups such as women, adivasis, Dalits, backward classes, minorities, and children with disabilities. Dalits are more deprived section of Indian society, having suffered for centuries from the practice of untouchability, segregation and denial of access to multiple resources including those both economic and cultural (Harinath 2014).

Nambissan (1998) examined the learning experience of Dalits and Adivasi children, giving a number of reasons for the lack of education for these groups. The reasons which she identified are as follows: 1. Teacher's absenteeism and non-functioning of school for prolonged periods, 2. Shorter school days in

sc/st school areas in comparison to those of non-ssc/st. this is regarded as being due to the fact that most of the teachers belong to the dominant caste and chose not to stay in these villages, thus reducing school contact hours, 3. Problems relating to the unquestioned authority of teachers by students, which lead to children not asking questions, even to clarify doubts, 4. Texts books often portray marginalised communities in a negative light and depict them low and down the social hierarchy (in Harinath 2014).A 2006 study on untouchability in rural India covering 565 villages in 11 States has revealed that almost 37.8% of the Dalit children made to sit separately in government schools (IDSN 2016). These are the main reasons for high dropout rate among Dalit children in schools.

D. Caste and village politics: India's policy of "reservations" or caste-based quota system is an attempt by the government to remedy past injustices related to marginalized castes. To allow for proportional representation in certain state and federal institutions, the constitution reserves 22.5 percent of federal government jobs, seats in state legislatures, the lower house of parliament, and educational institutions for scheduled castes and scheduled tribes. Dalits who have contested political office in village councils and municipalities through seats that have been constitutionally "reserved" for them have been threatened with physical abuse and even death in order to get them to withdraw from the campaign. In many villages throughout India Dalits were killed by dominant caste communities and they faced caste based discrimination in public offices. They were not allowed to sit with dominant caste elected representatives; they are not allowed to enter inside the offices and panchayat institutions. According to IDSN report Dalits are forced to form separate lines at polling booths (IDSN 2016).

E. Government offices& policies: In many villages Dalits are not allowed to use public resources equally along with dominant caste people. They are not allowed to police stations, electoral offices, panchayat offices, schools, and hotels. Even today Dalits children are asked to sit outside the class room or they forced to sit in the end of the class room. In many villages Dalits are not allowed to sit in the hotels and they are not allowed to use same utensils along with upper caste. According to Human Rights Watch report during the earthquake camps in Gujarat Dalits and Muslims lived separately from upper-caste Hindus. While the government has allocated equal amounts of monetary compensation and food supplies to members of all communities, Dalit and Muslim populations did not have the same access to adequate shelter, electricity, running water, and other supplies available to others (IDSN 2016).

F. Atrocities on Dalit women: Caste based discrimination and atrocities on Dalit women are very high in rural India. From the ancient period Dalit women subjected to caste discrimination and exploitation on the name of Devadasi system. It is the practice of forced prostitution, in which a girl, usually before reaching the age of puberty, is ceremoniously dedicated or married to a temple. Literally meaning female servant of god, devadasis usually belong to the Dalit community. Once dedicated, the girl is unable to marry, forced to become a prostitute for upper caste community members. Even today many villages in India practice this system which violates basic human rights of Dalit women (HRW 2007 and IDSN 2016).

Implementation of Law

The government of India has taken several steps to prohibit the practice of untouchability. The constitution of India in its bill of rights (Part-III), besides guaranteeing to all citizens the basic civil and political rights and fundamental freedoms has special provisions that are directed at the practice of caste discrimination:

1. Article 15 prohibits subjection to a disadvantage based on caste with respect to access to shops, public restaurants, etc or to use of wells, roads and public places maintained out of social funds;
2. Article 16 prohibits discrimination on the grounds of caste or decent in respect of employment under the state;
3. Article 17 abolishes untouchability and prohibits its practice in any form;
4. Article 23 prohibits forced labour and discrimination on the ground of caste when imposing compulsory service for public purpose;
5. Article 29 (2) prohibits denial of admission to any educational institution on the ground of caste;
6. There also positive duties imposed on the state to redress imbalances due to past injuries against untouchables. Article 15(4) permits the state to make special provisions for the advancement of any socially and educationally backward class of citizens, including Scheduled Castes;

7. Article 16 (4) permits the state to reverse appointments for members of backward class not adequately represented in the state services;
8. Article 325 which prohibits disfranchisement on ground of caste
9. Article 330 and 333 which provide reserving of seats for members of the SC/ST in union and state legislatures according to the population in each constituency;
10. Article 338 which mandates the appointment of a National Commission for SC and ST for safeguarding their rights (Constitution of India 2016 and Shinde 2005).

The activities of caste based discrimination, untouchability, violence against Dalit women and children aremass violation of Indian constitution and International Human Rights Law.

Conclusion

As we already discussed India lives in villages. Most of the Indian population lives in villages. A typical rural India reminds one of a small rural economy with agriculture and caste based inequalities. The rapid economic reforms, industrialization, literacy growth, exposure to media failed in annihilation of caste. Villages are segregated on the basis of caste; people are divided on the basis of their occupations, separate schools and separate temples are constructed for Dalits. A HRW and IDSN 2006 study on untouchability in rural India covering almost 565 villages in 11 States has revealed practice of untouchability in villages. According to the study 37.8% of Dalits made to sit separately in government schools, 27.6% of the Dalits prevented from entering police stations, 14.4% of the Dalits not permitted to enter the 'panchayat' Local Government building, 73% of the Dalits not permitted to enter non-Dalit homes, and 70% of the Dalits and non-Dalits cannot eat together. This study clearly shows the how caste based discrimination has become a strong obstacle for rural development India. Inspite of government plans and schemes of rural development Indian villages are still not able to achieve estimated development because of caste discrimination and practice of untouchability.

References

1. Constitution of India (2016), Government of India, Constitution of India, Accessed [10 February 2016), URL: https://india.gov.in/my-government/constitution-india.
2. HarinathSilveru(2014), Dalit Women and Dropout Rates in Collegiate Education: A Study of the Warangal District of Andhra Pradesh, Cambridge scholars.
3. Human Rights Watch (2007), Hidden Apartheid Caste Discrimination against India's "Untouchables, Human Rights Watch, Volume 19, Issue 3 of Human Rights Watch short reports, Asia.
4. Human rights watch (2014), India: Marginalized Children Denied Education, Use Monitoring, Redress Mechanisms to Keep Pupils in School-https://www.hrw.org/news/2014/04/22/india-marginalized-children-denied-education.
5. IDSN (2015), Dalit school Education in India and key issues, http://idsn.org/wp-content/uploads/user_folder/pdf/New_files/Key_Issues/Education/DALIT_EDUCATION_IDSNbriefingpaper.pdf.
6. Nambissan B. Geeta (1996), Equity in Education Schooling o Dalit Children in India , Economic and Political Weekly, Vol. 31, No. 16/17 (Apr. 20-27, 16), pp. 1011-1024.
7. Nambissan B. Geetha (1995), Human rights education and Dalit children- Zakir Husain Centre of Educational Studies, Jawaharlal Nehru University, New Delhi)- PUCL Bulletin, April.http://www.pucl.org/from-archives/Dalit-tribal/education.htm.
8. Rana Mulchand. S (2008), Reservations in India: Myths and Realities, New Delhi: Concept Publishing Company.
9. RevankarRatna G. (1971), the Indian Constitution--: A Case Study of Backward Classes, New Jersey: Fairleigh Dickinson Univ Press.
10. ShindePrem Kumar (2005), Dalits and Human Rights: Dalits: the broken future Volume 3 of Dalits and Human Rights, ISBN, Delhi: Gyan Publishing House.
11. Times of India (2011), Dalit kids: 'Untouchables' and uneducated too, http://timesofindia.indiatimes.com/city/bhubaneswar/Dalit-kids-Untouchables-and-uneducated-too/articleshow/8079690.cms-by-Ashis Senapati.

IMPROVING SUSTAINABLE ROAD TRANSPORTATION SYSTEM IN INDIA

Ikram Pasha
Research Scholar, Jain University, Bangalore

Abstract

There are major issues faced by road transportation in India, we can see that most of the Indian road are unsurfaced. The maintenance of the roads is difficult in the rainy season, there is an issue with the national highways as well as they suffer from inadequate capacities, the quality of riding is very poor and fewer safety measures. The paper talks about the issues faced under road transportation, the measures taken by the government in order to improve the road transportation. When we talk about the issues we can see that the mixing of traffic is a major issue, the highway also faces this issue which may result in traffic time, congestion and road accidents. We can also see that the private participation is very less; because the constructions of the road take a long time and they yield very low returns. Not much importance is given for the highway development in the country; also the fund allocation for the construction and development of the roads is very less. The power strains have to be advanced by reduction of exhaust emissions, the design of road infrastructure can help manage the flow of traffic in the urban areas. The remaining paper analyses the importance of road transportation in the country, the measures taken by the government to improve the transportation. Also, the paper analyses the projects taken by the government for upcoming years, and the current figure of the Indian road transportation system.

Introduction

The second most important mode of transportation in India is road transportation, it covers all the places of the country were in the railways has not reached yet. It is a basic infrastructure which contributes to both agricultural and industrial sectors of the country, the construction and maintenance of roads take a longer time hence these generate huge employment opportunities because the industry is labor intensive when compared to housing and agricultural sectors. The state road consists of National highways which are the main routes to the country because it connects big cities, industrial centers, the major ports and the different states of the country. The length of the national highways is around 6572 kms; the construction and maintenance of the national highways are taken care by the central government as they are responsible for the same. Next, we have the state highways these highways connect the district headquarters and important towns and cities, with the national highways and the capital. The construction and maintenance of these highways is the responsibility of the central government, the length of the state highways was around 19578 kms. The district roads connect the production centers and the markets, they connect the roads with each and every district, and the total length of the roads was around 49909 kms.

Finally the village roads these are the roads that connect roads with villages, they also connect village roads to the district roads they are of two types classified and unclassified. The unclassified road is the non-metal roads; the total length of this road was 177542 kms. There is a negative impact on the road transportation on the environment including human health, the road transportation has huge energy consumption it is also responsible for air pollution and noise pollution in the urban areas. In order to address these issues, it is better to develop power strains and advance them, by reduction of exhaust emission. We can see that the road space is limited and demand for the use is more, the traffic is increasing every day and the importance given for expansion of the space is less. Because of this issue, the congestion is increasing, noise and air pollution are also increasing and finally, this results in the increase of the accident rates. In order to address this issues land use planning has to be undertaken, so that the demand for the transport can be fulfilled. The road space has to be managed efficiently, and the importance should be given to public transportation, also there should be financial institutions who work on the progress of the same. The importance should be given to highway safety it is seen that the percentage of road deaths is at 6 percent, the government is attempting to control this but still the issue continues.

Importance of road transportation in the country

Road transportation plays a very important role, as the movement of passengers and goods takes place for medium and short distances through this mode. The cost of road transportation is cheap when compared to other mode of transportation; it connects with commercial and personal purposes and provides service from one place to another. Roads are very important for farmers to move there perishable products, it is the road transport that brings the towns and villages in contact. They have gradients and sharp turns which the railways do not have, thus the road transportation have their own way of providing importance to the public and towards contribution of GDP.

Road transportation issues in the country

Roads are the national property we can see that the government keeps selling roads, to contractors and private builders. These private builders collect the toll charges even when the building is fully built and the investment is fully recovered, there are some sources through which we can see that the toll charges are charged even when the work on the highways begins and is in process. There is no extra facilities given by the private builders are the charges they charge is very high, it is seen that the government has entered into MCAs and offered 20 to 30 years of time frame to collect the toll, this benefit is been provided to the private builders. There is a commercial business were in the business is realized after the agreement is signed, the toll charged by the private parties is different from what is fixed by the government. Under the PPP scheme the government has projects which is been implemented through MCAs, these kind of agreements are unfair as concessions which are undue are given to the concessionaries who are the holders of the grant. This has caused issues and road burdens to the road users. The government is making changes in the toll policy and them focusing only the revenue generation but not on providing benefits to the road users. The implementation of the same has made the economy not capable of working properly when we consider the contributions of the road infrastructure towards the economy. A proposal was introduced in order to abolish the pool which is been implemented by third party, but without taking any consultations and recommendation from the stake holders a decision was implemented which resulted in the hike. The motor insurance act was implemented in the year 1988, by the ministry of finance this was proposed to amend the act which was introduced earlier in 1988 by deleting section 140 to 173. The act resulted in a new separate act which was the motor vehicles insurance and compensation act of 2011. We can see that the goa government has reduced the VAT on petrol, the diesel prices have been increasing this is a main component as it is used for various purposes, the reduction of the price and the taxes may have some changes. The transporters are affected by the pricing as the pricing is different from state to state, also we can see that they are affected by the sales tax and the norms prescribed by the check-post. One of the main issues faced by the highways is that there is no proper space available for parking, the vehicles coming across the country has to park on the highways. This can cause traffic problems and accidents, the projects taken by the government for the construction of highways are big and long projects, this has resulted in increase of the number of accidents, in order to address all this issues there should be construction of service roads and the subways wherever required so that the accidents issues can be minimized.

Road transportation issues in New Delhi

It is seen that the most common issue faced in national capital of India is the traffic jams, the issue is becoming adverse day by day it is because of the failure of the public transportation infrastructure. It is seen that the New Delhi is top ten cities in the world having the worst traffic jams; there are various reasons of which the traffic congestion has increased in Delhi. The increase in the number of vehicles on the roads of Delhi has become a major issue, it is seen that at least one lakhs vehicles are running everyday in Delhi. The increase in the length of the roads in New Delhi has a rate of 4.53% per year, which is of course very slow compared to the growing population; Density of the roads is around 155 km per 1000000 populations which is around 80 vehicles per km. When we talk about the intersections the cycle time ranges between 120 to 180 seconds, which causes long queues this actually happens in the

peak hours. We can also see mixed traffic, which includes the vehicles, buses, trucks etc. this cause's heavy traffic and leads to delays in the movement of traffic.

The population in Delhi is increasing at very high speed; including the workforce is also an important cause. Apart from all these issues the construction of metro networks, damaged roads, the roads which are in repair all contribute to severe traffic congestion in the city.

Outcomes of the issues

The traffic congestion has resulted in delays and reduction in speed; this may cause non-productive activity for most of the people as it affects the workplace timings or the personal works. The traffic fatalities has been seen which makes the travelling very unsafe in Delhi. The number of accidents has been increased in New Delhi, it is seen that Delhi has the highest accident rates in India and it is the third-highest in the world. The air and noise pollution has increased in New Delhi, it is seen that Delhi is the most polluted city this is causing many problems on the health of the people.

Suggestions for Improvement of Road Transport System in India

i) Development of Bypasses, Expressways and Four-Laning of Congested Corridors

When we consider the huge problem of congestion which is existed in national highways, it is very important for the construction of national highways, expressways, bypasses and four-laning of congested corridors throughout the country for maintaining an improved road network.

(ii)Financial Policy

There should be a proper financial policy which should be designed by the government of India for the improvement of road sector. Sufficient amount of fund should he invested for the maintenance and construction of roads, the toll tax which is imposed should be imposed by collecting sufficient funds.

(iii)Private Sector Participation on BOT Scheme

The Build-Operate and Transfer (BOT) has to be encouraged in order to develop a sound road network system throughout the country, this can be done as per the amendment of the national highways act in the year 1995. Based on the projects which has been mentioned and the present requirement the private sector of the participation has to be encouraged.

(iv) Maintenance of Existing Roads

We can see that there are issues and the conditions of the roads is not good, so important steps has to be taken for the proper maintenance of the roads in existing which has to be done in a shorter time. The fund has to be allocated by the government in order to address this issue, so that the roads can be maintained properly in the country.

(v) Technical Improvement*:*

Various steps has to be taken for the technological improvement of the road transport sector, the transport such as motor vehicles, trucks, bus, cars etc should adopt fuel efficiency technology by improvement of the technical leading to the unit cost of the road transport.

Projects taken by government to improve the road transportation

- Zoji la tunnel is strategic government project, which was started to connect with Srinagar, Leh and Kargil. It was approved by the cabinet committee on economic affairs, government of India.
- Projects worth 13411 crore has been sanctioned by the government of India, for the development of Assam highways between the period 2014-15 and 2017-18. This was done by the ministry of road transportation and highways.
- The Central Road Fund (Amendment) Bill, 2017 has been passed by Lok Sabha, Government of India which would result in revenues of Rs 2,300 crore (US$ 358.7 million) for national waterways in the country.
- The Government of India has succeeded in providing road connectivity to 85 per cent of the 178,184 eligible rural habitations in the country under its Pradhan Mantri Gram Sadak Yojana (PMGSY) since its launch in 2014.

- According to the minister for road and transport and highways, the land acquisition process which was taken for Bharatmala Pariyojana. The project is supposed to be completed by the end 2018, and the detail project reports will be shared by Mr. Nithin Gadkari.
- A value engineering programme has to be implemented in order to use the new technology and material; this has to be taken care by the ministry of road transportation and highways.

The government is also taking various steps to attract the investor's interest in order to take up various road development projects; the Indian government has plans to develop programmes like the National Highway Development Projects, Wing Extremism and Special Accelerated Road Development Programme in North East. All this programmes have been undertaken in order to develop 66,117 km of roads, also the government has indentified 2,000 km of coastal roads in order to improve the connectivity between the remote areas and ports. There are various plans which have been undertaken by the national highway authority of India, they have planned to build 50000 km of road by 2022. This is long term projects which will double the national highways network to 200000 km, under Pradhan Mantri Gram Sadak Yojana (PMGSY). The government has decided to spend 1 lakh crore for the year 2018-2020 in order to build roads in the country, there is also 5 year plan implemented by the government and they have decided to invest 7 trillion in order to contrast roads and highways.

Conclusion

Despite the projects taken by the government the various issues in road transportation still continues, as I have taken an example of new Delhi they are facing the highest traffic and pollution issues. But still India faces issues in infrastructure because of the growing population, we can see that there is inadequate transport in the country; this is causing issues to the welfare of the people. There should measure taken in the advancement of roads, bridges and other infrastructure. In order to conclude the issues regarding the transportation in India will be to work on the existing infrastructure, the population in India is also increasing because of the traffic and congestion of the roads so the same has to be worked and the issues has to be addressed.

References

1. K.RAJA. An article written on road transportation issues in the country
2. Article shared by prakash kumar, essay on road transportation system in India
3. Development of a sustainable road transport system A. Merkisz-Guranowska1, J. Merkisz1, M. Kozak1 & M. Jacyna2 1 Poznan University of Technology, Poland 2 Warsaw University of Technology, Poland 2:11
4. Urban transport Issues for India Professor Ken Gwilliam Institute for Transport Studies University of Leeds formerly Economic Advisor, Transport Sector, World Bank 2:16. 4:16
5. Indian roadways: Importance; development and classification of Indian railways
6. Article shared by smriti chand, on the role and importance of the roads in the economy
7. India brand equity foundation, an article written on road transportation
8. Traffic congestion in Delhi: Causes, outcomes and solutions by rumani saikia phukan December 8 2014

STRENGTHENING THE E-AGRICULTURE AND DEVELOPING ICT

Prof.Prema.R
Head, Department of Computer Science, Indo Asian Women's Degree College, Bangalore

Abstract
On the global level, practices done in agriculture and the advancement in technology related to agriculture are quite different from each other. Location of agriculture plays a significant role in the development of the agriculture areas. Techniques related to agriculture are improved due to the exchange in knowledge from different agricultural individuals residing throughout the world.For the advancement in agriculture sector, process of information sharing and the capability of using it made a great and positive impact for masses. Information Technology has become a path for the world. In India, there are various important and basic sectors required for the field of agriculture which includes national security, sustainable development, food security and poverty alleviation. For the country's GDP, there is a contribution of approx. 18% on all these sectors.
Keywords*: national security, sustainable development, food security and poverty alleviation*

Introduction

E-Agriculture Can Drive Rural Development

Information and communication technologies can help boost agricultural development by improving farmers' access to vital information. The Food and Agriculture Organization (FAO) of the United Nations, in collaboration with the International Telecommunication Union, has come up with the e-agriculture strategy to help countries use information and communication technology to drive rural development. Primarily focusing on agriculture, information and communication technologies (ICTs) can help boost agricultural development by improving farmers' access to vital information so that they make the best decisions and use their resources sustainably. According to Gerard Sylvester, Knowledge and Information Management Officer at the FAO, ICTs may include devices, networks, services and applications, including internet-based technologies and tools such as telephones, mobiles, televisions, radio, and satellites.

"Over the last decade, more than 74 percent of all ICTs in agriculture initiatives have failed to move beyond the pilot stage, resulting in wasted resources. This has happened due to the fact that the necessary ecosystem needed to sustain (the) services weren't comprehensively taken into consideration while designing the services," Sylvester said. E-agriculture and climate change In this era of climate change when extreme weather events have become the order of the day, e-agriculture can offer services like weather forecasts and disaster alerts which can help farmers plan accordingly.

Today, agriculture has become knowledge intensive and access to right information at the right time makes a huge difference in the livelihood of smallholder farmers. "With right kind of ICT services, governments can provide rural communities with information on weather, market prices and insurance that contribute to their livelihoods," Sylvester told Down To Earth. The e-agriculture framework can help countries develop their national e-agriculture strategies. In Asia, Bhutan, and Sri Lanka were the pilot countries that used this framework for developing their own national e-agriculture strategies. The Bhutan e-agriculture strategy called the e-RNR master plan, has been approved as of May 2016. The Sri Lanka e-agriculture strategy is now lying with the Ministry for approval. Bhutan and Sri Lanka have become the first two countries in the world to have full-fledged e-agriculture strategies. Access to right information is the key to addressing many problems faced in the agriculture sector. "Disaster preparedness and m management, with practices such as smart water management, maintenance of watersheds, accurate weather inform ation and so on can go a long way in reducing the impacts brought about by the vagaries of weather and climate change," Sylvester said. The right information can mean the difference between farmers going in for semi-arid crops like chickpeas, pigeon peas or groundnuts rather than cash crops for a particular season when rainfall is expected to be below average.

Developed countries are already using an array of technologies for boosting agriculture. In developing countries, e-agriculture brings accessible and affordable technologies to small holder farmers. Simple technologies such as investigation to find out about soil health can help a farmer decide on the type of fertiliser to use for his field. Another great thing is to link farmers with markets by giving out market prices information and helping them receive electronic payments. In India, initiatives such as e-Choupal have demonstrated the power of bringing communities together, Sylvester said. “There is a need for a strategic approach to integrate the growth and reach of ICTs in other fields such as banking, insurance and mobile technologies for agriculture is the key to identifying key services and solutions and making them sustainable,” he added. 'I he world produces enough food for everyone. One-third of the food produced is either lost or wasted; add to this the problem of people’s access to food being hindered by economic status, conflicts, and other manmade problems. All these factors are all in some way a challenge to food security and ensuring the world without hunger and malnutrition. “Climate will keep changing, the population will keep increasing. How well we adapt, adopt new practices, and try to mitigate the risk is the key to ensuring a food secure world.”

Sustainable Agriculture

Agriculture often places significant pressure on natural resources and the environment. Sustainable agricultural practices are intended to protect the environment, expand the Earth’s natural resource base, and maintain and improve soil fertility. Based on a multi-pronged goal, sustainable agriculture seeks to:

- Increase profitable farm income
- Promote environmental stewardship
- Enhance quality of life for farm families and communities
- Increase production for human food and fiber needs

ICT Use in Agriculture: Teleagriculture

TeleAgriculture is another subset of eAgriculture, referring to Agriculture related services delivered with agronomist participation via electronic communications. teleAgriculture overlaps with eAgriculture when Mobile communications technologies are employed in the delivery process. Establish model telecasters to showcase this approach, with e-government services acting as anchor services. Provide incentives for investors to establish services agencies to innovate and localize high-impact services Mobile 2.0 Mobile 2.0 applications offer services beyond simple voice or text Messages these include payments, money transfers and mobile banking.

Vertical farming

Vertical farming a component of urban agriculture is the practice of producing food in vertically stacked layers. This offers many advantages. Perhaps the most obvious is the ability to grow within urban environments and thus have fresher foods available faster and at lower costs. However, vertical farming won’t be limited to just urban environments like initially expected. Farmers in all areas can use it to make better use of available land and to grow crops that wouldn’t normally be viable in those locations.

Using Satellites to Monitor Changes in Land Use

All Asian governments have legal restrictions concerning the use of public land, especially the cutting of forest, and the conversion of forest to arable land. In practice, it is difficult to monitor what are usually remote areas, and detect changes in land use at an early stage before environmental damage has become serious. Satellite remote sensing is an effective way of monitoring resource management and changes occurring over large areas. The ”Gram-Schmidt Orthogonalization (GSO)” technique is being used in Malaysia to detect and monitor changes in land use, using data transmitted by satellite.

More Indian Future Projects

- Agricultural Projects being undertaken by the Centre for Data Engineering at International Institute of Information Technology, Hyderabad, India, are

- Web-based Agricultural Expert Advice Dissemination System: In this project, an effort is being made to build a cost-effective agricultural information dissemination system to disseminate expert agriculture knowledge to the farming community to improve the crop productivity.
- Pest Prediction Systems: In this project an effort to understand pest population dynamics and build pest prediction systems by applying data mining techniques on pest surveillance data set of Helicoverpa Armegira, Bacterial Leaf Blight, Groundnut leaf miner regarding Chickpea, Pigeonpea, Cotton, Groundnut, and Rice crops is being made. This project is carried out in collaboration with ICRISAT (The International Crops Research Institute for the Semi-Arid Tropics), Patancheru, Hyderabad (India) and CRIDA (The Central Research Institute of Dryland Agriculture), Hyderabad (India).

Some Challenges

Poor Broadband connectivity in rural areas because of absence of commercial competition. This also limits the IT extension in the rural areas, as the Internet is apparently an inevitable core infrastructure in IT utilization.

Factors to consider for IT in agriculture are as follows:

1. How to adjust software to the special features of agricultural information
2. How to enrich digital contents
3. How to utilize the Internet, especially to reduce time and monetary costs
4. How to provide easy-to-use systems for computer literacy?
5. How to convince farmers of the potential benefits of IT?

Constraints and Remedies for Effective Dissemination

Some of the major constraints delaying the spread of e-revolution to rural India are listed below:

1. Haphazard development: It is observed that some initiatives have already been made to provide IT based services to rural community. However, duplication of efforts are witnessed as most of the services revolve around limited subjects. Keeping in view the giant task involved, it is necessary to form a coordination mechanism to strive for a concerted effort to support farming community in the country. Such a coordination agency may only have advisory powers such as user interface, broad design, and delivery mechanism of the content, standards for setting up kiosks.

2. User friendliness: The success of this strategy depends on the ease with which rural population can use the content. This will require intuitive graphics based presentation. Touch screen kiosks are required to be set up to encourage greater participation

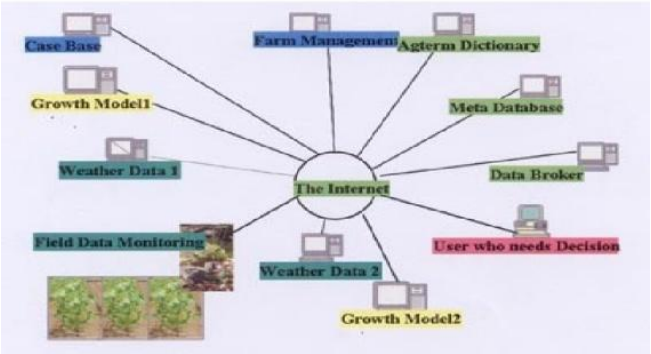
3. Local languages: Regional language fonts and mechanisms for synchronization of the content provides a challenge that needs to be met with careful planning.

E-Agriculture Activities

- Union Information and Service Centres(UISC)
- Agricultural Information and Service Centre
- Farmers information and Advice Centres
- TV Prog. Mati O Manush(soil and man)&Bangalri Krishi
- Community Agriculture Radio
- www.ais.gov.bd
- Agricultural Call Centre(16123)
- 30 GIS basedCrop Zoning Map(BARC)
- Web based RicsKnowledge Bank
- BARI Mobile apps
- National e-Information Hub

- E-book(AIS)
- SMS for sugarcane farmers-Purji(BSRI)
- Online fertilizer guide(SRDI)

Schematic Diagram of an Agricultural Grid System



References

1. D. Kumar, Information and Communication Technology (ICT) in Indian Agriculture, IT and Systems, pp.44-46, Feb.-March 2005.
2. International Development Enterprises India (IDEI), http://www.ideindia.org/ide/index1.shtml
3. E-agriculture Working Group (EWG), Analysis of Global e-agriculture Survey, pp.1-14, 2007.
4. World Submit on the Information Society (WSIS), http://www.itu.int/net/wsis/c7/e-agriculture/index.html
5. P. Thomas, Bhoomi, Gyan Ganga, e-governance and the Right to Information: ICTs and Development in India, Telematics and Informatics, vol.26, pp. 20-31, 2009.
6. Field to Market www.fieldtomarket.org
7. The Women's Empowerment in Agriculture Index (WEAI) www.ifpri.org/publication/womens-empowerment-agriculture-index
8. Agricultural Systems (Second Edition)-Agroecology and Rural Innovation for Development
9. Edited by:Sieglinde Snapp and Barry Pound
10. Encyclopedia of Agriculture and Food Systems, edited by N. K. Van Alfen
11. Weaver, P., L. Jansen, G. V. Grootveld, E. V. Spiegel, and P. Vergragt. Sustainable Technology Development. Sheffield, UK: Greenleaf Publishing, 2000.
12. Tacastacas, R.C. (2011). Value Chain Integration, Cluster Cooperation, and Sustainable Livelihoods: Bridging Small Farmers to High Value Markets. (Doctoral Dissertation, University of Missouri-Columbia, United States of America).

IMPLEMENTATION OF AES ALGORITHM FOR SECURING DATA STORAGE IN CLOUD COMPUTING

Prof. Adisesha. K
HOD, Computer Science Department, SJES College of Management Studies, Bangalore, India

Dr. Lakshma Reddy
Principal & Director, SJES College of Management Studies, Bangalore, India

Abstract

The evolution of Cloud computing makes the major changes in computing world, which is widely emerging technology in the recent years,and is adopted by most of the IT companies and other organizations. Cloud computing enables individuals and organizations to gain access to huge computing resources without capital investment. The cost of storing large amount of data in the local storage is higher than cloud storage. However, the cloud environment is considered untrusted as it is accessed through Internet. Therefore, people have security concerns on data storedin cloud environment. Cloud Computing is rising fast, with its data centers growing at an unprecedented rate. However, this has come with concerns over privacy, efficiency at the expense of resilience, and environmental sustainability, because of the dependence on Cloud vendors such as Google, Amazon and Microsoft. Our response is an alternative model for the Cloud conceptualization, providing a paradigm for Clouds in the community, utilizing networked personal computers for liberation from the centralized vendor model. However, On the other hand security of the data in the cloud database server is the key area of concern in the acceptance of cloud. It requires a very high degree of privacy and authentication. To protect the data in cloud database server cryptography is one of the important methods. Cryptography provides various symmetric and asymmetric algorithms to secure the data. This paper presents the symmetric cryptographic algorithm named as AES (Advanced Encryption Standard). It is based on several substitutions, permutation and transformation.

Keywords: *Cloud Computing, Cloudvendors, Cloud Environment, Sustainability, Security, Cryptography, AES.*

Introduction

Cloud Computing

Cloud computing is a recent technology that uses the Internet, central servers to organize the data and applications, which the user can access. Cloud computing allows individual users and other business peoples to use application without the necessity to install in their computer. They can access their files, which is located in other computer using Internet. This technology allows for more inefficient computing by centralizing storage, processing memory, and bandwidth. Cloud computing comes in three categories such as Software as a Service (SaaS), Infrastructure as a service (IaaS), Platform as a Service (PaaS).The SaaS provides application software which the user can use. The PaaS provides the platform for the user to do his operation .The IaaS provide physical or virtual devices for user. In addition, each provides different services to the user. The cloud is available in four-deployment model namely.

1. Public Cloud
2. Private Cloud
3. Community Cloud
4. Hybrid Cloud

Public Cloud: If the cloud computing resides outside an organization and any one access it is called public cloud. Third party hosts the files.

Example: Amazon Elastic Compute Cloud (EC2), Google AppEngine, Windows Azure Services Platform.

Private Cloud: If the cloud computing resides inside an organization and file or application accessed through a secure network is called private cloud.

Community Cloud: Different organization with same policy and requirement share a same cloud computing and this is called community cloud

Hybrid Cloud: Combination of public, private and community cloud is called hybrid cloud.

Cloud Storage

As Cloud, computing is popular and in demand, similarly cloud storage technology has greater demand. Cloud storage is a virtualized storage areas over a network basis .It provides services based on QoS assured. Cloud storage consist of many resources but act as single system. It has greater fault tolerance by redundancy. As the data generated by IT sectors are dramatically growing, we can't just update our hardware frequently instead we can adopt for cloud storage which is a better choice. Cloud storage can we just for different purpose just backing up our home desktop data into cloud storage or as an archive to maintain data for regulatory. Cloud storage allows user to access broad range of application and resources immediately, which are hosted by others.

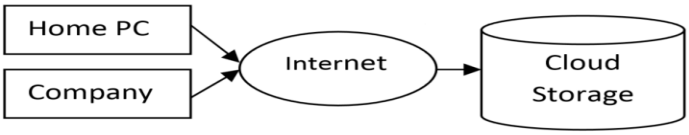


Figure 1: Sample Cloud Storage

Advantages

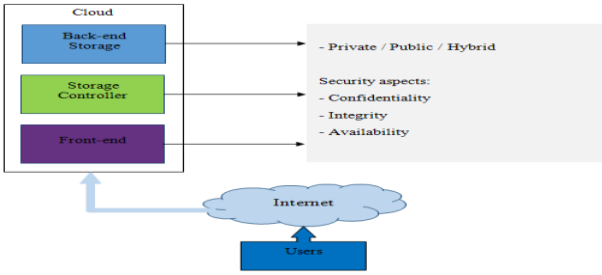
- Cloud storage avoids the need to buy storage equipment.
- We have to just pay for storage we are using.
- Cloud storage allows user to access broad range of application and resources immediately, which are hosted by others.

Disadvantages

- As data is redundant, it leads to be hacked by unauthorized users.
- Cloud storage is costly for day users.
- Security is not guaranteed completely for our data.

Cloud Storage Architecture

Figure 2: Generic Cloud Storage Architecture



Cloud storage architectures are mainly about delivering storage on demand in a highly scalable and multi-tenant way. Cloud storage architectures contain of a front end that exports an API to communicate with the backend storage. In traditional storage systems, this API is the SCSI protocol; nonetheless, in the cloud, these are evolving protocols. At this layer, there are web service, file-based Internet SCSI or iSCSI front ends. This layer is the first communication point between the user and the service provider. Users access the services using their credentials. The midpoint component layer is called storage controller that interconnects and communicates from the front API to the backend storages. This layer has a variety of features such as replication, traditional data placement algorithms with geographical location. Finally, the back-end consists of physical storage for data. This may be a central protocol that runs dedicated programs or a traditional back-end to the physical disks.

Advantages

Following are the advantages of cloud storage.

- Usability: All cloud storage services reviewed in this topic have desktop folders for Mac's and PC's. This allows users to drag and drop files between the cloud storage and their local storage.
- Bandwidth: You can avoid emailing files to individuals and instead send a web link to recipients through your email.
- Accessibility: Stored files can be accessed from anywhere and anytime via Internet connection.
- Disaster Recovery: It is highly recommended that businesses have an emergency backup plan ready in the case of an emergency. Cloud storage can be used as a backup plan by businesses by providing a

second copy of important files. These files are stored at a remote location and can be accessed through an internet connection.

- Cost Savings: Businesses and organizations can often reduce annual operating costs by using cloud storage; cloud storage costs about 3 cents per gigabyte to store data internally. Users can see additional cost savings because it does not require internal power to store information remotely.

Disadvantages

Following are the disadvantages of cloud storage.

- Usability: Be careful when using drag/drop to move a document into the cloud storage folder. This will permanently move your document from its original folder to the cloud storage location. One can do a copy and paste instead of drag/drop, if you want to retain the document's original location in addition to moving a copy onto the cloud storage folder.
- Bandwidth: Several cloud storage services have a specific bandwidth allowance. If an organization surpasses the given allowance, the additional charges could be significant. However, some providers allow unlimited bandwidth. This is a factor that companies should consider when looking at a cloud storage provider.
- Accessibility: If you have no internet connection, you have no access to your data.
- Software: If you want to be able to manipulate your files locally through multiple devices, you'll need to download the service on all devices.
- Data Security: There are concerns with the safety and privacy of important data stored remotely. The possibility of private data commingling with other organizations makes some businesses uneasy.

Open Challenges

Cloud computing introduces many challenges for system and application developers, engineers, system administrators, and service providers.

Figure 3: Cloud computing challenges

One of the major concerns when moving to Clouds is related to security, privacy, and trust. Security in particular, affects the entire cloud computing stack. The Cloud computing model promotes massive use of third party services and infrastructures to host important data or to perform critical operations.

Besides security, there are legal and regulatory issues that need to be taken care of. When moving applications and data to the Cloud, the providers may choose to locate them anywhere on the planet. The physical location of data centers and clusters determines the set of laws that can be applied to the management of data. For example, specific cryptography techniques could not be used because they are not allowed insome countries. Simply, specific classes of users, such as banks, would not be comfortableto put their sensitive data into the Cloud, in order to protect their customersand their business. At present, a conservative approach is taken for what concernshosting sensitive data.

Security Requirements in Cloud Storage

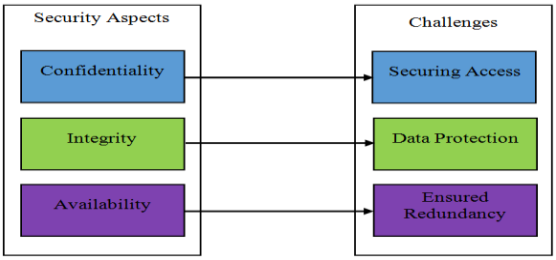
Security is the protection of information assets using technology, processes, and training. Cloud storage is a service that includes inherent vulnerabilities, but these have never dissuaded users from taking advantage of its economies and flexibilities. With adoption of a cloud model, users lose control over physical security. Users raised concerns whether unauthorized person accesses their data since there are many user sharing the resources over the cloud.

Sharing the cloud with other users possesses risks and concerns over security. Security overall covers mainly three aspects: Confidentiality, Integrity and Availability (CIA). These aspects are the topmost considerations in designing a security measure to ensure maximum protection.

- **Confidentiality:** Protecting data and information from disclosure to unauthorized person.

- **Integrity:** Protecting data and information from being modified by unauthorized person.
- **Availability**: Authorized people are able to access and use data and information whenever require.

Figure 4: Cloud Storage Security Aspects and Challenge



Securing Access

Securing access to protected data and information is restricted to certain level of user authorized to access it. This requires mechanisms to be in place to control the access of protected data. The sophistication of the access control mechanisms should be in parity with the value of the information being protected; the more sensitive or valuable the information the stronger the control mechanisms need to be. The foundation on which access control mechanisms are built starts with authentication, authorization and encryption.

Data Protection

Cloud storage that holds data and information on the cloud is obligated on data integrity. Data integrity depends on the assurance pursued by the user that data are unaltered on the provider infrastructure. Data integrity threats involve both malicious third party occurrences and hosting infrastructure weaknesses. Protecting data from loss and leakage involves integrity of many parties involved in providing the resources. Some schemes and mechanism are needed to ensure the data and information kept on the cloud is unaltered or removed. It is suggested to practice auditing techniques such as proof-of-irretrievability and proof-of-data possession to enable verification.

Ensured Redundancy

Data availability is critical. Cloud storage providers must guarantee that the data will always be available autonomously regardless of hardware failures, corrupted physical disks or downtime. Hardware failures can happen at any time. This includes failures caused by environmental failures such as a natural disaster, flood or even fire. A hardware design should be built on a basis of having redundancy and minimum single points of failure. At the design phase, the analyst creates a physical hardware map that shows all the connection points for server, storage, network and software.

As the central data storage is the key facility of the cloud, computing it is of prominent importance to provide the security. The art and science of concealing the messages to introduce secrecy in information security is recognized as cryptography.

Security goals of data cover three points namely: Availability, Confidentiality, and Integrity. Cryptography, in modern days is considered grouping of three types of algorithms. They are

1) ***Symmetric-key algorithms***
2) ***Asymmetric-key algorithms***
3) ***Hash functions***

Symmetric algorithms use the same key for encryption and decryption. This is termed as secret key. With the same key messages are encrypted by the sender and decrypted by the receiver. It contains algorithms like Data Encryption Standard (DES), Advanced Encryption Standard (AES), Ron's Code (RCn), and Triple DES, Blowfish etc.

