
A STUDY ON INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) CONTRIBUTION IN THE BANKING SECTOR IN INDIA

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Abstract

In recent years, ICT has become inconsistent inside conventional systems as far as improving the effectiveness of financial systems. Numerous developed nations including India upgrade ICT, business knowledge, and business research to coordinate the vital exchange of different nations. The information technology sector empowers a few industries to keep up a competitive preferred position in the worldwide market through certain development services. In particular, ICT refers to a wide scope of IT technologies that address and oversee electronic information. The effect of information and communication technology (ICT) in the financial economy has become progressively apparent, expanding productivity to reach out into outside investment. Furthermore, a few nations likewise construct political and vital associations with one another and, coming about, become free economies. Information Technology has been one of the most significant factors for the development of humankind. Information and communication technology (ICT) is the major advent in the field of technology which is utilized for get to, process, stockpiling and dispersal of information electronically. In recent times, Indian banking industry has been consistently moving in the direction of the development of technological changes and its utilization in banking activity for improvement of their productivity and customer's satisfaction in this day and age. Banking industry is quickly developing with the utilization of technology as ATMs, on-line banking, Telephone banking, Mobile banking and so forth. Subsequently, exploiting information technologies (IT) is an expanding challenge for developing nations like India. Technological developments have empowered the industry to open up efficient conveyance channels. IT has helped the banking industry to manage the difficulties the new economy presents. Technology is likewise changing the supervisory and administrative scene. It is making new apparatuses for chiefs and new supervisory difficulties. Technology-driven issues, for example, security and the idea of electronic communications have arrived at the cutting edge of the arrangement motivation. Also, the line between electronic banking and electronic commerce is becoming progressively hard to define unmistakably. More than most different industries, financial establishments depend on get-together, processing, breaking down, and providing information so as to address the issues of customers. Given the significance of information in banking, it isn't amazing that banks were among the soonest adopters of computerized information processing technology. Hence, the present study has been conducted to highlight the contribution of ICT in Banking Sector in India.

Keywords: Business Intelligence, Financial Applications, Economic Growth, ICT Awareness, ICT Solution, Digital Banking and Development of Mankind.

Introduction

Information Technology has been one of the most significant factors for the development of humankind. Information and Communication Technology (ICT) is the major advent in the field of technology which is utilized for get to, process, stockpiling and scattering of information electronically. In recent times, Indian banking industry has been consistently progressing in the direction of the development of technological changes and its utilization in banking activity for improvement of their proficiency and customer's satisfaction in this day and age. Banking industry is quickly developing with the utilization of technology as ATMs, on-line banking, Telephone banking, Mobile banking and so on. Thusly, exploiting information technologies (IT) is an expanding challenge for developing nations like India.

Technological refinement in the banks is gone for providing better services to customers as well as to achieve competitive points of interest among them. Development of a sound and sufficient ICT has become a need to address the difficulties of development and broadening of banking industry. It has allowed the banks a chance to offer a wide scope of services to their customers. The utilization of Information Technology (IT), comprehensively alluding to computers and fringe equipment, has seen enormous development in service industries in the recent past. The most evident model is maybe the banking industry, where through its presentation related products in internet banking, electronic payments, security investments, information trades, banks now can provide progressively assorted services to customers with less labor. Seeing this example of development, it appears glaringly evident that IT can realize equivalent contribution to profits. To get the advantages of improved technologies, Indian banks are continuously reassuring the investment in information technology (IT), for example ATMs, e-banking or net banking, mobile and tele-banking, CRM, computerisation in the banks, expanding utilization of plastic cash, establishment of call centres, and so on. RBI has additionally embraced IT in supporting the payment system's usefulness and modernisation on a progressing premise by the development of Electronic Clearing Services (ECS), Electronic Funds Transfer (EFT), Indian Financial Network (INFINET), a Real-Time Gross Settlement (RTGS) System, Centralised Funds Management System (CFMS), Negotiated Dealing System (NDS), Electronic Payment Systems with the 'Vision Document', the Structured Financial Messaging System (SFMS) and India Card – a local card activity, implemented recently.

