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Intellectual Capital and Its Relationship with Organisational Capabilities: A Structural Equation Modeling Approach

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Abstract: Intellectual capital had strategic importance in SME's. Intellectual capital to be the sum of all the knowledge firms which utilize for competitive advantage In this study we develop a scale to measure the relationship between intellectual capital and organisational capabilities in SME's. Self structured research instrument were used in the study. Purposive sampling techniques were used to target SME's of Punjab. Only manufacturing SME's were targeted in the study. We target 650 SME's out of which only 500 SME's give accurate response. SME's entrepreneurs (owner) and executive managers were the respondents of the research. The scales used for the survey were validated by using Exploratory Factor Analysis and Confirmatory Factor Analysis. Structural equation modeling was used in the study to check the relationship between intellectual capital and organisational capabilities. The findings of the study showed that the Intellectual Capital has significant and direct positive relationship with Organizational Capabilities' The study create awareness among researchers, academicians and SME's entrepreneurs about the applications of intellectual capital to improve the organisational capabilities.

Key Words- Intellectual Capital, Organisational Capabilities, Structural equation modeling.

I. INTRODUCTION

Intellectual capital is viewed as a sub-set of intangible capital the term intangible relates to the assets without physical existence and capital refers to assets retained by the organisation to contribute to future profits. Intellectual capital is defined as the total stocks of all the intangible assets of an organization which create value or competitive advantages in the organisation. Intellectual capital is recognized as the strategic asset which boosts the organizational performance. Intellectual capital represent as the difference between the organizational book value and market value. It is the sum of a company's hidden assets which are not captured from the balance sheet. Intellectual capital is intellectual materials which form the company's competitive advantage. Intellectual capital regarded as the hidden value of an organization

Table 1 Intellectual Capital Definitions

Chaudhary, 2010	Intellectual capital is critical source for organizations to gain competitive advantage in a knowledge-based economy.
Bontis et al., 2000 and Khalique, 2012	Intellectual capital is the set of knowledge, skills, experiences

	and capabilities of the employees that allow generating value to the organization.
Youndt, Subramaniam, & 2004	Intellectual capital to be the sum of all the knowledge firms which utilize for competitive advantage.
Roos et al 2007	Intellectual capital is the sum of the "hidden assets" of the company not fully captured in the balanced sheet, and thus it includes both what is in the heads of organizational members, and what is left in the company.
Su et al, 2014; Cabello and Kekale, 2008; Cohen and Kaimenakis, 2007; Jardon and Martos, 2009	Intellectual capital strongly influences the competitive advantage and performance of an SME's.

A. Dimensions of Intellectual Capital

- Human Capital:** Human capital is the stock individual knowledge of the organisation. Human capital is composed as a mixture of employee's knowledge, leadership abilities, risk-taking and problem-solving capabilities, expertise, competence, attitude and intellectual agility (Bozbura, 2004, Bontis, 2000)
- Structural capital:** Structural capital is the valuable strategic assets of the organisation. Structural capital, sometimes used interchangeably with organizational capital, includes all non-human reserves of knowledge. (Wang et al, 2014). Structural capital includes all the non-human storehouses of knowledge in organizations which include the databases, organizational charts, process manuals, strategies, routines, intellectual property, technological process (kalkan, 2014, Bontis, 2000)
- Relational capital:** Relational capital means developing maintaining and sustaining the high-quality relationships with the organization, individuals or group that influences the business performance (Awais and Asad, 2014). Relational capital is the strength and loyalty of customer relations (Kavida and Sivakoumar, 2009).

Relational capital refers to the ability of an organization to interact with a wide range of external stakeholders such as customers, suppliers, competitors, and trade and industry associations.

- d) *Social Capital*: Social capital also called network capital. Social capital is based on corporate responsibility toward fairness, transparency, honesty and ethics (Khalique et al, 2015). Social capital refers to the fact that as individuals interact with one another to develop a common set of goals, and a shared vision for the organization.
- e) *Spiritual Capital*: Spiritual capital refers to the religious views and ethical values (Khalique et al, 2015). Spiritual capital is one of the most important components of intellectual capital and which is based on intangible knowledge, faith and emotion embedded in the minds of individuals.
- f) *Renewal Capital*: Renewal capital refers to the organic environments which are flexible and capable of adapting the changing environmental condition. (Kline, 2010). Renewal capital is how well the organization responds to the future challenges and to the radical changes in the market. It means how organizations survive in turbulent and unexpectedly changing environment. Renewal capital has become “the new bottom line” of intellectual capital (Kline et al, 2010).