Asymmetric algorithms use different keys. One key (public) is used for encryption and other (private key) is used for decryption. This is named as public key. Public key is known to public and private key is known to the user. It comprises various algorithms like Rivest, Shamir, &Adleman (RSA), Digital Signature Algorithm (DSA), Elliptic Curve (EC), Diffi-Hillman (DH), El Gamal etc.

The Hash functions use a mathematical transformation to irreversibly "encrypt" information. It contains algorithms like Message Digest, Secure Hash Algorithm [10].

We choose symmetric cryptosystem as solution as it has the speed and computational efficiency to handle encryption of large volumes of data. In symmetric cryptosystems, the longer the key length, the

stronger the encryption. AES is most frequently used encryption algorithm today this algorithm is based on several substitutions, permutations and linear transformations, each executed on data blocks of 16 byte. As of today, no practicable attack against AES exists. Therefore, AES remains the preferred encryption standard for governments, banks and high security systems around the world.

Literature Review

As is proposed a simple data protection model where data is encrypted using Advanced Encryption Standard (AES) before it is launched in the cloud, thus ensuring data confidentiality and security.

The privacy-preserving public auditing system for data storage security in cloud computing is intended, although the computational time is increased but the privacy is preserved where data is stored in the cloud by using the most prominent algorithm AES. AES data encryption is more scientifically capable and graceful cryptographic algorithm, but its main force rests in the key length. The time necessary to break an encryption algorithm is straight related to the length of the key used to secure the communication. AES allows choosing a various type of bits like 128-bit, 192-bit or 256-bit key, making it exponentially stronger than the 56-bit key of DES. It is described a new architecture for security of data storage in multicloud. Two mechanisms-data encryption and file splitting are used. When user uploads a file, it is encrypted using AES encryption algorithm. Then that encrypted file is divided into equal parts according to the number of clouds and stored into multicloud. This proposed system enhances the data security in multicloud. Based on the text files used and the experimental result it was concluded that AES Algorithm consumes least encryption and RSA consume longest encryption time. They also observed that Decryption of AES algorithm is better than other algorithms. From the simulation result, they evaluated that AES algorithm is much better than DES and RSA algorithm.

Implementation of AES Algorithm

AES acronym of Advanced Encryption Standard is a symmetric encryption algorithm.

Two Belgian cryptographers Joan Daemen and Vincent Rijmen developed the algorithm. It is useful when we want to encrypt a confidential text into a decryptable format, for example, when we need to send sensitive data in e-mail. The decryption of the encrypted text is possible only if we know the right password. AES is an iterative rather than Feistel cipher. It is based on ‘substitution–permutation network’. It comprises of a series of linked operations, some of which involve replacing inputs by specific outputs (substitutions) and others involve shuffling bits around (permutations).

The First Step

- AddRoundKey

The Following Four Functions Are Periodically Repeated

- SubByte
- ShiftRow
- MixColumn
- AddRoundKey

Final Step

- SubByte
- ShiftRow
- AddRoundKey

Byte Substitution (SubBytes)

The 16 input bytes are substituted by looking up a fixed table (S-box) given in design. The result is in a matrix of four rows and four columns.

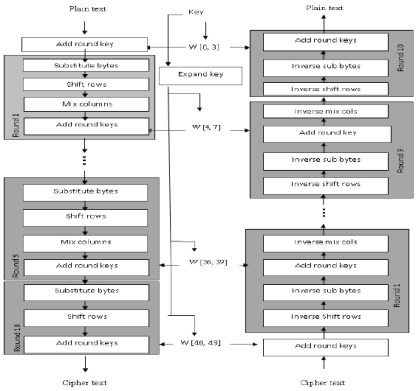


Figure 5: Encryption and decryption in AES

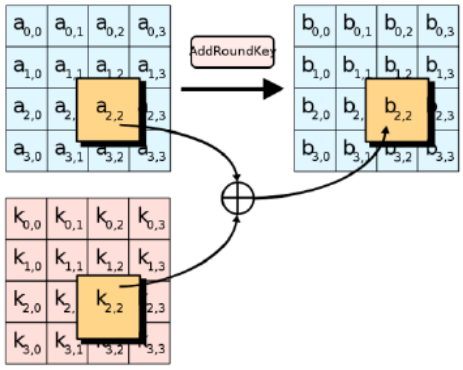


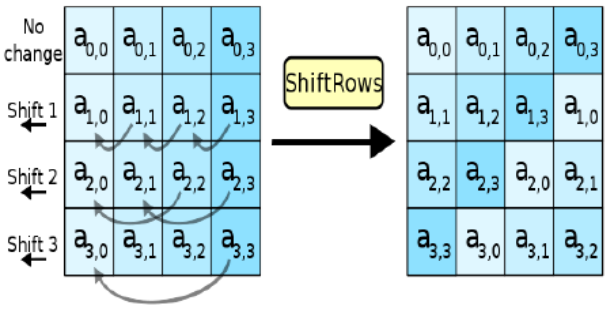
Figure 6: Byte Substitution (SubBytes)

Shift Rows

Each of the four rows of the matrix is shifted to the left. Any entries that 'fall off' are re-inserted on the right side of row. Shift is carried out as follows

- First row is not shifted.
- Second row is shifted one (byte) position to the left.
- Third row is shifted two positions to the left.
- Fourth row is shifted three positions to the left.
- The result is a new matrix consisting of the same 16 bytes but shifted with respect to each other.

Figure 7: Shift Rows



Mix Columns

Each column of four bytes is now transformed using a special mathematical function. This function takes as input the four bytes of one column and outputs four completely new bytes, which replace the original column. The result is another new matrix consisting of 16 new bytes. It should be noted that this step is not performed in the last round.

Addroundkey

The 16 bytes of the matrix are now considered as 128 bits and are XORed to the 128 bits of the round key. If this is the last round then the output is the ciphertext. Otherwise, the resulting 128 bits are interpreted as 16 bytes and we begin another similar round.

Conclusion

According to a report, "Worldwide and Regional Public IT Cloud Services 2012-2017 Forecast" released by IDC, cloud services will see as much as 41% growth from 2013 to 2017. Spending on IT cloud services worldwide will edge toward $100 billion by 2017. And in all this cloud growth, security will play a key role. AES encryption is the fastest method that has the flexibility and scalability and it is easily implemented. On the other hand, the required memory for AES algorithm is less than the Blowfish algorithm. AES algorithm has a very high security level because the 128, 192 or 256-bit key are used in this algorithm. It shows resistance against a variety of attacks such as square attack, key attack, key recovery attack and differential attack. Therefore, AES algorithm is a highly secure encryption method. Data can also protect against future attacks such as smash attacks. AES encryption algorithm has minimal

storage space and high performance without any weaknesses and limitations while other symmetric algorithms have some weaknesses and differences in performance and storage space.

References

1. Abha Sachdev, Mohit Bhansali "Enhancing Cloud Computing Security using AES Algorithm" International Journal of Computer Applications (0975 – 8887) Volume 67– No.9, April 2013
2. Dr.S.Gunasekaran, M.P.Lavanya " A REVIEW ON ENHANCING DATA SECURITY IN CLOUD COMPUTING USING RSA AND AES ALGORITHMS" (IJAER) 2015, Vol. No. 9, Issue No. IV, April ISSN: 2231-5152
3. Rashmi S. Ghavghave, Deepali M. Khatwar "Architecture for Data Security In Multicloud Using AES-256 Encryption Algorithm" International Journal on Recent and Innovation Trends in Computing and Communication Volume: 3 Issue: 5 ISSN: 2321-8169
4. Mr. Santosh P. Jadhav, Prof. B. R. Nandwalkar "Efficient Cloud Computing with Secure Data Storage using AES" International Journal of Advanced Research in Computer and Communication Engineering Vol. 4, Issue 6, June 2015 ISSN (Online) 2278-1021
5. Namita N. Pathak, Prof. Meghana Nagori "Enhanced Security for Multi Cloud Storage using AES Algorithm" International Journal of Computer Science and Information Technologies, Vol. 6 (6), 2015 ISSN:0975-9646
6. R. H. Sakr, F. Omara, O. Nomir "An Optimized Technique for Secure Data Over Cloud OS" International Journal of Emerging Trends & Technology in Computer Science (IJETTCS) Volume 3, Issue 3, May-June 2014 ISSN 2278-6856
7. Ranjit Kaur, Raminder Pal Singh "Enhanced Cloud Computing Security and Integrity Verification via Novel Encryption Techniques" SSRG International Journal of Mobile Computing & Application (SSRG-IJMCA) – volume 2 Issue 3 May to June 2015
8. P.V.NITHYABHARATHI, T.KOWSALYA, V.BASKAR "To Enhance Multimedia Security in Cloud Computing Environment Using RSA and AES" International Journal of Science, Engineering and Technology Research (IJSETR), Volume 3, Issue 2, February 2014
9. T. Shobana Maheswari, S. Kanagaraj and Shriram K. Vasudevan "Enhancement of Cloud Security Using AES 512 Bits" Research Journal of Applied Sciences, Engineering and Technology ISSN: 2040-7459; e-ISSN: 2040-7467 November 25, 2014
10. Disha Shah, "Digital Security Using Cryptographic Message Digest algorithm", International Journal of Advance Research in Computer Science and Management Studies, Volume 3, Issue 10, October 2015.
11. Dr. Prerna Mahajan & Abhishek Sachdeva "A Study of Encryption Algorithms AES, DES and RSA for Security" Global Journal of Computer Science and Technology Network, Web & Security Volume 13 Issue 15 Version 1.0 Year 2013 Online ISSN: 0975-4172 & Print ISSN: 0975-4350
12. Rachna Arora, Anshu Parashar " Secure User Data in Cloud Computing Using Encryption Algorithms" International Journal of Engineering Research and Applications (IJERA) Vol. 3, Issue 4, Jul-Aug 2013 ISSN: 2248-9622
13. Enterprise and Individual Users to fuel Growth in Cloud Computing [Online]. Available: http://www.redorbit.com/news/technology/1112692915/cloud-computing-growth-paas-saas-091212/
14. Kiruthika.R, Keerthana.S, Jeena.R" Enhancing Cloud Computing Security using AES Algorithm" International Journal of Advanced Research in Computer Science and Software Engineering Volume 5, Issue 3, March 2015 ISSN: 2277 128X

CLOUD BASED SECURITY SYSTEM TO NEXT GENERATION FOR SUSTAINABLE DEVELOPMENT

Mohandas. N.K
Assistant Professor, Department of Computer Science, Nagarjuna Degree College, Bangalore

Dr. Divakar
Research Guide
SAT SIMS Integrated Hardware and Ground System Simulation, Servo Controls, Belgaum

Abstract

Cloud computing has formed the conceptual and infrastructural basis for tomorrow's computing. The global computing infrastructure is rapidly moving towards cloud based architecture. While it is important to take advantages of cloud based computing by means of deploying it in different sectors, like Banking, insurance, medical etc. Since the cloud computing has exploded, with major vendors and lean start-ups rolling, it's a growing variety of cloud-based services for enterprises, including storage and computational services as well as software (applications) and infrastructure. In addition, cloud services such as ***Dropbox*** *that target the consumer market are increasingly being used by employees to store enterprise data, the security aspects in a cloud based computing environment remains at the core of interest. With the introduction of cloud based services and geographically dispersed cloud service providers, sensitive information of different entities are normally stored in remote servers and locations with the possibilities of being exposed to unwanted parties in situations where the cloud servers storing those information are compromised. If security is not robust and consistent, the flexibility and advantages that cloud computing has to offer will have little credibility. This paper presents a review on the cloud computing concepts as well as security issues to next generation and also it is inherent within the context of cloud computing and cloud infrastructure.*

Usually cloud computing services are delivered by a third-party provider who owns the infrastructure. The major advantages include scalelibilty, resilience, flexibility, efficiency and outsourcing non-core activities. Despite the potential gains issues and challenges which may hamper growth of cloud

Keywords: *Cloud Computing, Security, Sustainable Development*

Introduction

Recent developments in the field of could computing have changed the way of computing as well as the concept of computing resources. In a cloud based computing infrastructure, the resources are normally in someone else's premise or network and accessed remotely by the Processing is done remotely implying the fact that the data and other elements from a person need to be transmitted to the cloud infrastructure or server for processing; and the output is returned upon completion of required processing. In some cases, it might be required or at least possible for a person to store data on remote cloud servers. These gives the following three sensitive states.

1. The transmission of personal sensitive data to the cloud server,
2. The transmission of data from the cloud server to clients' computers,
3. The storage of clients' personal data in cloud servers which are remote server not owned by the clients.

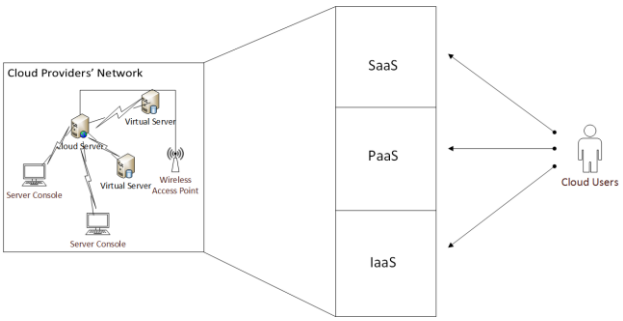
All the above three states of cloud computing are severely prone to security that makes there search and investigation within the security aspects of cloud computing practice an imperative one. There have been a number of different ways that are being used in cloud computing, Security has been at the core of safe computing practices. When it is possible for any unwanted party to any private computers by means of different ways of 'hacking'; the provision of widening the scope to access someone's personal data by means of cloud computing eventually raises further security concerns. Cloud computing cannot eliminate this scope due to its nature and approach. As a result, security has always been an issue with cloud computing practices. Robustness of security and a secured computing infrastructure is not a one-off effort, it is rather ongoing this makes it essential to analyze and realize the state-of-the-art of the cloud computing security as a mandatory practice. Cloud is mainly categorized as private cloud, community cloud, public cloud and hybrid cloud the discussion in this paper assumes only one category of cloud

exists which is public cloud; as this assumption will well satisfy all the characteristics of any other type of cloud. Due to its diversified potentiality, The study presented in this paper is organized with a view to discuss and indentify the approach to cloud computing as well as the security issues and concerns that must be taken into account in the deployment towards a cloud based computing infrastructure. Discussion on the technological concepts and approaches to cloud computing including the architectural illustration has been taken into consideration within the context of discussion in this paper. Security issues inherent in cloud computing approach have been discussed afterwards. The exploration in the technological and security concerns of cloud computing has led to the concluding realization on the overall aspects of cloud computing. The approaches to counter security issues inherent in cloud computing are numerous with diversified facets and applications which has been kept out of scope. A discussion on the authentication of cloud computing has been addressed as it forms the holistic basis to embedded integrity in the context of cloud computing security.

Cloud Computing Infrastructure

The term cloud computing is rather a concept which is a generalized meaning evolved from distributed and grid computing. Cloud computing is described as the offspring of distributed andgrid computing by some authors. The straightforward meaning of cloud computing refers to the features and scenarios where total computing could be done by using someone else's network where ownership of hardware and soft resources are of external (third) parties. In general practice, the dispersive nature of the resources that are considered to be the 'cloud' to the users are essentially in the form of distributed computing; In recent years, the cloud has evolved in two broad perspectives – to rent the infrastructure in cloud, or to rent any specific service in the cloud. Where the former one deals with the hardware and software usage on the cloud, the later one is confined only with the 'soft' products or services from the cloud service and infrastructure providers. The computing world has been introduced with a number of terminologies like,

- **Software-as-a service (SaaS)-**This offers limited power to the consumer in terms of customizing ability. The SaaS model fundamentally allows hosting web services and computer software application for users.
- **Platform–as-a-service (PaaS) -** This provides services to host application tools for development and other libraries to cloud infrastructure. Subscribing to this service means the user receives an API from the provider to access platform application or software development. a PaaS user can configure the applications developed or the ones that are run on the platform.
- **Infrastructure-as-a-service (IaaS) –**Thisis the most important and integrated one. It provides storage networks and other computer resources that are provided according to the service characteristics of the cloud. IaaS users have the freedom to configure and migrate workload between resource provisioning entities. For instance Amazon provides virtual server via API which allows users to move workload to VM's within datacenters.



SaaS (Software as a Service), PaaS (Platform as a Service) and IaaS (Infrastructure as a Service) with the evolution of cloud computing. As discussed earlier, the term 'cloud computing' is rather a concept, so are the terminologies to define different types of cloud computing. and distributed computing which varies in terms of infrastructure, services, deployment and geographic dispersion In a pervasive meaning within the context of computer networks,Thus the concept of cloud based services is hierarchically built from bottom to top in the order ofIaaS, PaaS and SaaS. This is merely the level of abstraction that defines the extent to which anEnd-user could 'borrow' the resources

ranging from infrastructure to software – the core concernOf security and the fashion of computing are not affected by this level of abstraction. As a result,Security is to be considered within any form of cloud infrastructure. It shows the hierarchical arrangement based on which a cloud is perceived in the form of IaaS, PaaS and SaaS from any cloud end-user's viewpoint.

Security Issues in Cloud

Cloud computing comes with numerous possibilities and challenges simultaneously. Of the Challenges, security is considered to be a critical barrier for cloud computing in its path to success. The security challenges for cloud computing approach are somewhat dynamic and vast. Data location is a crucial factor in cloud computing security Location transparency is one of the prominent flexibilities for cloud computing, which is a security threat at the same time – without knowing the specific location of data storage, the provision of data protection act for some region might be severely affected and violated. Cloud users' personal data security is thus a crucial concern in a cloud computing environment In terms of customers' personal or business data security, the strategic policies of the cloud providers are highest significance as the technical security solely is not adequate to address the problem. Trust is another problem which raises security concerns to use cloud service for the reason that it is directly related to the credibility and authenticity of the cloud service providers. Trust establishment might become the key to establish a successful cloud computing environment. The provision of trust model is essential in cloud computing as this is a common interest area for all stakeholders for any given cloud computing scenario. Trust in cloud might be dependent on a number of factors among which some are automation management, Trust in cloud is not a technical security issue, but it is the most influential soft factor that is driven by security issues inherent in cloud computing to a great extent. All kinds of attacks that are applicable to a computer network and the data in transit equally applies to cloud based services – some threats in this category are man-in-the-middle attack, phishing, eavesdropping, sniffing and other similar attacks. DDoS (Distributed Denial of Service) attack is one common yet major attack for cloud computing infrastructure. The well known DDoS attack can be a potential problem for cloud computing, though not with any exception of having no option to mitigate this. The security of virtual machine will define the integrity and level of security of a cloud environment to greater extent, used in a cloud environment might have security loopholes which in turn would pose security risks to the cloud infrastructure itself. The problem with third party APIs as well as spammers are threats to the cloud environment.

As cloud computing normally means using public networks and subsequently putting the transmitting data exposed to the world, cyber attacks in any form are anticipated for cloud computing. The existing contemporary cloud based services have been found to suffer from vulnerability issues with the existence of possible security loopholes that could be exploited by an attacker. Security and privacy both are concerns in cloud computing due to the nature of such computing approach. Confidentiality, availability and integrity are the generalized categories into which the security concerns of a cloud environment falls. Threats for a cloud infrastructure are applicable both to data and infrastructure Different modes of data transfer and communication means Huge amount of data transfer is a common anticipation in a cloud environment, the communication technology used along with the security concerns of the adapted communication technology also becomes a security concern for the cloud computing approach. The broadcast nature of some communication technology is a core concern in this regard Cloud environment is associated with both physical and virtual resources and they pose different level of security issues – having no sophisticated authentication mechanism to fully address the security threats is an existing problem for cloud computing. It has mainly resulted in the situations where grid computing has been taken as an embedded part ofcloud computing As the virtualized resources are highly coupled with a cloud infrastructure, intrusion related security concerns are of utmost priority as part of security issues. Arbitrary intermittent intrusion needs to be monitored in the operational context of a cloud computing infrastructure where the severity of possibility for a virtual machine to be compromised is to be taken into account Some authors have argued that using Internet technologies is not a must for cloud computing- but

the cost efficiency and globalization trends will enforce and motivate almost all the businesses to admit Internet and associated technologies to be the ultimate means towards cloud computing approach. As a result, total Internet related security concerns are anticipated to be automatically added on top of the cloud-specific security issues. Bringing portability is one of the means to make cloud services flexible. The portability of cloud services would also be associated with security concerns. Cloud portability enables the cloud users to switch among different cloud service providers without being affected with the necessity to change the ways to accomplish tasks in different ways. It is a clear provision on bargaining power for the cloud users; but at the same time, the security issues with cloud portability are to be counted. Cloud portability might bring severe degree of API based security threats The wide transition to mobile computing practices in recent years has made it imperative to include mobile computing and its associated technologies as an essential part of cloud computing. Resource scarcity as well as other constraints of mobile computing is barriers to cloud computing. The demand of huge data processing is a problem for mobile end-user devices which has been further complemented by the security concerns of mobile cloud computing. For mobile cloud computing, the device level limitations has inspired researchers to suggest the inclusion of another level of cloud termed as 'mobile cloud' to aid the processing of the specific computing and processing for mobile computing devices. The earlier explained broadcast nature of satellite communication and related security issues are equally applicable to the mobile cloud computing due to its being wireless communication. The hierarchical arrangement of cloud computing facilitates different level of extensibility for the cloud users with varying degree of associated security issues Security issues for cloud computing are described by some authors as an obvious one due to its nature. In a business model, the risks for the consumers are related to and dependent on the relevant approaches and policies of the cloud service providers the consumers are dealing with. Using cloud products or services may lead to security concerns for the consumers if they are not well aware with the type and particulars of the products or services they are to procure or to use in a cloud environment; this is also related to the cloud providers' identity and reliability. One of the inherent problems in this context is that, the consumers might normally not be able to identify or foresee all the risks involved in the specific cloud transaction.

Conclusions

Cloud computing has enormous prospects, but the security threats embedded in cloud computing approach are directly proportional to its offered advantages. Cloud computing is a great opportunity and lucrative option both to the businesses and the attackers – either parties can have their own advantages from cloud computing. The vast possibilities of cloud computing cannot be ignored solely for the security issues reason. Cloud computing is inevitable to become the ideal and possibly the ultimate approach to business computing though the security barriers along with other issues need to be resolved for cloud computing to make it more viable, given its total advantages and dynamism and provided it is deployed within an integrated and secured infrastructural framework for sustainable development. Based on the fact that the impact of cloud computing can include both the technical and social settings, the research on cloud computing and its related work can change higher education sector and systematic way in changes and emphasis on sustainable development.

References

1. Agarwal, A. and Agarwal, A. (2011). The Security Risks Associated with Cloud Computing. International Journal of Computer Applications in Engineering Sciences, 1 (Special Issue on CNS), 257-259.
2. Indian journal of Computer Science. Volume-2 May-June2017.

INFORMATION AND COMMUNICATION TECHNOLOGY FOR GREEN AND SUSTAINABILITY

Preethi. P.G
Asst. Professor, Department of Computer Science, Indo Asian Academy Degree College, Bangalore

Abstract
The term Green Informative explain the utilization of informatics in the interest of natural environment and natural resources regarding the sustainable development. Recently information communication technology introduced eservices with broad band network infrastructure, wireless and mobile technologies. The dimensions of Green Informatics contribution are: the reduction of energy consumption, the rise of environmental awareness, the effective communication for environmental issues and the environmental monitoring and surveillance systems , as a means to protect and restore natural ecosystems potential. In this we discuss the key role of information technologies in the environmental protection and sustainability while maintaining the green behavior.
Keywords: *Green Informatics, Green ICTs, e-m services, environmental protection, sustainability*

Introduction

Nowadays the role information communication technologies in the field of environment protection and climate change received significant attention in different types of international forums. Increasing temperatures and frequent incidences of floods and storms shows the evident impact of climate change and also effect on the balance of the ecosystems. Combating climate change involves strategic solution such as the improvement of energy efficiency, increase usage of renewable energy source sources while ensutring the reliability of energy supplies and promote green and sustainable product.

With growing concern concerning global climate change and unpredictability of energy markets, computing has begun to acknowledge green information and communication technologies (ICT), in which the environmental impact is taken into consideration in the design of new technologies and systems (Bronk et.al., 2010). Discussion on the topic of " Green and information technogies" are frequent and the interest in ICT's potential is not as much appreciated and often fails to get the attention it deserves to reflect solutions . Green Informatics incorporate different kind of design methods, construction methods and the information diffusion techniques and aim to the optimal environmental governance, in the interest of the natural environment and the natural resources regarding sustainability in combination to management of the energy requirements in a way that exploits the alternative energy sources. Informatics are ICT tools, services and technologies in combination with green practices and green behavior either for the ICT industrial sector or the ICT user/citizen that contribute not only to the protection and restoration of the environment but also to the enhancement of the quality of human life. So, the notion of ''Green Informatics'' has rather become synonymous with eco-friendly techs and software tools such as Virtualization, Recycling and Telecommuting.

Green IT aims to minimize the negative impact of IT operations on the environment by designing, manufacturing, operating and disposing of computers and computer-related products in an environmental-friendly manner. The motives behind green IT practices include reducing the use of hazardous materials, maximizing energy efficiency during the product's lifetime and promoting the biodegradability of unused and outdated products. Since broadband has potential to transform the daily process in both work and life it has been the gateway to the networked economy.it opens a door to new business models and growth opportunities during the global economic crisis (Broadband Commission, 2012). Services provided using broadband access on the Internet shows high and fix transmission rate for quality internet almost globally. Some of the most common web-based products of the suite of e-services are e-learning, e-working, e-banking, e-voting, e-government, e-commerce, e-shop, e-research, e-medicine and e-payment. Nowadays mobile broadband services and technologies also contribute to sustainable development through green banking, green commerce, green governance, green constructions, etc

Since the ''carbon footprint'' is constantly increasing the revolution of information and communication technologies resulted in increase of the green house effect. A carbon foot print is also known as carbon profile. it is the total amount of CO2 and green gas emission (methane, N2O etc) associated with a product. In the study of Gatner shows that total amount of CO2 emission from the ICT industry could amount 2% of the global carbon emission. At the same time the Information and communication technology application are act as a tool for global environmental protection strategy and they present a huge potential to improve performance across the economy and society, as it concerns the remaining 97-98% (OECD, 2009).

	2009	2015	2020
Data Centers	121.30	229.87	369.48
PCs	126.69	222.41	516.55
Mobiles	1.54	3.74	6.58
Gaming Consoles	11.23	26.04	40.22
Carbon Conversion Number (CCN)	1.3	1.265	1.23
Total	260.77	482.06	932.84

The Green Informatics Contribution and Dimension

- The important dimensions of Green Informatics to the environment and environmental sustainability are:
- Production and usage towards low carbon economy
- Environmental awareness with information diffusion through training and education
- Provide effective and reliable communication system for environmental projects and networks
- Sustainable environmental governance

Energy consumption and gas emission reduction

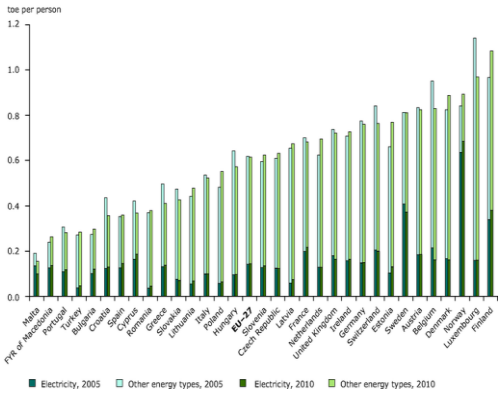
Green Informatics can contribute through:

- Developing effient energy saver systems, technologies and smart devises using smart energy management system
- Developing Applications for energy saver policies using renewable sources such as solar energy and photovoltaic, wind energy, bio-fuel, bio-climatic technology, anti-pollutants technology, etc
- Recycling of e-waste such as old IT systems, chips, PC, hardware, printers, mobile phones, etc.

Recent survey shows that the 40% of the total energy consumption is due to households, so innovative ''smart houses'', green constructions of bio-climate material and green architecture making use of innovative energy sensor – IT systems can achieve to reduce and manage the electricity consumption and air-conditioning requirements.as a result of economic crisis and increased environmental awareness of the public, the manufactures of technical and industrial product were obliged to change direct about their energy consumption. The concern taken by the producer towards energy reduction covering every computing device, from the laptops and mobiles to the data centers, has been and will be presumably successful. Nowadays consumer shows their preferences for Smart devices, new, noticeably less energy-consuming technologies, renewable energy sources and updated, more efficient cooling systems with improved energy management software (INFOCOM, 2012).

The transition to a low-carbon society by 2050 includes the vision to live and work in low-energy and low-emission buildings, with intelligent heating and cooling systems. They going to introduce electric car and train and therefore our living-environment will be less polluted and cleaner. It is also important during global economic crisis that the sector of green construction and house energy improvement can lead to new job places. In Figure 2, shows the average per capita final energy consumption of households in 2005 and 2010 (EU, 2012).eco-friendly products, a recycling perspective, even using sustainability checklists, designed to help evaluate how sustainable ar home is, as well as provide ideas for increasing home sustainability that include many no or low cost actions (World Green, 2012). Moreover, clever use of e- and m-services can be a tool for less energy consumption in everyday life and in work. In the case of paper use it is important that nowadays correspondence of files, studies, data, photos, maps, etc can be acquired in digital type using internet and smart devices. The production and distribution of new products and services through broadband tends to minimize the needed energy that is estimated through carbon footprint.

Figure 2 Average per capita final energy consumption of households in 2005 and 2010, divided into electricity consumption and other energy types (*Source: EEA)*



Using Green Informatics tools and services through broadband / 3G Internet, there is a profit for the environment and for the citizen with the decrease of cost and time to access government divisions (24 hours/7 days services), with energy save (no transportation), with degradation of pollute emission (carbon footprint). Similarly, in the sector of e-commerce and e-business new innovative business solutions are in favour of either the entrepreneur or the final customer

Environmental awareness with information diffusion through training and education programs

Training and education programs helps the people to understand environmental problems and the current environmental policies that are practiced globally. Remote and isolated populations can be encouraged to learn and be environmentally aware through (wireless/mobile) internet, especially when it is difficult to satisfy through traditional channels (newspapers, TV, radio, magazines, etc).There are hundreds of websites ,blogs, network groups etc that share the environment related information. These sources provide an open platform for everyone to speak and participate their vision.

The enhancement of people's skills and awareness can be achieved through learning. Some of the learning software packages are the presentations and educational games and generally the use of e-services such as e-class, e-learning, distance-learning, web-based learning, lifelong learning

Providing effective and reliable communication system for environmental projects and networks

Communication system for environmental projects and networks can be effective through innovative information and communication technologies for environmental projects and networks in local, regional, national, cross-border and trans-national level. The success of environmental projects prerequisites the effective communication of stakeholders participants, secured through innovative Green Informatics tools and services. Green Informatics secures information flow for their viability and quick/safe communication. Environmental networks can survive including various scientific stakeholders:

- Environmental groups, societies, unions, clubs, etc
- Research Institutes
- Government Organizations / divisions / ministries
- Non-government Organizations (NGO)
- Local authorities
- Research groups.

Sustainable environmental governance

Nowadays Green ICT provide a way to public sector's performance in terms of information and service delivery.This will encourage the citizen to participate in decision making process and make government more accountable and effective. ICTs are key elements supporting the growth of e-governance initiatives, strategies and projects. Governance constitutes a distinct policy regarding management issues and designates processes with special focus on decision making, while it indicates the total sum of given and anticipated mechanisms. Presently, the governance of natural ecosystems, forests, lakes, rivers, natural resources and agricultures has to face the increased diversity of connections between different environmental characteristics and decisions of local, regional, national, and supranational relevance, with high coordination and exchange between administrative entities and actors across the public/private and the expert/stakeholder divide (Andreopoulou et al., 2011).

Information and Communication Technologies for Green and Sustainability

Using e-mobile innovation we solve environmental problems and we ensure the sustainable environmental management with environmental data. ''ICT for sustainable growth'' is aspecific process that focuses on greening with ICT (and also on greening of ICT). Six policy areas have been selected as priorities (Ernst and Young, 2011):

a. Energy Efficiency of the ICT Sector (greening of ICT)
b. Smart Sustainable Cities (greening with ICT)
c. Energy Efficient Buildings (greening with ICT)
d. Smart Grids (greening with ICT)
e. Water Management (greening with ICT)
f. Climate Change Management (greening with ICT).

Green Informatics supports the construction and improvement of natural environment and resources surveillance systems, as a means to protect and restore natural ecosystems potential (forests, lakes, rivers, wetlands, etc) and introduce prevention actions, such as observatories, innovative tele-detection for forest fires - river floods - land erosions - climate change, monitoring and alarm systems, improvement of infrastructure and communication equipment, GIS technology, etc. Although research attempts are carried out locally successfully, in Institutes and research centers, at often considerable cost, their use remain limited and local. Effective organization, access and management of all-available information in environmental databases constitute an important factor within decision-making process.

Environmental projects have to manage large interdisciplinary multivariable data sets that include a lot of variables from different sources and with different structure (meteorological, biological, economic, etc) and this has been successfully achieved through multidisciplinary environmental data management with databases. Environmental monitoring is an extremely useful tool for a large proportion of people. Network technologies can integrate geospatial technologies aiming to sustain agricultural and environmental observation networks and mission-critical agricultural and environmental applications can be deployed. Sensor networks through wireless networks can help to collect from remote places time-series of environmental data. They are sent wirelessly/automatically to local databases in Institutes, Labs, etc and then data are analyzed for the study of sensitive environmental parameters. Data are analyzed with enhanced software and visual graphs are continuously produced for comparison. The analysis of data provides simulation models that simulate effectively the environmental reality. Models can provide future forecasts. Decision-makers can evaluate alternative future scenarios with decision support system (DSS). DSSs are Information Systems given certain parameters we can provide wise management aiming to environmental sustainability. Decision support information systems may use:

- Environmental databases
- GIS
- ARIMA modeling (time-series analysis)
- Multi-variant analysis/multi-criteria analysis
- Fuzzy logic
- Expert systems, etc to help local authorities/stakeholders to decide towards sustainable environmental management, wise use of natural resources and also protect from natural disasters. Whereas world opinion, business, and Information Systems units acknowledge problem, the IS academic community seems largely ignorant of the challenge of sustainable development, with a few exceptions (e.g., Avital et al. 2007, Watson et.al., 2010).

Conclusion

Information and Communication Technologies can play a key role in the environmental protection, the environmental sustainability, the environmental education and the rural sustainable development. Green IT enhances the sustainability of computing through manufacturing lower impact materials and products, reduced energy consumption of data centers and computers, and better recycling and end of life management (Center for Sustainable Systems, 2011). Using Green Informatics tools, services and

technologies can contribute to the Environmental and Rural Sustainability. Yet, Green Informatics cannot substitute people and their behavior that still constitutes the most critical factor within environmental protection and sustainability

References

1. Andreopoulou, Z.S. 2009. Adoption of Information and Communication Technologies in public forest service in Greece. Journal of Environmental Protection and Ecology. 10(4): 1194-1204.
2. Andreopoulou, Z.S., B. Manos, N. Polman and D. Viaggi. 2011. Agricultural and Environmental Informatics, Governance, and Management: Emerging Research Applications. IGIGlobal. USA
3. Avital, M., Lyytinen, K., King, J. L., Gordon, M. D., Granger- Happ, E., Mason, R. O., and Watson, R. T. 2007. Leveraging Information technology to Support Agents of world benefit. Communications of he AIS (19), 567-588.Broadband
4. Commission. 2012. The Broadband Bridge: Linking ICT with Climate Action for a Low-Carbon Economy. Available at: http://www.broadbandcommission.org/Documents/Climate/BD-bbcomm-climate.pdf (18/9/2012).
5. Bronk, C., Lingamneni, A., &Palem, K. (2010). Innovation for sustainability in information and communication technologies (ICT). Internal report, Rice University, http://www. rice. edu/nationalmedia/multimedia/2010-10-11-ictreport. pdf (last accessed March 23, 2011).
6. Center for Sustainable Systems. 2011. Green IT. University of Michigan. Available at: http://css.snre.umich.edu/css_doc/CSS09-07.pdf (18/9/2012).
7. Ernst and Young. 2011. The Role of Green ICT in Enabling Smart Growth in Estonia. Available at: http://www.pamlin.net/new/wp-content/uploads/EY_MKM_Green_ICT_study_2011_FINAL-REPORT2.pdf (18/9/2012).
8. EC.2006. The European Eco-label for Personal Computers: The official EU mark for Greener Products, available at: ec.europa.eu/environment/ecolabel/product/pg_personalcomputers_en.htm.
9. EC.2006a. The European Eco-label for Portable Computers: The official EU mark for Greener Products, available at: ec.europa.eu/environment/ecolabel/product/pg_portablecomputers_en.htm. EC. 2007. Carbon Footprint – What it is and how to measure it. European Platform on Life Cycle Assessment. Available at: http://lct.jrc.ec.europa.eu/pdf-directory/Carbon-footprint.pdf (18/9/2012).
10. EC. 2011. Sustainable Development. Available at: http://ec.europa.eu/environment/eussd/ (18/9/2012).
11. EC. 2012. Guidelines for trans-european energy infrastructure. Available at http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0658:FIN:EN:DOCEEA. 2012. European Environment Agency. Available at: http://www.eea.europa.eu/data-and-maps/
12. Gartner. 2007. Gartner estimates ICT Industry Accounts for 2 Percent of Global CO2 Emissions. Available at: http://www.gartner.com/it/page.jsp?id=503867 (18/9/2012).
13. Green Press Initiative. 2008. Annual Report.
14. INFOCOM, 2012. Give green a chance. Conference Overview.4th Infocom Green ICT 2012 Conference. http://infocomgreen.gr.
15. OECD, 2009. Towards Green ICT Strategies: Assessing Policies and Programmes on ICT and the Environment. OECD Conference on “ICTs, the environment and climate change”, Helsingør, Denmark, 27-28 May 2009 www.oecd.org/sti/ict/green-ict.
16. YPEKA, 2012. Climate change.Ministry of Environment and climate change. www.ypeka.gr
17. World Green, 2012. World Green. Leonardo Academy. Living. Available at : www.worldgreen.org
18. WWF, 2011. Outline for the First Global IT Strategy for CO2 Reductions. Available at: http://wwf.panda.org/ (18/9/2012).
19. Watson, R.T., Boudreau, M.-C., Chen, A.J. , 2010. IS and Environmentally Sustainable Development IS Quarterly Vol. 34 No. 1/March 2010.

INTERNET OF THINGS IOT IN THE FIELD OF EDUCATION

Sujatha. M
Assistant professor, Department of Computer Science,Indo Asian Women's Degree College, Bangalore

Abstract
Technology is dynamic part in day to day life of human. It keeps on improving and changing daily. Needs of the human and their demands also dynamic. In the field of education, the technology is playing a major role .As technology continues to evolve, computers grow smaller and more power efficient. The computing devices can be embedded into all sorts of objects. Its start from the household items to service required for the humans. For these computing devices to communicate, they must connect in some way. This connection could be to a database, a network, or other devices etc. Internet of Things (IoT) technology in education represents an opportunity for educational institutions to collect valuable data and use this data to enhance the learning activity. The smart objects like desks, light fixtures, or fitness bands have the potential to support both teachers and students in meeting learning goals. These objects are embedded with sensors and stored data, smart wristbands can improve student as well as motivating and rewarding physical activity. The "Internet of Things" connotes the next step in the evolution of smart objects-interconnected things in which the line between the physical object and digital information about that object is blurred. "Internet of Things" to describe an automated process of data passing to and from things using technology like radio-frequency identification (RFID). The devices collect GPS and accelerometer data, not to mention audio and video, when cameras and microphones are enabled.
Keywords: *RFID, GPS, Io T,NFC, POE*

Introduction

The World Wide Web, as a tool for communication and information gathering. Online activity mirrors much of people do in physical space like chat, play games, share pictures and videos, and shop. In many ways, cyberspace exists as an extension of the meeting spaces familiar to people for centuries such as the marketplace, town square, auditorium, library, and school. Transactions and interactions online primarily take place between people, and the information exchanged takes familiar forms such as currency, text, music, images, and video.

Information about the communication and sensing capabilities of objects participating in an "Internet of Things" on a school campus as explained with capabilities, recording and transmitting of data to support learning goals and streamline typical processes familiar to students and staff of a school or district."Internet of Things" to describe an automated process of data passing to and from things using technology like radio-frequency identification (RFID).RFID tags allow objects to wirelessly and automatically communicate data.

How do "things" communicate?

- A local area network, either through a wired or wireless connection
- Radio communication, using Bluetooth or RFID
- Near Field Communication (NFC)
- Connection to 3G networks like those used by mobile phones

What information do "things" communicate?

- Data from sensors (temperature, energy consumption, motion or proximity detection, etc.)
- Video, audio, and images from cameras, microphones
- Biometric data recorded by fitness trackers or otherwearable
- Educational content, to display on mobile devices, interactive whiteboards, etc.
- Assessment data collected from students completing class worker exams

With whom or what do"things" communicate?