Information and Communication Technologies (ICT) have been a current issue for as long as barely any years and scarcely a day abandon a paper covering news alluding to the "new economy" or the "Information society". ICT are likewise broadly discussed in the scholarly world and governmental bodies. This is as an outcome of their impact in numerous parts of our general public, from on-line shopping to virtual visiting. Information and Communication Technologies (ICT) have been a current issue for as far back as not many years and barely a day abandons a paper covering news

alluding to the "new economy" or the "Information society". ICT are likewise generally discussed in the scholarly world and governmental bodies. This is as a result of their impact in numerous parts of our general public, from on-line shopping to virtual visiting. So it is compulsory to study about the ICT contribution in the development of Banking Sector in India.

Research Objectives

The present study aimed with following objectives:

1. To know about the ICT in the Indian Banking Sector.
2. To study the contribution and role of ICT in banking industry.
3. To narrate the impact of ICT on the service quality in the banking sector, impact of ICT on banking system and impact of ICT on privacy and confidentiality of data.
4. To synchronize the ICT and Customer Satisfaction in Indian Banking Sector.

Operational Definitions

Information and communications technology (ICT) is an extensional term for information and technology (IT) that burdens the role of brought together communications and the reconciliation of telecommunications (phone lines and remote sign) and computers, just as fundamental enterprise programming, middleware, stockpiling, and varying media systems, that empower users to get to, store, transmit, and control information.

E-banking is a product intended for the reasons for web based banking that empowers to have simple and safe access to the bank account.

Reviews of Related Literature

Ali, Ashfaq. (2018) has inspected that the ICT is a comprehensive term which is comprises of practically all communication devices, for example, radio, TV, mobile phones, computer network, satellite systems and so forth. It incorporates service and applications additionally like video conferencing and separation learning. The term Information Communication Technology is for the most part utilized as an Information Technology (IT) .The significance of Information Technology and Communication is less identified with the term technology than its potential to pass on information to bigger populace at unmistakable zone. For the most part every nation of the world has placed their attempts in setting up associations for the development of advance communication techniques, expanding productivity and modernization. Today Business environment is dynamic and experience frequent changes because of technological developments.

Sapkota et al. (2018) has explored that people in general and private sectors, association has been quick to outfit the potential of ICT to upgrade its authoritative,

administrative and clinical execution. Effective implementation of the new technology relied on acknowledgment by authoritative part focuses as its end-users. The experiment is finished by the assistance of both essential and secondary information. Essential information have been gathered from the organized poll developed for the worker of the bank and the customers. Secondary information has been gathered from the website of Nepal Rasta Bank, ICT related diaries, banking articles and other distributed sources. The study reason for existing is to increase a more complete comprehension of the change management factors influencing the acknowledgment of the. The present study was meant to investigate the overarching status of the utilization of ICT in commercial banking services, evaluate the extent of saw advantages of the utilization of ICT and dissect the key problems and their restorative measures in order to use the utilization of ICT in commercial banking in the nation. The study discovered investigates the banking sector utilizing the information and technology. The study serves to provide the information about the cons and pros of utilizing information and communication technology in the present context of Nepalese banking sector.

Khajeh, Saeid. (2011) has studied the advent of information technology to each part of human life and business has been clear to such an extent that it shouldn't be accentuated more. Information technology has been of extraordinary pith in banking system. This study plans to examine the impact of information technology in the banking system of Bank Keshavarzi Iran. The information are gotten both through the customers and the workers. The information were then broke down utilizing the careful percentage and the 5-point Likert scale to decide the effect of Information technology in the banking system issues. The findings then proved that Information technology contributes to the banking system in three different ways as pursues: IT spares the hour of the customers and the workers prominently, IT chops down the costs and IT encourages the network exchanges.

Asongu et al. (2017) has studied the role of ICT (internet and mobile telephone penetration) in complementing financial sector development (financial formalization and informalization) for financial get to. The experimental proof depends on Generalized Method of Moments with 53 African nations for the period 2004-2011. The accompanying findings are set up from linkages between ICT, financial sector development and financial movement. To begin with, the association among ICT and financial formalization (informalization) diminishes (increments) financial movement. Second, with respect to net impacts, the normal signs are built up generally. Disregarding the negative minimal impacts from financial informalization, the general net impacts are sure. Third, the potentially engaging cooperation among ICT and informalization produces positive edges that are inside extents. Arrangement suggestions are talked about in three fundamental strands. They incorporate

ramifications for (i) mobile/internet banking; (ii) a calm life and (iii) ICT in reducing information asymmetry and surplus liquidity.