B. *Intellectual Capital and Organisational Capabilities*

Organisational capability defined as the firm's ability to integrate build and reconfigure the internal and external competencies of the firm to address rapidly changing environments. Organizational capabilities are packages of resources that the company uses efficiently to perform some processes or tasks. Intellectual capital play vital role in the development of organizational capabilities. Intellectual capital directly affects the organizational capabilities through the dimensions of intellectual capital. Intellectual capital is an important economic resource that directly affects competition in the market and enhances the organizational capabilities to enhance the performance.

II. LITERATURE REVIEW

Organizational capabilities are valuable source of competitive advantage. In this study we consider three main pillars of organizational core capabilities that were innovation capabilities, learning capability and knowledge management capability. Following literature depict the impact of intellectual capital on organizational capabilities.

(Snell and Morris, 2011; Kalkan et al, 2014) Test the conceptual framework which examined the relationship between intellectual capital configurations and organizational capabilities. They found that the human capital, social capital and organizational capital complement one another in this process and human resource practices

also play important role in global competitive advantage. Intellectual capital was an important source of competitive advantage in SMEs than large enterprises. The intellectual capital play vital role to improve the strategic factors and firm performance through organizational capabilities (Jardon and Martos, 2012). (Wu and Hu, 2012) also investigated that the intellectual capital positively affects knowledge management capabilities and process capabilities and these capabilities significantly mediate the relationship between intellectual capital and firm financial performance.

(Dadashinasab and Sofian, 2014) investigated the empirical effect of intellectual capital on firm financial performance with moderating role of dynamic capabilities. . They also found that the impact of intellectual capital on firm performance were greater with the introduction of dynamic capabilities as moderator. Dynamic capabilities help the firms to renew and integrate their capabilities and upgrade their resources for sustaining competitive advantage. (Chien et al, 2012) also explored that human capital play significant role to improve technology innovations and financial performance. On the other hand (Dujaili, 2012; Khalil et al, 2013) also depict that the structural capital and human capital had significant relationship with the organizational innovation on the other hand customer capital did not have significant relationship with the organizational innovation.

(Darvish et al, 2012; Moradi et al, 2013) portray that the intellectual capital positively impact on organizational learning capabilities. Relational capital put maximum impact on learning capabilities. (Sheng Ting, 2012; Badrabad and Akbarpour (2013) examined the impact of Intellectual Capital on Organization Performances and Organizational Learning Capability act as Mediator. They highlight that the intellectual capital also show positive influence on organizational learning capabilities as well as on firm performance.

(Isa et al, 2008) examined the typology of intellectual capital and knowledge management in Malaysian hotel industry. They found that the structural capital and human capital were play significant role in managing the knowledge in Malaysian hotel industry. (Ngh and Ibrahim, 2011; Sharafi et al, 2012) measured the Influence of Intellectual Capital on Knowledge Sharing of Small and Medium Enterprises. The findings of the study was that the relational capital showed positive impact on knowledge sharing while human capital and structural capital had negative impact on knowledge sharing. (Hsu and Sabherwal, 2011) examined the role of intellectual capital on firm performance with the mediating role of knowledge management capabilities. At the end all the literature disclose that the intellectual capital put great impact on organization capabilities

III. RESEARCH OBJECTIVE

In the light of the above discussion, this paper aims to study the following objectives:

1. To study the relationship between intellectual capital and organisational capabilities.

Hypothesis: Intellectual capital has a significant positive impact on organisational capabilities

IV. METHODOLOGY

A self-designed questionnaire has been used for this study. The questionnaire included two scales for measuring 'Intellectual Capital' and 'organisational Capabilities'. Various statements of intellectual capital and organisational capabilities have been identified based on literature review. After selecting the items all items were shown to the experts to evaluate content validity of the scale. Based on the feedback of experts, some items were deleted or modified. 40 statements were selected for intellectual capital scale and 16 items were selected for organisational capability scale Shown in 'Appendix1 and 2'. Both scales were used for measuring the constructs and validated for further analysis. The present study's sample comprised 650 manufacturing SME's of Punjab. The data was collected from the SME's entrepreneurs (owner) and executive managers who had power to take the important decision in the firm. Only 500 SME's able to fill the questionnaire accurately. Only manufacturing industries were targeted in the study. Primary data was collected through the self structured research instruments. 5 point Likert (1Strongly Disagree.....5 strongly agree) scale were used in the study. We targeted only those manufacturing SME's whose investment in SME's more than 25 lakh and but less than 10 crore rupees.