- Remote professionals (regarding maintenance or repair, campus safety and security)
- Other things (mobile devices used by students and educators,interactive whiteboards,Wearablesuch as fitness trackers, etc)
- Learning Management Systems or Content Management Systems

- Student Information Systems (for recording attendance)
- Payment systems (for buying school lunch, using vending machines, etc)
- Inventory tracking systems (checking out books and materials)

Smart objects

The evolved vision of a "networked physical world" contains objects embedded with wireless communication technology combined with any number of sensors. These objects can transmit data about themselves and their environment, as well as the interaction of the two. Internet of Things in addition to wireless communication technology and sensors, smart objects may also contain actuators that convert electrical signals into mechanical movement. This means that some smart objects may be capable of manipulating their environment, not merely collecting information about it. The "smart" device, the Smartphone, exemplifies one more possible feature like a user interface. Apron smart phones and other mobile devices can often serve as the user interface for a smart object connected wirelessly to the phone.

The Internet of Things Today

Capabilities	Description
Communication and cooperation	Objects use wireless technology such as GSM(Global System for Mobile communication) and UMTS(Universal Mobile Telecommunications System),Wi-Fi, Bluetooth, Zigbee, etc to network with Internet resources or each other
Addressability	Objects can be located and addressed via discovery,look-up, or name services
Identification	Objects are uniquely identifiable
Sensing	Objects collect information about their surroundings
Actuation	Objects can manipulate their environment
Embedded information processing	Smart objects feature a processor or micro-controller,plus storage capacity
Localization	Smart things are aware of their physical location, or can be located, using GPS or the mobile phone network
User interfaces	Smart objects can communicate with people in an appropriate manner, either directly or indirectly (for example via smartphone)

Internet of Things Smart School/college

Many schools may already use RFID tags to keep track of library books, or other pieces of inventory checked in and out by teachers and students. Access cards for entering the school building also likely make use of RFID technology. The smart objects in school that could represent parts of an Internet of Things, consider the mobile devices and wearable carried by people on a campus. These devices collect GPS and accelerometer data, not to mention audio and video, when cameras and microphones are enabled. It's not far-fetched to imagine a future when these same devices collect biometric data such as heart rate and even brain activity. The "Internet of Things" has evolved as a term to encompass any object that can transmit data through IP networks. Typically, an adjective like "smart" or "intelligent" signifies that the object described has Io T functionality. Within the classroom, interactive whiteboards, laptops, and tablets all qualify for IoT membership.

Io T Technology Currently Used In Education

Multi-Touch Tables

The SMART Table is an interactive table that supports up to 40 simultaneous touches, enabling collaboration on lessons for as many as eight students at a time. A teacher can send activities from his or her computer to the SMART Table, or share SMART Table content with the whole class via an interactive whiteboard.

Beacons

Beacons are always on, broadcasting over Bluetooth. Any Bluetooth device can be configured to act as a beacon, sending data to nearby mobile devices. Students and school staff need a mobile device with an installed that listens for data from beacons. Some possible uses for beacons are,

- Enabling precise delivery of learning materials to specific areas of a classroom
- Automating attendance taking
- Controlling access to schools without using ID bags and readers

Smart HVAC System

HAVC (Heating, ventilation, and air conditioning) allows for monitoring and controlling the school/college building's environment 24/7 from anywhere in the world. The intelligent gateway extracts significant amount of data from the unit and then transports that to the cloud through a number of different mechanisms. It can send data, via 3G, to a service technician, so they can arrive on site with the right parts. The equipment can also automatically configure to a signal sent from a utility to use less power during peak times equating to significant savings.

Smart Lighting

It uses Power over Ethernet (POE) to enable each light fixture in a classroom to communicate with the school network. POE systems pass electric power along the same cables that carry data. Some possible uses explored include:

- Adjusting to ambient lighting automatically throughout the environment to closely mimic outdoor lighting patterns
- Using lighting colors to send signals across sites (green lighting could signal a new class period, red could indicate an alarm)
- Picking up signals from smart wristbands worn by students with light sensors, facilitating automatic attendance collection as they enter the classroom

Wireless Temperature Monitors

The low-cost, wireless temperature sensors to place inside of a school's cafeteria coolers. The sensor can send real time alerts via SMS text or email if the cooler's temperature falls above or below the optimal range. Some benefits of the technology include:

- Reducing food spoilage and waste
- Saving time and money by eliminating the need for manual checking
- Achieving and maintaining FDA safety standards

Facial Recognition Cameras

The system can also detect visitors who may be prohibited to enter the school, such as sex offenders, disgruntled employees, or relatives with restraining orders against them.

IoT Can Transform Education

- **Security cameras and motion sensors** to monitor facilities to keep students, teachers, and parents safe. Principals, security officers, and operations leads can remotely preconfigure this surveillance equipment to increase accuracy and timeliness of emergency responses.
- **Sensor gloves** that provide feedback to children learning sign language from a computer. The learner wears theglove while attempting to sign the sensor information is fed back to the computer, which gives the learner feedback on his or her accuracy in signing.
- **Headsets** that help learners who have Attention Deficit Hyperactivity (ADHD) and/or are easily distracted. The headsets detect brain activity and reward learners when they demonstrate improved concentration.
- **Sensorized** blocks for teaching base ten counting. Each block knows its identity and where it is in relation toother blocks. The blocks could use flashing LED lights to communicate to a learner if they have made a correct pattern to represent a given number.

- **A music score on a tablet** could send signals to the guitar held by a learner, communicating what chord to play next. The guitar could indicate the finger positioning on the fretboard using LEDs.

Conclusion

As computing devices shrink and power efficiency increases, this results in an expansion of possible "things "that can communicate with one another. The Internet of Things, or IoT, has the potential to transform everyday life in all sectors of society, including schools. Students and teachers may soon see a range of benefits arising from new uses of the Internet networks already in place on their campuses. Additionally, school administrators, parents, and other stakeholders stand to gain from IoT technology applications.

Developments in the area of artificial intelligence, specifically, pose new opportunities for IoT applications in schools. The discussion of Internet of Things may often sound like settings for young adult science fiction stories, but it is rooted in science fact. What remains to be seen is the degree to which schools will incorporate emerging IoT technologies as quickly and enthusiastically as the sectors of business, commerce, medicine, and manufacturing.

References

1. https://www.indiatoday.in
2. www.businessinsider.com
3. Adamk, "A System Model and Applications for Intelligent Campuses," 2014.
4. Rytivaara, "Collaborative classroom management in a co-taught primary school classroom," , 2012.
5. S. University, "Review Article Guidelines for Students on Rotation," , 2012
6. C. H. Chang, "Smart classroom roll caller system with IOT architecture," 2011
7. P. R. Temkar, M. Gupte, and S. Kalgaonkar, "IoT for Smart Classrooms,", 2016.
8. S.Vallurupalli., H. Paydak., S.K. Agarwal,. et , "Wearable technology to improve education program a feasibility study" , 2013.
9. J. Gubbi, R. Buyya, S. Marusic, and M. Palaniswami, Internet of Things (IoT): A vision, architecturalelements, and future directions.Future Generation Computer Systems, 2012
10. Q. B. Sun, J. Liu, S. Li, C. Fan, and J. Sun, Internet of things: Summarize on concepts, architecture
10. and key technology problem. 2010

A NOVEL AND EFFICIENT APPROACH TOWARDS INTRUSION DETECTION USING DATA MINING

Vivek Kumar Srivastava
Software Development Engineer, Adroit Business Solutions Pvt Ltd, Noida

Sudhanshu Gupta
Software Engineer, Dream App World Pvt Ltd, Noida

Abstract

These days network security is major concern because day by day there is drastic increase in violation of network security, thus to mitigate and avoid these violation an effective IDS (Intrusion Detection System) is required. Effectiveness of IDS is measured by two factors, one is detection rate and other is false alarm rate. Aim is to increase detection rate and decease false alarm rate. In this research a hybrid approach is proposed to implement IDS. Decision tree is used to produce decision rules to classify normal and attack data, but these rules are ambiguous and also it gives local best solution. To overcome the shortcomings of decision tree algorithm, rule optimization is performed using genetic algorithm, which is well known optimization technique, it will optimize the rule and gives global best solution. The proposed hybrid approach has been tested in a simulated environment using KDD CUP99 data set and result shows that this proposed approach gives high detection accuracy with low false alarm.

Keywords: Data Mining, Decision tree algorithm, Genetic optimization technique, KDD CUP 99 dataset.

Introduction

Internet is very much spread in every corner of the world computers all over are exposed to diverse intrusions from the World Wide Web. To keep safe the computers from these unauthorized attacks, potent intrusion detection systems (IDS) need to be employed. Traditional instance based learning methods for Intrusion Detection can only detect known intrusions since these methods classify instances based on what they have learned. They hardly detect the intrusions that they have not learned before. Intrusion detection techniques are of two types namely [2], Misuse detection and Anomaly detection [2].Firewalls are used for intrusion detection but they often fail in detecting attacks that take place from within the organization. To overcome this drawback of firewalls, different data mining techniques are used that handle intrusions occurring from within the organization. Data mining techniques have been successfully used for intrusion detection. Data Mining based IDS require less expert knowledge yet provides good performance and security. These systems are capable of detecting known as well as unknown attacks from the network. Different data mining techniques like classification, clustering and association rule mining can be used for analyzing the network traffic and thereby detecting intrusions.

The Proposed System Model

A new and efficient hybrid approach is introduced. Proposed approach combine two algorithm viz decision tree algorithm and genetic algorithm. This approach takes advantage of both the algorithm. Decision tree algorithm is used to produce decision tree rules to classifies normal and attack data, but these rules are ambiguous and also it gives local best solution, thus to overcome the shortcoming of decision tree genetic algorithm is proposed which eliminate the ambiguous rules and gives global best solution. The proposed novel approach has been tested in a simulated environment using KDD CUP99 dataset and result shows that the novel approach gives high detection accuracy with low false alarm.

Decision Tree Algorithm

Decision tree algorithm generates a decision tree from the given training data.

Input: Training sample set T, the collection of candidate attributes, attribute- list.

Output: A decision tree.

Genetic Algorithm

Genetic algorithm tries to include ideas of natural evolution. An initial population is created using randomly generated rules. Each rule can be represented by problem oriented encoding; the population in

each iteration called a generation and in each generation the goodness or fitness of every individual has been evaluated. The goodness is the value of fitness function in the optimization problem being solved. The more fit population is selected from the current population, and each population chromosome is modified to form a new generation. The new generation of candidate solutions is then used in the next iteration. The fitness function is defined and measures the quality of the represented solution. The fitness function is always problem dependent. The next step is to generate a second generation population of solutions from those selected through a combination of genetic operator: crossover and mutation. Crossover is a process of taking more than one population and producing a child solution from them. Mutation operator is used to maintain the genetic diversity from one generation of the population to the next; it is same as biological mutation. Mutation operator works on single population, we simply change the bit value, and the algorithm terminate when either a maximum number of generation has been produced or satisfactory fitness level has been reached.

Proposed Algorithm

Step 1: Decision tree is applied on KDD CUP99 training dataset to generate decision rules.

Step 2: For each rule calculate fitness value. Fitness function is used to calculate the fitness value. For this approach Fitness function = x/1327 is considered; where x is a variable which represent the attack record which are correctly classified as attack and 1327 is total number of attack records.

Step 3: If fitness value is greater than fitness threshold then rule is selected. Else fitness value less than fitness threshold then calculate mutation and crossover for that rule. Mean value of maximum and minimum fitness value is considered as fitness threshold. Crossover and mutation operation are used to generate new children.

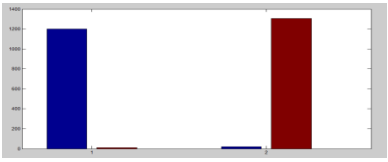
Step 4: Repeat step 3 while no new rules are generates or maximum iteration will reach.

Result Analysis

On the basis of detection rate and false alarm rate performance of IDS is measured. Thus in result analysis detection rate and false alarm rate is analyzes before and after applying genetic algorithm on decision rules.

Result Analysis before applying genetic algorithm: Confusion matrix contains information about actual and predicted classifications done by a classification system. Performance of such systems is commonly evaluated using the data in the matrix. The following figure shows the confusion matrix for a two classes; one is normal class and other is attack class. With the help of this confusion matrix detection rate and false alarm rate are calculated. Matrix gives four type of information (Figure 1). In this graph blue bar represents normal data and red bar represent attack data. Longest blue bar represent normal data which are correctly classified as normal. Smallest blue bar represent the normal data which are incorrectly classified as attack. Longest red bar represent the attack data which are correctly classified as attack and smallest red bar represent the attack data which are incorrectly classified as normal.

Figure 1: Bar chart of confusion matrix before applying genetic algorith



Result Analysis after applying Genetic algorithm: Detection rate and false alarm rate are evaluated on different value of crossover points. Because at different crossover values different parent and child pair are generated which affect the selection of optimize rules. For the analysis purpose one to seven crossover points is considered (Figure 2). In this graph blue bar represents normal data and red bar represent attack data. Longest blue bar represent normal data which are correctly classified as normal. Smallest blue bar represent the normal data which are incorrectly classified as attack. Longest red bar represent the attack data which are correctly classified as attack and smallest red bar represent the attack data which are incorrectly classified as normal.

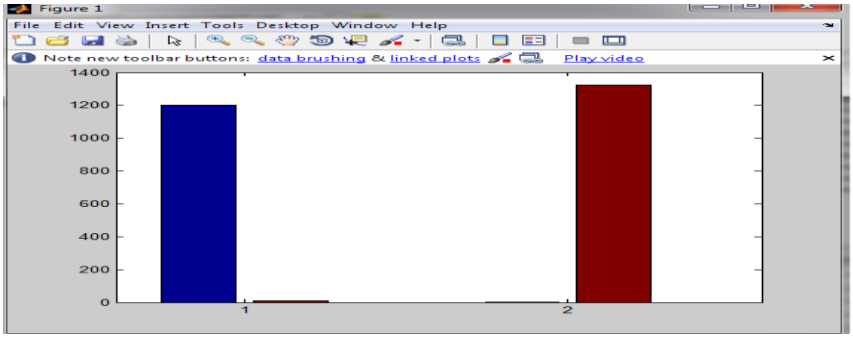


Figure 2: Confusion matrix after applying genetic algorithm

References

1. Vaishali Kosamkar ,Sangita S chaudhari, " Improved IDS using C 4.5 decision tree and SVM" International journal of computer science and information technology -2014 IJCSI.
2. G.V.Nadiammai, M.Hemalatha," Effective approach towards IDS using Data Mining"- Egyptian P.jongsuebsuk,N.Wattanapongdakorn,C.Charnsripinyo," Improved IDS with Fuzzy Genetic Algorithm " ,UMM Csci Senior Seminar conference,December2013 IEEE.
3. Idown S.A,AnyaechieAmarachi,Ajayi," Comparartive Study of Selected Data mining algorithm used for IDS" 2013 IJSCE.
4. B.Senthilnayaki, K.Venkatalakshmi, A. Kannan, "An Intelligent Intrusion Detection System Using Genetic Based Feature Selection and Modified J48 Decision Tree Classifier", Fifth International Conference on Advanced Computing (ICoAC), December 2013.
5. Chih-Fong Tsai,Jung-Hsiang Tsai,Jui-Sheng Chou," Centroid –Based Nearest Neighbor Feature representation for Intrusion detection"-2012-The Institute of Electronics, Information and Communication Engineeres 2012 IEICE.
6. LI Han," Research and Implementation of an Anomaly Detection Model Based on Clustering Analysis", International Symposium on Intelligence Information processing and trusted computing ,2010 IEEE.

LITERATURE REVIEW ON IMAGE SEGMENTATION TECHNIQUES IN IMAGE PROCESSING

Prof.Radhika.E.K
HOD, Dept of Computer Science, Sindhi College, Bangalore

Prof.Kalaivani.Y.S
Associate Professor, Sindhi College, Bangalore

Abstract

Image processing is one of the fundamental approaches of digital image processing. Image Segmentation can be done for extracting useful information from the image. It is most important for feature extraction and pattern recognition. This paper enumerates various image segmentation techniques. Some valuablecharacteristics of image segmentation come out after a large number of comparative experiments. Assessing the performance of different algorithms is a complex task. Segmentation can be done based on various parameters and also we can merge the techniques for better understanding of any image. There is a lot of information in any image. There are different algorithms for image segmentation for feature extraction and pattern recognition. The classification ofsegmentation algorithm is given here. Each of them has their different advantages and limitations.

Keywords*: Image segmentation, thresholding, Edge maximization technique, canny operator, Region splitting, fuzzy clustering, object extraction.*

Introduction

Image processing is a method to convert an image into digital form and perform some operations on it, in order to get an enhanced image or to extract some useful information from it. Image segmentation and its classification are difficult but very important in computer vision. The main objective of image segmentation is to extract various objects and features of the image that are used for analyzing, interpretation and understanding of images. Purpose of this paper is to determine various segmentation algorithms for extracting meaningful information from any image. Result of object extraction is depending on segmentation algorithm so that it is necessary to select efficient segmentation algorithm. In image segmentation the image is divided into different partitions according to segmentation method used. It is done according to discontinuity of image like edge, color texture etc. We can fore see the trend of image segmentation in three ways: Combination of multi-algorithms, the application of artificial intelligence and the rise of manual alternating segmentation. The image contains lots of information. The object extraction can be done using different methods of image segmentation. In extraction method, the required object is separated from its complex surrounding. But there are several difficulties to extract object from entire image because there can be lot of information in the single image. There are many uncertainties in foreground image edges. Image foreground and background are not smooth because there are many edges in image. There are several methods by which required object can be extracted, but there are some drawbacks of the existing methods. In this paper, classification of main image segmentation algorithms is given and they are reviewed.

This paper will help us find the most suitable technique that can be used for segmentation of satellite images. The Different types of segmentations are:

- Region based segmentation
- Pixel based segmentation
- Edge based segmentation
- Model based segmentation

Region-based Segmentation : Region based methods are robust because they cover more pixels than edges and thus you have more information available in order to characterize your region.

Pixel-Based Segmentation: It's the simplest approach and is done based on pixel gray level values. It is also called as point based segmentation.

Edge-Based Segmentation: An edge based segmentation approach can be used to avoid a bias in the size of the segmented object without using a complex thresholding scheme. Edge-based segmentation is based on the fact of the first-order derivative that is position of an edge is given by an extreme

Model-Based Segmentation :The human vision system has been able to recognize objects even if they are not completely clear or represented. It is obvious that the information that can be gathered from local neighborhood operators is not sufficient to perform this task. Instead Specific knowledge about the geometrical shape of the objects required, which can then be compared with the local information. This train of thought leads to model-based segmentation.

Image Segmentation Methods

There are several existing techniques which are used for image segmentation. These all techniques have their own importance. These all techniques can be approached from two basic approaches of segmentation i.e. region based or edge based approaches. Every technique can be applied on different images to perform required segmentation. These all techniques also can be classified into three categories.

A. Structural Segmentation Techniques The structural techniques are those techniques of image segmentation that relies upon the information of the structure of required portion of the image i.e. the required region which is to be segmented.
B. Stochastic Segmentation Techniques The stochastic techniques are those techniques of the image segmentation that works on the discrete pixel values of the image instead of the structural information of region.
C. Hybrid Techniques The hybrid techniques are those techniques of the image segmentation that uses the concepts of both above techniques i.e. these uses discrete pixel and structural information together. In further parts of this paper the various techniques of segmentation are discussed and compared. Mathematical description is avoided for simplicity therefore all the techniques are described theoretically. The popular techniques used for image segmentation are: thresholding method, edge detection based techniques, region based techniques, clustering based techniques, watershed based techniques, partial differential equation based and artificial neural network based techniques etc. These all techniques are different from each other with respect to the method used by these for segmentation.

Literature Review of Image Segmentation

Wavelet Transform

Wavelets can be used to extract information from many different kinds of data, including –audio signals and images. A wavelet is a wave-like oscillation with an amplitude that begins at zero, increases, and then decreases back to zero. Wavelets allow complex information such as music, speech, images and patterns to be decomposed into elementary forms at different positions and scales and subsequently reconstructed with high precision. The wavelets method is the one which least distorts the spectral characteristics of the data. The distortions are minima The wavelet based method is the most efficient in preserving the spectral information contained in the original multispectral images. Wavelets have the great advantage of being able to separate the fine details in a signal. Very small wavelets can be used to isolate very fine details in a signal, while very large wavelets can identify coarse details. A wavelet transform can be used to decompose a signal into component wavelets.

Marker Controlled Watershed

Watershed model is a mathematical morphological approach and derives its analogy from a real life flood situation .It transforms image into a gradient image. Then, image is seen as a topographical surface where grey values are deemed as elevation of the surface at that location. Then, flooding process starts in which water effuses out of the minimum grey value. When flooding across two minimum converges then a dam is built to identify the boundary across them. This method is essentially an edge based technique.

The original watershed algorithm was susceptible to over segmentation so a modified marker-controlled based watershed algorithm was proposed by Beucher(1992). The marker- controlled method is

used to conquer the over segmentation problem of watershed transform. Use different scale of the marker image can produce segmentation results in different scale. Generally, small minimize value produces small-scale segmentation results, whereas large minimize value produce large-scale segmentation results.

Fuzzy C-Means

The process of grouping a data set in a way that the similarity between data within a cluster is maximized while the similarity between data of different clusters is minimized .There are two main approaches to clustering. One method is crisp clustering (or hard clustering), and the other one is fuzzy clustering. A characteristic of the crisp clustering method is that the boundary between clusters is fully defined. However, in many real life cases, boundaries between natural classes maybe overlapping. In such cases, the fuzzy clustering method provides a better and more useful method to classify these patterns.

Fuzzy C-means clustering algorithm is one of most important and popular fuzzy clustering algorithms. In fuzzy clustering (also referred to as soft clustering), data elements can belong to more than one cluster, and associated with each element is a set of membership levels. These indicate the strength of the association between that data element and a particular cluster. Fuzzy clustering is a process of assigning these membership levels, and then using them to assign data elements to one or more clusters.

K-Means

K-means is an un supervised learning algorithm. It classifiesagiven data set through a certain number of clusters fixed priori. The main idea is to define k centroids, one for each cluster. These centroids should be placed in cunning way because of different location cause different result. So the better choice is to place them as much as possible far away from each other. The next step is to take each point belonging to a given data set and associate it to the nearest centroid .When no point is pending, the first step is completed and an early group is done. At this point we need to re- calculate k new centroids . The next step is to take each point belonging to a given data set and associate it to the nearest centroid .a new binding has to be done between the same data set pints and the nearest new centroid .A loop has been produced as a result of this loop we may notice that the k centroids change their location step by step until no more changes are done .In other word centroids do not have anymore . The Cosine distance can be used to find the centroid of cluster as it reduces computation time of the algorithm. The cosine similarity as quantified the cosine angle between vectors. Cosine similarity is one of the most popular similarity measure.

Thresholding

Thresholding is one of the segmentation because of its simplicity and efficiency. If the target is clearly distinguishable from the back ground, the histogram of the image will be bimoda land then it can easier get to the threshold by choosing the valley bottom as the threshold point. However in most of real images, there are not clearly distinguishable marks between the target and the background. Ant Colony Optimization Algorithm (ACO) which is a kind of bionic evolution, one was invented by an Italian Scholar M. Dorigo. It was inspired by the observation of real ant colony and used to find an optimal path to food source in the food searching process. In the real world, ants are social insects and live in colonies. Their behaviour is directed more to the survival of the colony as a whole than to that of a single individual component of the colony. An important and interesting behaviour of ant colonies is their foraging behaviour, and, in particular, how ants have the capability to find the shortest paths between food sources and their nest. The Ant colony optimization (ACO) algorithm is relatively a new meta-heuristic algorithm and a successful paradigm of all the algorithms which take advantage of the insect's behaviour. It has been applied to solve many optimization problems with good discretion, parallel, robustness and positive feedback.

Quick Shift

Quick Shift is a mode seeking algorithm which instead of iteratively shifting each point towards a local mean forms a tree of links to the nearest neighbour which increases the density. Quick shift arranges all of the data points into a tree where parents in the tree are the nearest neighbours in the feature space

which increase the estimate of the density. By imposing a limit on the distance between nearest neighbours (maximum distance), we decrease the amount of computation required to search for the nearest neighbours. However, we also break our tree into a forest, because local modes of the density will now have no neighbour which is close enough in the feature space to form a link.

Parameters for Comparison:

The parameters used for comparison of the Segmentation techniques are:

Mean: The standard definition of mean states Average or mean value of array. The Image is in form of a matrix

Variance: The Variance computes the unbiased variance of each row or column of the input, along vectors of a specified dimension of the input, or of the entire input. The Variance block can also track the variance of a sequence of inputs over a period of time. The block computes the variance of each row or column of the input, along vectors of a specified dimension of the input, or of the entire input at each individual sample time, and outputs the array y. Each element in y is the variance of the corresponding column, row, vector, or entire input.

Standard deviation :Standard deviation (represented by the symbol sigma, σ) shows how much variation or dispersion exists from the average (mean), or expected value. A low standard deviation indicates that the data points tend to be very close to the mean; high standard deviation indicates that the data points are spread out over a large range of values. A useful property of standard deviation is that, unlike variance, it is expressed in the same units as thedata. The measurements with percentage is unit, the standard deviation will have percentage points as unit.

SNR (Signal to noise ratio): Signal-to-noise ratio (often abbreviated SNR or S/N) is a measure used in science and engineering that compares thelevel of a desired signal to the level of background noise. It is defined as the ratio of signal power to the noise.

Power: A ratio higher than 1:1 indicates more signal than noise.

Analysis of Different Methods

Here in this subsection we analyze the various algorithms and determine their benefits and drawback based on above discussions which is explained below. Among all techniques Thresholding does not need prior information of the image and has less computational complexity but May be difficult to identify significant peaks and valleys in the image. It does not take into account the spatial detail so the segmented regions may not be contiguous. edge maximization techniqueis the best for thresholding. It is used in the field of medical imaging to detect or locate the tumors and also useful in otherpathologies. Edge based segmentation algorithms locate points with more or less abrupt changes in gray level works well for images having good contrast between regions and produces less immune to noise than other techniques. But it does not work well with images which have too many edges. Mostly it is used for face detection. Among all edge detection techniques canny operator provide most efficient edge detection. In the region based approach the benefit is that we could split the image using the criteria we decide, such as mean or variance of segment pixel value. In addition, the merging criteria could be different to the splitting criteria. But it may It may produce the blocky segments and it is quite expensive technique in computational time and memory. It often used for 3D construction of the any shape. As we shown above Clustering technique is straight forward classification and easy to implement. It is more popular technique of image segmentation. But it does not utilize spatial information and it is used for neural network edge pattern and to measure volume of tissues.

Conclusion

The major aim of segmentation method is to provide the accuracy in segmented images. It has been observed that with a little modification to the existing segmentation algorithm a large improvement can be achieved in its performance. There is different segmentation algorithms are used to separate required object image from the background. They all have their related limitations which are described through out

this paper. From above all techniques it can be conclude that not a single algorithm is completely efficient for all type of images. It is based on type of images. Different algorithms are useful for different images. Segmentation can be done in three ways: Combination of multi-algorithms, the application of artificial intelligence and the rise of manual alternating segmentation. These all are the research aspects to be further explored in order to extract required object effectively from an image. The result of image segmentation is affected by lots off actors, such as: homogeneity of images, spatial structure character of the image, continuity, texture, image content, physical visual character and so on.

References

1. T. Shraddha, K. Krishna, B.K.Singh and R. P. Singh, "Image Segmentation: A Review", International Journal of Computer Science and ManagementResearch Vol. 1 Issue. 4 November 2012.
2. M. R. Khokher, A. Ghafoor and A. M. Siddiqui, "Image segmentation using multilevel graph cuts and graph development using fuzzy rule-basedsystem", IET image processing, 2012.
3. Ms.ChinkiChandhok, Mrs.Soni Chaturvedi, Dr.A.A Khurshid, "AnApproach to Image Segmentation using K-means ClusteringAlgorithm", International Journal of Information Technology (IJIT),August 2012
4. Salem Saleh Al-amri, N.V. Kalyankar and Khamitkar S.D, "Image Segmentation by Using Threshold Techniques", Journal of computing,may 2010
5. Er. Pratibha Thakur1, Er. Nishi Madaan, "A survey of image segmentation techniques", International journal of research in computer application and robotics, April 2014
6. Henita rana, shashwat kumar, hemang shah, "survey on imagesegmentation and image matting", intenational journal of advancere search in computer science and management studies, February 2014
7. N. Dabhi and H. Mewada, "Review on Outdoor Scene image Segmentation", International Journal of Computer Science and Information Technologies(IJCSIT), Vol. 3, 2012.
8. N. Senthilkumaran and R. Rajesh, "Edge Detection Techniques for Image Segmentation – A Survey of Soft Computing Approaches", InternationalJournal of Recent Trends in Engineering, Vol. 1, No. 2, May 2009.
9. N. R. Pal and S. K. Pal, "A review on image segmentation techniques", Pattern recognition society, Vol. 29, 1993.
10. R. Dass, Priyanka and S. Devi, "Image Segmentation Techniques", IJECT Vol. 3, Issue 1, March 2012.

RADIO FREQUENCY IDENTIFICATION BASED ATTENDANCE MANAGEMENT SYSTEM

Lakshmipathi.V & Srividya.R
Assistant Professor, Department of Computer Science
Ramaiah College of Arts, Science and Commerce, Bangalore

Abstract

Most educational institutions' administrators are concerned about student irregular attendance. Truancies can affect student overall academic performance. The conventional method of taking attendance by calling names or signing on paper is very time consuming and insecure, hence inefficient. Radio Frequency Identification (RFID) based attendance system is one of the solutions to address this problem. This system can be used to take attendance for student in school, college, and university. It also can be used to take attendance for workers in working places. Its ability to uniquely identify each person based on their RFID tag type of ID card make the process of taking the attendance easier, faster and secure as compared to conventional method. Students or workers only need to place their ID card on the reader and their attendance will be taken immediately. With real time clock capability of the system, attendance taken will be more accurate since the time for the attendance taken will be recorded. The system can be connected to the computer through RS232 or Universal Serial Bus (USB) port and store the attendance taken inside database.

Keywords: *Transmitter, Interrogator, Encoding, electromagnetic and electrostatic coupling, Radio frequency.*

Introduction

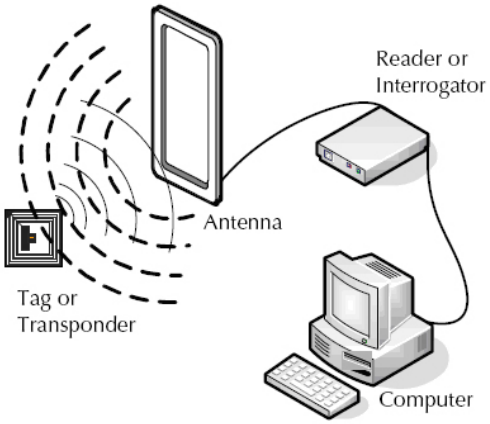
Radio frequency identification (RFID) refers to the use of radio frequency wave to identify and track the tag implanted into an object or a living thing. It is a wireless mean of communication that use electromagnetic and electrostatic coupling in radio frequency portion of the spectrum to communicate between reader and tag through a variety of modulation and encoding scheme. Modulation refers to the variation in the amplitude, frequency or phase of a high frequency carrier signal to convey information. Encoding is a process of converting information from one format to another. RFID system usually consists of RFID reader and tag. It is very useful because it can uniquely identify a person or a product based on the tag incorporated. It can be done quickly and this usually takes less than a second.

Related Words

Radio-Frequency Identification (RFID) is the use of radio waves to read and capture information stored on a tag attached to an object. A tag can be read from up to several feet away and does not need to be within direct line-of-sight of the reader to be tracked. A RFID system is made up of two parts: a tag or label and a reader. RFID tags or labels are embedded with a transmitter and a receiver. The RFID component on the tags has two parts: a microchip that stores and processes information, and an antenna to receive and transmit a signal. The tag contains the specific serial number for one specific object. To read the information encoded on a tag, a two-way radio transmitter-receiver called an interrogator or reader emits a signal to the tag using an antenna. The tag responds with the information written in its memory bank. The interrogator will then transmit the read results to an RFID computer program.

There are two types of RFID tags: passive and battery powered. A passive RFID tag will use the interrogator's radio wave energy to relay its stored information back to the interrogator. A batter powered RFID tag is embedded with a small battery that powers the relay of information. In a retail setting, RFID tags may be attached to articles of clothing. When an inventory associate uses a handheld RFID reader to scan a shelf of jeans, the associate is able to differentiate between two pairs of identical jeans based upon the information stored on the RFID tag. Each pair will have its own serial number. With one pass of the handheld RFID reader, the associate can not only find a specific pair, but they can tell how many of each pair are on the shelf and which pairs need to be replenished. The associate can learn all of this information without having to scan each individual item.

Fig. 1. Basic setup of a RFID system



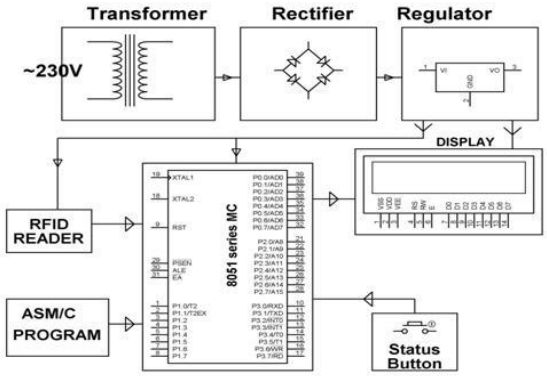
Technical Solution

Before RFID can be understood completely, it is essential to understand how Radio Frequency communication occurs. RF (Radio Frequency) communication occurs by the transference of data over electromagnetic waves. By generating a specific electromagnetic wave at the source, its effect can be noticed at the receiver far from the source, which then identifies it and thus the information. In an RFID system, the RFID tag which contains the tagged data of the object generates a signal containing the respective information which is read by the RFID reader, which then may pass this information to a processor for processing the obtained information for that particular application. Thus, an RFID System can be visualized as the sum of the following three components:

1. RFID tag or transponder
2. RFID reader or transceiver
3. Data processing subsystem

An RFID tag is composed of an antenna, a wireless transducer and an encapsulating material. These tags can be either active or passive. While the active tags have on-chip power, passive tags use the power induced by the magnetic field of the RFID reader. Thus passive tags are cheaper but with lower range (<10mts) and more sensitive to regulatory and environmental constraints, as compared to active tags. An RFID reader consists of an antenna, transceiver and decoder, which sends periodic signals to inquire about any tag in vicinity. On receiving any signal from a tag it passes on that information to the data processor. The data processing subsystem provides the means of processing and storing the data. RFID systems can also be differentiated based on the frequency range it uses. The common ranges are Low-Frequency (LF: 125 - 134.2 kHz and 140 - 148.5 kHz), High-Frequency (HF: 13.56 MHz) and Ultra-High-Frequency (UHF: 868 MHz - 928 MHz). Low-frequency systems have short reading ranges and lower system costs. They are most commonly used in security access, asset tracking, and animal identification applications. High-frequency systems, offering long read ranges (greater than 90 feet) and high reading speeds, are used for such applications as railroad car tracking and automated toll collection. However, the higher performance of high-frequency RFID systems incurs higher system costs.

Fig. 2. Architecture/Block Diagram of the RFID framework



Conclusion

The objective to build an RFID based attendance system was successfully achieved. In terms of performance and efficiency, this project has provided a convenient method of attendance marking compared to the traditional method of attendance system. By using databases, the data is more organized. This system is also a user friendly system as data manipulation and retrieval can be done via the interface, making it a universal attendance system. Thus, it can be implemented in either an academic institution or in organizations. However, some further improvements can be made on this RFID in order to increase its reliability and effectiveness. An indicator or an LCD screen can be incorporated into the system to indicate when any unregistered card is scanned.

An IP camera can be integrated into this system to monitor the actions like buddy-punching wherein a person cheats by scanning for another person. Finally, this attendance system can be improved by adding a feature where the attendance system indicates when a student is late for work or classes as the case maybe.

References

1. https://www.elprocus.com/wp-content/uploads/2013/09/Block-Diagram-of-the-System.jpg
   Architecture/Block Diagram of the RFID framework.
2. http://www.tutorial-reports.com/wireless/rfid/technology.php
   RFID Technology and Architecture
3. https://www.sumhr.com/biometric-time-attendance-system/
   Biometric Time & Attendance System

STRESS MANAGEMENT-A CHALLENGING DIMENSION OF SUSTAINABLE DEVELOPMENT

Hemalatha. V, M.A, M.Phil
Assistant Professor, Indo Asian Academy Co-Ed Degree College and PG Centre, Bangalore

Abstract

Stress is a part of life. Most of us feel stressed at one time or another. Whether we talk of jobs related pressures or any sort of tension induced by personal relationships and family problems, stress affects all of us. There are many day-to-day situations that can bring stress in our lives. Avoiding these situations may prove to be an impossible task. The solution therefore, lies in knowing how to manage stress. If not managed properly, stress can have a very negative impact on our mental and physical health. Living in a state of continuous stress, without any relief or relaxation, can give rise to many health complications. From headaches to chest pain, from sleeping disorders to high blood pressure, stress can be very harmful and negatively affect our body's ability to cope with diseases.

Walter Cannon and Hans Selye used animal studies to establish the earliest scientific basis for the study of stress. They measured the physiological responses of animals to external pressures, such as heat and cold, prolonged restrained, and surgical procedures, then extrapolated from these studies to human beings. More recently, however, it has been argued that external circumstances do not have any intrinsic capacity to produce stress, but instead their effect is mediated by the individual's perceptions, capacities, and understanding.

Richard Lazarus and Susan Folkman suggested in 1984 that stress can be thought of as resulting from an "imbalance between demands and resources" or as occurring when "pressure exceeds one's perceived ability to cope." Stress management was developed and premised on that idea that stress is not a direct response to a stressor but rather one's resources and ability to cope mediate the stress responses and are amenable to change, thus allowing stress to be controllable.

Key words: *Stress, Sustainable development, Challenges, Behavioral change. Development.*

Introduction

Sustainability indicators demonstrate the advantages of a participatory approach to selection for incorporating different values. Risk management and sustainable development are frameworks for studying and managing the environmental impacts of human actions, as such, each requires indicators for monitoring decision making and communication. This paper compares the two frameworks as used in practiced and their experience of using indicators. Sustainable development is a system based concept with a long time horizon, a tendency to apply precaution in decision. This paper analysis the framework and examines their deficiency in relation to all stress problems and explores alternatives focusing on the project. The overall objective of the study is to identify the stress perception, stressful experience and stress management strategies. In modern life most individuals experience stress. Competition and constant changes result in a demanding environment that often turns stressful. The negative effects of stress on health are well perceived. As a result, it is important that the individuals develop different strategies in order to handle stressful situations which will mold him or her to be an ideal citizen. This factor will be directly proportional to Sustainability Development. The less the stress the more the development and vice-versa. Educational institutions are created in order to socialize and selects students to perform adult roles of the society. Considering that stress is presented in different dimensions of daily life and it affects individuals well-being, is it not important that educational institution promote the development of students "Stress Management Strategies" .in addition stress could be strongly experience that work and there are jobs which are considered most stressful than others, for instance to be teacher.

Researches have shown that there are specific stresses and stress affects in each culture. However, these results are from studies on job stress. stress is inescapable part ofmodernlife, work place is becoming a volatile stress factory for most employees. Stress may kill brain cells. Appropriate amount of stress can actually trigger your passion for work, tap your latent abilities and even ignite inspirations. Stress is the emotional and physical strain caused by our response to pressure from the outside world. Common stress reactions include tension, irritability, inability to concentrate and a variety of physical

symptoms that include headache and a fast heart beat. Stress is our body's way of responding to any kind of demand. When people feel stressed by something going on around them their bodies react by releasing chemicals into the blood. Life events such as marriage, changing jobs, divorce, or the death of a relative or friend are the most common causes of stress. the majority of causes of stress that we face on day-to-day basis are not as extreme as life events. The day-to-day causes stress are called daily hassles. They are those daily, minor irritations such as misplacing our car keys, traffic jams, arguments with family, colleagues, etc. Research has found that the Transactional Model of Stress is more accurate. Its our own internal beliefs, attitudes, interpretations, perceptions, and other factors, in combinations with the events that tend to create stress. any change life change can be stressful even be happy event like a wedding. More unpleasant events, such as divorce, major financial setback, or death in the family can be significant sources of stresses.