ICT in Indian Banking Sector

Information and Communication Technology (ICT) has become the core of the banking sector in India now-a-days. The banking industry is the core of each vigorous economy. ICT is helping the banking sector improve its proficiency and adequacy of services offered to customers, and upgrades business processes, administrative basic leadership and workgroup coordinated efforts which reinforce their competitive situations in quickly changing and developing economies. All banks in India have made significant investments in technology stages and systems, constructed numerous circulation stations, including an electronically connected branch network, robotized phone banking, internet banking and banking through mobile telephones to offer its customers convenient access to different products. All things considered, the banks have been fruitful in developing imaginative product highlights, reducing working expenses, improving customer service conveyance and limiting inherent dangers. IT encourages all our center business processes and components, and serves to help, continue and develop change and realisation of our key goals at gathering and specialty unit levels.

In India, banks have set up their huge ATM and POST networks for providing ATM access for 24 hours for their customers. Other than offering access to ATM network the nation over, they are additionally providing a similar access to their customers worldwide through the network of VISA/MasterCard. They are additionally setting up and growing their own ATM/POST network. Numerous banks have introduced POS terminals in significant shops, lodgings, deals centres and so on everywhere throughout the nation. A portion of the technology-driven banks are providing internet banking channel with the incorporation of various customer-accommodating highlights. The systems programming is providing the customers access to their records from mobile devices like advanced cells and tablets. The customers are currently ready to do banking from wherever of India whenever. Mobile banking refers to access to accounts, move of funds, rundown sheets and other banking services through dialling a phone number. If there should be an occurrence of mobile banking, banking services are provided to the customers having credit card accounts. Services are provided by the relationship of banks and cell service providers through SMS or WAP empowered mobile instruments. What's more, there are numerous useful sides of ICT and these are Contact/Call Centre, Automated Clearing House System (ACHS), Electronic Fund Transfer (EFT), Online CIB, the Core Banking Solution (CBS), Corporate Intranet System, etc.

Customers' awareness can be expanded by directing, promoting and circulating pamphlets/leaflets. Specific preparing on IT security and misrepresentation prevention

can be provided to the representatives of banks. Attention to customers can be expanded through proper mobile banking preparing, featuring security issues. Banks ought to guarantee that KYC structures are topped off and confirmed appropriately. Evaluators of the India Bank ought to guarantee that banks properly pursue its rules. Multi-factor/versatile authentication technique can be presented by banks rapidly. Information burglary, bypassing OTP, can be halted by expanding profound quality/morals of bank representatives and expanding inner information security.

Contribution and Role of ICT in Banking Industry

Banking environment has become profoundly competitive today. To have the option to endure and develop in the changing business sector environment banks are going for the most recent technologies, which is being seen as an 'empowering asset' that can help in developing student and progressively adaptable structure that can react rapidly to the elements of a quick changing business sector situation. It is additionally seen as an instrument of cost reduction and compelling communication with individuals and establishments related with the banking industry.

The Software Packages for Banking Applications in India had their beginnings in 80s, when the Banks began computerising the branches in a constrained way. The mid 90s saw the diving equipment costs and advent of modest and economical however powerful PC's and Services and banks went in for what was called Total Branch Automation (TBA) bundles. The center and late 90s saw the tornado of financial changes, deregulation globalization and so forth combined with quick upset in communication technologies and development of novel idea of combination of communication technologies, as internet, mobile/mobile phones and so on. Technology has continuously played on significant role in the working of banking establishments and the services provided by them. Care of open cash, move of cash, giving drafts, investigating investment openings, loaning drafts and investigating investment are being provided. Information Technology empowers advanced product development, better market infrastructure, implementation of solid techniques for control of dangers and causes the financial middle people to arrive at geologically far off and differentiated markets. Internet has altogether affected conveyance channels of the banks. Internet has developed as a significant mode for conveyance of banking products and services.