Examples of Work Stress are being unhappy in your job, having a heavy workload or too much responsibility, working long hours, working under dangerous conditions, being insecure about your chance for advancement or risk of termination, having to give speeches in front of colleagues, facing discrimination or harassment at work, especially if your company isn't supportive, the death of a loved one, divorce, loss of job, increase in financial obligations, moving to a new home, taking care of the sick family member. Stress can cause or contribute to serious physical disorders. It increases hormones such as adrenaline and corticosterone, which affect metabolism, immune reactions, and other stress responses. That can lead to increase in heart rate, respiration, blood pressure, and physical demands on internal organs. A sustained high level of stress is no laughing matter. It can affect area of one'sproductivity in the workplace and classroom, increased health risks, and relationships, to name just a few. An individual must identify the reasons as to why he is facing stress. This can reduce half his burdens. Positive stress is usually the outcome of a positive attitude towards stressor, good time management practices, and affective prioritizing of one'sactivities. Good news, or an unexpected benefit, can be also cause a positive stress experience. Negatively stress will impair and eventually incapacitate your ability to perform. Degree a common mental illness that affects a persons body, mood, and thought – it causes people to lose pleasure from daily life, can complete other medical conditions, and can even lead to suicide.

Challenging yourself out of Stress can be by realizing how a person reacts in different situations, what causes stresses, and how the person behave when stressed. Make a do-to list. Decide what is really important to get done today, and what can wait. This helps you to know that working on most immediate priorities, and you don't have the stress of trying to remember what you should be doing. Think about the event or situation expected to face and rehearse possible outcomes of reactions. Find ways to practice dealing with the challenge. Try to set realistic goals,.Its good to push self to achieve the goals set, but make sure that expectations are realistic. Be satisfied with doing the best possible. Allow people the liberty to make mistakes, and remember that mistakes can be a good teacher. Get plenty of exercise. Eat healthy foods. Allow tie for rest and relaxation. Learn to accept changes as a part of life. Nothing stays the same. Avoid those activities that promise release from stress while actually adding it.

According to psychologist Robbie Maller Hartman, PhD, a Chicago health and wellness coach,

"Research suggests that daily meditation may alter the brains neutral pathways, making the person more resilient to stress,". Social network is one of the best tools for handling stress. Stress can have consequences far beyond temporary feelings of pressure and we can't avoid stress, but learn to manage it and develop skills to cope with the events or situations and find it stressful. By learning how to cope with stress, and by recognizing the symptoms of depression and the warning signs of suicide, a person will be better prepared to help not only self, but also friends, fellow students. Emotions of an individual are affected by loss of confidence, irritability, depression etc.

Ways of reducing stress can be done by getting enough sleep, exercising and controlling your diet, building up a social support network, creating peaceful times in your day, don't smoke and don't drink too much or abuse any other substances.

How do Reckon Sustainability Development?

Sustainability Development is a concept of organizing natural systems and ecological services which will regulate and help the human development. These systems in turn will help sustain the economy and society in general. Therefore, the study of Sustainability Development involves almost all the themes and areas which directly or indirectly become the dimensions for Development of a society and a nation in turn. With regards to Sustainability Development, besides all the enduring elements stress plays a vital role and it can be concluded that if an employee in an organization performs his job with minimal stress the organizations grows and logically if most of the employees are treated with stress free environment it is difficult to imagine the growth of such an organization. Similarly, the same analogy works for a nation.

Therefore, stress is directly proportional to Sustainability Development.

This paper aims to prove Stress as an indispensable dimension to Sustainable Development.

References

1. Bond M.(1998) Stress and Self Awareness: a Guide for Nurses, Heinemann.
2. Bradley D. (2000) Hyperventilation Syndrome, Kyle Cathie Ltd.
3. Soft Skills –Shruthi PrabhakarB.Com, MBA(Finance), M.Com(F&A), (PhD),NIHA ASIF M.Com, Net
4. Davis M. (2000) The Relaxation and Stress Reduction Work Book, New Harbinger inc.
5. Brookes D.(1997) Breathe Stress Away, Hollanden Publishing.

SECURITY IN BLUETOOTH, CDMA AND UMTS

SumanLata
Department of Computer Science & Engineering, Harcourt Butler Technical University, Kanpur, Uttar Pradesh

Abstract
This is a survey paper on the security in Bluetooth, CDMA and UMTS networks. Bluetooth is the name for a short-range radio frequency (RF) technology capable of transmitting voice and data. CDMA is a channel access method used by various radio communication technologies and UMTS is a third-generation mobile cellular technology for networks based on the GSM standard. Here in this paper we have discussed various possible attacks, threats, vulnerabilities, security requirements and countermeasures in respect of each of the three networks. There are several possible attacks in Bluetooth and UMTS but since CDMA uses a special coding scheme, attacks on CDMA networks are very difficult and rare.
Keywords: *Code-Division Multiple Access, Universal Mobile Telecommunication System, Logical Link Control and Adoption Protocol, Authentication and Key Agreement.*

Introduction

Bluetooth is managed by the Bluetooth Special Interest Group (SIG), which has more than 15,000 member companies in the areas of telecommunication, computing, networking, and consumer electronics. The SIG oversees the development of the specification, manages the qualification program, and protects the trademarks. There are some standards defined by SIG that a Bluetooth device must be qualified. Two Bluetooth devices within 10 m of each other can share up to 720 Kbps of capacity using the 2.4 GHz band which is available globally for unlicensed low power uses [1]. Code Division Multiple Access (CDMA) technology originated from military applications and cryptography, and to date, do not have any report of high jacking or eavesdropping on a CDMA call in a commercially deployed network. CDMA air interface is superior to first-generation analog and Time Division Multiple Access (TDMA) systems and is inherently secure. The spread spectrum technology and the use of Walsh codes generate the inherent security of CDMA air interface. The Universal Mobile Telecommunications System (UMTS) is one of the new third generation' (3G) mobile cellular communication systems being developed within the framework defined by the ITU and known as IMT-2O0O1. UMTS builds on the capability of today's mobile technologies by providing increased capacity, data capability and a greater range of services using a new radio interface standard called UMTS Terrestrial Radio Access (UTFU).

Bluetooth

Security Threats

Threats in Bluetooth network can be roughly divided into three categories:

Disclosure Threat: A person who doesn't have authorization to access the information gets the information from the target system.

Integrity Threat: Modification of information to mislead the recipient.

Denial of Service (DoS): Blocking of access to aservice, making it either unavailable or severely limiting its availability to an authorized user.

Attacks in Bluetooth Network

Following are the dangerous attacks which can cause hazard in the network:

Snarf Attack: This attack is also called Blue Snarf in gattack. It is a hacking technique that allows hackers to access another Bluetooth device without the victim's knowledge. Once the attacker reaches into the victim's device sensitive data can be retrieved.

Backdoor Attack: This attack is of higher concern for the Bluetooth users. Here, the Bluetooth related vulnerability exploits the pairing mechanism that is used to establish a connection between two blue-tooth enabled devices.

Blue Bug Attack: Blue bug is the name of a Bluetooth security loop hole on some Bluetooth enabled cell phones. Exploiting this loop hole allows the attacker to make premium priced phone calls, allows the use of Internet or SMS. It is also helpful to identify the theft to portray the user.

Blue Jack Attack: It is the process of sending an anonymous message from a Bluetooth enabled phone or any other device to another, within a particular range without knowing the exact source of the received message to recipient.

Denial of Service Attack (DoS): Function of a DoS attack is fundamentally to flood its target machine with so much traffic that it prevents it from being accessible to any other requirement or providing services. The target machine is kept so busy in responding to the traffic it is receiving from its attackers that it has insufficient resources to respond to legitimate traffic on the network.

Security Levels and Modes

Security depends on how a device implements its discovery and connect ability options. On the basis of this there are three security levels [1]:

Silent: Device will simply monitor the Bluetooth traffic and will never accept any connections.

Private: Connections will be accepted only if the address of the Bluetooth device is known by the master otherwise the device is non discoverable.

Public: The device is discoverable and can be connected to any device.

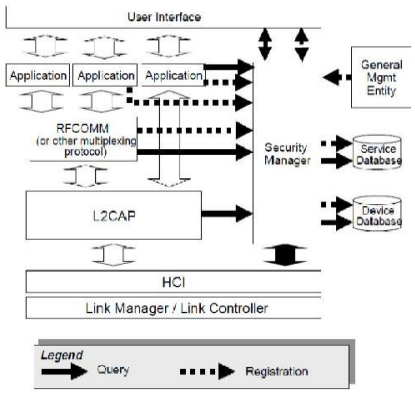
There are three different security modes [2].

Non-Secure: No security measures. Communication takes place without authentication and encryption.

Service level enforced Security: ACL link between two devices can be made in a non-secure manner but the security procedures are initiated when L2CAP (Logical Link Control and Adaptation Protocol) channel request is made.

Link Level Enforced Security: Security procedures are initiated when the ACL (Asynchronous Connectionless) Link is established.

Figure 1 The overall security architecture of Bluetooth.

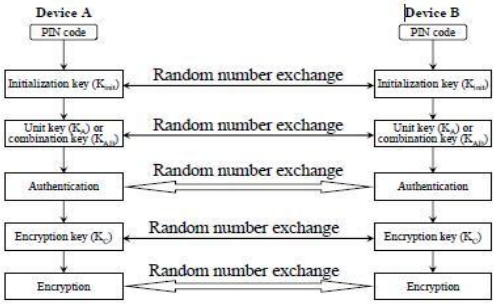


Authentication, Authorization and Encryption

Authentication is the process of proving the identity of one piconet member to another. The result of authentication determines whether the client is authorized to have access to the services provided by the server.

Encryption is the process of encoding the information being exchanged in between two devices so that no eavesdropper can read its contents.

Figure 2 The summary of Bluetooth security Operations



Encryption Mode 1: No encryption is performed on any traffic.

Encryption Mode 2: Encryption keys based on individual link keys are used to encrypt individually addressed traffic.

Encryption Mode 3: All traffic is encrypted using an encryption key based on the master link key. Same encryption mechanism is used by Encryption mode 2 and 3.

Known Vulnerabilities

The Bluetooth Security Architecture, though relatively secure, is not without weaknesses.

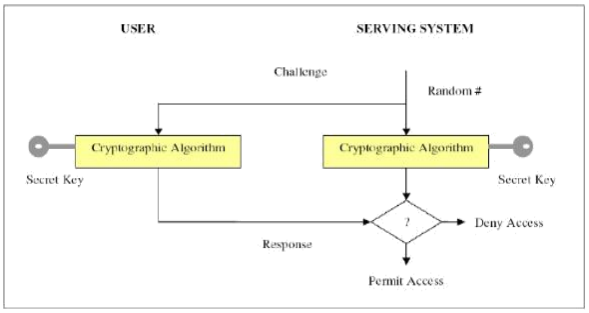


Figure 3 Encryption Procedure in Bluetooth

Spoofing Through Keys: A simple attack, though not so simple to implement in practice, is a man-in-the-middle attack to steal identification and encryption keys before the start of a session. The identification and keys can then be used to impersonate and/or eavesdrop on communications.

Spoofing Through a Bluetooth Address: Each Bluetooth device has a unique address, allowing users to have some trust in the identity of the device at the other end of the transmission. Once this device ID is associated with a user of the device, an intruding device can change its address to match the device address of the user. The intruder can then impersonate the user with the spoofed address.

PIN Length: Another vulnerability relates to the PIN itself. Most devices have extremely short (usually 4 decimal digits) PINs. This is itself is a security weakness, though it is a property of the implementation and not the specification. Attackers can exhaustively search through the set of short PINs to determine a key.

CDMA (CODE DIVISION MULTIPLE ACCESS)

Overview of Division Multiple Access

It is easier to understand CDMA if it is compared with other multiple access technologies. The difference between FDMA (Frequency Division Multiple Access) and TDMA (Time Division Multiple Access) is as follow:

FDMA: Each user is assigned with a different frequency channel. No one else in that cell or neighboring cell can access that channel.

TDMA: Each user has the same frequency channel but are assigned with different time slots and they are allowed to transmit in that slot only.

CDMA: Each user is on the same frequency channel and at the same time but they are divided however by codes.

Types of CDMA

There are two types of CDMA which are as follows [6]:

Frequency Hopping Spread Spectrum CDMA: Each user's narrowband signal hops among discrete frequency, and the receiver follows in sequence. Frequency-Hopping Spread Spectrum (FHSS) CDMA is not currently used in wireless system.

Direct Sequence Spread Spectrum CDMA: Narrowband input is modified using user's unique broadband code and transmitted. Receiver knows the code and retrieves the original signal.

Security

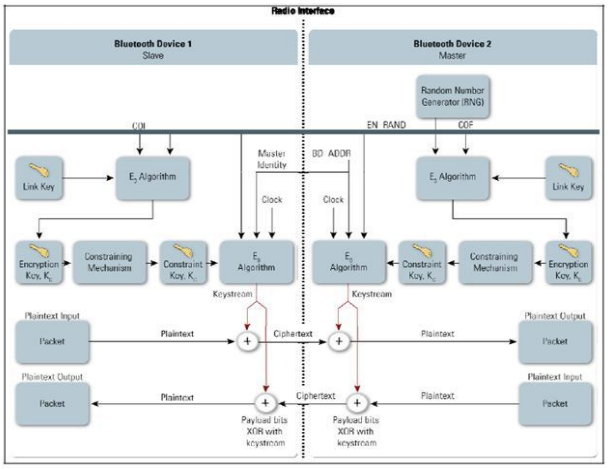
Service providers are primarily concerned with security to prevent fraudulent operations such as cloning or subscription fraud, while subscribers are mainly concerned with privacy issues.

Authentication

A random binary number RANDSSD is generated in the HLR (Home Location Register) and is used in authentication [9] procedure. The A-key is programmed into the mobile and is stored at authentication center (AC) of the network.As soon as the User desires some service from the Serving System a random number is thrown at it from the Serving System as a Challenge to authenticate itself. The User uses this random number and performs a cryptographic algorithm on it using a Secret Key which is known at both

ends. The same process is carried out at the Serving System using the same cryptographic algorithm and Secret key. The resultant output from the User side is given to the Serving System as a Response. The Serving System compares the Response with its own computation. If the two match the User is either permitted access to Services or is denied entry.

Figure 4 Authentication Model UMTS
(UNIVERSAL MOBILETELECOMMUNICATION SYSTEM)



Possible Attacks on UMTS

In this section we will give a description of attacks or threats that have been identified [6]. These attacks exploit a weakness of the system. In the next section we will show how each of these possible attacks is counteracted by a specific feature of the 3G security architecture. To be able to carry out these attacks the intruder has to possess the following capabilities [7]:

Eavesdropping: The intruder is able to listen in to the signaling associated with other users or their data connections.

Impersonation of a User: Enables the intruder to interact with the network as the actual user.
Impersonation of the Network: Enables the intruder to interact with the user as if he is receiving signals from a genuine network.
Man-in-the-middle Attack: An ability of the intruder to put himself between two communicating parties, a user and the network, enabling him for various actions including eavesdropping, modifying, deleting, re-ordering, replaying, and spoof signaling and user data. For his attacks the intruder requires a modified Mobile Station (MS) and/or a modified Base Station (BS).
Denial of Service:
User de-registration request Spoofing: If the network cannot authenticate messages then an attacker with a modified MS can send a de-registration request to the network, which is com-plied by the network and simultaneously sends instructions to the Home Location Register (HLR) to do the same.
Location update request Spoofing: Instead of sending requests for de-registration, the attacker sends a location update request from a different area from the one in which the user is presently located. As a result, the user is paged in the new area.
Camping on a false BS/MS: The attacker with a modified/MS puts himself in between the Serving Network (SN) and the target user.
Identity Catching: Mobile users are identified by temporary identities, but there are cases where the network requests the user to send its permanent identity in clear text.
Passive identity catching: The attacker with a modified MS waits passively for a new registration or a database crash as in such cases the user is requested to send its identity in clear text.
Active identity catching: In this case, the attacker with a modified BS entices the user to camp on his BS and then asks him to send his International Mobile Subscriber Identity (IMSI).
Impersonation of the network and thereby Eaves-dropping: In this sub-section we cover attacks where the intruder masquerades as a genuine net-work towards the user.

By suppressing encryption between the target user and the intruder: An attacker with a modified BS entices the user to camp on his false BS and when the service is initiated, the intruder does not enable encryption.

By suppressing encryption between the target user and the true network: In this case, during call setup the ciphering capabilities of the MS are modified by the intruder and it appears to the network that there is genuine mismatch of the ciphering and authentication algorithms. After this the network may decide to establish an un-enciphered connection. The intruder cuts the connection and impersonates the network to the target user.

Impersonation of the user:

By the use of an eavesdropped authentication response:

The intruder with a modified MS uses an eavesdropped authentication response if the same challenge is used again.

Hijacking outgoing calls in networks with encryption disabled: The intruder with a modified BS/MS pages the target user for an incoming call, who then sets up a call which it allows to occur. The intruder modifies the signaling elements and it appears to the serving network that the user wants to set-up a mobile originated call. The intruder then cuts the connection with the target user, and makes fraudulent calls on the user's subscription

Hijacking outgoing calls in networks with encryption enabled: In this case the intruder also modifies the ciphering capabilities of the MS to suppress encryption.

Overview of the UMTS Security Architecture

The 3G security architecture defines four distinct security features, intended to meet certain threats [8] and to establish required security services [10].

Network Access Security: This provides confidentiality of user identity and that of the user and signaling data, integrity protection of critical signaling data, authentication of user and network, and identification of Mobile Equipment (ME).

User Domain Security: It ensures only authorized access to Universal Subscriber Identity Module (USIM).

Network Access Security Mechanisms

User Identity Confidentiality: The main objectives of user identity confidentiality feature are to prevent intruders from eavesdropping the IMSI and the location of the user.

Authentication and Key Agreement: The AK mechanism accomplishes mutual authentication of the user and the network using a symmetric key (K) and derives the new cipher and integrity keys [16].The UMTS AKA is based on the assumption that the Authentication Center (Auch) of the user's home environment and the user's USIM share a user specific secret key K, certain message authentication functions f1, f2 and certain key generating functions f3, f4, f5. The UMTS AKA consists basically of two phases:

Generation of Authentication Vectors: After receiving an authentication data request from an SN, the HE/Auch generates an array of n authentication 5 vectors, each consisting of the following five components: A random number RAND, an expected response XRES, a cipher key CK, an integrity key IK and an authentication token AUTN. This array of n authentication vectors is then sent to the requesting SN.

Authentication and Key Agreement: In an authentication exchange the SN, resp. one of its corresponding network entities, namely Visitors Location Register (VLR) or Serving GPRS Support Node (SGSN), selects the next (the it, where 1in) authentication vector from the ordered array and sends RAND(I), AUTN(I) to the user. The USIM checks whether AUTN(I) can be accepted, i.e. whether AUTN(I) constitutes a valid authentication token, and if so, produces a response RES(I) which is sent back to the SN, which compares RES(I)to XRES(I). The USIM now also computes CK and IK which are subsequently used for ciphering and integrity protection on the air inter-face. Figure 10 shows this process.

Confidentiality

The UMTS access security encryption function f8 is a link layer symmetric synchronous stream cipher. The f8 function is specified to produce a pseudo-random Key stream block that is combined with a plaintext block by means of bitwise modulo 2 operations (XOR function).

The generic confidentiality function f8 takes as input the confidentiality key (CK, 128-bit), a sequence number (COUNT-C, 32-bit) derived from the layer 2 frame number, the radio channel indication (BEARER, 5-bit) and a direction indication (DIRECTION, 1-bit). Additionally, the length (LENGTH, 16-bit) of the key stream block is provided.

Integrity

Integrity protection in UMTS is limited to covering signaling messages between the MS and the RNC. The generic integrity function f9 takes as input the integrity key (IK, 128-bit), the message (MESSAGE) to be protected, a sequence number (COUNT-I, 32-bit) derived from the layer 2 frame number, a random value (FRESH, 32-bit), and a direction indication (DIRECTION, 1-bit) value. The actual length of the MESSAGE element presented to the f9 function is longer than the message sent over the air since the five bits used to indicate the bearer channel are extracted from the radio bearer context. The standard f9 function is based on the KASUMI block cipher, had a regular CBC-MAC mode been used for KASUMI, it would have been restricted by the internal block size of 64 bits, but a novel chaining technique has allowed the f9 function to maintain a 128-bit internal state. The final output from the KASUMI used in f9 is a 64-bit cipher block, which is truncated to become the 32-bit MAC value.

Network Domain Security

The term network domain security in the 3GPP specifications covers security of the communication between network elements which may be in the same or two different networks. The mobile specific part of Signaling System No. 7 (SS7) signaling is called the Mobile Application Part (MAP). The complete collection of protocols and procedures needed to protect MAP messages is called Mapes. The Internet Engineering Task Force (IETF) has standard security mechanisms for IP-based networks. For the 3GPP, the main emphasis is on how to use IETF protocols to protect IP-based communication in 3GPP networks.

Mapes: The plaintext MAP message is encrypted and the result is put into a container in another MAP message. Mapes has borrowed the notion of a security association (SA) from IPSec. The SA contains cryptographic keys and other relevant information. The KACs also distribute the SAs to the network elements. integrity mechanism works independent of confidentiality protection and provides protection against active attacks. Although 3G Security marks a large step forward however there are some short comings. The user data

In IPSec based solution all control plane IP communication towards external networks go via SEG. 3GPP defines the minimum set of features of IPSec that must be supported for internetworking purposes. These simplifications are: only Encapsulating Security Payload (ESP) is used for protection of packets; ESP is always used in tunnel mode; Advance Encryption Standard (AES) is used as the encryption algorithm.

Conclusion

The Bluetooth threats have the ability to provide criminals with sensitive information on both corporate and personal levels. The only way to avoid such threats is for manufacturers, distributors, and consumers to be provided with more information on how they are committed, current attack activity and how to combat them.

The CDMA systems are believed to more secure than GPRS networks, mainly due to the nature of the radio frequency signaling, while it is possible to listen in on a GPRS transmission using TDMA receivers, such is not possible with CDMA. A CDMA receiver has to be coded with the correct 64-bit code to be receive a channel of CDMA traffic and without This code, or with the wrong code, the received signal is noise, A brute force attack to find correct code is not feasible. The code is exchanged between the sender and receiver at the handshake, which happens over an encrypted channel. IN spite of the difficulty in

’tuning ’into CDMA transmission, the data (or voice) transmission is further encrypted. This double layer of ciphering makes CDMA security possibly quite strong.

The access security mechanisms in UMTS now protects against the false base station attacks. The confidentiality algorithm is stronger than its GSM predecessor.

References

1. John Padgette, Karen Scarfone and Lily Chen, (Sept. 2008) (Rev. 1) (June 2012).“Guide to Bluetooth Security: Recommendations of the National Institute of Standards and Technology”, NIST Special Publication 800-121.
2. Minar, Nateq Be-NazirIbn, and Mohammed Tarique, (2012, January). "Bluetooth security threats and solutions: a survey." International Journal of Distributed and Parallel Systems 3.1: 127.
3. John Padgette, Karen Scarfone and Lily Chen, (Sept. 2008) (Rev. 1) (June 2012).“Guide to Bluetooth Security: Recommendations of the National Institute of Standards and Technology”, NIST Special Publication 800-121.
4. Zou, Yulong, Xianbin Wang, and LajosHanzo, (2015, May), "A survey on wireless security: technical challenges, recent advances and future trends." arXiv preprint arXiv:1505.07919.
5. T. H. Shake, “Security performance of optical CDMA against eavesdropping,” J. LightwaveTechnol,vol. 23, pp. 655–670, 2005.
6. R. Prasad, CDMA for Wireless Personal Communications Artech House, 1996.
7. Mine Lei, Hai Bi, ZhengjinFeng “Security Architecture and Mechanism of Third Generation Mobile Communication” IEEE 2002.
8. 3GPP TS 33.102. “3GPP: Technical Specification Group services and System Aspects, 3G Security, Security Architecture”.
9. 3GPP TS 03.20 (9.0.0), “Security related network functions” Release 2000, January, 2001.
10. G. Rose and G.M. Koien, “Access security in CDMA2000, including a comparison with UMTS access security” IEEE Wireless Communications, Volume 11 Issue 1, Pages: 19-25, 2004.
11. M. Blunden and A. Escott, “Related key attacks on reduced round KASUMI”, in Proceedings of Fast Software Encryption (FSE’01), Lecture Notes in Computer Science, Pages: 277–285, Springer-Verlag, 2001.

IMPROVED NEGOTIATION BASED PROTOCOL FOR DISSEMINATING INFORMATION IN WIRELESS SENSOR NETWORKS

Sweta Dipti
Lecturer, Department of Computer Science, BMS College for Women, Bengaluru

Abstract

Wireless Sensor network has emerged as a promising technique that revolutionizes the way of sensing information. Wireless Sensor Networks consist of small nodes with sensing, computation, and wireless communications capabilities. Some of the applications of WSN like disaster management, battlefield control etc. demand fast data delivery in which energy consumption is more. Dense deployed sensor nodes at a specific region are likely to transfer redundant data to the base station. This increase the communicational overhead and affects network lifetime. Since energy conservation is the key issue in WSNs, proper data dissemination should be incorporated in order to save energy. The main aim to route the data on network in an energy efficient manner, so that network lifetime is enhanced. To make the Wireless Sensor Network sustainable our goal is reduce the energy consumption in routing the data to base station. In this paper, we present a routing protocol, Improved Negotiation based Protocol for data dissemination in Wireless Sensor Networks. Here, we have proposed ISPIN (Improved SPIN) protocol where both energy value of sensor node as well as hop count is considered for selection among the neighbor node to whom data to be forwarded. This way the data reaches to the sink. The proposed approach has been tested in a simulated environment using MATLAB and result shows that the approach gives better result compared with the Flooding and SPIN protocol. Issues focused here are minimizing of energy consumption and maximizing the network lifetime of Wireless Sensor Network

Keywords: Wireless Sensor Network, Flooding, SPIN protocol, Improved SPIN protocol.

Introduction

Efficient design and implementation of wireless sensor networks has become a hot area of research in recent years, sensors in a WSN have a variety of purposes, functions and capabilities. Applications for wireless sensor networks exist in a various fields, including medical monitoring, environmental monitoring , surveillance, home security, military operations, and industrial machine monitoring. Data transmission is one of the major challenges in wireless sensor network (WSN). Different routing protocols have been proposed to save energy during data transmission in WSN. Routing protocols based on data-centric approach are suitable in this context that performs in-network aggregation of data to yield energy saving data dissemination [1]. Here below is the various related work to Negotiation based Protocol for Disseminating Information in Wireless Sensor Network.

Related Work

Dissemination is the process of distributing individual sensor observations to the whole network, treating all sensors as sink nodes. Classic approach for dissemination is Flooding, in this source node sends data to all neighbors. The receiving node stores and sends data to all its neighbors. It requires no protocol state and disseminates data quickly in the network. [2]

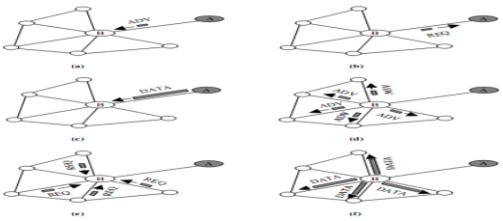
Problems of Classic Flooding [1]

- Implosion-Always sends data to a neighbor, even it has already received the data from another node.
- Overlap- Nodes often cover overlapping areas (e.g. temperature distr.)
- Resource blindness- Amount of energy available does not affect the communication activities.

SPIN [1] is a data-centric routing protocol. It fits under event driven data delivery model in which the nodes sense data and disseminate the data throughout the network by means of negotiation. Negotiation: Before transmitting data, nodes negotiate with each other to overcome implosion and overlap. Only useful information will be transferred. Observed data must be described by meta-data. Resource adaptation, each sensor node has resource manager. Applications probe manager before transmitting or processing data. Sensors may reduce certain activities when energy is low. SPIN nodes use three types of messages for communication [2]:

- ADV- When a node has new data to share; it can advertise this using ADV message containing metadata.
- REQ- Node sends an REQ when it needs to receive actual data.
- DATA- DATA message contains actual sensor data.

Figure 1. Working of SPIN [2



Modified SPIN (M-SPIN) proposed considering the distance discovery of nodes from sink for data routing [3]. Energy consumption not only depends on sensing the data but also on processing the sensed data and transmitting or receiving them to or from its neighbor nodes. So if it is possible to control number of transmission and receipt of messages, a significant amount of energy can be saved. It has three phase Distance Discovery, Negotiation, Data Transmission. Challenges with this is only a part of network is utilized in data transmission.The nodes near the sink get exhausted early, thus minimizing the network lifetime [3].

Proposed Improved SPIN (ISPIN) Approach

The basis of our proposed protocol is the selection of minimum path without actually sending the data. To select the minimum path we have taken both residual energy and the hop count. Here the source sensor node starts sending the control message to the neighbor node. From the list of neighbor node we find the neighbor node with maximum energy, if same then check the min hop count and select that particular node to transfer data. This way process goes on till the data reaches to the sink. After each round there residual energy of the network is calculated and number of dead node is counted.

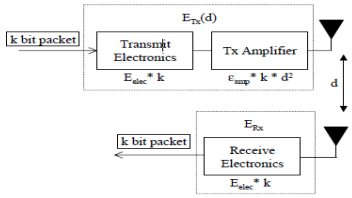
Initialization of networktakes place where all nodes of the network are initialized to same equal energy value and current threshold value is set to 0.005J.We have taken assumption of 100 nodes, area of 100m*100m, all nodes are considered to have equal energy of 0.5J and nodes are randomly distributed. The network has been initialized taking different parameters such Area, Number of Nodes, Initial Energy, Transmit energy values, control message and data size, threshold energy value, transmission range.

Energy Consumption Based on Radio Model:The calculation of energy consumed by a sensor node is based on this radio model. Below given is the formula of energy consumption while transmission and receiving of control and data packets. To transmit 'k-bit' message over a distance 'd' using radio model, the radio expends [5]

ETX (k, d) = ETX_elec (k) + ETX_amp(k,d)

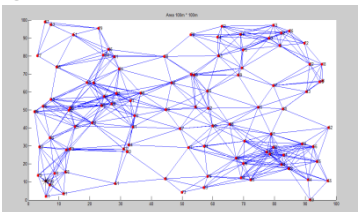
ETX (k, d) = E_elec * k + e_amp * k * d^2

Figure 2 Energy Consumption First order radio model [5]



Creation of Wireless Sensor Network: An area of 100m*100m is taken where 100 sensor nodes are randomly distributed on it.

Figure 3. Creation of Wireless Sensor Network



Distance Finding,herefrom sink node hop distance is measured for each node. Initially the sink node broadcasts Startup packets in the network with node id and hop distance. The process is continued until all nodes in the network get the startup packets.

Computing Distance Matrix- showing distance of each node with all other nodes, calculated on basis of eulicidian distance. Eulicidian distance formulaD=sqrt((x(i)-x(j))^2 +(y(i)-y(j))^2).

Compute Connection matrix, here a matrix of 100*100 is created where there exist a connection between the two nodes 1 is assigned, else 0.

Negotiation

- The source node broadcast the ADV message to the neighbor node. ADV message contain the sensor node id
- On receiving the ADV message, receiver node check whether energy above threshold.
- If yes, then the interested node will send back REQ message with its residual energy value and the hop distance.
- Now check from the request packet received by the source node.
- Choose the neighbor node with maximum residual energy and minimum hop distance.

Data Transmission itsends the packet to the particular node.

This process keeps on until data reach the sink node. If any node has residual energy less than the minimum threshold then it is considered as the dead node.

Performance Analysis

The implementation in done using MATLAB. We present the performance analysis ofFlooding, SPIN, MSPIN. We have used two parameters shown in graph, (a) Total number of dead nodes with each rounds, (b) Residual energy of thesensor network with each rounds.Figure 4 and Figure 5 shows the simulation results.Initially, both the protocols have been tested with the samenetwork topology. Figure 4 shows the number of dead node with increase in number of rounds.In comparison with flooding, SPIN and M-SPIN, the residual energy is slightly more of ISPIN (Improved SPIN), and thus saves the total energy ofthe WSN shown in Figure 5. In this way it can prolong the lifetime of the WSN.

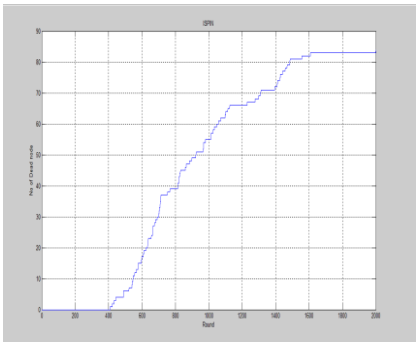


Figure 4. Graph of ISPIN Dead Node verses No. of Round

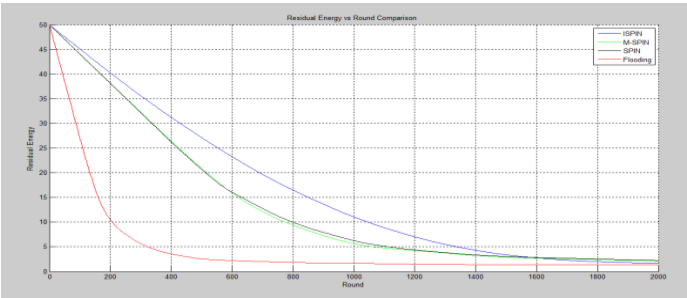


Figure 5. Residual Energy verses No. of Round (ISPIN, MSPIN, SPIN, Flooding)

Conclusion

In this paper ISPIN (Improved SPIN) is proposed and corresponding experimental results are presented. The basis of our proposed protocol is the selection of minimum path without actually sending the data. To select the minimum path we have taken both residual energy and the hop count. The proposed protocol implemented and compared with flooding, SPIN, MSPIN. The proposed protocol shows a slightly better performance in terms of residual energy and number of dead nodes. There are few limitation in this approach, with increase in area performance decreases. Future work direction can be reducing the transmission time of the node for disseminating data in the wireless sensor network so that the energy consumption can be further minimized and also maximize the lifetime of sensor network further.

References

1. Akyildiz,I.F.; Weilian Su; Sankarasubramaniam,Y.; Cayirci,E., "A Survey on Sensor Networks, A survey on sensor networks," Communications Magazine, IEEE Volume: 40 , Issue: 8 , 2002.
2. Joanna Kulik, Wendi Heinzelman, Hari Balakrishnan, "Negotiation-Based Protocols for Disseminating Information in Wireless Sensor Networks," Wireless Networks 8, IEEE Communications Magazine 169–185, 2002.
3. ZeenatRehena, Sarbani Roy, Nandini Mukherjee, "A Modified SPIN for Wireless Sensor Networks", Communication Systems and Networks (COMSNETS), 2011 Third International Conference , 2011 IEEE.
4. Luwei Jing, and Feng Liu, "Energy Saving Routing Algorithm Based on SPIN Protocol in WSN," IEEE Communications Magazine 169–185, 2011.
5. Doohan, N.V.; Mishra, D.K. ; Sanjiv Tokekar "Shortest path routing protocol (sprp) for highly data Centric wireless sensor networks" Internet (AH-ICI), 2011 Second Asian Himalayas International Conference 2011 , IEEE Conference Publication.
6. Nikolaos A. Pantazis, Stefanos A. Nikolidakis and Dimitrios D. Vergados, "Energy-Efficient Routing Protocols in Wireless Sensor Networks: A Survey," IEEE Communication Survey & Tutorials, Vol. 15, No. 2, Second Quarter 2013.
7. Prashant Mishra, Rakesh Tripathi, "Optimum Energy Path (OEP) Protocol for Wireless Sensor Networks", 2014 International conference on CSCITA, IEEE.
8. "Matlab Programming for Engineers" by Stephen J. Chapman, Publication-Thomson, Second Edition 2003.
9. "Wireless Sensor Networks-An Information Processing Approach, by Feng Zhao, Leonidas Guibas, Publication-Elsevier, First Edition 2005

GREEN COMPUTING FOR ENVIRONMENTAL SUSTAINABLE DEVELOPMENT

Roja B.A
Assitant Professor, Department of Computer Science, Indo Asian Academy Degree College, Bangalore

Abstract

The information and communication technology (ICT) has changed the way we live, work, learnAnd play but at the same time, it is affecting our environment in several ways, Green computing refers to environment sustainable computing. The great growth of IT around the world defiantly affects the environment. Building computers and its various mechanical as well as electronic components consumes raw materials, chemicals, water, and electricity power. All these resources will increase the carbon dioxide (CO2). Green computing is the study and practice of plan ,design, Building, using, and towards of computers, servers systems, and associated sub Components of sub systems —such as storage devices ,monitors, printers, and networking communications systems — effectively and efficiently with minimum or no effect or influence On the environment. The goals of green computing are reduce the use of hazardous materials (chemical, radiological, biological, and/or physical,) and make the best use of quality during the products in lifetime, and promote the Recycling of defunct products and factory waste. Research Development will continues into important key areas such as making the use of computers as energy-efficient as possible, and designing of algorithms and systems for efficiency computer technology.

Keywords: *Green Computing, Eco-Friendly, Recycling, Green Design, Green Build or manufacturing, Green Use, Green Disposal,Data Centers.*

Introduction

A green computing system is one which deals with the entire process of plan, design and analysis, manufacturing, use, and disposal involves as less environmental impact as possible. In other words, a green initiative is taken in consideration of all facets of a computer‘s life, from Plan, design to disposal.

In the design aspect, a green computing is created to perform without environmental impact. Such design includes everything from materials and components to how the computer uses its power supply. Nowadays, most computers are built with a sleep mode that allows them to save power when users are not in use, therefore, save on energy impact. A green computing will also takes very important role into an account how it impacts the environment during its life time. One way to make a green computer reduce its usage impact is to extend its longevity. The longer the computer lasts, the less impact it will have on the environment because disposal, normally the most significant green influence of the computer‘s cycle, will be delayed for a longer period of time. To increase a computer‘s longevity, we suggest looking toward upgrades and modularity. In IT world the business runs 24/7 and transactions are made every possible channel to request, read, and store and analyze huge data. The IT industries need to maintain this information in databases which are maintained in servers. Due to the advent of social networks the data is increasing day to day enormously, in space of volume, variety and viscosity. Hence there is a need for soft computing green technology reducing the hardware by maintaining the data on packed servers, providing better cooling, and combination of new database technologies expressly designed for analysis of massive quantities of data. Organizations can even save money and become greener by using open source projects making affordable, resource-efficient. Eco-Friendly Green Computing Definition defines Eco-Friendly Green Computing as the study and practice of the design, development, implementation, utilization and disposal of IT infrastructure efficiently and effectively with low or zero impact on the environment whilst reducing operating costs. Currently the ICT industry is responsible for 3% of the world's energy consumption. With the rate of consumption increasing by 20% a year, 2030 will be the year when the world's energy consumption will doublebecause of the ICT industry.

Organizations use the Green Computing Lifecycle when designing and implementing green computing technologies. The stages in the Lifecycle include Strategy, Design, Implementation, Operations and Continual Improvements. The 5 core green computing technologies advocated by GCI are Green Data Center, Virtualization, Cloud Computing, Power Optimization and Grid Computing.

Organizations can do so in the following three key areas: reduced data footprint, reduced deployment resources, and reduced ongoing management and maintenance. .This technology is beneficial as it:-

- Reduce energy consumption of computing resources during peak operation.
- Save energy during idle operation
- Use eco-friendly sources of energy
- Reduce harmful effects of computing resources
- Reduce computing wastes

Hence, businesses and consumers can embrace environmentally sustainable products that offer low-carbon solutions that can not only reduce their global greenhouse gas (GHG) emissions, but can achieve more efficient energy consumption and lower costs.

Software and Deployment Optimization

Algorithmic efficiency

The efficiency of algorithms has an impact on the amount of computer resources required for any given computing functions and there are manyefficiency trade-offs in writing programs. While algorithmic efficiency does not have as much impact as other approaches, it is still an important consideration.

Data center power

Data centers, which have been criticized for its extraordinary high energy demand, are a firstly focus for proponents of green computing. The federal government has set a minimum 10% reduction target for data center energy usage by 2011.With the aid of a self-styled ultra-efficient evaporative cooling technology, Google Inc. has been able to reduce its energy consumption to 50% of that of the industry average.

Data Center Consolidation & Optimization currently much of the emphasis of Green Computing area is on Data Centers, as the Data Centers are known for their energy hunger and wasteful energy consumptions. With the purpose of reducing energy consumption in Data Centers it is worthwhile to concentrate on following:

- Information Systems – efficient and right set information systems for business needs are a key in building Green Data Centers. As per green computing best practices efficient servers, storage devices, networking equipment's and power supply selection play a key role in design of information systems.
- Cooling Systems – it is suggested by the researcher s that at the initial stage of design process for data center cooling systems, it is significant to consider both current and future requirements and design the cooling system in such a way so it is expandable as needs for cooling dictates.
- Standardized environment for equipment is must for Data Center Air Management and Cooling System.
- Consider initial and future loads, when designing & selecting data center electrical system equipment.

Virtualization

One of the main trends of Green Computing is virtualization of computer resources. Abstraction of computer resources, such as the running two or more logical computer systems on one set of physical hardware is called virtualization. Virtualization is a trend of Green computing it offers virtualization software as well as management software for virtualized environments. One of the best ways to go towards green and save enough space, enough resources, and the environment is by streamlining efficiency with virtualization. This form of Green Computing will lead to Server consolidation and enhance computer security. Virtualization runs fewer systems at higher levels of utilization. Virtualization allows full utilization of computer resources and benefits in:

- Reduction of total amount of hardware;
- Power off Idle Virtual Server to save resources and energy; and
- Reduction in total space, air and rent requirements ultimately reduces the cost

Green Design: The main objective for green designing is to ensure a sustainable future for our society, in regard to both resources and ecological health. It is essential to modify and develop new technologies for Future generations. Simultaneously, these technologies should be eco-friendly and may overcome by the environmental problems caused now.

Green Management: The main objective of green management is to implement and control the system. For successful green management, the procurement and purchasing of the right material for green manufacturing is one of the most critical point

Green Manufacturing: The process of green manufacturing techniques has already brought into play. Some major industries have already taken massive steps toward a greener prospect by altering their designs to make more efficient processes and increase the reusability and recycling rate of the finished products.

Green Disposal and Recycle

Green computing disposal provides a flexible and audit managed solution for the collection and re-processing of end-of-life redundant computing equipment and computer recycling. It is easier to think of to 'go green'. For a positive environmental impact with computer recycling by correctly disposing of unwanted computers and computing equipment with green computing disposal, it is even easier to collect and process the unwanted items at absolutely no cost. With computer recycling we are actively reducing waste, minimizing CO2 emissions and controlling processing costs. It gives the potential to generate a revenue return. If the equipment is still functional, the best way is to continue to be used by someone else, until such time as it fails or it no longer is in use. Once it is useless, the equipment can be recycled. It is important to ensure that data is erased from equipment before anyone else gets to use it. Many organizations would like to have their old equipment reused or possibly even resold to realize a disposal value, but don't have the time or expertise to organize this.

Reasons to Think About Green Computing

- Computer energy is often wasteful
  - leaving the computer on when not in use (CPU and fan consume power, screen savers consume power)
- Printing is often wasteful
  - how many of you print out your emails or meeting agendas
  - printing out partial drafts
  - for a "paperless" society, we tend to use *more* paper today than before computer-prevalence
- Pollution
  - manufacturing techniques
  - packaging
  - disposal of computers and components
- Toxicity
  - As we will see, there are toxic chemicals used in the manufacturing of computers and components which can enter the food chain and water!

Energy Use of PC

- CPU uses 120 Watts
- CRT uses 150 Watts
  - 8 hours of usage, 5 days a week = 562 KWatts
  - if the computer is left on all the time without proper power saver modes, this can lead to 1,600 KWatts

  - for a large institution, say a university of 40,000 students and faculty, the power bill for just computers can come to $2 million / year
- Energy use comes from
  - electrical current to run the CPU, motherboard, memory
  - running the fan and spinning the disk(s)
  - monitor (CRTs consume more power than any other computer component)
  - Printers.

Reducing Energy Consumption

- Turn off the computer when not in use, even if just for an hour
- Turn off the monitor when not in use (as opposed to running a screen saver)
- Use power saver mode
  - in power saver mode, the top item is not necessary, but screen savers use as much electricity as any normal processing, and the screen saver is not necessary on a flat panel display
  - Use hardware/software with the Energy Star label
  - Energy Star is a "seal of approval" by the Energy Star organization of the government (the EPA)
  - Don't print unless necessary and you are ready
  - Use LCDs instead of CRTs as they are more power efficient.

Chemical Elements Used: Lead

  - Used in soldering of printed circuit boards and other components
    - also used in glass for CRTs
    - It is estimated that between 1997 and 2004, 1.2 billion tons of lead was used in computer components
- The problem:
    - Lead can cause damage to the central and peripheral nervous systems, blood system, kidneys, endocrine system and cause negative effects on child brain development
    - Lead accumulates in the environment and has toxic effects on plants, animals and microorganisms
    - Electronics contribute 40% of the total amount of lead found in landfills and can make its way from landfills into the water supplies.

Chemical Elements Used: Mercury

- Mercury is used in
  - Batteries, switches, housing, printed circuit boards
  - Mercury is found in medical equipment, data transmission equipment, telecommunications equipment and cell phones as well
  - If is estimated that 22% of the yearly use of mercury is in electrical and electronic equipment
  - although a small amount of mercury is used, it is used in nearly all computer construction amounting to 400,000 pounds of mercury used between 1997 and 2004
- The problem
  - Mercury spreads out in water transforming into methylated mercury which easily accumulates in living organisms
  - It enters the food chain through fish that swim in polluted waters
  - Methylated mercury can cause chronic brain damage

Solutions

- **Reuse:**Donate your computer components to people who may not have or have lesser quality computers
  - Inner city schools, churches, libraries, third world countries

- This however leads to the older computers being dumped but there is probably no way around this as eventually the older computers would be discarded anyway
- **Refurbish:**Rather than discarding your computer when the next generation is released, just get a new CPU and memory chips – upgrade rather than replace
  - while you will still be discarded some components, you will retain most of the computer system (e.g., monitor, the system unit housing, cables)
  - Are there adequate incentives to do either of the above? Do computer companies encourage refurbishing/upgrading?

Recycling

- If companies can recycle the plastics and other components, this can greatly reduce waste and toxins
- However, the hazardous materials in e-waste can harm the recycle workers if they are not properly protected
- Developed countries now have facilities for recycling e-waste,However, in Europe, the plastics are discarded instead of recycled because the flame retardant chemicals are too toxic to work with
- To resolve these problems, the computer manufacturers must start using recyclable chemicals.

Conclusion

The aim of this paper is to focus on the sustainable IT organizations with effective energy efficiency and negligible environmental problems. Green computing leads to a spectacular change in the IT industry. Thus far, the IT industries have been focusing on electronic equipment processing only. The concern with other requirements such as power, cooling, and data center space is very less. However, recent developments IT industry indicates the motivation and certainty to deal with the environmentalissues. This paper exhibits a review of current thinking and suggested factors that should be considered for a sustainable IT strategy. Hence, it is concluded that the IT equipment industries can play a most significant role in green computing movement. Major IT industries have evolved their devices for better efficiency and cooling requirements by providing tools that can monitor equipment and data center power usage, and can organize the power necessity to IT equipment and monitor equipment temperature conditions to help discover and address data center cooling issues.

Here's how designers plan to make future computer more eco-friendly across itsEntire life span, from manufacture to recycling:-

- Energy-intensive manufacturing of computer parts can be minimized by makingManufacturing process more energy efficient
- By replacing petroleum-filled plastic with bio plastics—plant-based polymers require less oil and energy to produce than traditional plastics with a challenge tokeep these bio plastic computers cool so that electronics won't melt them
- Landfills can be controlled by making best use of the device by upgrading andrepairing in time with a need to make such processes (i.e., up gradation and repairing)easier and cheaper
- Avoiding the discarding will not only control e-waste out of dumps but also saveenergy and materials needed for a whole new computer
- Power-sucking displays can be replaced with green light displays made of OLEDs,or organic light-emitting diodes
- Use of toxic materials like lead can be replaced by silver and copper
- Making recycling of computers (which is expensive and time consuming atpresent) more effective by recycling computer parts separately with an option of reuseor resale
- Future computers could knock 10 percent off their energy use just by replacing
- Hard drives with solid-state, or flash, memory, which has no watt-hungry moving parts.

References

1. Anam, A., Syed, A.: Green computing: e-waste management through recycling. Int. J. Sci. Eng.
2. Debnath, B., Baidya, R., Biswas, N.T., Kundu, R., Ghosh, S.K.: E-waste recycling as criteria for green computing approach: analysis by QFD tool. In: Maharatna K., Dalapati G., Banerjee P., Mallick A., Mukherjee M. (eds) Computational Advancement in Communication Circuits and Systems. Lecture Notes in Electrical Engineering, vol. 335. Springer, New Delhi
3. Manomaivibool, P.: Extended producer responsibility in a non-OECD context: the management of waste electrical and electronic equipment in India.
4. Baud, I., Grafakos, S., Hordjik, M., Post, J.: Quality of life and alliances in solid waste management.
5. Empa, E.: E-waste pilot study Delhi: knowledge partnerships with developing and transition countries. St. Gallen: Empa; 2004. Fagerberg Jan, Mowery David C, Nelson Richard R., the Oxford Handbook of Innovation.
6. Hazardous Wastes (Management and Handling) Amendment Rules, www.cpcb.nic.in
7. Climate Savers Computing Initiative (2010) Retrieved
8. http://www.climatesaverscomputing.org
9. Energy Star Program (2010) Retrieved from http://www.energystar.gov/
10. http://www.theglobalwarmingstatistics.org/globalwarming-
11. Microsoft: Green IT taking the first step (2010) Retrieved from
12. http://www.microsoft.com/environment/our_commitment/articles/green_guide.aspx
13. Recycle-it America (2010) Retrieved from http://www.recycleitamerica.com/
14. San Murugesan, ―Harnessing Green IT: Principles and Practices,‖ IEEE IT
15. Professional, January-February 2008, pp 24-33.
16. The Green Grid (2010) Retrieved from
17. http://www.uh.edu/infotech/news/story.php?story_id=1
18. http://www.uh.edu/infotech/news/story.php?story_id=1

HYPER LOOP: A SUSTAINABLE DEVELOPMENT IN TRANSPORTATION

Anjali. M
Assistant Professor, Department of Electronics, Indo Asian Academy Degree college and PG center, Bangalore

Abstract
Hyper loop is known as the fifth mode of transportation which can overcome the disadvantages of other types of transportation. It has many advantages like high speed, more environmental friendly, use of renewable energy sources etc. In this paper the author is trying to analyze the advantages of hyper loop compared to other mode of transportation.
Keywords: *Hyper loop, transportation, environment. renewable energy*

Introduction

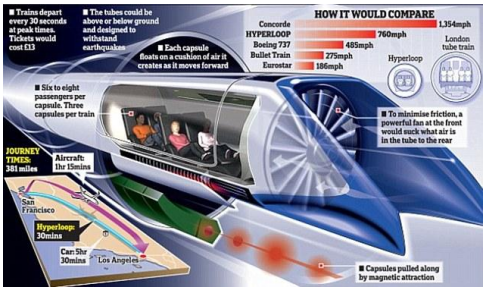
The Challenges of Contemparory Transportation

Transportation is an industry in constant drift: it is compelled to compete with the growing human population while catering faster and cheaper modes of travel. Within 100 years, the industry has made massive developments, as seen by the substitution of horses with the large-scale enactment of mechanized cars, trains, planes, and boats. Most important of all of all, flight, first achieved in 1903, has transformed the human idea oftravel. In today's world, traveling at speeds of 560mph,which is the typical journey speed for modern airliners, is approved and for various reasons universally accepted. But, air travel is becoming very costly and has many formalities. This is due to the increased cost of fuel and tight security at airports, emanate from the fact that nature of airplanes not being restrained to a certain location like a train is to its tracks. Because of all these reasons, a fifth method of transportation is needed to appease peoples hunger for high speed travel at a low cost.

Hyper loop is the technology to fill this gap . Devised in 2013 by Space CEO Elon Musk, Hyper loop is the idea of keeping a passenger carrying pod in almost vacuum and shooting that pod around 760mph. which is almost equal to , the speed of sound . This technology is similar to that of bullet trains ;but , it has the advantage of being very cheap, in theory, to build. At present, two companies are in a race to establish and realize the possibility of this idea. Moreover, hyper loop excites people because of its capability to bring an alternative form of travel , where airplanes and cars are dominant. Engineers are excited by the idea because it could prove to be admissible in replacing the old infrastructure. finally, this technology could remarkably reduce transport times while being inexpensive, safe, and convenient for many The main challenge is devising a way to make Hyper loop a reality.

The Principles Behind Hyperloop and its Shortcomings

Figure 1: Hyper loop Concept



Hyper loop is a modern technology, but the idea behind it is entirely feasible within our understanding of physics exertion would not require any new technology .In short, creating a Hyper loop should only need combining together current technologies. The main theoretical problem for hyper loop is called the Kantrowitz limit. This is about speeds of projectiles as they move in a tube. A projectile in a tube has a minimum tube to projectile ratio in order to move at a high speed efficiently . This is because as a projectile starts to move quickly in a tube it creates a large column of air in front of it. If the tube diameter is too small, the projectile will not only have to propel itself forward but also the entire column of air in front of it .This occurs because the air cannot move around the projectile if the diameter is too small. Furthermore, this situation would require an infeasible amount of power for a very little speed benefit, or in other words a

horrible transportation system. The solution to this problem is to simply make a large tube, yet this too is inefficient for a large-scale transportation system as material cost would be greatly increased.

In 2013, Elon Musk invented a solution to both these problems. If an electric compressor fan is kept on the tip of the pod it could fiercely shift high pressure air from the front of the pod to the back. This air can be used to make a cushion for the train to glide on as it travels, known as an air bearing. The main advantage of air bearings are that hyper loop will not lose any energy due to friction., The vengeance for anyone who wants to move an object quickly. The other components of Hyper loop are electromagnets to propel the train forward and a near vacuum inside its tube. Electromagnets are currenly in use, known as maglev, Which is used in fastest bullet trains in the world. In hyper loop these magnets are only used for propulsion. This means that magnets will only be needed in the walls of the tube and about every 70 miles to make the train running at its top speed .About 1% of the tube would need to be constructed of magnets.

Another major section of Hyper loop is the tube it travels in. The outside it looks like a normal tube but , the inside is a soft vacuum . This is very much needed as it also decreases the amount of drag force in the tube. Drag force is the other main force stopping the objects from traveling at high speeds. The pressure in the tube will be around 100 pascals when compared to the pressure we live at of 101,325 Pascal . The reason the tube will not be a complete vacuum is due to cost and likelihood of leaks .A pump can easily hold a pressure of 100 pascals with small leaks while it is not possible for it to do so with a complete vacuum .Finally, the entire hyper loop tube can be hanged by pylons anchored to the ground, similar to a monorail's track . This has the advantage having less space and protecting the track from natural disasters, such as earthquakes.

There are two main criticisms of hyper loop: oneis it is only a good solution for intermediate distances and other one is the cost of development sounds far too optimistic. In Musk's paper detailing his idea for Hyperloop, he specially devised this system as an alternative to a high-speed train from Los Angeles to San Francisco, cities that are380 miles apart. In principle hyper loop is not useful for long distance transport. It is an alternative for an intermediate transport system not ment for distances over 900 miles . Hyper loop is not a transport system which can replace all other modes of transport. It can be considered as aother tool to solve the problem of moving people quickly and cheaply. Considering the cost of building hyper loop, bullet trains using maglev need large investment. Compared to the high speed train hyper loop for the same distance cost only6 billion . Even if development of hyper loop goes over budget it would still likely be billions of dollars less than a high-speed train. Another, criticism to think about with hyper loop is whether or not humans will be able to withstand its high speeds . This question cannot be answered until true testing begins. There are still many uncertainties regarding hyper loop, yet in a short time it has made huge developments.

In a three-year period, twocompanies,one named as HTT (hyper loop Transportation Technologies) and other Hyperloop One, already started developing hyper loop technology for commercial use . HTT is a company unlike most, as it is a volunteer team of engineers who are developing the technology from crowd sourced funding . Currently, HTT has yet to test its product and plans to do so in early 2017. However, their competitor hyper loop One has already tested a prototype. In an open air-track earlier this year, they were able to hit speeds just over 100mph . This may seem far off from the proposed 760mph, but it is important to note this was not in a near vacuum tube and the pod was not using air bearings. The importance of this test is that hyper loopOne was able to prove their electromagnetic propulsion works. Incredibly this company has already raised 100 million dollars of capital to continue testing. They aim to have a fully working prototype, tube and all, in early 2017. They also claim to be in talks with countries all over the world who may be interested in implementing Hyperloop.

Advantages of Hyper loop

The futuristic transport system hyper loop has come a long way since entrepreneur Elon Musk proposed a "fifth mode of transport" in 2012. The concept, in which commuters are whisked

through a tube at speeds in excess of 700mph, has developed rapidly with inventors and investors giving their backing.

While it may have seemed like fantasy, and there are still lots of reasons to be skeptical about this "future of transport", plans for hyper loop and the companies behind it are making progress towards their first operational tunnels. Hyper loop is considered to be the fifth mode of transportation after cars, trains, air, and water. It provides a very fast means of transportation for the people compared to all other types of transport. Most of the transportation system which we are using now a days run with nonrenewable sources of energy like petrol, diesel etc. This energy sources are getting exhausted day by day. According to experts earth has left out with oil only for fifty three years more, Moreover the existing transport create more environmental pollution. In this paper we are trying to find the different benefits of hyper loop which makes it a sustainable development in the field of transportation.

The most important fact of hyper loop is that, it has many environmental benefits compared to other modes of teansport. The reasons for this is it uses very less energy as well as it uses only green forms of energy. Hyper loop uses only one fourth the energy used by cars, one fifth of energy of planes even lesser energy compared to electrical cars. From this fact we can conclude that the money we spend for the aircraft mainly because of the expensive fuels can be avoided using in the case of hyper loop

The plan to cover the entire tube session with solar panel will makes the hyper loop a very environmental friendly transport system, and can make it to run day and night, summer and winter with excess of energy. Coal or any other nonrenewable energy sources are avoided in hyper loop.Therefore; the implementation of the Hyper loop would provide a much-needed push toward fossil fuel independence that could potentially save the world from a major energy crisis.

References

1. F. Aboukhadijeh. “The Transportation Revolution.” Study Notes, LLC. 11.17.2012 Accessedhttps://www.apstudynotes.org/us-history/topics/the-transportation-revolution/
2. “The Wright Brothers- First Flight 1903.” EyeWitness to History. Accessed 10.26.2016. http://www.eyewitnesstohistory.com/wright.htm
3. “Airplane.” Wikipedia. Accessed 10.26.2016. https://en.wikipedia.org/wiki/Airplane#Propulsion
4. E. Musk. “Hype rloop Alpha.” Tesla. 08.12.2013. Accessed 10.26.2016
5. https://www.tesla.com/sites/default/files/blog_images/hyperloop-alpha.pdf
6. R. Palacin. “Hype rloop, the Electrification of Mobility, and the Future of Rail Travel.” IEEE Electrification Magazine. 09.2016. Accessed 10.26.2016.
7. https://www.researchgate.net/profile/Roberto_Palacin/publication/307867878_Hyperloop_the_Electrification_of_Mobility_and_the_Future_of_Rail_Travel_Viewpoint/links/5801f78008ae6c2449f7c30e.pdf
8. P. Ross. “Hyper loop: No Pressure.” IEEE. 12.29.2015. Accessed 10.26.2016. http://rt4rf9qn2y.scholar.serialssolutions.com/?sid=google&auinit=PE&aulast=Ross&atitle=Hyperloop:+No+Pressure&id=doi:10.1109/MSPEC.2016.7367468&title=IEEE+spectrum&volume=53&issue=1&date=2016&spage=51&issn=0018-9235
9. System.” IS3C-15. 3.2015 Accessed 10.26.2016. http://www.atlantis-press.com/php/paper-details.php?id=17380
10. R. Bradley. “The Unbelievable Reality of the Impossible Hyper loop.” MIT Technology Review. 05.10.2016 Accessed 10.26.2016. https://www.technologyreview.com/s/601417/the-unbelievable-reality-of-the-impossible-hyperloop/
11. A. Minter. “Just Say No to High-Speed Rail.” Bloomberg View. 07.06.2016. Accessed 10.26.2016. https://www.bloomberg.com/view/articles/2016-07-07/just-say-no-to-high-speed-rail
12. “Hyper loop Transportation Technologies.” Hyper loop Transportation Technologies. Accessed 10.26.2016. http://hyperlooptransp.com/#!/

INTELLIGENT DATA MINING AND ANALYSIS AND ITS APPLICATIONS

Deepa.S & Monisha.R
IV Sem BCA, Indo Asian Women's Degree College, Bangalore

Sujatha. M
Assistant Professor, Department of Computer Science
Indo Asian Women's Degree College, Bangalore

Abstract

The Intelligent Data Mining and Analysis is an advanced technology in information processing to extract rules and knowledge from largedatabase systematically and analyze the nonlinear relationship between input and output variables in complex problems or phenomena. Data mining is a mature application in other areas like marketing. It is relatively recent that the power industry has shown an interest in these techniques. This paper provides an overview of data preprocessing, focusing on problems of real world data. These are primarily problems that have to be carefully understood and solved before any data analysis process can start. The paper discusses in detail two main reasons for performing data preprocessing are problems with the data and preparation for data analysis.

Keywords*: Data preprocessing, Data analysis, Data mining, Knowledge management.*

Introduction

Recent developments in computing have provided the basic infrastructure for fast access to vast amounts of online data and many of the advanced computational methods for extracting information from large quantities of data are beginning to mature. These developments have created a new range of problems and challenges for the analysts, as well as new opportunities for intelligent systems in data analysis and have led to the emergence of the field of Intelligent Data Analysis (IDA), a combination of diverse disciplines including Artificial Intelligence and Statistics in particular.

These fields often complement each other: many statistical methods, particularly those for large data sets, rely on computation, but brute computing power is no substitute for statistical knowledge. Most of the data collected so far have not been analyzed, and there are few tools around which allow the effective analysis of "big data".

Different analysis strategies may be applied to the same problem and it is often difficult to judge which is the most appropriate and the division of the work between the computers. The analyst most effectively is by and large still work of art. Many different application areas offer vast potential for improvement include such diverse fields as the automatic monitoring of patients in medicine (which requires an understanding of the underlying decision process), optimization of industrial processes, and also the extraction of expert knowledge from observations of their behavior.

Scope of Data Analysis

- **Strategies**- Data analysis in a problem-solving context is typically an iterative process involving problem formulation, model building, and interpretation of the results. This deals with how data analysis may be carried out effectively should lead us to having a close look not only at those individual components in the data analysis process, but also at the process as a whole, asking what would constitute a sensible analysis strategy.
- **Integration**- In addition to careful thinking at every stage of an analysis process and intelligent application of relevant domain expertise regarding both data and subject matters, Intelligent Data Analysis requires critical assessment and selection of relevant analysis approaches.
- **Data Quality**- Data is now viewed as a key organizational resource and the use of high-quality data for decision making has received increasing attention. It is commonly accepted that one of the most difficult and costly tasks in modern data analysis is trying to obtain clean and reliable data.

Knowledge Discovery and Data Mining: The challenge raised by the growing volume of data a new research area has emerged, which is usually characterized by one of the following phrases:

- **Knowledge Discovery in Databases** (KDD) Usual characterization

KDD is the non-trivial process of identifying valid, novel, potentially useful, and ultimately understandable patterns in data.

- **Data Mining** (DM)

Data mining is that step of the knowledge discovery process in which data analysis methods are applied to find interesting patterns. It can be characterized by a set of types of tasks that have to be solved. It uses methods from a variety of research areas.

Data Mining Tasks

- **Classification:** It Predict outcome of an experiment with a finite number of possible results (e. g. yes/no, good/neutral/bad).This is Applicable for binary or categorical results. Prediction may be less expensive or easier to check.
- **Regression :** It is similar to classification and prediction of a numerical value.
- **Cluster Analysis:** It is a process of summarizing data, split data set into sub sets. There is no need to examine data set as a whole but inspect clusters only. It gain insight in the structure of the data.
- **Association Analysis:** These tasks find correlations or interdependencies between items and focus on relationships between all attributes.

The Applications of Data Mining in Knowledge Management

The applications of data mining to organizational knowledge management for effective capturing, storing and retrieving, and transferring knowledge. It is divided into four main groups.

- Knowledge resource
- Knowledge types and/or knowledge datasets
- Data mining tasks
- Data mining techniques and applications used in KM.

Knowledge Resources

The knowledge resources into eight groups as that which knowledge object to be stored and manipulated in KM and how data mining aids.

1. Health Care Organization: This domain is used in the use of the disease knowledge management system (KMS) of the hospital
2. Retailing: This is customer knowledge from household customers for product line and brand extension issues. Data mining can help and propose suggestions and solutions to the firm for product line and brand extensions. This doing by extracting market knowledge of customers, brands, products, and purchase data to fulfill the customers' demands behavior
3. Financial/Banking: The domain knowledge covered financial and economic data; data mining can assist banking institutions making decision support and knowledge sharing processes to an enterprise bond classification
4. Small and Middle Businesses (food company and food supply chain): There were two methods and processes to obtain knowledge resources: knowledge seeding-the relative knowledge to the problems; knowledge cultivating-the process to find the key knowledge from knowledge seeding.
5. Entrepreneurial Science: There were three types of the research assets: research products, intellectual capital, and research programs. Data mining facilitated for knowledge extraction and helped guiding managers in determining strategies on knowledge-oriented organization competition.

Knowledge Types

This section described knowledge types in 8 organization domains for data mining collaboration process in the knowledge creation.

- **Health-care System domain**, the dataset composed of three databases: the health-care providers' database, the out-patient health-care statistics database and the medical status database .Another data source was from hospital inpatient medical records.

- **Construction Industry domain**, a sample data set was in the form of Post Project Reviews (PPRs) as defining good or bad information.Multiple Key Term Phrasal Knowledge sequences (MKTPKS) formation was generated through applications of text mining and was used an essential part of the text analysis in the text documents classification.
- **Retailing domain**, customer data and the products purchased have been collected and stored in databases to mine whether the customers' purchase habits and behavior affect the product line and brand extensions or not
- **Financial domain,** there were two datasets posed in financial domain to identify bond ratings, knowledge sets contained strings of data, models, parameters and reports for each analytical study and the second to predict rating changes of bonds, cluster data of bond features as well as the model parameters were stored, classified, and applied to rating predictions
- **Small and Middle Businesses (SMBs) domain,**Knowledge types in small and middle businesses in case of Food Company were related to the corporate conditions or goals of the problem among all departments to develop a decision system.
- **Research Assets domain**, this platform contained three components types of research products, human resources or intellectual capital, and research programs. The various types of research assets were handled on domain ontologism and databases.
- **Business domain**, there were two types of knowledge attributes conducted are condition attributes and decision attribute. Condition attributes included four independent attributes of the KM purpose, the explicit-oriented degree, the tacit-oriented degree, and the success factor. Decision attribute included one dependent attribute of the KM performance.
- **Collaboration and Teamwork domain**, a dataset used from a research laboratory in a research institute. The two types of knowledge flow were determined to describe a worker's needs. To collect the knowledge flow, documents in the datasetwere categorized into eight clusters by data mining clustering approach.

Data Mining Techniques/Applications Used in Knowledge Management

The applications of data mining have been widely used in various enterprises ranging from public health-care, construction industry, Food Company, retailing to finance. Each field can be supported by different data mining techniques which generally include classification, clustering, and dependency modeling.

Classification: Classification is one of the most common learning in data mining. This task aims at mapping a data item into one of several predefined classes. Examples of classification methods used as part of knowledge management include the classifying of the patients from primary health-care centers to specialists; the combination of the data mining and decision support approaches in planning of the regional health-care system; and the implementation of visualization method to facilitate KM and decision making processes

Clustering: This involved seeking to identify a finite set of categories and grouping together objects that are similar to each other and dissimilar to the objects belonging to other clusters.This technique has been applied in many fields. Some of them are as follows,

- Healthcare: clustering categories and attributes used in analyzing the similarities between community health centers.
- Retailing: clustering the segmentation for possible product line and brand extension to identify market to customer clusters.
- Financial/Banking: identifying groups of corporate bond clusters according to the industry and a specific segment within an industry; then tuning cluster data for each industry as a template for predicting rating changes
- Construction Industry: clustering textual data to discover groups of similar access patterns

- Collaboration and Teamwork: identifying groups of workers with similar task-related information needs based on the similarities of workers' knowledge flow.

Dependency Modeling: This concerned with finding a model that describes significant relationships between attribute sets. For example, it is widely used in healthcare to develop clinical pathway guidelines and provide an evidence-based medicine platform. It is helpful for clinical decision making. It could give better results in knowledge refinement through a use of this technique on the construction industry dataset, this technique used to mine customer knowledge from household customers Common tools for dependency modeling and sequential pattern analysis.

Conclusion

In organization, knowledge is an important resource. Management of knowledge resources has become a strong demand for development. Discovering the useful knowledge has also significant approach for management and decision making. As data mining is a main part of KM. This aims to give a research summary on the application of data mining in the KM technologies domain. On the basis of the publication rates, research on the application of data mining in KM will increase in the future and cover the interest in different areas. The classification of data mining tasks is usually the employed model in organization for description and prediction. In the context of healthcare, one article used the visualization technique as a supplement to other data mining tasks. This visualization system could enhance and lead to better performance in decision making.KM is an interdisciplinary research area. Thus, in the future, KM development may need integration with different technologies and demand more methodologies to solve KM problems.KM applications development tends to support expert decision making and will be the application of a problem-oriented domain.

References

1. Dalkir, K. (2005). Knowledge Management in Theory and Practice. Boston: Butterworth-Heinemann.
2. Dawei, J. (2011). The Application of Date Mining in Knowledge Management.2011 International Conference on Management of e-Commerce and e-Government, IEEE Computer Society
3. Fayyad, U., Piatetsky-Shapiro, G. & Smyth, P. (1996). From Data Mining to Knowledge Discovery in Databases.AI Magazine,
4. Gorunescu, F. (2011). Data Mining: Concepts, Models, and Techniques. India: Springer.
5. Han, J. &Kamber, M. (2012). Data Mining: Concepts and Techniques. 3rd.ed. Boston: Morgan Kaufmann Publishers.
6. Hwang, H.G., Chang, I.C., Chen, F.J. & Wu, S.Y. (2008). Investigation of the application of KMS for diseases classifications: A study in a Taiwanese hospital. Expert Systems with Applications,
7. Lavrac, N., Bohanec, M., Pur, A., Cestnik, B., Debeljak, M. &Kobler, A. (2007).Data mining and visualization for decision support and modeling of public health-care resources. Journal of Biomedical Informatics
8. Li, Y., Kramer, M.R., Beulens, A.J.M., Van Der Vorst, J.G.A.J. (2010). A framework for early warning and proactive control systems in food supply chain networks. Computers in Industry
9. Liao, S.H., Chen, C.M., Wu, C.H. (2008). Mining customer knowledge for product line and brand extension in retailing.
10. Liao, S. (2003). Knowledge management technologies and applications-literature review from 1995 to 2002. Expert Systems with Applications.

A SURVEY ON EFFECT OF INTERNET OF THINGS ON SUSTAINABILITY

Umamageswari. S
Assistant Professor, Department of Science and Computer Applications
Indo Asian Academy Degree College and PG Center, Bangalore

Abstract

The technology is growing fast by giving new trends to make a better world. The Internet of Things (IOT) plays a vitalrole among them; the most efficient technology that will trend in the year 2030 is IOT. Why is the effect of IOT so large? It connects and controls all the unconnected things remotely, which is not achievable by the other older technologies. IOT can create a sustainable world, to do so we need more industries and individuals to work together. We may face more security issues, but it is possible to use this technology to develop a sustainable world. In this article I want to glance at the survey on effect of Iot on sustainability.

Keywords: *IOT, effect, survey, sustainability.*

Introduction

In the last four decades, the world has observed fascinating new trends. Technologies have been invented and used exclusively to make the world a better place.

Restructuring Global Efforts

There are seventeen sustainable development goals which are used for measuring the growth of the countries; in UN General Assembly 194 countries adopted it. In this point, the vision of the world economic forum digital economy and society system projects are making sure that digital future is expansive, trustworthy and sustainable. The IOT is the primary focus. The impact of IOT will be around $11.1 trillion which is 14% of today's global GDP.

In The forum they made a research on society and on the UN SDG, they got two outputs from this research.

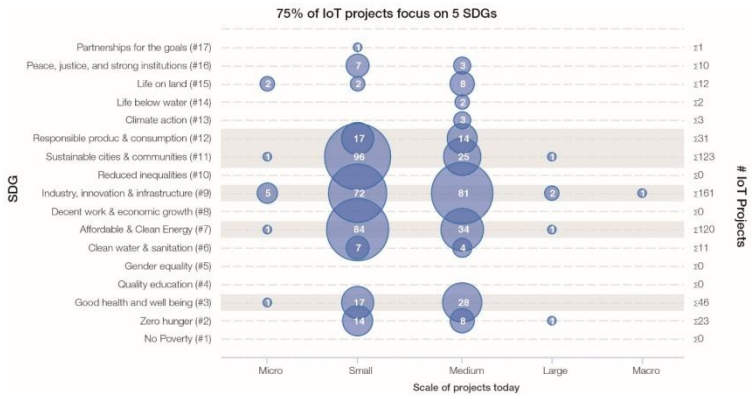
Effect 1: the Internet of Things Possibly will Be a Game Changer for Sustainability

IOT projects can be used to achieve both the SDG's and UN's 2030 mission. In the analysis of 640 IOT projects, 84% is meeting the goals of the forum. 75% is concentrating mainly on five SDG's. They are:

9 projects on Industry, innovation and infrastructure which is of 25%, 11 on smart cities and communities which is of 19%, 7 on affordable and clean energy of 19%,3 on good health and well being of 7%, 12 responsible production and consumption which is of 5%.

Out of this 84%, 75% of the projects are driven by the private sectors.

Effect 2: Measuring Current Success taleis a Key Challenge



The IOT projects which ever is deployed so far is 95% of small or medium and only few are large or macro sized. The following graph shows the IOT project in different areas.

As the IOT is in its early stage the projects are small, why we are not able to do large size of projects is because of technical and commercial issues. City Digital in Chicago developed a project for monitoring the infrastructure which has high IOT sustainability impact.

IOT is mainly focusing on zero hunger, education, life on hand, life below water. Sustainability is the privilege of CSR department and support for business, investment and cooperation.

Objectives

To support the growth of IOT the World Economic Forum uses the scalable and replicable models of business, investment and collaboration across industries and with public. The first phase of the project focuses on the following questions:

1. How to compare the IOT projects?
2. Whether IOT projects can support or have the potential to support the SDGs? If yes, how do they plan against the 17 SDGs?
3. What are some of the inspiring or most illustrative IoT projects addressing the SDGs, and how can their impact be compared against each other?

The project proposed to answer these questions:

- A structure for a beginningassessment of the impact of IoT projects across sustainable development areas.
- A map of IOT projects that can support or have the potential to support the SDGs according to this structure.
- The purpose of the framework to case studies to help visualize how they address the SDGs and how they could compare with each other

A second part of the proposal will build on these results and produce a set of rules on scalable and replicable models for business, investment and collaboration for sustainable IoT deployment strategies.

Scale of projects

The scale of project is determined from today's project achievement from micro to macro level by keeping the count of the individuals, geographical area and usage reach.

Applied on: 640+ projects from IoT-analytics database

Display: Map of IoT deployments with potential to support SDGs

Scale of Impact	Individuals	Usage	Geography
Macro	> 10M	Across multiple sectors	Worldwide
Large	1M – 10M	Across industry, value chain or sector	Pan continent
Medium	100K – 1M	Multiple generic products or projects	Country or Countries
Small	10K – 100K	Multiple specific products or projects	City or region
Micro	< 10K	Single product or project	Community
Uses best of 3 dimensions			

Target penetration

Decides the % of SDG targets that the advantages of that project reaches.

Display: KPI framework applied on Illustrative IOT4D examples

Applied on: 640+ projects from IoT-analytics database

Display: Map of IoT deployments with potential to support SDGs

SDG Targets Project Touches Converted to a 5 Point Scale		
x	Criteria	Explanation
5	>80%	Project touches more than 80% of targets within SDG
4	60%–80%	Project touches between 60%-80% of targets within SDG
3	40%–60%	Project touches between 40%-60% of targets within SDG
2	20%–40%	Project touches between 20%-40% of targets within SDG
1	<20%	Project touches less than 20% of targets within SDG

Influence on targets: Decides how much the project outcome can control an individual target within SDG

Applied on: 5 illustrative examples

Score	Criteria	Explanation For a given scale and scope what % of target can the project achieve?
5	>66%	Greater than 66% e.g. initial MMR 100; target MMR < 80.2
4	33%–66%	Between 33% and 66% e.g. 80.2 < target MMR < 90.1
3	10%–33%	Between 10% and 33% e.g. 90.1< target MMR < 97
2	1%–10%	Between 1% and 10% e.g. 97< target MMR < 99
1	<1%	Less than 1% e.g. 99< target MMR < 100

Qualitative Targets

E.g. By 2030, enhance international cooperation to facilitate access to clean energy research and technology

Score	Criteria	Explanation For a given scale and scope what is the likely project impact on target?
5	Very significant	For a given scale and scope what is the likely project impact on target?
4	Significant	Very significant impact on targets; project is probably designed to achieve the targets
3	Material	Material impact on targets; probably amongst top 3 focus areas for the project
2	Limited	Limited impact on targets; project touches but probably not designed for the target
1	Nominal	Nominal impact, project touches but does not influence the targets

Scalability and Replicability*:* Determine to what level a project is structurally scalable (same target) or replicable (across targets, SDGs)

Applied on: 5 illustrative examples

Display: KPI framework applied on Illustrative IoT4D examples

Scalability: How scalable (number of individuals impacted, geographical and usage reach) is the project for achieving individual SDG target?

Score	Label	Explanation Estimates ease of scaling in terms of i. # individuals ii. Geography iii. usage reach
5	Very high	Project in its current form can easily be scaled up in all 3 dimensions
4	High	Project in its current form can easily be scaled up in 2 dimensions
3	Medium	Project in its current form can be scaled up in at least 1 dimension
2	Low	Project would require significant structural changes and / or resources to scale up
1	None	Unique project, cannot be scaled up in current form

Replicability

How replicable is the project for achieving targets in same or other SDGs?

Score	Label	Explanation Estimate ease of replication to achieve other targets in same or different SDGs
5	Very high	Project in its current form can easily be replicated to achieve 3 or more targets
4	High	Project in its current form can easily be replicated to achieve 2 targets
3	Medium	Project in its current form can easily be replicated to achieve at least 1 other target
2	Low	Project would require significant structural changes / resources to be replicated
1	None	Specific project, cannot be replicated in current form

Focus on vulnerable groups

Determine whether a project has a significant focus on vulnerable, under developed or underserved groups

Applied on: 5 illustrative examples

Display: KPI framework applied on Illustrative IoT4D examples

The score is calculated using a three-step process

1. Identify which of the 12 indicators is the most relevant to use for the project under consideration
2. Create a normalized scale for the chosen indicator (minimum 0, maximum 1)
3. Plot where on the scale the project beneficiaries are likely to fall and read the "vulnerable group focus score" from the left of the chart

The score is ranked on a scale from one to five: nominal (1), limited (2), material (3), significant (4), or very significant (5).

Conclusion

As we saw so many surveys which explains about IOT, I would I like to conclude that IOT is a sustaining technology for the development of the world. As of now we have only projects up to medium scale we can develop the large scale project so that it meets the requirements of the world.

References

1. https://dzone.com/articles/the-effect-of-the-internet-of-things-on-sustainability
2. https://www.weforum.org/.../effect-technology-sustainability-sdgs-internet-things-iot/
3. https://www.greenbiz.com/.../3-ways-businesses-can-use-internet-things-save-environment

FOG COMPUTING: ARCHITECTURE AND ITS CHALLENGES IN IOT

Prof. Annakumari.N
HOD, Department of Computer Science, St. Vincent Pallotti College, Bangalore

Abstract

Fog/edge computing has been proposed to be integrated with Internet of Things (IoT) to enable computing services devices deployed at network edge, aiming to improve the user's experience and resilience of the services in case of failures. With the advantage of distributed architecture and close to end-users, fog/edge computing can provide faster response and greater quality of service for IoT applications. Thus, fog/edge computing-based IoT becomes future infrastructure on IoT development. To develop fog/edge computing-based IoT infrastructure, the architecture, enabling techniques, and issues related to IoT should be investigated first, and then the integration of fog/edge computing and IoT should be explored. To this end, this paper conducts a comprehensive overview of IoT with respect to system architecture, enabling technologies, security and privacy issues, and present the integration of fog/edge computing and IoT, and applications. Particularly, this paper first explores the relationship between cyber-physical systems and IoT, both of which play important roles in realizing an intelligent cyber-physical world. Then, existing architectures, enabling technologies, and security and privacy issues in IoT are presented to enhance the understanding of the state of the art IoT development. To investigate the fog/edge computing-based IoT, this paper also investigate the relationship between IoT and fog/edge computing, and discuss issues in fog/edge computing-based IoT. Finally, several applications, including the smart grid, smart transportation, and smart cities, are presented to demonstrate how fog/edge computing-based IoT to be implemented in real-world applications.