The customers can see the records; get account statements, move funds and buy drafts by simply punching on hardly any keys. The keen card's i.e., cards with miniaturized scale processor chip have added new measurement to the situation. A presentation of 'Digital Cash' the trading of cash happens entirely through 'Digital books'. Assortment of Electricity bills and phone bills has become simple. The upgradeability and adaptability of internet technology is after unprecedented open doors for the banks to connect with its customers. Most likely banking services have

experienced extreme changes thus likewise the desire for customers from the banks has expanded more noteworthy. IT is progressively moving from a back office capacity to a prime right hand in expanding the estimation of a bank after some time. IT does as such by boosting banks of pro-dynamic estimates, for example, reinforcing and institutionalizing banks infrastructure in regard of security, communication and networking, accomplishing bury branch network, moving towards Real Time net settlement (RTGS) environment the anticipating of liquidity by building real time databases, utilization of Magnetic Ink Character Recognition and Imaging technology for check demonstrating to innocence a couple. Indian banks are going for the retail banking in a major manner.

The key driver to charge has to a great extent been the expanding advancement in technology and the developing prominence of the Internet. The move from customary banking to e-banking is changing customer's desires.

Impact of ICT on the Service Quality in the Banking Sector

The most obvious effect of technology is reflected in the manner the banks react deliberately for making its powerful use for efficient service conveyance. This effect on service quality can be summarized as beneath:

1. With mechanization, service never again stays a showcasing edge with the huge banks as it were. Little and moderately new banks with restricted network of branches become better put to compete with the built up banks, by coordinating IT in their tasks.
2. The technology has commoditising a portion of the financial services. In this way the banks can't take a lifetime association with the customers as allowed and they need to work continuously to encourage this relationship and hold customer dependability.
3. The technology on one hand serves as a useful asset for customer servicing, then again, it itself brings about depersonalizing of the banking services. This adverse affects relationship banking. A time of computerization can probably never substitute a basic or a warm handshake.
4. In request to reduce service conveyance cost, banks need to mechanize routine customer requests through self-service channels. To do this they have to put resources into call centres, stands, ATM's and Internet Banking today require IT infrastructure coordinated with their business system to be customer centric.

Impact of ICT on Banking System

The banking system is gradually moving from the Traditional Banking towards relationship banking. Customarily the connection between the bank and its customers has been on a coordinated level by means of the branch network. This was placed into activity with clearing and basic leadership duties concentrated at the individual

branch level. The administrative center had duty regarding the general clearing network, the size of the branch network and the preparation of staff in the branch network. The bank checked the association's exhibition and set the basic leadership parameters, yet the information accessible to both branch staff and their customers was constrained to one land area. The cutting edge bank can't depend on its branch network alone. Customers are presently requesting new, more convenient, conveyance systems, and services, for example, Internet banking have a double role to the customer. They provide conventional banking services, yet also offer a lot more noteworthy access to information for them status and on the bank's numerous different services. To do this bank need to make account information layers, which can be gotten to both by the bank staff just as by the customers themselves. The utilization of intelligent electronic connections by means of the Internet could go far in providing the customers with more noteworthy degree of information about both their own financial circumstance and about the services offered by the bank.

Impact of ICT on Privacy and Confidentiality of Data

Information being put away in the computers, is presently being shown when required on through internet banking mobile banking, ATM's and so forth this has offered ascend to the issues of protection and confidentiality of information are:

1. The information processing abilities of the computer, especially the quick throughput, reconciliation, and recovery capacities, offer ascent to questions in the brains of people regarding whether the protection of the people is being disintegrated.
2. So long as the individual information things are accessible just to those legitimately concerned, everything is by all accounts in proper place however the rate of information being cross referenced to make nitty gritty individual dossiers offers ascend to protection problems.
3. Customers feel undermined about the deficiency of security being kept up by the banks concerning their exchanges and connection at computerised systems with doubt.

Beside any protected angle, numerous countries regard security to be a subject of human right and believe it to be the duty of the individuals who worried about computer information processing for guaranteeing that the computer use doesn't spin to the phase where different information about individuals can be gathered, incorporated and recovered rapidly. Another significant obligation is to guarantee the information is utilized uniquely for the reason expected.