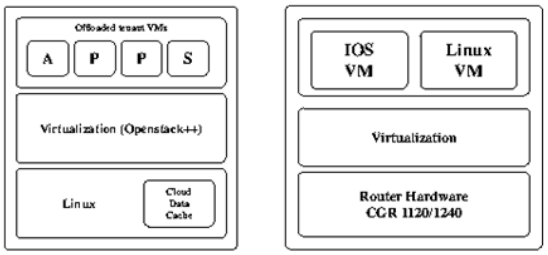
Keywords: *Applications, enabling technologies, fog/edge computing, internet of Things (IoT), security and privacy*

Introduction

In recent years, Fog Computing extended its computing infrastructure to the network edges to provide computation, networking, and storage services between end devices and data centers. Fog systems are capable of processing large amounts of data locally, are fully portable, and can be installed on heterogeneous hardware. These features make the Fog platform highly suitable for time and location-sensitive applications, and it can be seen as an interface between IoT and Cloud. The extensions from cloud to Fog and Fog to IoT are not trivial, as there exist many fundamental differences emanating from the reason that Fog computing is developed. Fog computing system design and implementation are challenging, including model analysis, computing/communication/controlco-optimization, architecture/ algorithm/protocol design, energy consumption/delay control, workload balance/allocation, prototype test, system integration, application implementation, and many others. In addition, since Fog devices are deployed at the network edge at a much lower cost than cloud servers, they are more easily compromised and less trustworthy. Therefore, awareness of security and privacy challenges in fog computing requires a great deal of attention and in-depth exploration.

Design and Implementation

The designing and implementation of fog computing system is focused on Cloudlet, IOx and Paradrop Fig. 1(a), is considered as an exemplar implementation of resource-rich fog nodes. It is a three layer design in which the bottom layer is Linux and data cache from cloud, the middle layer is virtualization along with cloud softwares like Open Stack, and the top layer is applications isolated by different virtual machine (VM) instances. The architecture of IOx is shown in Fig. 1(b), which is a router from Cisco. It hosts applications in guest OS running on a hypervisor upon the hardware of a grid router. The platform supports developers to run scripts, compile code, and install their own operation system. This platform is not open to public and relies on expensive hardware.



(a) Cloudlet (b) IOx

Fig: 1 Cloudlet architecture and IOx architecture

ParaDrop is implemented on gateway (WiFi access point or home set-topbox), which is an ideal fog node choice due to its proximity to end user. However, it is designed for home usage scenarios and is not in a fully decentralized manner where all application servers are required to use a ParaDrop Server as entry point to services provided by gateways. We consider this ParaDrop as a complementary implementation of fog computing platform for lightweight task scenarios.

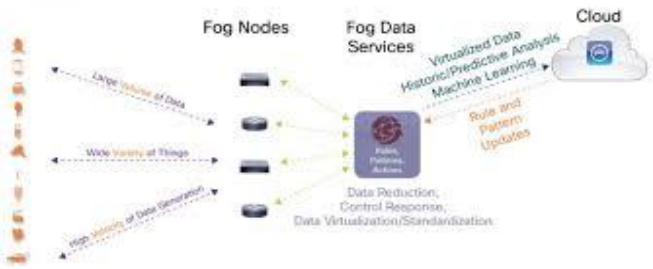
Challenges in edge computing

Edge computing solves a few problems related to the transfer of data for IoT technologies, including latency, reduced load on networks, privacy and security, reduced data management costs, and disaster recovery.

1. **Latency**: How long it takes to process and analyze the captured data.E.g Driverless car. Waymo an autonomous vehicle company estimated that self driving car cam produce 1 GB of data for every second. The only solution to this problem is to immediately analyze the data with the a nearby processing device. So that the safety of the car's passengers, pedestrians, and surrounding objects can be ensured.
2. **Reduced load on internet networks**
   According to the Cisco Cloud Global Index, the amount of traffic running through cloud computing networks will increase to 14.1 zettabytes per year in 2020.Zettabytesis a trillion gigabytes! That's an unbelievable amount of data and can lead to constrained and poorly-performing networks.Some of the data-transfer load can be removed from the cloud by processing some of this data closer to where it's collected.
3. **Lower data management costs**
   Storing large amounts of data in the cloud and downloading this data from the clouds are costlier and slod, the more data you transfer to the cloud, the higher bandwidth costs you'll have to pay. Therefore Storing and analyzing some of this data at the edge might help cut down on these costs.
4. **Disaster Recovery**
   The decentralization of computing power that edge networks provide will assure you that if one edge device fails, other nodes and associated IT assets will remain operational.This is similar to cloud disaster recovery strategy .And also edge computing can actually be a form of disaster recovery in case of internet outage due to natural disaster.
5. **Privacy and security**
   While security used to be a primary concern in moving to cloud computing that fear has largely subsided. The concern is about the transfer of data over a network to the cloud.Especially in situations where devices collect sensitive personal data such as health metrics or location data, the transmission of this data can have privacy, legal, and security ramifications. And the various regulations in different countries and regions makes this more complicated.Thus, storing some of this data in or closer to the devices may improve privacy and security.The other side of the security argument is that the edge devices themselves may be more susceptible to a breach. This may be true, so it's important that you take steps to ensure the security of edge devices such as encrypting data, tightly controlling access, and securing your networks.

Fog Computing Architecture

Fog computing is an extension of cloud computing which deploys data storage, computing and communications resources, control and management data analytics closer to the endpoints. It is especially important for the Internet of Things (IoT) continuum, where low latency and low cost are needed.



Fog computing architecture is the arrangement of physical and logical network elements, hardware, and software to implement a useful IoT network. Key architectural decisions involve the physical and geographical positioning of fog nodes, their arrangement in a hierarchy, the numbers, types, topology, protocols, and data bandwidth capacities of the links between fog nodes, things, and the cloud, the hartware and software design of individual fog nodes, and how a complete IoT network is orchestrated and managed. In order to optimize the architecture of a Fog network, one must first understand the critical requirements of the general use cases that will take advantage of fog and specific software application(s) that will run on them. Then these requirements must be mapped onto a partitioned network of appropriately designed fog nodes. Certain clusters of requirements are difficult to implement on networks built with heavy reliance on the cloud (intelligence at the top) or intelligent things (intelligence at the bottom), and are particularly influential in the decision to move to Fog-based architectures.

From a systematic perspective, Fog networks provide a distributed computing system with a hierarchical topology. Fog networks aim at meeting stringent latency requirements, reducing power consumption of end devices, providing real-time data processing and control with localized computing resources, and decreasing the burden of backhaul traffic to centralized data centers. And of course, excellent network security, reliability and availability must be inherent in Fog networks.

One use case for fog computing is a smart traffic light system, which can change its signals based on surveillance of incoming traffic to prevent accidents or reduce congestion. Data could also be sent to the cloud for longer-term analytics.

References

1. Fog Computing: a New IoT Architecture? By Joe MCKendrick March 22, 206
2. Fog Computing Definition, Architecture, Market and Use Cases posted by Alan Weissberger Novermber 6, 2017
3. “Fog Computing: Platform and Applications” by Shanhe Yi, Zijiang Hao, Zhengrui Qin, and Qun Li
4. Z.G. Prodanoff, Optimal frame size analysis for framed slotted ALOHA based RFID networks, Computer Communications (2009), doi: 10. 1016/j.comcom.2009.11.007.
5. Dey, Sandipan, Ajith Abraham, and SugataSanyal. "An LSB Data Hiding Technique Using Prime Numbers."Information Assurance and Security, 2007.IAS 2007.Third International Symposium on.IEEE, 2007
6. Rolf Clauberg. RFID and Sensor Networks: From Sensor/Actuator to Business Application, RFID Figure 3 – Security Issues in RFID 6 Workshop, University of St. Gallen, Switzerland, September 27, 2004.
7. Aashima Singla, RatikaSachdeva, “Review on Security Issues and Attacks in Wireless Sensor Networks” International Journal of Advanced Research in Computer Science and Software Engineering . Volume 3, Issue 4, April 2013 ISSN: 2277 128X.
8. Sen, Jaydip. "Security and privacy challenges in cognitive wireless sensor networks." arXiv preprint arXiv: 1302.2253 (2013).
9. G. Bianchi, “A comparative study of the various security approaches used in wireless sensor networks,” International Journal of Advanced Science and Technology, vol. 17, (2010) April, pp. 31-44.
10. T. A. Zia, “A Security Framework for Wireless Sensor Networks”,
11. http://ses.library.usyd.edu.au/bitstream/ 2123/2258/4/02whole.pdf, (2008)
12. Bhattasali, Tapalina, RituparnaChaki, and SugataSanyal "Sleep Deprivation Attack Detection in Wireless Sensor Network." arXiv preprint arXiv: 1203.0231(2012).
13. Xiangqian Chen, Kia Makki, Kang Yen, NikiPissinou, “Sensor network security: a survey” IEEE Communications Surveys and Tutorials 01/2009; 11:52-73. DOI: 10.1109/SURV.2009.090205 [13] Roy, Bibhash, SumanBanik, ParthiDey, SugataSanyal and NabenduChaki, "Ant colony based routing

for mobile ad-hoc networks towards improved quality of services." Journal of Emerging Trends in Computing and Information Sciences 3.1 (2012): 10-14.

14. M. Saxena, “Security in Wireless Sensor Networks-A Layer based classification”, Technical Report, Center for Education and Research in Information Assurance & Security-CERIAS, Purdue University. pages.cs. wisc.edu/~msaxena/papers/2007-04-cerias.pdf, (2007)
15. J. Sen, “A Survey on Wireless Sensor network Security”, International Journal of Communications Network and Information Security, vol. 1, no. 2, (2009) August, pp. 59-82
16. D. F. Willis, A. Dasgupta, and S. Banerjee, “Paradrop: a multi-tenant platform for dynamically installed third party services on home gateways,” in ACM SIGCOMM workshop on Distributed cloud computing, 2014
17. B. T. Wang and H. Schulzrinne, “An IP traceback mechanism for reflective DoS attacks”, Canadian Conference on Electrical and Computer Engineering, vol. 2, (2004) May 2-5, pp. 901-904. [18] VipulGoyal, Virendra Kumar, Mayank Singh, Ajith Abraham and SugataSanyal: A New Protocol to Counter Online Dictionary Attacks, Computers and Security, Volume 25, Issue 2, pp. 114-120, Elsevier Science, March, 2006. This paper is now listed in the top 25 articles of the COMPUTER SCIENCE (Computer and Security)
18. http://sensors-and-networks.blogspot.in/2011/08 /physical-layer-for-wireless-sensor.html
19. Ahmad AbedAlhameedAlkhatib, and Gurvinder Singh Baicher. "Wireless sensor network architecture." International conference on computer networks and communication systems (CNCS 2012) IPCSIT.Vol. 35. 2012, pp. 11-15.
20. Al-Sakib Khan Pathan, "Denial of Service in Wireless Sensor Networks: Issues and Challenges", Advances in Communications and Media Research, Vol. 6 (Edited by Anthony V. Stavros), ISBN: 978-1-60876-576-8, Nova Science Publishers, Inc., USA, 2010.
21. Sunil Ghildiyal, Amit Kumar Mishra, Ashish Gupta, NehaGarg, "Analysis of Denial of Service (DoS) Attacks in Wireless Sensor Networks" IJRET: International Journal of Research in Engineering and Technology; eISSN: 2319-1163 | pISSN: 2321-7308
22. Khoo, Benjamin. "RFID as an enabler of the internet of things: issues of security and privacy." Internet of Things (iThings/CPSCom), 2011 International Conference on and 4th International Conference on Cyber, Physical and Social Computing.IEEE, 2011.
23. VipulGoyal, Ajith Abraham, SugataSanyal and Sang Yong Han, “The N/R One Time Password System.” Information Assurance and Security Track (IAS'05), IEEE International Conference on Information Technology: Coding and Computing (ITCC'05), USA, April, 2005. pp 733-738, IEEE Computer Society
24. Cisco, “Iox overview,” http://goo.gl/n2mfiw, 2014, [Online; accessed 18- June-2015]
25. Openstack, “Openstack open source cloud computing software,” https: //www.openstack.org/, 2015, [Online; accessed 18-June-2015].

REVIEW OF ECC OVER RSA FOR ASYMMETRIC ENCRYPTION

Shilpi Singh
Assistant Professor, Department of Computer Science
Indo Asian Women's Degree College, Kalyan Nagar, Bangalore

Abstract

Cryptography is used to provide security of data to transmit over an open network. This paper compares the two important algorithms for asymmetric encryption .i.e. RSA and ECC. RSA is one of the effective public key cryptographic algorithms, which needs time and memory; on the other hand ECC provides a strong alternative with its subtle features and is a better option for future.

Keywords: *Cryptography, RSA, Elliptic Curve Cryptography (ECC), asymmetric-key.*

Introduction

Cryptography is the art and science of securing the data from an unwanted person and converting it into an encoded unreadable form so that only the authorized receiver can read and process it.

Cryptography addresses the following security goals of data:

- Confidentiality: It refers to protecting the data from disclosure attack and providing access of information to authorized person. It assures that the private date will remain private.
- Authentication: It refers to assuring the identity of all parties attempting access.
- Authorization: It is assuring that a certain party attempting to perform a function has the permissions to do so.
- Data Integrity: It refers to assuring that an object is not altered illegally i.e. preventing unauthorized data modification.
- Non-Repudiation: It is assuring against a party denying a data or a communication that was initiated by them.

The cryptography involves encryption and decryption. The transformation of original message into the coded form that is almost impossible to read and understand is called encryption.Decryption is the reverse process of encryption. It is the conversion of encrypted message back into original readable format. Both the encryption and decryption process require the use of some secret key.

Cryptography Involves Two Main Approaches

- Symmetric-key cryptography.
- Asymmetric-key cryptography.

Symmetric-key cryptography: Same secret key is used for both encryption and decryption.

Asymmetric-key cryptography**:** Two different keys are used i.e. one for encryption and other for decryption.

Asymmetric Key Cryptography

Asymmetric key cryptography or sometimes known as public key cryptography increases the security of the encryption or decryption process by utilizing two separate but mathematically related keys known as a public key and a private key.It uses public and private keys to encrypt and decrypt data. The keys are simply large numbers that have been paired together but are not identical (asymmetric). One key in the pair can be shared with everyone; it is called the public key. The other key in the pair is kept secret; it is called the private key. Either of the keys can be used to encrypt a message; the opposite key from the one used to encrypt the message is used for decryption as shown in figure 1. This paper is organized as follows. Section 2 presents the explanation of two asymmetric key algorithms, RSA and ECC. Section 3

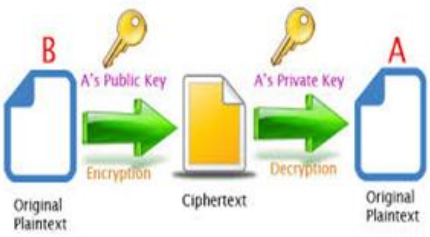


Figure.1. Asymmetric Key Cryptography

provides the comparative analysis of these two algorithms. Then it is followed by the conclusion in Section 4.

RSA (Rivest-Shamir-Adleman)

This asymmetric cryptographic algorithm was developed in 1977. RSA is based on the fact that it is difficult to factorize a large prime number. .RSA generates two keys: Public key for encryption and Private Key for decryption. The public key consists of two numbers where one number is multiplication of two large prime numbers. And private key is also derived from the same two prime numbers. So if somebody can factorize the large number, the private key is compromised. Therefore encryption strength totally lies on the key size and if we double or triple the key size, the strength of encryption increases exponentially. RSA keys can be typically 1024 or 2048 bits long,

Algorithm:

1. Take two large prime numbers, p and q.
2. Calculate, n = p*q. n is called the modulus of both public and private keys.
3. Calculate, $\varphi(n) = (p-1)(q-1)$,where φ is Euler's totient function and its value is kept secret.
4. Choose an integer e, $1 < e < \varphi(n)$ such that e and $\varphi(n)$ are co-prime i.e. $\gcd(e, \varphi(n)) = 1$ e is called the public key exponent.
5. Calculate, $d \equiv e^{-1} (\mathrm{mod}\ \varphi(n))$ i.e. d is inverse of e modulo $\varphi(n)$ and d is called the private key exponent.

Encryption

Sender sends his public key (n,e) to the receiver and keeps the private key (d) confidential. He computes the cipher text C from the plain text P as

$C = P^e \mathrm{mod}\ n$

Decryption

The receiver can recover the original message by using his own private key.

$P = C^d \mathrm{mod}\ n$

ECC:

Elliptic Curve Cryptography

Elliptic curve cryptosystem (ECC) is based on elliptic curves theory. To design public key cryptographic systems, Koblitz and Miller proposed the concept of Elliptic Curve Cryptography . A brief introduction of ECC is given below:

The general form of elliptic curve E over a prime finite field F_p is

$y^2 = x^3 + ax + b$ …… (1)

where $a, b \in F_p$ and the discriminate $D = 4a^3 + 27b^2 \neq 0$.

The points on elliptic curve E over a prime finite field F_p together with an extra point O called the point at infinity or zero point which is denoted as:

$A = \{(x, y): x, y \in Fp, E(x, y) = 0\} \cup \{O\}$……. (2)

Let n, the order of A, such that $n \times g \bmod q = 0$, where g is the generator of A. Also A be a cyclic additive group under the point addition "+"defined as P + 0 = P, where $P \in A$. The scalar point multiplication over A can be defined as

$kP = P + P + \ldots\ldots + P$ (k times) …….. (3)

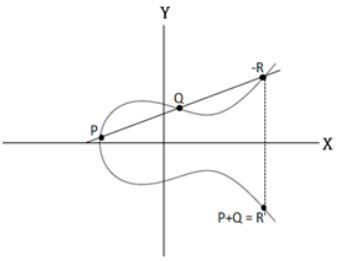


Figure.2. Point Addition

If P, Q $\in$A, the addition P + Q is a point R. The line passing through P and Q intercepts the curve at a point called –R. The reflection of -R is R with respect to the x-axis . This is known as point addition as shown in figure 2. If two points overlap i.e. P = Q, then R= P + P, it becomes a tangent at P, which intersects the curve at -2P, The image of -2P on the changed sign of y coordinate is the result of addition of P+P which lies on the curve E/F_P. This is known as point doubling as shown in figure 3.

The high level of difficulty of solving the Elliptic Curve Discrete Logarithm Problem (ECDLP) provides the security strength of the Elliptic Curve Cryptography. ECDLP states that, "For an elliptic

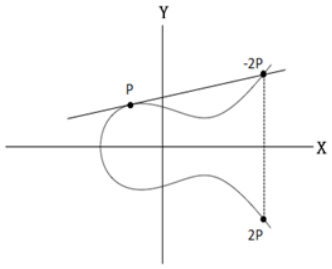


Figure.3. Point Doubling

curve E over a prime finite field F_P, the points P, Q∈E (F_P) and P (called base point) is of order n, find the integer k ∈ [0, n −1] such that Q = k P. The integer k is called the discrete logarithm of Q to the base P, denoted as k = $\log_P Q$".

Elliptic Curve Encryption/Decryption

Suppose user A wants to send message 'P_m' to user B then user A randomly chooses a positive integer 'k', private key 'd_A'. The public key of A is generated as $P_A = d_A \times G$ and the cipher text 'C_m' is produced with consisting of pair of points

$C_m = \{kG, P_m + kP_B\}$ Where G is the base point selected on the elliptic curve, $P_B = d_B \times G$ is the public key of B and 'd_B' is the private key of B.

'A' will send the cipher text 'C_m' as encrypted message to 'B'

To decrypt the cipher text, B multiplies the first point in the pair by its private key d_B and subtracts the result from the second point to get the original message P_m.

$P_m + kP_B - d_B (kG) = P_m + k (d_B G) - d_B (kG) = P_m$.

Comparative Analysis of ECC and RSA

ECC with 160-bit key size offers the same level of security as RSA with 1024-bit key size. Smaller Key size provides storage efficiencies, bandwidth savings and computational efficiencies which leads to higher speeds, lower power consumptions and cost size reductions respectively. ECC implementation is beneficial in applications where bandwidths, processing capacity, power availability or storage are constrained. ECC are used in web servers which required intensive public key operations. Wireless communications and PDAs are some of the application of ECC with limited power, computational power, speed transfer, memory storage, or bandwidth. ECC are applied where rigid constrains on processing power, parameter storage, and code space is required like Smart card and tokens.

Table 1 Key Generation Performance

Key Length(bits)		Time	
RSA	ECC	RSA	ECC
1024	163	0.16	0.08
2240	233	7.47	0.18
3072	283	9.8	0.27
7680	409	133.9	0.64
15360	571	679.06	1.44

Conclusion

In today's world the internet is used for transferring the information. So to provide the security of data we need strong algorithm. ECC as compared to RSA takes less time for encryption and decryption of data and generates a key of smaller size. So it can be concluded that ECC is much secure and more efficient than RSA. In future, comparison of other cryptographic algorithms can be done and efforts can be done to reduce theexecution time of RSA.

References

1. Stallings, W, "Cryptography and Network Security: Principles and Practices", Prentice Hall, 4th Edition, pp 420-430, 2009.
2. Hankerson, D, Menezes, A, Vanstone, S, "Guide to elliptic curve cryptography", Springer-Verlag, New York, USA, 2004.
3. Koblitz, N, "Elliptic Curve Cryptosystem", Journal of mathematics computation, Vol. 48, No. 177, pp203-209, 1987.
4. Miller, V, "Use of elliptic curves in cryptography", In Proc. of Advances in Cryptology-CRYPTO, 85, LNCS, Vol. 218, pp. 417–426, 1985.
5. V. Miller, "Uses of elliptic curves in cryptography", Lecture Notes in Computer Science218: Advances in Cryptology- CRYPTO,85, pp. 417-426, Springer- Verlag, Berlin, 1986.
6. **N**. Koblitz, "Elliptic curve cryptosystems", Mathematics of Computation, 48:203-209, 1987.
7. A. Kahate," Cryptography and Network Security", TMH-2003.
8. P. Zimmermann,"Introduction to Cryptography", 2000.
9. S. Vanston ," Handbook of Applied Cryptography", CRC Press, 1996.
10. V.B. Kute et al,"A software comparison of RSA & ECC**",** IJCSA Vol 2, No.1, April/May 2009.

A SURVEY ON TOPIC MODELING FOR TEXT DATA

Vikas Kumar
Senior Research Fellow, HBNI, IGCAR, Kalpakkam, Tamil Nadu

Abstract

The overnight growth of the text data on web triggers the need for automated methods of organizing the documents for convenient access and efficient information retrieval. Topic Modeling, a branch of machine learning and probabilistic graphical Modeling and it provides a convenient way to analyze large collection of documents based on their topical structure. The topic distribution over set of documents and the harmony of the document towards a particular topic can be disclosed using topic Modeling. It can cluster the words with the same meaning and distinguish the words with the multiple meanings. It has a wide range of applications text categorization, keyword extraction, similarity search, information retrieval, text summarization etc. This paper provides the survey of algorithms, advantages and disadvantages of the topic Modeling.

Keywords *- Topic Modeling, Algorithm of topic Modeling, Latent Semantic Analysis, Probabilistic Latent Semantic Analysis (PLSA), Latent Dirichlet Allocation (LDA).*

Introduction

Availability of the immense amount of data on the web necessitates new intelligent technology and tools to automatically organizing, searching, indexing and browsing. For example, let that we are having an extremely large amount of text document. It would be necessary to have some “short description” that could quickly tell about. It would also be useful for these short descriptions to have representations that are consistent across the entire collection. In this way, we may define the relationship between the documents. It would also be helpful to indentify the pattern of words in the document. Natural language processing (NLP) is used to deal with these kinds of problem but there is a lack of intelligence in it. In today’s era, researchers are putting more effort on machine learning and statistics along with NLP to make the system more intelligent and efficient. Researcher hasdeveloped techniques using hierarchical probabilistic models for finding pattern of the words in the document collection. These models are called “topic models”. Discovering of patterns indentify the hidden topics which are united to form the documents. The principal task of topic Modeling is to identify the patterns of words and get the information from the related document based on the similarity measure. So the concept behind the topic model is that term which deals with documents and these documents are variety of topics, where a topic is a probability distribution over word. Topic Modeling is the text mining tool, which is used to detect instructive structure in the data such as genetic information, images and networks. It specifies a simple probabilistic procedure by which documents can be detected.

Generate a document by calculating the distribution over topics and then each word in that document could choose a topic at random depends on the distribution (Steyvers, 2007).

Mostly in text mining, topic Modeling is based on bag-of-words irrespective of order of the words. Each document in a given corpus is thus represented as histogram containing the occurrence of the words (Stephen,2010). The histogram is modeled by a distribution over a certain number of topics, each of which is a distribution over words in the vocabulary. The different kinds of topic models are Latent Semantic Analysis (LSA), Probabilistic Latent Semantic Analysis (PLSA), Latent Dirichlet Allocation (LDA), and Correlated Topic Model (CTM). This paper is organized as follows. Section 2 presents the various methods of topic Modeling. Section 3 provides the comparative analysis of all methods. Then it is followed by the conclusion in Section 4.

Topic Modeling Methods

This section provides the details of some of the topic Modeling methods. Also will discussed mathematical detail and applications.

Latent Semantic Analysis

LSA is a theory and method for extracting and representing the contextual usage of meaning of word by statistical computation applied to the large corpus of text. It is a technique in the NLP. The objective of the LSA is to represent the text in the form of vector to make semantic content. After vector representation compute the similarity between the vectors and find the highest related text. LSA uses as its initial data not just summed contiguous pair's co-occurrence of words, but the detailed pattern of co-occurrence of words over very large number of local meaning-bearing contexts such as sentences or paragraph treated as unitary whole. This method assumes that the choice of dimensionality in which all of the local word-context relations are jointly represented is of great importance, that reducing the dimensionality of the observed data from the number of initial contexts to a much smaller-but still large-number will often produce much better approximations to human cognitive relations. It uses singular valued decomposition (SVD) to represent the data. SVD is factorization of the rectangular matrix into three matrices U, D and V. U and V are the orthogonal matrices and D is a diagonal matrix. The factorization means when we multiply all three matrices, will get back the original matrix such as $A=UDV^T$. Generally SVD uses matrix and produce reduced vector space. Because of this nature it is used for dimension reduction. It also calculate the dimensionality and organized the vector space from most to least important. While searching, the words which are having similar vector space will occur. In LSA, first collect the set of relevant document and then divide into document. After that make a co-occurrence matrix for terms and documents, also mention the cell name. Finally SVD will compute all the diminutions and make three matrixes.

Probabilistic Latent Semantics Analysis

Probabilistic Latent Semantic Analysis is a statistical technique for the analysis of two-mode and co-occurrence data, which has applications in information retrieval and filtering, natural language processing, machine learning from text, and in related areas.Compared to standard Latent Semantic Analysis which stems from linear algebra and performs a Singular Value Decomposition of co-occurrence tables, probabilistic Latent Semantic is based on a mixture decomposition derived from a latent class model. It can automate indexing which is based on a statistical latent class model for factor analysis of count data and also this method tries to improve the Latent Semantic Analysis in a probabilistic sense by using a generative model. The objective of PLSA is to identify and distinguish between different contexts of word usage without recourse to a dictionary. It includes two implications: first, it allows disambiguating polysemy, i.e., words with multiple meanings. Second, it discloses typical similarities by grouping together words that shared a common context [7]. Initially PLSA is known as aspect model. The aspect model is a latent variable model for co-occurrence data which associates an unobserved class variable $z \in Z = (z_1,.....,z_k)$ with each observation.

PLSA has two different formulations. The first formulation is symmetric formulation, which will help to get the word (w) and the document (d) format he latent class z in similar ways by using the conditional probabilities P(d|z) and P(w|z). A joint probability model over D×W is defined by the mixture

$$P(d,w) = P(d)P(w|d), p(w|d) = \sum_{z \in Z} P(w|z)P(z|d)$$

Since the cardinality of z is smaller than the number of documents/words in the collection, z acts as a bottleneck variable in predicting words. It is worth noticing that the model can be equivalently parameterized by

$P(d|w) = \sum_{z \in Z} P(z)P(d|z)P(w|z)$ which is perfectly symmetric in entities, documents and words.

Latent Dirichlet Allocation

The goal of Latent Dirichlet Allocation (LDA) is to improve the mixture of models that capture the correspondence of both words and documents from the old way by PLSA and LSA.

Increasing degree of electronic documents such as news article, literatures, scientific documents, blogs and web has raised several new challenges to researchers in the data mining field. Situation demands the intelligent system which automates visualization, analysis and summarization. LDA is an

unsupervised, statistical approach to document Modeling that discovers latent semantic topics in large collections of text documents. The main goal of LDA is to discover short description for the members in a data collection. In the context of text document modeling, it is proposed that LDA hypothesized that one way of summarizing the content of a document quickly is to look at the set of words it uses. Because words posses very strong semantic information, documents that contain similar content will most likely use a similar set of words. LDA is a probabilistic, generative model for discovering latent semantic topics in large collection of text data. It tries to mimic what the writing process is. This model not only applies to text data, it can also be applied to other data such as image etc. Each topic discovered is characterized by its own particular distribution over words. Based on the proportion of time the document spends on each topic, documents characterized as a random mixture of topics. This mixture of topics is necessarily our short description: It not only provides the semantic content of a document in a concise manner, but also gives us a principled approach for describing documents quantitatively.

Notion and Terminology

1. $w \in \{1,....V\}$ is word. w is V dimensional unit-based vector.
2. $W= (w_1,w_2,....,w_N)$ is document.
3. $D=\{ W_1, W_2,...,W_M)$ is corpus.
4. $z \in \{1,2,...., K\}$ is a probability distribution over the vocabulary of V words.

Generative Process

For each indexed by $m \in \{1,...,M\}$ in a corpus

1. Choose a K-dimensional topic weight vector θ_m from the distribution $p(\theta|\alpha)$=Dirichlet(α).
2. For each word indexed by $n \in (1,...,N)$ in a document:

Choose the topic $z_n \in \{1,...,K\}$ from the multinomial distribution $p(z_n = k|\theta_m)=\theta_m^k$.

Given the chosen topic z_n, draw a word w_n from the probability distribution $p(w_n=i|z_n =j,\beta)=\beta_{i,j}$.

The Dirichlet distribution is given by: $p(\theta|\alpha) = \frac{\Gamma(\sum_i \alpha_i)}{\pi_i \Gamma(\alpha_i)} \pi_i \theta^{\alpha_i,-1}$

Due to its very large number of properties, LDA is used like: it is in exponential family, has finite dimensional sufficient statistics, and is a conjugate prior to the multinomial distribution. Since Dirichlet random variable, the topic weight vector θ has the property that $\theta^i \geq 0$ and $\sum_{i=1}^{K} \theta^i = 1$, and thus lies in the (K-1) simplex. Basically each document is characterized by its own topic weight vector, which indicates the amount of contribution of each of the K topic in that document.

Correlated Topic Model

Correlated topic Modeling is limited to small model and problem sizes due to their high computational cost and poor scaling. It is a statistical model used in NLP and machine learning. It is used to discover the topic from the related documents. Idea behind the TCM is logistic normal distribution. It fully dependent on LDA

Comparison Table

Methods	Characteristics
Latent Semantic Analysis (LSA)	LSA can get from the topic if there are any synonym words present.
Probabilistic Latent Semantic Analysis (PLSA)	It can generate each word from a single topic; even though vario us words in one document may be generated from different topics
Latent Dirichlet Allocation (LDA)	Need to manually remove stop words.
Correlated Topic Model (CTM)	Using of logistic normal distribution to create relations among topics. Allows the occurrence of words in other topics and topic graphs.
	Limitations
Latent Semantic Analysis (LSA)	It is hard to obtain and to determine the number of topics. To interpret loading values with probability meaning, it is hard to operate it.
Probabilistic Latent Semantic Analysis (PLSA)	At the level of document, PLSA cannot do probabilistic model.
Latent Dirichlet Allocation	It becomes unable to model relations among topics that can be solved in CTM method.
Correlated Topic Model (CTM)	Require lots of calculation Having lots of general words inside the topics

Conclusion

This survey paper presents methods of topic modeling in text mining. It discussed the basic idea behind the four topic Modeling methods including Latent Semantic Analysis (LSA), Probabilistic Latent Semantic Analysis (PLSA), Latent Dirichlet Allocation (LDA) and Correlated Topic Model (CTM). It also discusses the characteristic and limitation of all four models. In this survey we didn't go into more mathematical detail. We have discussed just the overview of the methods related to topic model in text mining.

References

1. Hu, Diane. "Latent Dirichlet Allocation for Text, Images, and Music",2018.
2. D. Hu and L. Saul. "A probabilistic topic model for unsupervised learning of musical key-profiles" , 2009.
3. D. J. C. MacKay and L.C. B. Peto. "A hierarchical Dirichlet language model". Natural Language Engineering, 1:289–307, 1995.
4. Q. Mei, C. Liu, H. Su, and C. Zhai. "A probabilistic approach to spatiotemporal theme pattern miningon weblogs".Proc.15th Int. World Wide Web Conference (WWW'06),2006.
5. M. Hoffmanand D. Blei and P. Cook. "Content-based musical similarity computation using the hierarchical Dirichlet process". In ICMC, 2008.
6. Blei, D.M., and Lafferty, J. D. "Dynamic Topic Models", Proceedings of the 23rd International Conference on Machine Learning, Pittsburgh, PA, 2006.
7. Liu, S., Xia, C., and Jiang, X, "Efficient Probabilistic Latent Semantic Analysis with Sparsity Control", IEEE International Conference on Data Mining, 905-910, 2010.
8. Bassiou, N., and Kotropoulos C. RPLSA: "A novel updating scheme for Probabilistic Latent Semantic Analysis", Department of Informatics, Aristotle University of Thessaloniki, Box 451 Thessaloniki 541 24, Greece Received 14 April 2010.
9. Song, Yang & Zhang, Lu & Lee Giles, C. "A Non-parametric Approach to Pair-Wise Dynamic Topic Correlation Detection".1031-1036.10.1109/ICDM.2008.20.

IMPROVED CPU UTILIZATION USING ADVANCED FUZZY BASED CPU SCHEDULING ALGORITHM (AFCS)

Saravana Kumar.S
Assistant Professor, Department of Computer Science, Kristu Jayanti College, Bangalore

Abstract

The operating system in our computer machines have changed a lot during the course of time, where in the initial stage of their development they were used to process a single task (process) at a time but now, in the era of supercomputers we have multiprogramming operating system running in our machines. At present we have a number of scheduling algorithms which are used to decide the order in which the processes loaded into the memory are to be executed. But none of the conventional scheduling algorithms is ideal, they have their own drawbacks. In this paper, an advanced fuzzy-based logic has been proposed for soft real time system to overcome the drawbacks of other algorithms for better CPU utilization and to minimize waiting, turn-around and response time. The proposed algorithm is preemptive in nature with minimum context switching and work to complete process within its deadline.

Keywords: *Fuzzy logic, CPU scheduling, soft real time system deadline, preemptive process deadline, Dynamic priority*

Introduction

As of now scheduling real time system involve allocation of resources and CPU time to task in such a way that certain performance requirements are happened. In real-time system scheduling has played a more acute role than non-real time system because in this system having the right answer too late is as bad as not having it at all [10]. Such a system reacts to the request within a fixed amount of time which is called deadline. In general, real time system can be categorized into two important groups: Hard real time system and Soft real time system. In hard real time systems, when task occurs it strictly completed at a given deadlines. While in soft real time system missing some deadlines is acceptable. In both cases, the scheduler is to be schedule in such a way that guarantees the deadline to meet when a new task is arrived.

Scheduling algorithm is necessary and important task when more than one jobs are present in ready queue. Criteria for choosing best scheduling is depend upon following basic features such as:

- Waiting Time
- Turnaround Time
- Response Time
- Utilization of CPU
- Throughput

There is various type of scheduling algorithms such as first come first serve, priority-based scheduling, shortest job first etc. The main constrain of real time task is that it should be completed within deadline time. The above scheduling algorithms are inefficient for real time operating system task. Hence, we have proposed a new scheduling algorithm to find out the dynamic priority of process using fuzzy logic.

Related Work

New era of possibilities were open when Lotfi A. Zadeh introduced the term “fuzzy logic” with proposal of fuzzy set theory. To make concept of approximation [1] reality this fuzzy logic can be used. Process scheduling with fuzzy logic has also been thought by many researchers [2][3][4]. Scheduling with deadline concept is basic requirement for real time system [10]. This schedule can be preemptive or non-preemptive. Soft real time system with optimal time slice and dead line [5] is considered in this paper.

Scheduling Algorithms

FCFS Scheduling Algorithm Even with all evolution in scheduling algorithm the FCFS serves as base algorithm. It is as simple as it sounds. The taskis executed as it comes to ready queue in arrival time order. There are some disadvantages of FCFS such as follows:

- This does not support preemption.

- Throughput decreases as CPU holding time of a task increases.
- There is no concept of priority. Turnaround time, waiting time and response time is very high which can reduce the performance.

Priority Based Scheduling Algorithm

In this algorithm priority is associated to each process and depends upon the highest priority the process is assigned to the CPU. If process has equal priority then it scheduled in FCFS. We know that priority is assigned by operating system. The disadvantages of this algorithm are as follows

- The major disadvantage of this algorithm is indefinite blocking it also called as starvation. We know that Low priority process gets interrupted by highest priority process. But if there is large number of highest priority process are present then each time it interrupted to low priority process then starvation occurred.
- Another disadvantage is that the waiting time and turnaround time depend upon the priority of process.

Shortest Job First Scheduling Algorithm

In this scheduling algorithm we are select the process with smallest burst time to execute the process. This is one of the best scheduling algorithm in which we get minimum waiting and turnaround time as compare to other scheduling algorithm. But there are some disadvantages of this algorithm are as follows:

- It is very difficult to know the burst time for next CPU request.
- Again, this algorithm is not implemented for the shortest level CPU scheduling.
- One major drawback is that process starvation for the process whose burst time is long if smallest burst time process is continuously arrived.

Fuzzy Logic

Fuzzy logic is the superset of Boolean logic which deals with the truth values that is 0's and 1's. It is the nonlinear mapping form input data to the output data. The fuzzy logic system first collects the crisp set of inputs and convert it's to the fuzzy set using fuzzy linguistic variable, terms and membership function, this process is called as Fuzzification. This fuzzy set is use for making inference. Finally, we used the defuzzification step in which the resulting output is mapped with crisp output using membership function.

There are two kinds of Fuzzy Inference System such as (I) Mamdani's fuzzy inference method and (ii) Sugeno fuzzy inference method.

Process Deadline

In any of the real time system the tasks are assigned some deadline, failure to meet the deadline is not tolerable in hard real time system but the soft real time system does not lead to system failure only performance degradation happens. In this paper an algorithm is proposed to avoid process starvation with deadline concept using some optimal time slice to execute process. Preemptive process deadline is used to denote the maximum time till which the process can be preempted.

Proposed Algorithm

- Check weather new process is arrived than add to ready queue else continue
- While (ready queue! = NULL)
- Set dynamic priority to output FIS

Calculate dynamic priority (DPi)

- For each process Pi in ready queue fetch its parameters burst time (BTi), static priority (PTi), and arrival time (ATi) and give them as input to FIS.
- For each process (Pi),
  Evaluate membership function of priority (µp) µp=PTi/(max (PTi) +1); where 1<=i<=n
- For each process (Pi),
  Evaluate membership function of burst time (µb) µb=1-(BTi/(max (BTi) +1)); where 1<=i<=n

- For each process (Pi) in ready queue find minimum priority process.
  To calculate dynamic priority (DPi)
- If process Pi has minimum priority then DPi= (µp+µb)
- Else
  DPi= max {µp, µb} where 1<=i<=n
- Calculate optimal time slice (OTS) only once for each process
  X=half of the highest burst time in ready queue (upper bound)
  Y=average burst time in ready queue (consider upper bound)
  Z=highest burst time-(OTS of 1stprocess in queue) calculate Zevery time new process gets in ready queue

For 1st Process in Ready Queue

If(X <= Y)
    OTS(Pi) =X [i=priority no 1 to 0]
Else
    OTS(Pi) =Y [i=priority no 1 to 0]
From 2nd process in ready queue:
    OTS(Pi) = Z [i=priority no 1 to 0]

Calculate deadline for each process in ready queue only once

For the process with highest priority: [i =highest priority]
[i-1 =second highest priority] [D(Pi) =deadline of process Pi] [BT(Pi) =burst time of process Pi]
[RBT(Pi-1) = remaining burst time of next process in ready queue]
[AT(Pi) =arrival time of process Pi]

D(Pi)= AT(Pi) +BT(Pi)+RBT(Pi-1) if(BT(Pi)<=OTS(Pi))
Complete total task else
switch on OTS(Pi) Gotostep(7)
For next process except last process:
[SPBT(Pi)= sum of previous burst time completion in CPU of process Pi]
[PPD(Pi)=preemptive process deadline of process Pi+1]

D(Pi)=AT(Pi) + D(Pi+1)+RBT(Pi-1)
If(BT(Pi)<=OTS(Pi)&&(SPBT(Pi)+BT(Pi)<=PPD(Pi-1))
complete task Else
switch on PPD(Pi) Otherwise
switch on OTS(Pi) Gotostep(7)
For last process: D(Pi)=D(Pi-1)
If(BT(Pi)<=OTS(Pi)&&(SPBT(Pi)+BT(Pi)<=PPD(Pi-1))
complete task
Else
switch on PPD(Pi) Otherwise
switch on OTS(Pi) Gotostep(7)

- Calculate remaining burst time(RBT): [RBT(Pi)=remaining burst time of process Pi, i denote priority no 1 to 0]
  [EBT(Pi)=total execution burst time of Pi, i denote priority no 1 to 0]
  RBT(Pi)=BT(Pi)-EBT(Pi) Gotostep(7)
- Calculate deadline of preemptive process for every process with priority lower than equal to latest executed process :
  for arrival in CPU: PPD(Pi)=D(Pi)-RBT(Pi)
  If(PPD(Pi-1)<=PPD(Pi)) ||(PPD(Pi-1)<D(Pi)) Then

PPD(Pi)=PPD(Pi-1)-RBT(Pi) Gotostep(1)

- Removing process from ready queue

  Remove from queue when next lower process

  Completes

  Else remove if no lower priority process

  If new process coming then Goto step (1)

Result and Performance Evaluation

To demonstrate proposed algorithm some case studies have been considered with comparison to other algorithms on same cases. The results are denoted in terms of Gant chart and some statistical representation.

Case Study 1

Table 1 Case Study 1 Data Set

Process ID	Arrival Time (ATi)	Burst Time (BTi)	Static Priority (PTi)	Dynamic Priority (DPi)	Deadline (D)
P1	0	3	2	0. 25	3
P2	2	6	7	0. 875	9
P3	4	4	5	0. 43	17
P4	6	5	6	0. 62	17
P5	8	2	1	0. 72	22

Gant Chart for priority Scheduling

PID	P1	P2	P4	P3	P5
0	3	9	14	18	20

Gant Chart for Improved Fuzzy based CPU Scheduling

PID	P1	P2	P5	P4	P3
0	3	9	11	16	20

Gant Chart for Advanced Fuzzy based CPU Scheduling

PID	P1	P1	P2	P2	P5	P4	P4	P3
0	2	3 ; 9	11	13	1620			

RBT	1 0 2 0 0 3 0 0
PPD	2 3 7 9 22 10 13 13

Comparison Table

Table 3 Comparison between various algorithms for case study1

Algorithm	Average Waiting Time	Average Turnaround Time	Average Response Time
Priority Algorithm	4. 8	8. 8	4. 8
IFCS	3. 8	7. 8	3. 8
AFCS	3. 8	7. 8	3. 8

Case Study 2

Table 4: Case Study 2 Data Set

Process ID	Arrival Time (ATi)	Burst Time (BTi)	Static Priority (PTi)	Dynamic Priority (DP i)	Deadline (D)
P1	0	18	1	0. 136	53
P2	0	2	3	0. 894	18
P3	0	1	2	0. 9 5	13
P4	0	4	6	0. 7 9	35
P5	0	3	5	0. 8 4	22
P6	0	12	11	0. 917	15
P7	0	13	7	0. 5 8	53

Gant Chart for priority Scheduling

PID	P6	P7	P4	P5	P2	P3	P1
0	12	25	29	32 34	35	53	

Gant Chart for Improved Fuzzy based CPU Scheduling

PID	P3	P6	P2	P5	P4	P7	P1
0	1	13	15 18	22	35	53	

Gant Chart for Advanced CPU S cheduling

PID	P3	P6	P2	P6	P5	P4	P7	P7	P1	P1
0	1	11 13	15	18 22	32	35 45	5 3			

Table 5: Gantt chart for case study 2

RBT	0 2 0 0 0 0 3 0 8 0
PPD	3 13 18 13 22 35 32 3545 53

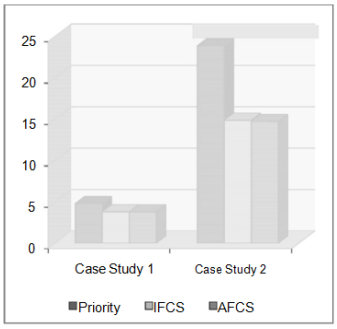
Comparison Table

Table 6 Comparison between v arious algorithms for case study

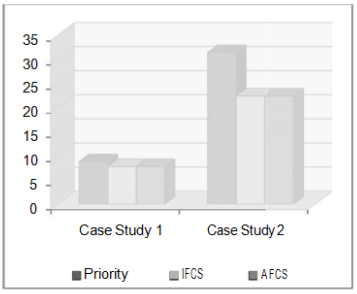
Algorithm	Average Waiting Time	Average Tu rnaround Time	Average Response Time
Priority Algorithm	23. 86	31. 43	23. 86
IFCS	14. 86	22. 43	14. 85
AFCS	14. 71	22. 43	14. 57

Statistical analysis of the proposed and existing algorithm

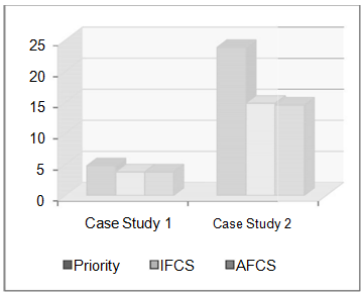
Waiting time vs. No. of Process



Turnaround Time vs. No. of process



Response Time vs. No. of Process



Conclusion and Future Work

The proposed algorithm reduces the response time and waiting time by minimal difference but with different case studies the difference of time may occur. This algorithm m completes the given processes within deadline. Preemption of processes occurs. The time slice value is kept optimal to minimize context switches and increase the response time of processes. This algorithm can be further improved by choosing good membership function in fuzzyfiction process. The time slice value can also be calculated with different way of thinking to further reduce the context switches.

References

1. Shankar K. Pal and Deba Pras ad Mandal," fuzzy logic and approximate reasoning: an overview", Electronics and Communication Science Unit , Indian statistical institute, Calcutta 700 035, India
2. Shatha J. Kadhim and Kasim M. Al-Aubidy," Design and Evaluation of a Fuzzy-Based CPScheduling Algorithm", Springer-Verlag Berlin Heidelberg 2010
3. H. S. Behera, RatikantaPatta nayak, PriyabrataMallick,"An Improved Fuzzy-Based CPU Sc heduling (IFCS) Algorithm for Real Time Systems", Internatio nal Journal of Soft Computing and Engineering (IJSCE) ISSN: 2231-2307, Volume-2, Issue-1, March 2012
4. PrernaAjmaniand ManojSethi," Proposed Fuzzy CPU Scheduling Algorithm (PFCS) for Real Time Operating Systems", BIJIT - BVICAM 's International Journal of Information Technology Bha atiVidyapeeth's Institute of Computer Applications and M anagement (BVICAM), New Delhi (INDIA)
5. Vikash Chandra Sharma, Pri yadarshini, Ajay Chaudhary, Manindarsinghnehra," CPU Scheduling Algorithm with Deadline and Optimize Time Sl ce for soft real time systems", international journal of enhance d research in management & computer applications
6. RajaniKumari, Vivek Kumar Sharma, Sandeep Kumar," Design and Implementation o f Modified Fuzzy basedCPU Scheduling Algorithm", Intern ational Journal of Computer Applications (0975 – 8887) Volume 77 – No. 17, September 2013
7. M. M. M. Fahmy," A fuzzy algorithm for scheduling non-periodic jobs on soft real-time single processor system", Ain Shams Engineering Journal (2010)
8. Patricia Balbastre, Ismael Ripoll and Alfons Crespo," Minimum deadline calculation for periodic real-time tasksin dynamic priority systems", S panish Government Research Office (CICYT)
9. Mamdani E. H., Assilian S, "An experiment in linguistic synthesis with a fuzzy logic controller", InternationalJournal of Man-Machine Studies, Vol. 7, No. 1, 1975.
10. William Stallings: Operating Systems 5th Edition. Pearson Education India, 2006.

DATA MINING: A PERTINENT APPROACH TO ECOLOGICAL MODELLING

Sheethal Abraham
Assistant Professor, Department of Science and Computer Applications
Indo Asian Academy Degree College and PG Center, Bangalore

Abstract

Data Mining is the process of extracting knowledge or useful patterns from a set of huge data. In this context, the term. 'Data' is very much relevant since it is the primary source that exists in order to mine and extract a useful information. Nowadays the different data mining techniques pave a way to the successful knowledge and information generation in many fields including Environment and Ecology. Ecology deals with the environment at different levels and scales of complexity to obtain knowledge about properties of living systems (from organism to the biosphere) and their interactions with the environment. To overcome the problems with different levels of complexity and scales of systems under study, ecological modelling has to be introduced into ecology. Based on existing knowledge about the structure, dynamics and functional relationships between the elements that are linked together into an ecological model, new knowledge about the system under study may be obtained.

One of the main challenges in the ecological research field is the analysis of the collected data in various circumstances. Most of the data will be obtained from physical measurements which is subjected to electrical, mechanical or human error factors. So it is very essential to differentiate these errors from the micro variations in the given data which is very important to ecologists. Also, the amount of data being collected in databases today far exceeds the ability of classical ecological modelling approaches. To analyse them, we need a new generation of computational tools and theories, which were designed for extracting useful information (knowledge) from the rapidly growing volumes of digital data.

This paper summarises the various data collection techniques and the different kinds of data that can be gathered in the field of ecology. The paper also gives an overview of different pre-processing techniques in data mining which are used in order to clean the provided ecological data.

Keywords: *Ecology, Data Mining, Pre-processing Techniques, Predictions, Ecological Model.*

Introduction

'Data' isthe most optimistic word in the field of Computer Science in this century. Millions of data are generated everyday by all means and the need for accessing or retrieving some useful information from this accumulated data is transcending. Data Mining paves a way to extract knowledge from huge set of accumulated data so that these valuable information can be utilized for ameliorating business. Apart from this data mining has other applications in health care, financial banking, fraud detection etc. Another upcoming application is in the field of Ecology Modelling.For eg. a Forest Fire can occur because of many reasons which can be natural or human causing. Some of the reasons include lightening, temperature and pressure variations etc . From the collected observational data and previous Forest Fire histories we can mine some patterns that help us to predict the possibility of fire.

The process of environmental data collection is a challenging work as a lot of observational, mechanical or human error factors can be get involved in the same. Other than the traditional way of analyzing ecological data a new way of data analysis should be found out and the different data mining techniques helps in this to an extent.

Section 2 in this paper discusses the heterogeneous data , different types of data and how to collect the required data for the analysis. Section 3 focuses on how the collected data will be corrupted and how it can be cleansed .The different data mining methods used for the cleaning process are mentioned. Section 4 concludes the paper and also depicts its future scope.

Required Data Collection

Preferably, once the question related to ecology has been analysed, the study is initiated and the data is gathered in a manner that will result in strong speculations. There are number of important aspects to the collection of environmental data relating to study design and sampling method that will influence the type and strength of conclusions that can made: identifying the desired scope of inference, choosing appropriate observational/experimental units, choosing the types of data to collect, and establishing a

robust sampling scheme (i.e., spatial and/or temporal distribution of units and method(s) of collecting the data) to ensure precise and exact inferences. Here the various types of ecological data and the properties of each type, the types of variables and their association, and few important issues to consider in study design are briefly explained.

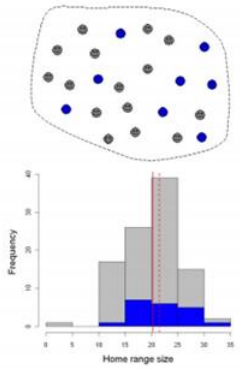


Figure 1 Inferring characteristics of Population from sample

Types of Data

The data that is collected should be in accordance with the ecological question we need to answer. This important step in the entire ecology modelling process, since the collection of wrong data will never lead us to an inference instead it will pave a way for more confusing statements. While there are many important considerations to this step, we need to carefully think of the number and types of attributes or variables to be gathered. The relationship among the variables also should be considered.

In ecological studies, there are several major types of data:

- Continuous Data
- Counts
- Proportions
- Binary data
- Time at death
- Time series
- Circular data

The three important types of variables in accordance with their associations to each other are:

- Independent variables
- Dependent variables
- Interdependent variables

Continuous Data

Continuous data is data in which the observations can be measured on a continuum or scale; can have almost any numeric value; and can be meaningfully subdivided into finer and finer increments, depending upon the precision of the measurement system. There are lots of examples of continuous data: temperature, mass, distance, etc. This is the most common type of ecological data collected and there are lots of statistical methods designed to work with this type of data, such as regression and analysis of variance.

Count Data

Count data is a form of discrete data in which the observations can take only the non-negative integer values {0, 1, 2, ...}, and where these integers arise from counting rather than ranking. Count data is usually of one of two forms: 1) simple counts, e.g., the number of plants infected by a disease on a plot, the number of eggs in a nest, etc., and 2) categorical data, in which the counts are tallied for one or more categorical explanatory variables, e.g., the number of plants infected in each of several towns. With simple counts, the goal is usually to explain or predict the counts based on one or continuous independent or explanatory variables, and the method of generalized linear modelling is used for this purpose. With categorical data, the goal is usually to determine whether the distribution of counts among categories differs from expected, and the method of contingency table analysis employing log-linear modelling is often used for this purpose.

Proportion Data

Proportion data is another form of discrete data in which we know how many of the observations are in one category (i.e., an event occurred) and we also know how many are in each other category (i.e., how many times the event did not occur). This is an important distinction, since it allows the data to be represented as proportions instead of frequencies, as with count data. There are lots of ecological examples of proportion data: percent mortality, percent infected, sex ratio, etc.. The key distinction of

proportion data is that the frequency of the event, e.g., individual died, is known as well as the total number of events, e.g., total number of individuals. With proportion data, the goal is typically to explain or predict the proportional response based on one or more explanatory variable, and the method of logistic regression is designed for this purpose. Note, here the explanatory variables are measured for each sample trial, as opposed to each individual. This is an important distinction between proportion data and binary data (next).

Binary Data

Binary Data is the data in which the observations can take only one of two values, for eg., alive or dead, present or absent, male or female, etc.. Binary data is useful when you have unique values of one or more explanatory variables for each and every observational unit; this is an important distinction from proportional data in which the explanatory data is collected at the level of the trial (consisting of many observational units). Binary data is typically analyzed with the method of logistic regression, like proportion data.

Time at Death Data

Time at death data is data that take the form of measurements of the time to death, or the time to failure of a component; each individual is followed until it dies (or fails), then the time of death (or failure) is recorded. Time at death data is not limited to plant and animal longevity studies, however, it applies to any situation in which the time to completion of a process is relevant.; for example, the time it takes juveniles to disperse out of the study area, or the time it takes a snag to fall. Time at death data is analyzed by the special method of survival analysis, which is highly complex and rapidly evolving to account for all sorts of variations.

Time Series Data

Time series data involves a sequence (vector) of data points, measured typically at successive times (or locations), spaced at (often uniform) time (or space) intervals. Usually time series data contains repeated patterns of variation, and identifying and quantifying the scale(s) of the repeated pattern is often the focus of the analysis. There are many examples of time series data in ecology: population size measured annually, temperature data measured at fixed intervals, river discharge measured over time, etc.

And let's not forget that time series data also includes spatial data that is serially correlated in space rather than time, such as variables measured at intervals along transects, e.g., plant cover, soil chemistry, water depth, etc.. There several specialized analytical methods for time series data, include autocorrelation analysis, spectral analysis, and wavelet analysis to name just a few.

Circular Data

Circular data is, not surprisingly, data in which the observations are circular in nature; where the beginning and end of the sequence is the same. Classic examples of circular data are topographic aspect, day of the year, and orientation of movement. The figure shown here is a circular histogram depicting red-spotted newt (Notophthalmus viridescens) departure from a uniform distribution for emigrating juveniles leaving a natal pond in western Massachusetts based on eight directional bins. In the histogram, each arm depicts one of the eight directional bins, concentric circles represent a given raw number of individuals, and the bold circle delineates the expected bin value given a uniform distribution. Circular data is typically analysed with specialized methods.

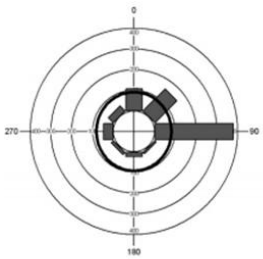


Figure 1: Circular Data

Types of Variables

In most, but not all, studies, our environmental question requires that we gather data on two or more variables in which one or more variables are considered as "independent" variables and one or more are considered as "dependent" variables. This distinction is critical to most statistical models.

Independent variable

Typically the variable (s) being manipulated or changed, or the variable(s) controlled or selected by the experimenter to determine its relationship to an observed phenomenon (i.e., the dependent variable) In observational studies, the independent variable(s) is not explicitly manipulated or controlled through

experimentation, but rather observed in its naturally occurring variation, yet it is presumed determine or influence the value of the dependent variable. The independent variable is also known as "x ", "explanatory," "predictor," "regressor," "controlled," "manipulated," "exposure," and/or "input" variable.

Dependent Variable

The observed result of the independent variable(s) being manipulated, and it usually cannot be directly controlled. The dependent variable is generally the phenomenon whose behaviour we are interested in understanding. The dependent variable is also known as "y", "response," "regress and," "measured," "observed," "responding," "explained," "outcome," "experimental," and/or "output" variable.In some cases we are interested in a single set of interdependent variables, without distinction between independent and dependent

Interdependent Variables

A set of related variables that are presumed to co vary in a meaningful way. A common example is a community data set consisting of n sites by p species abundances, arranged in a two-way data matrix in which the rows represent the sites and the columns represent the species. In this case, the species are the variables and there is no distinction of independent and dependent. In fact, they are all presumed to be interdependent on each other since they presumably co vary in meaningful ways. Moreover, they are generally considered to be inter-dependent variables because they are presumed to respond to other perhaps unmeasured independent variables that are not part of this variable set.

Quality of Data

Many of the typical data issues found in traditional data mining applications are also found in ecological data. Variable levels of metadata and quality assurance/ quality control were provided with data from different sources. Next, this section describes two pervasive data issues –units of measure and time. Different types of errors will be exhibited by mechanically gathered data and manually collected data. For eg for an observer who watches the wild life in the forest, the data about temperature is irrelevant. He may not use a thermometer to measure the temperature instead may give vague and unclear information about the temperature of the observation sight. He may mention it as "too sunny" or "pretty cool" which is very much inadequate while predicting the Forest Fire. Another example of data related to rainfall is mentioned below. The rain fall data from other Internet sources that aggregate data submitted by many people from different sites was more difficult to interpret. A fundamental source of uncertainty may be the common use of "tipping bucket" rain gauges. In these devices, a funnel directs rain water onto a small container that empties itself (by tipping) after a specified amount (often .01 inches) of rain accumulates. The physical movement of emptying of the container is recorded electrically. Based on a brief survey of the specifications for several such devices commonly used for the amateur Internet data, these devices are polled periodically (2-4 minutes) by the indoor base station. Data is uploaded to the website periodically from the base-station, typically at 5 or 15 minute intervals. Since the polling interval is a substantial fraction of the upload interval, the number of polling events per upload varies reducing precipitation timing accuracy. Furthermore, the polling interval for at least one rain gauge is different for wired and wireless operations. In this case, even knowing the model number of the device is not sufficient to determine the data frequency.

Data Cleansing

Some weather values vary within short distances with different ecological niches resulting from differences in microclimate. For example, temperature, humidity and wind are likely to differ between a heavily shaded forest and an adjacent sun-baked meadow. Other measurements, such as barometric pressure are less likely to exhibit such short distance variations.Beyond the obvious care in selecting data sources, if multiple sources are available, it is important for the data cleansing process to distinguish between errors and microclimate differences. It is tempting to use multiple sources to cross-validate the data but this could unintentionally remove the effect being sought.

Zero Values or Missing Values in the Data

One of the most common anomaly in data is the presence of zero or null values. A value missing in a tuple doesn't mean that the value is zero. A missing value can be interpreted in many ways as the data will be there but may not be present currently, or for a particular group the attribute may not be applicable. For eg. In case of observing animals in a sight there is more probability for getting missing values.An animal at a specific time was not observed doesn't mean that it was not there. One cannot reach into a conclusion regarding the presence of animal. It may be present there, but may not have been visible for the observer or it may have been absent.

In accordance with the kind of analysis, the meaning of zero can differ. For eg. the data entered to represent the calling activity of different species of frogs found all over the country based on the weather conditions can have a zero value which will be considered as a default value. The zero doesn't mean that the species is not present. Two inferences can be evolved from this. Either the species is not present or for that specific species the calling activity will be nil.

The different methods that can be followed to deal with these missing values are:

Reject the Tuple

This method is adopted, when the data mining involves a classification technique and when the class label is missing. The effectiveness is very poor especially when the percentage of missing value is comparatively less as the rest of the attribute values that are present is not at all useful.

Filling Missing Values Manually

This method is time consuming when there are more missing values in the data.

Replace the Missing Value with a Constant

Here, all missing values will be replaced by a global constant like "unknown" or ∞. But if it is replaced by a common value like "unknown" the mining program may another interesting concept. So even though the method is simple it is not a trustable method.

Fill the Missing Value with Mean or Median

In this, the missing attribute values can be replaced with a central tendency like mean or median. Suppose for the data that has theattribute percentage of algae content in the lakes in the state, the missing values may be replaced with the middle value.

Fill the Missing Value with the Most Probable Value

The most probable value may be determined by other data mining techniques like Regression, Bayesian Formalism or Decision Tree Induction.

Conclusion and Future Work

While collecting the data for ecological research several key factors have been identified. Inconsistencies and quality loss are present in data. The purpose of data collection and the various data types have been discussed. The paper also depicts how the anomalies present in the data become a major challenge in the pre-processing phase in the knowledge extraction. The different ways to overcome the anomalies have been discussed. Even though the paper started with a small thought on the challenges faced in the pre processing mining phase the scope can be easily expanded to the data mining algorithms and the post processing techniques.

References

1. "Data Mining for Ecological Field Research: Lessons Learned from Amphibian and Reptile
2. Activity Analysis" by Jeffrey D. Campbell, Karyn Molines and Christopher W. Swarth.
3. "Environmental Applications of Data Mining" by Saˇso Dˇzeroski.
4. " Prediction of response of zooplankton biomass to climatic and oceanic changes" by I. Aoki, T. Komatsu,and K. Hwang
5. Analysis of Environmental Data Conceptual Foundations http://www.umass.edu/landeco/teaching/ecodata/schedule/environmental.data.pdf
6. Methods for Evaluating Wetland Condition #12 Using Amphibians in Bio assessments of WetlandsU. S. EPA. 2002
7. FrogWatchUSA, National Wildlife Federation and US Geological Survey, www.nwf.org/frogwatchusa

DIGITAL PAYMENT AS A MOVE TOWARDS CASHLESS ECONOMY

Prathima. R, Bhavya. M & Jayshree Tambad
Assistant Professor, Department of Commerce& Management, Sindhi college, Bangalore

Abstract

Post Demonetisation is a Phase since November 8, 2016 when Recent Central Govt. Reforms of Honorable Prime Minister Mr. Narendra Modi i.e. DEMONITIZATION to eradicate corruption, terrorism and to move towards cashless economyevery Indian has only one thing on mind: the dilemma of choosing a safe, secure, convenient and cashless payment option. Currently available cashless payment systems include credit/debit cards, e-wallets *such as* Paytm, Unified Payment Interface *(UPI), IMPS, USSD, RTGS, and NEFT. Which one should you use and for what kind of transactions? Here's how you can decide. The Digital India programme is a flagship programme of the Government of India with a vision to transform India into a digitally empowered society and knowledge economy. "Faceless, Paperless, Cashless" is one of professed role of Digital India. The Paper depicts the Post Demonetisation effects on various sectors in India. And also emphasizes the Pros and Cons of Digital Payments i.e. Cash Less Economy.The Paper is an attempt and which tries to predict the upcoming impact of cashless transactions on each and every industry which directly or indirectly contributes towards GDP Growth rate in India. The Paper also studies the various parameters to make digital payments a dream of our Honorable Prime Minister Narendra Modi to be a reality or not. It also emphasizes on the technical specifications, Information and operations. Finally the outcome of our paper is to judge whether the cashless economy/ digital payment in India is likely to be good move? Or it is an attempt.*

Keywords*: Digital Payment, IMPS, UPI, Demonetization*

Introduction

Since November 8, every Indian has only one thing on mind: the dilemma of choosing a safe, secure, convenient and cashless payment option. Currently available cashless payment systems include credit/debit cards, e-wallets such as Paytm, Unified Payment Interface (UPI), IMPS, USSD, RTGS, and NEFT. Which one should you use and for what kind of transactions? Here's how you can decide.

Factors considered to complete the digital transactions

1. Time taken to complete a transfer/payment.
2. The Maximum amount you can transfer.
3. The Financial details/information (e.g. account number etc.,) that you need to complete the transfer;
4. How is the transaction validated/authenticated;
5. Whether you will earn interest on the money kept in reserve in the payment system?
6. Whether you need to specify who the money is being transferred to in advance i.e. register the beneficiary (recipient) of the money (beneficiary registration).
7. What infrastructure/technical support is a must for the transfer to happen?
8. And lastly, what are the costs involved there is no single 'best' payment option for everyone and all transactions. However, you could try to pick a payment option suitable for your purpose. Below is an overview of the comparision analysis.

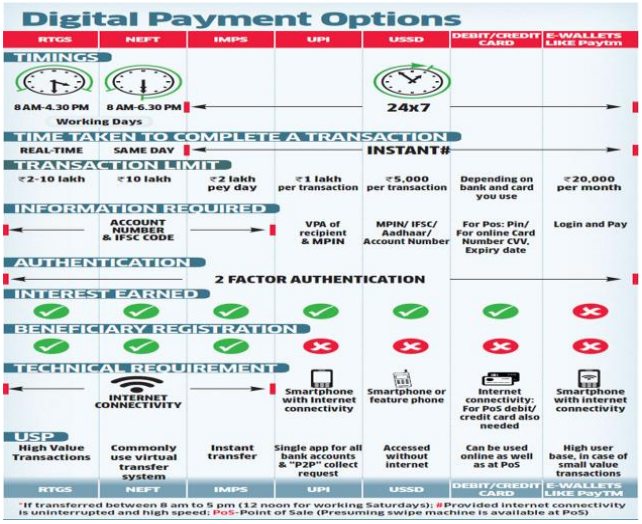
   Source:http://economictimes.indiatimes.com/articleshow/56173994.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

Value of Transaction

One way of choosing a payment option is to base your decision on the value of the transaction. As opening uses accounts. Creating passwords for various payment solutions is very cumbersome; a practical way would be to choose at least two of these applications- one for high- value transactions and other for small value transactions. You could divide the payment solutions into two categories and choose from RTGS/NEFT/debit and credit cards for transactions of over, say, Rs.10,000 and from-IMPS/UPI/USSD/e-

wallets for payments below Rs.10,000.However, the value of transaction is not the only deciding factor: safety and ease of use are some of the other important parameters.

Source:http://economictimes.indiatimes.com/articleshow/56173994.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst



Authentication

In terms of authentication, standard security procedure, which is tow-factor authentication, is followed in case of all these alternatives. It refers to login ID and password set up by you coupled with something that only you can provide – a PIN or an OTP (normally sent to your registered mobile number or email address). In the upcoming versions of UPI, an additional level of authentication i.e. biometric authentication (using your smart phone scanners) is Proposed to be Introduced.

Network Safety

Apart from this, how safe your transaction is would also depend upon where and which network (public/private Wi-Fi or mobile date) you are using to make the payment transfer. Most people have several apps installed on their Smart phones and almost all phone apps require access to various information/data stored on your phone. In such instances, smart phones could be more susceptible to hacking/internet virus/malware etc., depending on the type of firewall installed on them.

Technical Requirements for Making the Digital Transaction

- Internet connectivity.
- Mobile banking service based on USSD technology.

Presence of Third Party or Intermediaries

Paying through an e-wallet means presence of a third party between the payer and the payee. One should keep in mind, that regulations governing e-wallet providers are different from those governing banks.

Research Design

Statement of the Problem

TheProblem undertaken to study the impact of phase of Post Demonetisation and its move towards cash less economy i.e. Digital Transactions. The Paper also studies the various parameters to make digital payments a dream of our Honorable Prime Minister Narendra Modi to be a reality or not. It also emphasizes on the technical specifications, Information and operations. Finally the outcome of our paper is to judge whether the cashless economy/ digital payment in India is likely to be good move? Or it is an attempt

Objectives of the Study

- To understand the impact of phase of Post Demonetisation and its move towards Cashless Economy. .
- To offer valuable suggestions on implementation to undertake digital transactions.
- To study the various information and parameters required to undertake digital transactions.

Review of Literature

- http://economictimes.indiatimes.com/articleshow/56173994.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst*studied the impact of Phase of Post Demonetisation and its move towards Cashless Economy.*

Methodology

Only secondary data is applicable to the study. The Secondary data is collected through annual reports, websites and the company brochures, comprehensive references were made from the previous research papers from journals, books and magazines like economic times and so on. Some Statistical tools are used to study the evaluation of qualitative and quantitative data from Secondary sources.

Limitations of the Study

- Since the paper work is carried out for a very short period exhaustive findings could not be made.
- Most of the data is taken from the Published sources and it is assumed to be true.

Analysis and Interpretation

Table Showing Transaction Cost Carrying Digital Transactions

Source:http://economictimes.indiatimes.com/articleshow/56173994.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

Transaction Amount	NEFT	RTGS	IMPS	UPI - Proposed	USSD	Debit and Credit Cards	E-wallets
Up to ₹5000	₹ 2.50	N.A.	₹ 5	₹ 0.5	₹ 0.5	An annual fee/renewal fee which depends upon the type of card you are using. No additional charges for use at PoS but additional charges are levied for online transactions	Currently no charges.
₹5000-10,000	₹ 2.50	N.A.	₹ 5	₹ 0.5	N.A.		
₹10,000 - ₹ 1 lakh	₹ 5	N.A.	₹ 5	₹ 0.5	N.A.		
₹1 lakh - ₹ 2 lakhs	₹ 15	N.A.	₹ 15	N.A.	N.A.		
₹2 lakh - ₹ 5 lakhs	₹ 25	₹ 25	N.A.	N.A.	N.A.		
₹5 lakh - ₹ 10 lakhs	₹ 25	₹ 50	N.A.	N.A.	N.A.		

Analysis & Interpretation

From the above table which explains the cost involved in carrying digital transactions clearly states that the transaction cost is very high in terms of IMPS and significantly there is no cost for E-wallets. Overall if Indian Government reduces the transaction cost on such digital transactions in future and announces certain benefits then in future the India can move towards Cashless Economy.

Conclusion

Post Demonetisation A Move towards Cashless Economy is a dream which turns up a reality if the Indians transforms to carry the transactions in digital which leads to less cash and money circulation to eradicate black money i.e. corruption and move towards developed economy.

References

Books

1. Bharati V. Pathak, “Indian Financial System” Pearson Education Pvt. Ltd., 2003.
2. E.Gorden and K. Nataraj “Banking-Theory, Law and Practice” “Himalaya Publishing House”.
3. P.V Kulkarni and B.G Satyaprasad “Financial Management” “Himalaya Publishing House”.
4. M.Y. Khan and Jain “Financial Management” “Tata McGraw-Hill”.
5. M.Y. Khan “Financial services” “Tata McGraw-Hill”.
6. Shashi.K.Gupta and R.K Sharma “Management Accounting” “Kalyani Publications”.

Journal and other articles

1. Banerjee, Abhijit V., and Esther Duflo, 2003. Bank Finance in India,MIMEO, MIT
2. Banerjee Abhijit V., Shawn Cole and Esther Duflo, 2004. Banking Reform in India, MIMEO, MIT.
3. Bhaumik, Sumon K. and Jenifer Piesse, 2003. Are foreign banks active in emerging credit markets?Evidence fromthe Indian banking industry,Working Paper, Queen’s University, Belfast.
4. D’Souza, Errol, 2002. How Well Have Public Sector Banks Done?A Note.Economic and Political Weekly, March 2, 2002.
5. Dr.Vighneshwara Swamy, (2014-15) Basel III Implications for Indian Banking.
6. Dr. Suresh Chandra Bihari, (Pacific International Review International, Volume-7 Issue 8 February 2015) Basel III in Indian Banks and Capital Concerns.
7. Mr. C.S. Balasubramaniam, Basel III Norms And Indian Banking: Assessment And Emerging Challenges (National Monthly Referred Journal of Research in Commerce & Management, Volume No-1,Issue. No.8, ISSN 2277-1166).

GREEN BANKING: A DRIVE TOWARDS SUSTAINABILITY

Ms. IpsitaMohanta
Assistant Professor, Indo Asian Academy Co-ed Degree and PG Centre, Bangalore

Abstract

The present era of industrialization and globalization has additional comfort and luxury to human life; it has led to an alarming situation of huge environmental degradation incorporated with all the involved activities. In today's world, the entire sector in the world economy is experiencing huge challenge to deal with the environmental problems and their linkedsways in day to day businesses. Not only have the business firms realized the importance of the environment but more than that an immense awareness is seen among the consumers and general public for the same. Due to all these reasons the business organizations have started modifying their activities and strategies so as to ensure protection of our natural resources and environment. In this context the financial sector and especially the banks can play an important role in promoting environmental sustainability. Sustainability is one of the most important factors driving the strategy making process of the business fraternity. In financial sector, the various services that have adopted green business are banks, stock brokerage companies, credit card companies and also the companies of consumer finance. The concern for environmental sustainability has given bulk recognition to the concept of corporate social responsibility. The prospective benefits of the concept has gained the interest of the regulatory authorities, society, NGOs, employees, customers as well as the international bodies to the issue. In this regard, concern for environmental sustainability by the banks has given rise to concept of "Green Banking". In an emerging economy like India, environmental management needs to be the key focus area of the business fraternity and especially the banking sector being the major intermediary. This would help the firms in the emerging economies utilize their limited resources in an optimum way without harming the natural environment and face the global challenge of sustainability in successful manner.

In this paper green banking and sustainability has been discussed in detail. The paper also highlights on the stages, initiatives, benefits and future of green banking in Indian context. Some case studies in Indian context are also being discussed here in order to understand the importance of green banking in the present times.

Keywords*: *Sustainability; Green Banking Sustainable Development; Environmental degradation

Introduction

The environment is a prime asset of the human system. It must therefore be protected and preserved. The human ecological footprint has already crossed the sustainable capacity of Mother Earth, while the rising population and the dynamic economic growth add to the pressure by their increasing demand for the limited resources. Hence, reducing our global footprint to sustainable levels is the defining issue of the age. Sustainable development is understood as a development that does not hamper ecological, social and environmental systems on which it depends. Hence, we need to take stock of the price we are paying for economic development and recognize the fact that even small measures in the right direction go a long way in the management of natural assets. This process involves all sectors in the economy – Government, NGOs, corporates and the financial sector to foster sustainable development. Banking sector is generally perceived as environmentally neutral. However, directive leadership can be provided by banks for the economic renovation which shall provide new opportunities for creating a strong, successful, low carbon economy. Directive and concrete efforts taken by the banking sector to make their operations and their impact carbon free is termed as "Green Banking." Green Banking is an umbrella term referring to practices and guidelines that make banks sustainable in economic, environmental, and social dimensions. It aims to make the banking processes, use of Information Technology and physical infrastructure as efficient and effective as possible, with minimal impact on the environment.

The present paper explores and examines green banking and sustainability, sites examples of an Indian Banks, the largest public sector bank in India i.e. The State Bank of India as case study. These banks have pioneered the green banking practically and are setting up an example for others to follow and save the degrading environment. It has been understood from the extensive literature survey and personal visit to the banks that not much has been done in this regard in India although the role of the financial institutions and especially the banks is very crucial in India's emerging economy.

Objectives

The study mainly aims at understanding the green banking philosophy adoption by the banks. The paper attempts to review various guidelines for environmental preservation and sustainability along with the edges taken by the State Bank of India.

Research Methodology

The study mainly includes literature review from secondary data. The secondary data sources include reports of the respective banks and other relative information published on the banks and other internet sites. The study also includes the primary data collection through personal visit to the bank and in-depth interviews of the branch managers.

Green Banking: Definition

A **green bank** (sometimes referred to as green investment bank, clean energy finance authority, or clean energy finance corporation) is a financial institution, typically public or quasi-public, that uses innovative financing techniques and market development tools in partnership with the private sector to accelerate deployment of clean energy technologies. Green banks use public funds to leverage private investment in clean energy technologies that, despite being commercially viable, have struggled to establish a widespread presence in consumer markets. Green banks seek to reduce energy costs for ratepayers, stimulate private sector investment and economic activity, and expedite the transition to a low-carbon economy.

Sustainable Development and Sustainable Banking

Conferring to the "report of the World Commission on Environment and Development Sustainable Development", Sustainable Development is the way of using the resources that not only meet the human needs of present and future generation but also preserve the environment. The field of sustainable development comprises of three constituents - environmental sustainability, economic sustainability and socio-economic sustainability. Sustainable banking as per the United Nations Environment Programme Finance Initiative is defined as "the process by which the banks consider the impact of their various operational activities and their products and services for meeting the needs of the current as well as the future generations".

Banking sector is under massive pressure from its different shareholders to carry out its business in ethical ways. Few countries have imposed heavy penalties to banks for violating socio-economic principles. The UNEP-FI (2007) states that sustainable banks consider the effects of its services and operations in meeting the needs of current as well as future generation. Direct impacts of banks are related to its products and services. (UNEP FI, 2007). Sustainability in banking sector has basically two forms. Firstly, through adoption of environmental and social responsibility in bank's day to day operations like wise use of paper, energy conservation etc. and secondly, by including sustainability in to banks' products and strategies like green lending, etc.

Environmental Management by the Bank

Banks play key role in the country's economy and in the sustainable development. Bank being the major financer indirectly contributes to the environmental degradation by financing the projects and the industries whose activities put adverseinfluence to the environment. Thus, the bank by their active participation in the lending business in a judicious manner can contribute greatly to the environment and to the society. Banks are now adopting various strategies where the projects are scrutinized using a set of tools that take environmental considerations. Banks are also encouraging projects that show its concern for the environment in the form of sustainable development, use of renewable natural resources, waste minimization, pollution prevention, occupational health and safety, energy efficient, care of human health and many similar attributes that tries for the betterment of the society

Stages of Sustainable Banking

"Sustainable Finance and Banking" has mentioned four phases action that banks should adopt for sustainability. These stages include defensive banking, preventive banking, Offensive banking and Sustainable Banking. The model consists of the four phases. Each outer layer contains the previous layer expect of the first layer i.e. the defensive banking. every bank normally follow these stages but the attainment of sustainable approach is the most difficult one for the banks. The banks continue to evolve according to the stakeholder expectation. Here the terms 'defensive', 'preventative' and 'offensive' are defined in context of environmental issues.

Defensive Banking

In this phase, banks are not active and resist the environmental legislations as it affects the banks' interest. Consideration of the environmental issues at this stage is an avoidable cost.

Preventative Banking

Due to various driving forces like government pressure, non-government organizations, pressure from society etc, banks integrate the environmental issues and risk management activities in to their daily business activities.

Offensive Banking

In this stage, the banks not only consider their internal activities but also consider their external activities. The banks in this stage develop and market environmental-friendly projects.For example Green financing i.e. investing in to environmental friendly projects. The focus is on financing various projects which work on renewable energy, investment funds that invest on environment friendly assets and release of various reports based on the environmental performance.

Sustainable Banking

At this stage all the activities of banks are sustainable. Banks do not invest in the ecologically unsound business despite huge profit. The banks do not aim towards highest financial rate of return. The key motive is to get the highest sustainable rate of return. Currently, sustainable banking is possible only for the niche players of the field. Few examples for this are- Triodos Bank in Netherlands and Co-operative bank in the UK.

Environmental Impacts of the Banks

Although banks do not appear to have any direct impacts on the environment, it is not so. Banks play a very crucial role in the society and as a financer to major developmental projects their role in the society and impacts on the environment cannot be neglected. Following are the major types of the environmental impacts of the banks.

Internal Impacts

Banking sector is considered as a clean sector which is technologically strong with minimum negative impact on the environment and the society. Direct impacts of the banks are related to the internal operations of the banks that may increase greenhouse emissions, like energy consumption from lights, use of computers and ATM machines, water, waste disposal, business travels etc. The direct impact of banks' energy, waste and paper use on the environment is comparatively less than many other sectors but since the size of the banking sector is large, their impact on the environment as a whole sector cannot be ignored.

External Impacts

It is related to the environmental impacts of banks' products and clients' performance. But the situation is that opposite compared to other sectors in the economy. The banks' products are not environmentally unsafe but the clients of the bank who use those products put negative impact on the environment. So it is not easy to estimate the environmental impact of banks' external activities as the banks themselves do not have negative environmental impact rather the users of these products put negative impact on the environment.

The Environmental Risks for Banks

Banks are exposed to many risks that may lead the banks face loss in terms of reputation and profit. Banks may not get their money back which they have used to finance their clients and so can face credit risk and reputational risks. So, the risk to the banks from banks' commercial lending activity is high. Thus, besides the liability from the banks' own operations, greater risks are from bank's commercial lending and can be categorized into following types.