ICT and Customer Satisfaction

Banks have customarily been in the front line of saddling technology to improve their products, services and proficiency. They have, over quite a while, been utilizing

electronic and telecommunication networks for conveying a wide scope of significant worth included products and services. The conveyance stations incorporate direct dial – up associations, private networks, open networks and so forth and the devices incorporate phone, Personal Computers including the Automated Teller Machines, and so on. With the prominence of PCs, simple access to Internet and World Wide Web (WWW), Internet is progressively utilized by banks as a channel for accepting directions and conveying their products and services to their customers. This type of banking is for the most part referred to as Internet Banking, in spite of the fact that the scope of products and services offered by different banks change generally both in their content and modernity.

Comprehensively, the degrees of banking services offered through Internet can be sorted in to three kinds:

- (i) The Basic Level Service is the banks' websites which disseminate information on different products and services offered to customers and individuals from open when all is said in done. It might get an answer to customers' inquiries through email.
- (ii) In the following level are Simple Transactional Websites which enable customers to present their guidelines, applications for different services and inquiries for them adjusts, and so on, however don't allow any fund-put together exchanges with respect to their records.
- (iii) The third degree of Internet banking services are offered by Fully Transactional Websites which enable the customers to work on their records for move of funds, payment of different charges, buying in to different products of the bank and to execute buy and closeout of protections, and so forth.

The above types of Internet banking services are offered by conventional banks, as an extra strategy for serving the customer or by new banks, who convey banking services principally through Internet or other electronic conveyance channels as the worth included services. A portion of these banks are known as 'virtual' banks or 'Internet just' banks and might not have any physical nearness in a nation notwithstanding offering different banking services.

1. It evacuates the conventional topographical obstructions as it could connect with customers of different nations/lawful locale.
2. It has added another measurement to different sorts of dangers generally connected with banking, uplifting some of them and tossing new hazard control challenges.
3. Security of banking exchanges, legitimacy of electronic contract, customers' security, and so forth., which have from the start been worries of both bankers and bosses have expected different measurements given that Internet is an open space, not expose to control by any single position or gathering of users.

4. It represents a key danger of loss of business to those banks that don't react in time, to this new technology, being the efficient and practical conveyance 2 system of banking services.
5. A new type of competition has risen both from the current players and new players of the market who are not carefully banks.

Discussion and Conclusion

The relentless competition and expanding desire for customers had brought about expanded mindfulness on information technology among the commercial banks in India. The appearance of outside and new banks with their unrivalled technology based services has additionally constrained the commercial banks in India to switch over to the new technology in their everyday activities. The utilization of technology in extending banking sector in India is one of the key center zones for commercial banks as well as for the strategy producers too. The banks in India are utilizing Information Technology not exclusively to improve their very own interior processes yet in addition to improvise offices and services to their customers. The efficient utilization of technology has encouraged exact and opportune management of the expanded exchange volumes of banks which accompanies bigger customer base. Indian banking industry is extraordinarily profiting by I.T. transformation everywhere throughout the world. It empowered advanced product development, better market infrastructure, implementation of dependable techniques for control of dangers and has caused the financial delegates to arrive at topographically removed and differentiated markets. The Information Technology Act, 2000 has additionally provided the truly necessary legitimate recognition to the creation, transmission and retention of an electronic or magnetic information which can be treated as a substantial proof in an official courtroom, aside from in those regions, which continue to be represented by the provisions of the Negotiable Instruments Act, 1881. By structuring and offering basic, sheltered and secure technology, banks reach at the doorsteps of the customers with a goal of "please customer satisfaction". In fact Information technology has prevailing with regards to making a success win circumstance for all concerned segments in India.

In nutshell we can say that there is a direct role of technology (Internet and mobile banking interchange banking channels) to fulfil the customer or to hold the customer for private banking sectors. IT has changed the general example of banking system. The banking today is redefined and re-built with its utilization and it is certain that the fate of banking will offer increasingly modern services to customers with the continuous product and process developments. Along these lines there is a change in outlook from economically tight market to wide open market. So banks additionally change their approach from "Conventional Banking to Convenience Banking" and "Mass banking to Class Banking". So banks are presently more concentrate on providing esteem added services to customers. In any case, IT can be completely helpful just on

the off chance that they empower to address the difficulties in the present environment. In India it very well may be fruitful just in the event that it is properly implemented in rural zones moreover.

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