Risk of Loan Default by Debtors

If the loan debtors violate the environmental legislations, then they have to pay extra cost as a cost of for cleanup. This extra burden of payment many times leads bank clients become financially weak and this makes them defaulter of repaying the loan to the bank.

Risk of Changing Market with Environmental Concerns

Due to increase in the environmental concern among the customers and release of strict environmental regulations, the survival of the organization without environmental concern is becoming very tough in the present times. Thus, the change in the attitudes towards the environment can make the debtors tough to survive by affecting the banks capability to repay the loan amount to the bank.

Risk of Bank's Liability

As banks may have direct business with the collateralized properties, banks become liable for the cleanup of contamination caused by the property.

Risk of Reputation Damaged

If the banks do not perform their environmental and social responsibilities then this lowers the credibility of the bank among the public and thus causing loss of reputation of the bank.

Organizations Promoting Sustainability Concept and Green Banking international Finance Corporation (IFC)

The IFC is a member of the World Bank Group. It finances various private sector investments and provides consultative services to various business and government. It promotes the sustainable growth of the economy. It finances various private sector investments and provides advisory services to various business and government. It promotes sustainable growth of the economy through various activities like generation of tax revenues, job creation, improving corporate governance and environmental performance.

United Nations Environment Programme - Financial Initiatives (UNEP-FI)

It promotes environment protection and facilitates the wise use of the natural environment for the promotion of the sustainable development across the globe. UNEP through its initiatives works with the financial institutions towards encouraging the sustainability issue in the corporates' financial decisions. UNEP FI is a global partnership between UNEP and the financial sector. Over 200 institutions, including banks, insurers and fund managers, work with UNEP to understand the impacts of environmental and social considerations on financial performance.

Laws and Guidelines for Environmental Conservation and Sustainability the Carbon Disclosure Project

The Carbon Disclosure Project (CDP) is an organization based in the United Kingdom which works with shareholders and corporations to disclose the greenhouse gas emissions of major corporations. It conducts the climate change programme for the reduction of greenhouse gas emission in order to reduce the climate change risk. CDP maintains the largest database on the climate change. It is an independent non-profit organization. Various Indian financial institutions which are signatory to the CDP are SBI, HDFC Bank Ltd, IDBI, IDFC, Reliance Capital, Tata Capital, IndusInd Bank and Yes Bank.

CERCLA

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) is a United States federal law designed to clean up sites contaminated with hazardous substances as well as broadly define "pollutants or contaminants". Under CERCLA, Environmental Protection Agency (EPA) can require liable parties to conduct cleanups or EPA can conduct a cleanup and subsequently seek

cleanup costs from liable parties. Under CERCLA many banks in United States had to face loss when they were found responsible for the pollution activities performed by their clients.

BSE GREENEX

Bombay Stock Exchange has launched its carbon-efficient equity index called 'BSE-GREENEX' which measures the performance of the companies in context to their Carbon Emissions (Shree, 2012). This is the second thematic index launched by BSE and this index has been launched in collaboration with IIM Ahmadabad. The index will target those investors who are socially-aware and concerned with the environment and are also willing to pay a premium for green investments in companies to get better return. The BSE Greenex will assess the energy efficiency of firms, based on energy and financial data. The selection of companies was on the basis of greenhouse emissions in the last four financial years from 2007-08 till 2010-11(Gupta, 2012).

Green Banking Industry in India

Green banking requires a fundamental change in the planning process of the banks with the adequate consideration about the economy, business, finance, society and also the banks' profit. This will also help in the ecological balance. If we see the green banking concern in Indian banks then we will find that they are far behind the global trends. None of the Indian banks have adopted Equator Principle despite the RBI instructions. Also, none of the Indian banks are signatory to the UNEP-FI. But in recent few years, various Indian banks have started working towards this goal and have adopted various important contributions.

State Bank of India in partnership with the Suzlon energy has set up their wind mills to generate power in three states of India i.e. Gujarat, Tamil Nadu and Maharashtra for their own consumption. The State Bank of India has also started Green Channel counter (GCC) to initiate various paperless transaction activity of the banks in the branches like cash deposit, cash withdrawal and fund transfer up to Rs 40,000. Indus Ind bank has set up Solar power ATM to save 1980 KW of energy per hour every year to reduce carbon emissions. Yes Bank under community development initiatives, called "Planet Earth" is promoting clean and green drives energy efficient practices and local disaster management plans at its retail branches. ICICI Group Companies have saved around 30,000 trees and 16 crore litres of water through their various environmental friendly activities. The bank has also supported other organizations to adopt green philosophy by providing them fund to manage environment-friendly technology projects.

Bank investing or lending to those businesses and projects which have environment-friendly approach can set a trend for the companies in order to survive in the environmentally friendly market.

Green Initiatives: Indian Banks Case Studies State Bank of India

SBI is the largest public sector bank in India in terms of market capitalization, profit, net profit, revenue and assets. Till December 2016, SBI had maintained assets worth US$388 billion. The bank had 18,000 branches across the globe, which also includes 191 foreign offices. This makes SBI, the largest banking and financial services company in India in terms of asset. The bank offers various ranges of activities such as commercial banking, investment banking, consumer banking, assets management, pension, credit card, insurance and mortgages. The bank was ranked 29th in Forbes 2009 ranking. It is involved in community service activity since 1974 and sponsors various social and welfare activities. State Bank has been undertaking several environmentally and socially sustainable initiatives across the country and is one of the few banks in the country to have enunciated a Green Banking Policy, since 2007.

Certain major initiatives of SBI are:

1. With the aim of reduction of carbon footprint, SBI has collaborated with Suzlon Energy Limited for using wind power at the place of thermal power in three states namely, Gujarat, Maharashtra, and Tamil Nadu in the year 2010**.**

2. In 2010, SBI started the facility of Green Channel Counter and made it available at more than 6000 branches across the country till 2012.It is an approach towards paperless banking. This process is environmentally friendly as it consumes no paper.
3. SBI supports environmentally friendly residential projects and provides concessions on loans for the projects which are rated by the Indian Green Building Council (IGBC).
4. SBI provides project finances on concessional rates for the purpose of reducing greenhouse gas emission by adoption of clean technology.
5. State Bank of India has become a signatory investor to the Carbon Disclosure Project (CDP), a collaboration of over 560 institutional investors with assets under management of USD 72 trillion.

Major Benefits of Green Banking Identified from In-Depth Interviews of the Bank Employees

In India, green banking is in its initial phase. Banks can utilize green banking as an opportunity to gain advantage in the market by creating a difference in their strategy making process. Also, banks need to be more active in communicating the green banking concept and its associated benefits to the consumers. It was also observed that green banking consciousness is high in the higher levels of management in the banks and this consciousness reduces with the lower levels of management and least with the employees who are in day to day direct touch with the customers. Thus, the banks must focus on promoting the consciousness and benefits of the green banking to the employees who are in direct touch with the customers.

Green banking is a pro-active way of energy conservation and environment protection.The prime benefit of the green banking approach is the protection of the natural resources and the environment. Green banking avoids paper work to the optimum level and focuses on electronic transactions like use of ATM, mobile banking, online banking etc for various banking transactions by the customers. Electronic transaction not only aids towards sustainability but also provides convenience to the customers as well as to the banks. Less paperwork means less cutting of trees. For implementing eco-friendly business, banks should adopt environmental standards of lending as it improves the asset quality of the banks. This activity of the bank also has a very significant influence on the environmental performance of its clients. This forces the clients to perform in an environment friendly way. This not only enhances the reputation of the bank but also helps them face the environmental regulations in successful way and thus leading to better legal risk management by the banks. The banks normally grant loan to the clients on a low rate of interest. This promotes more and more entrepreneurs to start with environment friendly projects and thus leads to more and more awareness on the environment protection activities in the economy as a whole. It is thus a win-win approach by the banks as it not only benefits the environment but also the banks and its customers as a whole. Some of the major benefits of green banking to the banks identified from the interviews of the managers are as follows:

Reduces the Transaction Cost of the Bank

Green banking avoids paper work to the optimum level and follows electronic media for various transactions, banks functioning and customer management. Like providing e-statements to the customers, opening of the accounts through online, making all the internal circulars within the banks online, etc. Thus, Paperless banking reduces the transaction cost.

Competitive Edge

It helps the banks to get a competitive edge over their competitors through innovation in their products and services.

Better Risk Management

It provides the benefit of better risk management to the banks. Better risk management helps in building good image of the banks and by thus reducing the reputational risk.

Reduces the Credit Risk

It helps easy recovery of the financed loan and thus reduces the credit risk of the bank.

Cost Conscious Process

The transaction cost incurred to the bank through green banking products like ATM, Mobile banking and online banking is very less compared to the cost incurred through customer visiting the branch and performing the transaction.

Convenient Process

Green Banking provides convenience to the bank and also to the bank customers. Due to various green banking initiatives like ATM, online banking, mobile banking etc, the foot fall of the customer reduces to a larger extent in the branches of the banks and this leads to reduced cost and effort in the management of the banks activity. These banking activities also provide convenience to the consumers in terms of time management, energy and fuel conservation as they need not visit the branch for every transaction.

Future of Green Banking

Indian economy is an emerging economy and there is a huge potential of growth of Indian banks by adoption of innovative approach in their strategy making process. There is a need of an approach towards paradigm shift by setting up of the business model which would consider all the three aspect of triple bottom line approach i.e. the people, the planet and the profit. The future of green banking seems to be very promising in India as lots of green products and services are expected in the future. Green excellence awards and recognitions, Green rating agencies, Green investment funds, Green insurance and Green accounting and disclosure are some of the things that would be heard and seen in operation in the near future. Proper green banking implementation will act as a check to the polluting industries. Banks can act like a guideline towards the economic transformation and create a platform that would create many opportunities for financing and investment policy and contribute towards creation of a low carbon economy.

Conclusion

Green banking refers to the initiatives taken by banks to encourage environment-friendly investment. Green banking as a concept is a proactive and smart way of thinking towards future sustainability. It is very important for the banks to be pro-active and accelerate the rate of the growth of the economy. As there is a continuous change in the environmental factors leading the banks face intense competition in the global market. Banks needs to apply morality of sustainability and responsibility to their business model, strategy and formulation for products and services, operations and financing activities and become stronger. By adopting the environmental factors in their lending activities banks can recover the return from their investments and make the polluting industries become environment-friendly. These are the major information about Green Banking in India.

Adoption of green approach is more than just becoming environment-friendly as it is associated with lots of benefits like reduction in the risk as well as the cost of the bank, enhancement of banks reputations and contribution to the common good of environmental besides enhancing the reputation of the bank. In a broad sense, green banking serves the commercial objective of the bank as well as the corporate social responsibility. Thus, it is important that Indian Banks should realize their responsibilities towards the environment as well as the society in order to compete and survive in the global market.

References

1. About The Equator Principles. Retrieved from http://www.equator-principles.com/index.php/about-ep/about-ep
2. Bank Track. Retrieved from http://en.wikipedia.org/wiki/BankTrack
3. Biswas N., Sustainable Green Banking Approach: The Need of the Hour, Business Spectrum, 1(1), 32-38 (2011).
4. Bouma J. J., Jeucken M. and Klinkers L., Sustainable Banking: The Greening of Finance, Greenleaf Publishing Limited, Sheffield, UK, 31 (2001).

5. Business Standard, SBI now Signatory to Carbon Disclosure Project (2011, February 22). Retrieved from http://www.business-standard.com/article/finance/sbi-now-signatory-to-carbon-disclosure-project-111022200022_1.html
6. Dash R. N., Sustainable Green Banking: The Story of Triodos Bank. CAB CALLING, 26-29, October-December (2008).
7. EconomicTimes,SBIturnsGreen,InstallsWindmills(2010).Retrievedfrom http://articles.economictimes.indiatimes.com/2010-04-23/news/27587704_1_windmills-wind-power-mw-capacity
8. Gupta A., BSE Launches India's First Carbon-efficient LiveIndex called Greenex (2012). Retrieved from http://articles.economictimes.indiatimes.com/2012-02-26/news/31101643_1_first-carbon-efficient-bse-greenex-energy-efficiency
9. Green Banking for Indian Banking Sector**,** Institute of Development and Research in Banking Technology. Publications:IDRBT(2013).Retrievedfrom http://www.idrbt.ac.in/publications/Frameworks/Green%20Banking%20Framework%20(2013).pdf
10. InternationalFinanceCorporation(IFC).Retrievedfrom ttp://wbi.worldbank.org/developmentmarketplace/partner/international-finance-corporation-ifc
11. Jeucken M., Sustainable Finance and Banking, Earth scan Publication Ltd., London, 71 (2001)
12. Jha N. and Bhome S., A Study of Green Banking Trends in India, International Monthly Referred Journal of Research in Management and Technology, 2, 127-132 (2013).
13. Lalon R. M., Green Banking: Going Green, International Journal of Economics, Finance and Management Sciences, 3(1), 34-42 (2015)
14. Mani A., Green Banking through Green Lending (2011). Retrieved from http://ibmtedu.org/gvcg/Papers/IC-140.pdf
15. Mishra D. K., Green Strategies: Response of Indian Banks to Climate Change. The Ecoscan, Special Issue, 3, 345-348 (2013).
16. Rashid M., Green Banking comes to Focus, The Daily Star (2010, September, 17). Retrieved from http://www.thedailystar.net/newDesign/newsdetails.php?nid=154690.
17. Shree V., What is BSE-GREENEX (Carbon Index) (2012). Retrieved from http://www.marketcalls.in/indices/what-is-bse-greenex.html
18. Singh H. and Singh Pal B., An Effective and Resourceful Contribution of Green Banking towards Sustainability, International Journal of Advances in Engineering Science and Technology, 1(2), 41-45 (2013). Retrieved from http://www.sestindia.org/wp-content/uploads/2013/01/Volume-1Number-2PP-41-45.pdf.
19. UNEP FI, Banking on Value: A New Approach to credit Risk in Africa (2007). Retrieved from http://www.unepfi.org/fileadmin/documents/banking_on_value.pdf
20. United Nations, Report of the World Commission on Environment and Development, General Assembly Resolution 42/187, 11 December, 1987 (1987). Retrieved from http://www.un-documents.net/a42r187.htm
21. Weber O., Fenchel M. and Scholz R. W., Integration of Environmental Risks into the Credit Risk Management Process of Banks, GOE Report, 4, Zurich: GOE and ETH (2005).
22. Weiler E., Murray B. C., Kelly S. J. and Ganzi J. T., Review of Environmental Risk Management at Banking Institutionsand Potential Relevance of ISO 14000. Research Triangle Institute, North Carolina (1997).

BANK RECAPITALIZATION AND NON-PERFORMING ASSETS OF BANKS

Ibrahim Umar Safana
Department of Economics, Jain University, Bangalore

Dr.Xavier.V.K
Professor, Department of Economics, Jain University, Bangalore

Abstract

The paper analyzes the correlation between the Non Performing Asset levels of public sector banks with Capital Adequacy Ratio of each bank over a period of time. The study is an attempt to verify whether the measure of recapitalization of public sector banks by almostRs 25000 crore in the year 2016 & 2017 followed by Rs 10000 in the year 2018 and 2019 will reduce the NPA levels of public sector banks. Secondary data has been collected from RBI website over the period; from the financial years 2009 to 2015 across the banking groups- nationalized, SBI & Associates, old & new private and foreign banks. The standard NPA levels are studied across the groups with the use of an Analysis of Variance (ANOVA) and additional research is made on nationalized banks and SBI group & associates based on the above results of ANOVA and a correlation analysis is performed between Non-performing assets (NPA) and Capital Adequacy Ratio (CAR) to study the association between the two variables. Growing non-performing assets is a recurring problem in the Indian banking sector. Over the past 20 years, there have been two such episodes when the banking sector was rigorously impaired by balance sheet troubles. In this paper we do a comparative analysis of the two banking predicament episodes-the one in the late 1990s and one that started in the aftermath of the 2008 Global Financial Crisis and is yet to be determined.We wrap up by drawing policy lessons from this discussion and suggest some procedures that can be adopted to better deal with a future balance sheet related predicament in the banking sector such that the collision on the real economy is minimum.

Keywords: *Public Sector Banks, Capital Adequacy Levels, Non-Performing Assets, bank Recapitalization*

Introduction

Non-Performing assets have been worrisome for banks all over the world. The competition and the pressure arising in the sector leads banks to lend belligerently and the result of the same is seen in the bank's financial statements. RBI terms an asset as NPA when an asset is out of order status for more than 90 days. NPAs are further classified into the following categories by the Reserve Bank of India:

1. Sub-Standard Assets- An asset which remains in non-performing for a period of less than or equal to 12 months
2. Doubtful Assets- An asset which remains in sub-standard category for a period of 12 months
3. Loss Assets- Loss of an asset identified by bank / internal or external auditor/ RBI.

There might be only salvage value. Indian banks are mainly divided into public sector, old private sector, new private sector and foreign banks. Each sub-division has reacted to the above mentioned pressure uniquely and their asset performance has been distinctively singular over the years. The reason behind choosing the financial year 2013 onwards for the study is to reason out the Basel III implications on NPA levels. The public sector banks which have a considerable 70 % market share have the highest levels of NPAs. It is definitely a worrisome zone as these are placing stress on the industry's profitability. If corrective measures are not taken now, it will dampen the confidence levels of the stakeholders. Government and Reserve Bank of India are thus taking measures to recapitalize these banks with various new schemes like project *Indradhanush*.

The Indian economy has changed rapidly and significantly since the implementation of the liberalization, deregulation and privatization reforms of the early 1990s. The banking sector has also undergone remarkable changes over the last 25 years. When comparing crises across time, the main antecedents that need to be considered are the changes in the overall economy as well as in the banking sector at the time of the crises. The economic factors that are relevant here include the growth rate of GDP and the evolution over time of the bank credit to GDP ratio. Also important is the structure of banking as captured through factors such as the depth of banking penetration, share of bank credit in the overall capital formation, ownership structure of banks, level of capitalization, and key aspects of banking

regulation. These antecedents help to understand the causes of the crises and also facilitate a comparison of crises occurring at different points in time. There are several ways to describe a banking crisis. The most common manifestations of stress in the banking sector are in the form of insolvency and illiquidity. In India, crises have mostly manifested in the form of high levels of NPAs and their impact on the capital adequacy levels of banks. Hence, the levels of NPAs, in absolute and in relation to the capital in the banking system, constitute a convenient metric to compare the degree of banking crises.3 Finally, for a comprehensive analysis of the two crisis episodes, it is important to compare the consequences of the crises, especially in terms of the policy responses undertaken. Given that banking is a regulated activity, it is important to assess how the regulator (in this case the Reserve Bank of India or RBI) responds to the crises. Resolution of a banking crisis is a collective effort where the regulator works closely with the stakeholders the shareholders, management, customers, and employees of the banks. Regulatory response at the onset and during the course of a banking crisis is a critical determinant of how effectively and efficiently the crisis is resolved. In India, given the dominance of government owned banks (public sector banks or PSU banks), the government as an owner and manager of these banks becomes a key stakeholder.

Recapitalization

A change in a company's long-term financing mix is termed as recapitalization .Post subprime crises banks have lost money; i.e. their liabilities are greater than their assets. Recapitalizationinvolves a major change in the way a bank is funded; this could come about through issuing new shares or loan from a government. This improves the banks' bank balance and prevents them from going bust.If a bank is provided with loan it can help improve liquidity, but it doesn't improve their balance sheet, because they still owe the extra money received. i.e. the money shows up as an asset, but also as liability because the bank has to pay it back. Recapitalization would inject money without creating a liability

Background of the Study

Banking in India broadly consists of the commercial banks and the co-operative banks. Commercial banks in turn are classified into scheduled and non-scheduled commercial banks. The scheduled commercial banks (SCBs) are those banks that are included in the second schedule of the Reserve Bank of India Act, 1934 and satisfy certain conditions with regard to paid up capital, reserves etc. The SCBs include the public sector banks (nationalized banks, State Bank of India and its subsidiaries), domestic private sector banks (old and new), foreign private sector banks and regional rural banks. Banks in India got nationalized in two phases, in 1969 and 1980 (14 largest private banks in 1969 and 6 more in 1980). After the second round of nationalization, close to 90% of the sector (measured by the share of credit) was composed of government owned banks and the rest of the sector was almost equally divided among a few foreign banks and some very small privately owned banks (which were below the size threshold that the government had applied for nationalization.

An asset, including a leased asset, becomes non-performing when it ceases to generate income for the bank and is then termed as Non-Performing Asset (NPA). RBI has defined NPA as a credit facility in respect of which the interest and / or installment of principal has remained 'past due' for a specified period of time as stipulated by RBI. NPA is an important parameter in the analysis of financial performance of a bank as it results in higher provisioning requirements and thus decreasing margin. It affects liquidity and profitability, in addition to posing threat on quality of asset and survival of banks. It points out the credit risk of the banks. It emerged about 25 years ago in our banking sector, sending disappointing signals on the sustainability of affected banks. At present, Public Sector Undertaking Banks (PSU) are facing more problems than Private Sector Banks (PRSB). A mounting level of NPAs in the banking sector can severely affect the economy in many ways. If NPAs are not properly managed, it can cause financial and economic degradation which in turn signals an adverse investment climate.

Recapitalization has had a positive impact in the American and European continents. Indian bank's recapitalization will enrich the capital in banking making them more sustainable to absorb the losses.

With the introduction of Basel III; the capital norms more stringent for protecting the banks in times of adversity. The latest rules state that the minimum capital adequacy requirements (CAR) levels to be maintained by banks from 2013 are 10.5% of Risk Weighted Assets (RWA).

Statement of the Research Problem

One of the important functions of banks is to maintain the quality of assets, which requires proper selection of borrower, appraisal of his/ her project, adequate credit, close monitoring, supervision and follow up. In spite of this, there is always risk of accounts becoming non-performing. There is therefore, a need to devise suitable strategy for accounts, which have gone bad and or classified as non-performing assets. There is a carrying cost or holding cost for the non-performing assets as there is loss of interest, provision to be made etc. Appropriate and timely action for recovery can reduce the level of NPAs and further reduce the holding cost. This is very important from bank's profitability point of view. The focus of this study is on reducing the level of NPAs and further reducing the holding cost by adopting appropriate strategy for recovery, compromise and write off.

Literature Review

Number of researchers carried out various studies on bank recapitalization and nonperforming assets.BajiraoBorse (2016)the study of the effect of nonperforming assets (NPA) on return on assets (ROA) of major Indian commercial banks. The study tried to correlate the NPA with the ROA in case of Indian Banks and also to find out the variation between Public Sector Banks and Private Sector Banks in NPA as well as ROA.Vivek Srivastava (2013) focused on the study of nonperforming assets of Indian banks. The study was intended to calculate the correlation between the GNPA and Gross advances in respect of nonperforming assets and also to analyze the extent and tendency of NPA of different banks in India. Nishi Aggarwal and Poonam Malik (2016)conducted a study on the comparative study of non-performing assets in public and personal sector banks. The study was to investigate the NPA tendencies in the last 7 years of the private and public sector banks and also to make a correlative analysis of the NPA's of public and private sector banks and also to determine the comparative position of NPA's in nationalized banks.PriyankaMohani and MonalDeshmukh (2013) carried out a study of nonperforming assets on selected public banks and private banks. The study was to ascertain the trends in NPA level and also to highlight the NPAs position of selected public sector banks and private sector banks. Fareed Ahmed(2017) analyzes the Non-Performing Assets-A Comparative Analysis of Public Sector Banks and Private Sector Banks in India. The study was conducted to analyze the trend of NPAs of public sector banks and private sector banks. Shraddha KokaneDr Shriram Nerlekar (2017) studied Recapitalization of Public Sector Banks Will it reduce the Nonperforming Asset Levels. Roseline Oluitan (2015) studied the Effect of Recapitalization on Bank Performance in Nigeria.

Research Gap

From the analyzed papers the study showed that the previous researches failed to point out the government roles which lead to the rise in the nonperforming assets.

From the previous researches, some of the banks failed to adopt the most and efficient way to recover the nonperforming assets.also there is no clear explanations on how the recapitalization of banks affects the overall growth and development of the banking sector.

Research Questions

- What should be the overall analysis of NPAs in different banks?
- What are the past trends of NPAs?
- What is the weighted ratio of NPA in risk management in banking?
- What are the impacts of bank recapitalization to the overall banking industry?
- Do the profitability of banks with higher NPAs increases?
- What are the impacts of NPAs to the banks?

Objectives of the Study

The main objectives of the following study are as follows:

- To evaluate NPAs (Gross and Net) in different banks.
- To study the past trends of NPA
- To calculate the weighted of NPA in risk management in Banking.
- To evaluate profitability positions of banks.
- To study the impact of NPAs to the banks.
- To determine the impacts of bank recapitalization on the overall Indian banking industry.

Research Methodology

The research methodology adopted for carrying out the study are as follows:

- Descriptive research methodologies are used.
- At the first stage theoretical study is attempted.
- At the second stage Historical study is attempted.
- At the third stage Comparative study of NPA is undertaken.

Data Source

The data collected for the study is secondary data.data collected is from

- Annual reports of the bank RBI
- Report on Trend and Progress of Banking in India
- Manual of instructions on loans and advances
- Research Papers and Published Articles

Hypothesis

H_0: TheNPAs do not have a significant impact on the profitability of the banks

H_1: TheNPAs have a significant impact on the profitability of the banks.

Scope of the Study

In this case, three private sector banks and three public sectors banks have been selected.

These banks are primarily the top 3 banks of each sector i.e. top three banks from the public sector banks and the top three banks from the private sector banks. The public sector banks are State Bank of India (SBI), Punjab National bank (PNB) and Canara bank and the private sector banks are HDFC bank, ICICI bank and Axis bank. The study will analyze the following:

- Concept of Non-Performing Asset
- Guidelines
- Impact of NPAs
- Reasons for NPAs
- Preventive Measures
- Tools to manage and recover NPAs

HOW IS CLIMATE CHANGE A CHALLENGE TO SUSTAINABLE DEVELOPMENT IN INDIA!

Fuzail Ahmed & Mohammed Irfan Shariff
Assistant Professors, Hasanath College, Bangalore

Abstract

Climate change is one of the major problems facing mankind today. The severe complexity of the problem is attributed to global environment modifications on a vast range of issues impacting the very survival of life on Earth. There are varieties of perceptions regarding the exact size and consequences of climate change. Yet, it is no secret that risks emanating from climate change are indeed profound, which call for urgent solution. There is now strong evidence that climate change is a reality. Today, it has been scientifically established that significant global warming is occurring. It is now evident from observations that there is increase in global average air and ocean temperatures, widespread melting of snow and ice and rising global average sea level. There is no denying the fact that the problem exists, each passing day. Therefore, there is an imperative need to take urgent and strong measures in the interest of an appropriate response to meet the emerging challenges of climate change. Climate change is not an isolated issue. It has several aspects and inter-linkages namely, science and technology, economy and trade, diplomacy and politics. Climate change, however, is different from other problems facing humanity and it compels us to think differently at many levels. It obliges us to think about what it means to live as part of an ecologically interdependent human community. In the face of much diversity that characterizes human society, climate change provides a potent reminder of one thing that we share in common - the planet Earth. All nations and all people share the same atmosphere. And, we only have one. Descriptive research has been used to prepare this research paper.

Keywords: *Climate, Greenhouse Gases, Global warming, Impact, Agriculture, Ecosystem, Biodiversity*

Problem Statement

How is Climate Change a challenge to Sustainable Development in India!

Understanding Climate Change

Climate change refers to the variation in the Earth's global climate or in regional climates over time. It describes changes in the state of the atmosphere over time scales ranging from decades to millions of years. While some define it as an off-shoot of Earth's natural processes, others define it as a result of human activities. Striking a balance between these two varying perspectives, climate change is defined as "a change which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods".If humanity is, in large part, responsible for this change, then whatever choices we make today, will have a significant bearing on the climate of the future. This makes climate change a formidable concern.

Greenhouse Gases and Global Warming

The Earth's climate is dynamic and always changing through a natural cycle. It took billions of years for the Earth's climate to become what it is today for the evolution of mankind. The solar energy, passing through the atmosphere, is absorbed by the Earth's surface and a significant part of it is reflected back into the atmosphere. However, the atmosphere of the Earth contains small quantities of carbon dioxide, methane and nitrous oxide (collectively called greenhouse gases (GHGs)) which acts as a partial blanket that trap some of the outgoing infra-red radiation and reflect it back to Earth thus keeping the surface warmer than it would otherwise be. In the absence of this greenhouse effect (trapping by GHGs) the Earth's mean temperature would be 30°C lower than it is, which would mean that the Earth would be an ice covered place. Thus, most of the present life forms on the Earth depend on the natural greenhouse effect for their existence. However, increase in the emission of these GHGs due to human activities causes the enhanced greenhouse effect. Global GHG emissions due to human activities have grown since pre-industrial times, with an increase of 70% between 1970 and 2004. Apart from the three natural GHGs (carbon dioxide, methane and nitrous oxide), the increased emission also includes several "man-made" gases including chlorofluorocarbons (CFCs), hydro-fluorocarbons (HFCs), per-fluorocarbons (PFCs) and

sulphur hexafluoride (SF6). Increase in the concentration of these GHGs tends to increase the surface temperatures. This rise in the average temperature of the Earth is called global warming, which is likely to lead to unprecedented climate changes on a global scale threatening the ecosystems of the entire world. Today, there is evidence that we are overloading the carrying capacity of the Earth's atmosphere. Stocks of greenhouse gases that trap heat in the Earth's atmosphere are accumulating at an unprecedented rate.

Impacts of Climate Change

Though climate change poses a variety of challenges, the present paper would specifically focus on the issues viz. agriculture and food security, water stress and water insecurity, rising sea levels, biodiversity and human health, which have immense relevance from the perspective of developing countries in general and India in particular.

1. Agriculture and Food Security - Climate Change is projected to have significant impacts on conditions affecting agriculture, including temperature, precipitation. It affects agriculture in more ways than one. It can affect crop yield as well as the types of crops that can be grown in certain areas, by impacting agricultural inputs such as water for irrigation, amounts of solar radiation that affect plant growth. Rise in temperatures caused by increasing greenhouse gases is likely to affect crops differently from region to region. For example, moderate warming is expected to benefit crop yields in temperate regions, while in lower latitudes especially seasonally dry tropics, even moderate temperature increases are likely to have negative impacts for major cereal crops.
2. Impacts on Indian agriculture - Agriculture are the mainstay of Indian economy and provide food and livelihood security to a substantial section of the Indian population. The impact of climate change as witnessed in recent times has immense potential to adversely affect agriculture in this country in a variety of ways. As a large part of the land in India is rain-fed, the productivity of agriculture depends on the rainfall and its pattern. Agriculture will be adversely affected not only by an increase or decrease in the overall amounts of rainfall but also by shifts in the timing of the rainfall. Any change in rainfall patterns poses a serious threat to agriculture, and therefore to the economy and food security. South-West monsoon rainfall accounts for almost 70 per cent of the total annual rainfall over India and is crucial to Indian agriculture. However, studies predict decline in south-west monsoon rainfall by the 2050s.
3. Water Stress and Water Insecurity - Lack of access to water is a disturbing issue, particularly in developing countries. At present a whopping 1.1 billion people around the world lack access to water and 2.6 billion people are without sanitation. By 2020, between 75 and 250 million people are projected to be exposed to increased water stress due to climate change. Spreading water scarcity is contributing to food insecurity and heightened competitions for water both within and between countries. As the world population expands and the consumption of water spirals upwards, water problems are bound to intensify. By 2025, 40 per cent of the world's population, more than 3 billion in all, may be living in countries experiencing water stress or chronic water scarcity. Increase in temperature due to climate change has been widespread over the globe. Warming has resulted in decline in mountain glaciers and snow cover in both hemispheres and this is projected to accelerate throughout the 21st century. This will in turn lead to reducing water availability, hydropower potential, and would change the seasonal flow of rivers in regions supplied by melt water from major mountain ranges.
4. Impacts on water situation in India - Water security is one of the most important threats in this regard. Water resources will come under increasing pressure in the Indian subcontinent due to the changing climate. The Himalayan glaciers are a source of fresh waters for perennial rivers, in particular the Indus, Ganga, and Brahmaputra river systems. In recent decades, the Himalayan region seems to have undergone substantial changes as a result of extensive land use (e.g. deforestation, agricultural practices and urbanization), leading to frequent hydrological disasters, enhanced sedimentation and pollution of lakes. Available records suggest that the Gangotri glacier is retreating about 28 m per

year. Any further warming is likely to increase the melting of glaciers more rapidly than the accumulation. Glacial melt is expected to increase under changed climate conditions, which would lead to increased summer flows in some river systems for a few decades, followed by a reduction in flow as the glaciers disappear.

5. Rise in Sea Levels - Nearly 70 % of Earth's surface comprises of water in the form of seas and oceans. Sea level rise under warming is inevitable. Sea level rise is both due to thermal expansion as well as melting of ice sheets. The present scenario clearly indicates that the sea level will definitely rise. Satellite observations available since the early 1990s show that since 1993, sea level has been rising at a rate of around 3 mm per year. Global temperature increases of 3–4°C could result in 330 million people being permanently or temporarily displaced through flooding. Warming seas will also fuel more intense tropical storms. With over 344 million people currently exposed to tropical cyclones, more intensive storms could have devastating consequences for a large group of countries. The 1 billion people currently living in urban slums on fragile hillsides or flood-prone river banks face acute vulnerabilities.
6. Impacts on Coastal States in India - The coastal states of Maharashtra, Goa and Gujarat face a grave risk from the sea level rise, which could flood land (including agricultural land) and cause damage to coastal infrastructure and other property. Goa will be the worst hit, losing a large percentage of its total land area, including many of its famous beaches and tourist infrastructure. Mumbai's northern suburbs like Versova beach and other populated areas are also vulnerable to land loss and increased flooding due to sea level rise. Flooding will displace a large number of people from the coasts putting a greater pressure on the civic amenities and rapid urbanization. The states along the coasts like Orissa will experience worse cyclones. Many species living along the coastline are also threatened. The coral reefs that India has in its biosphere reserves are also saline sensitive and thus the rising sea level threatens their existence too, not only the coral reefs but the phytoplankton, the fish stocks and the human lives that are dependent on it are also in grave danger.
7. Ecosystems and Bio-diversity - Climate Change has the potential to cause immense biodiversity loss, affecting both individual species and their ecosystems that support economic growth and human well-being. It is difficult to predict the overall result of climate changes on animal and plant kingdom. Devastating effects on the native habitats of many animals and plants due to global warming is likely to drive a considerable number of today's known animal and plant species to extinction. Mass extinctions of the Earth's flora and fauna have occurred before also but those were driven by natural factors. However, the projected extinctions of flora and fauna in the future will be human driven i.e. due to adverse impact of human activities. The growth of human populations around the world, along with attendant pollution and loss of habitat, has set the stage for mass extinctions and large scale alterations in the flora and fauna. According to International World Wildlife Fund (WWF) and National Wildlife Federation, Many species may be unable to move to new areas quickly enough to survive changes that rising temperatures will bring to their historic habitats. WWF asserted that one-fifth of the world's most vulnerable natural areas may be facing a "catastrophic" loss of species.
8. Impacts on India's Biodiversity - India is a land of mega-biodiversity, encompassing features from glaciers to deserts. However, climate change is posing grave threat to its ecosystems. Mountain ecosystems are hot spots of biodiversity. However, temperature increases and human activities are causing fragmentation and degradation of mountain biodiversity. The Himalayan Ecosystem is considered as the lifeline not only to India but also to our neighboring countries such as China, Pakistan, Nepal, owing to the perennial rivers that arise out of the melting glaciers. It is home to the largest amount of glaciers after the North and the South Poles. However, climate change is threatening this life giver drastically. It is also predicted that there will be an increase in the phenomenon of Glacial Lake Outburst Floods (GLOFs) in the eastern and the central Himalayas,

causing catastrophic flooding downstream, with serious damage to 'life, property, forests, farms, and infrastructure'.

9. Climate Change and Health - Climate change poses a host of threats to the survival of mankind. The far reaching consequences of climate change have forced policymakers and planners to look at every possible aspect of human survival. Arguably, it has catastrophic effects on human health. Each year, about 800,000 people die from causes attributable to air pollution, 1.8 million from diarrhea resulting from lack of access to clean water supply, sanitation, and poor hygiene, 3.5 million from malnutrition and approximately 60,000 in natural disasters. A warmer and more variable climate would result in higher levels of some air pollutants, increased transmission of diseases through unclean water and through contaminated food. Climate change has a direct impact on human health. For example, the warmer the climate the likelihood of its impact on human health becomes worse. Available studies suggest that there will be an increase in health problems.

India's Response to Climate Change Challenges

It has been India's stand not to agree to any commitments related to reducing greenhouse gas emissions. India stands for equity in global negotiations on climate change. India believes that since developed countries are more responsible for the problem, owing to their historical as well as current emissions, they must deliver on their commitments to stabilize and reduce their emissions of GHGs. In order to meet the demands of rising standards of living and providing access to commercial energy to those lacking it, the total emission of greenhouse gases is bound to increase in India and also in other developing countries. India is committed to a path of sustainable development. Though India's per capita emissions are lowest in the world, we have recently adopted a National Action Plan on Climate Change. As a responsible nation, we are mindful of our obligations. Our efforts, of course, would be greatly enhanced with global support, especially in terms of financial flows and technology access. India has been pressing at the UN Framework Convention on Climate Change and other international conferences for collaborative development of clean technologies and immediate transfer of existing technologies which are environment friendly. India has also been trying to impress upon developed countries to transfer environmentally sound and cleaner energy technologies into the limited public domain. India is a partner to the new Asia Pacific Partnership on Clean Development and Climate which consists of key developed and developing countries— Australia, China, Japan, South Korea and the USA besides India. It focuses on development, diffusion and transfer of clean and more efficient technologies.

India's Climate Friendly Measures

Despite the fact that India's contributions to greenhouse gas emissions are very small, the Government of India has taken many measures to improve the situation in this regard. The Ministry of Environment and Forests is the nodal agency for climate change issues in India. India has initiated several climate-friendly measures, particularly in the area of renewable energy. It has one of the most active renewable energy programme besides having perhaps, the only dedicated Ministry for non-conventional energy sources in the world (Ministry of New and Renewable Energy). India had adopted the National Environment Policy 2006 which provides for several measures and policy initiatives. A major afforestation programme covering 6 million hectares has been launched under the 11th plan for this purpose. On 30th June 2008 India unveiled its National Action Plan on Climate Change (NAPCC) with a view to lay down the priorities and future actions of the Government for addressing climate change. The National Action Plan identifies measures that promote our development objectives while also yielding co-benefits for addressing climate change effectively. Eight national missions (solar mission, energy efficiency, sustainable habitat, water, Himalayan ecosystem, green India, Eco-green agriculture and knowledge) have been specifically outlined to simultaneously advance India's development. However, we have not set any quantitative goals towards emission reduction. Further, in pursuance to the announcement made by the Finance Minister while presenting the Union Budget 2007-08, the Government has set up an "Expert Committee on Impacts of Climate Change" on 7 May 2007 under the

chairmanship of Dr. R. Chidambaram to study the impacts of climate change on India and to identify the measures that India may have to take in the future in relation to addressing climate change impacts.

Summing Up

Climate change is the defining issue of our times. It is perhaps, the greatest challenge to sustainable development. It should be addressed by all countries with a shared perspective, free from narrow considerations. The developed countries need to look beyond their narrow self-interests and work jointly with the developing countries to evolve cooperative and collaborative strategies on the issue of climate change, which is of immense relevance for the future of mankind. However, the efforts so far in the direction of meeting the challenges of climate change have been sporadic and incoherent. We urgently need a new economic plan, which is global, inclusive, cooperative, environmentally sensitive and above all scientific. Sustainable development based on addressing the needs of the poor and optimal harnessing of scarce resources of water, air, energy, land, and biodiversity will have to be sustained through more cooperative endeavors. Then alone, we could make some headway in saving our lone planet from the brink of climate disasters.

References

1. Bruce E. Johansen, Global Warming in the 21st century: Plants and Animals in Peril (www.greenwood.com).
2. The Day After Tomorrow: Impact of Climate Change on the World's Water, Dr. Pradipto Ghosh (Terragreen, 2008)
3. Chandrashekhar Dasgupta, 'Shifts on Climate Change', The Telegraph, Calcutta, 2 September, 2008.
4. Coping with Climate Change: Gautam Dutt and FabiinaGaioli (Economic & Political Weekly, 20 Oct., 2007).
5. Effect of Global Warming on Crop Productivity, Y.S. Shivay and Anshu Rahal (Kurukshetra, July 2008)
6. P.P.Sangal, India's Climate Change Action Plan, The Economic Times, New Delhi, 29 July, 2008.
7. Climate Change 2007: Synthesis Report, IPCC, Geneva, 2007.
8. Climate Change 2007: Impacts, Adaptation and Vulnerability (Working Group II Contribution to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change).