V. ANALYSIS AND INTERPRETATION

A. Sample Profile of SME's Respondents

Table 2 Sample Profile

Criteria	Category	No of Respondents	Percentage
Position in the Firm	Owner	345	69%
	Manager	103	20.6%
	Partner	52	10.4%
Nature of Industry (Based on Investment in plant and machinery)	Small (between 25lakh to 5 crore)	270	54%
	Medium (between 5	230	56%

Table 4 Result of Exploratory Factor Analysis

Factors	Name of Dimension (%age of variance)	Factor Loading	Dimensional Cronbach's Alpha
	<i>Human Capital (36.899 %)</i>		0.935
H1	Lack of technical skills among employees of the company	.768	
H2	Our employees have good professional skills in their areas of operation	.791	
H3	Employees generally understand the target markets	.751	

Type of industry	crore to 10 crore)		
Food product and Beverages	150	150	30 %
Furniture	50	50	10 %
Textile	150	150	30 %
Rubber and Plastic	150	150	30 %

B. Reliability and Validity of Intellectual Capital

Table 3 Reliability Statistics

Cronbach's Alpha	No of Items
.956	40

The reliability of scale was checked through cronbach's alpha and the cronbach's alpha of intellectual capital scale was 0.956 which were above 0.7. From the above results and analysis, it clearly shows that the items on each construct of the study were reliable and recommended for further Analysis. Above table indicates that all the items of the construct were technically free from error (Vij and Farooq, 2015).

C. Validation of Intellectual Capital Scale

Validity was accessed through convergent validity, discriminant validity of the construct. Intellectual capital scale has been measured using 40-item at 5-point scale. In order to test the suitability of the data (EFA) Exploratory factor analysis were used in the study and the correlation matrix was computed and examined. The results indicated that Kaiser-Meyer-Olkin Measure of Sampling Adequacy was found to be .937. Bartlett's test of sphericity showed a statistically significant number of correlations among the variables (approx $\chi^2 = 18500.962$, $df = 780$, significance = 0.000). Hence, all of these standards revealed that data was fit for factor analysis. Principal Component Analysis (PCA) was employed for extracting factors. The number of factors to be extracted was finalized on the basis of 'Latent Root Criterion'. Rotation converged in 25 iterations. All factor loadings greater than 0.60 (ignoring signs) have been considered. Six factors were extracted, which accounted for 73.122 % of the total variance. Six factors have been given appropriate names on the basis of variables represented in each case. Following table summarizes the results of EFA (vij and Farooq, 2014 and vuuen and mungule 2016).

H4	Lack of creativity among employees of the company	.781	
H5	Upgrade the employees' skills through well designed training programs	.745	
H6	Our company's recruitment program is comprehensive	.795	
H7	In our organization good work is rewarded accordingly	.766	
H8	Lack of job security in the organization	.784	
H9	Inability to provide attractive career paths to the employees	.739	
	Structural Capital (10.902%)		
STR1	My company embeds much of its knowledge and information in structures, systems and processes	.744	
ST2	Difficult to maintain the physical repositories such as database manuals and protocols in the firm	.757	
STR3	Inadequate tools of communication within the firm among different department	.656	0.948
STR4	Use of the trademarks shows special attention of customers towards the firm	.741	
STR5	Policies, procedures, database and networks are up to- date in the organization	.770	
STR6	There are clear lines of authority and responsibility	.832	
STR7	Atmosphere of the firm is comfortable	.833	
STR8	Our company invest in the quality improvement projects	.820	
STR9	We use high-tech technology to remain competitive in the business	.756	
ST10	We use high-tech technology to remain competitive in the business	.795	
ST11	Inadequate budget for technological development	.762	
	Relational Capital (8.676%)		
R1	Our organization has good brand name in the market.	.764	
R2	We have direct distribution channel for the customers	.756	
R3	Difficult to maintain customer loyalty in the business	.838	
R4	Lack of ability to customise the product according to the customer choice	.820	
R5	Unable to maintain the long term relationships with the business partners of the firm	.785	
R6	Successfully solve the complaints of customers in short period of time	.699	
	Social Capital (7.524%)		
SO1	Firm characterize by the mutual trust among colleagues at multiple level	.889	0.964
SO2	Unable to maintain long term relation with the professional trade associations	.902	
SO3	Employees of the firm exchange their experiences with other employees in the firm	.882	
SO4	All colleagues of the company share organizational vision	.897	
	Spiritual Capital (5.523%)		
SP1	Employees work to the best of their capabilities because they believe that, 'Work is a part of our devotion to God'	.786	0.937
SP2	Faith in the management team to perform their duties well	.776	
SP3	Our organization has key values e.g. (honesty, commitment, care and respect to the employees)	.831	
SP4	Due to religious belief our employees are honest in their duties	.780	
SP5	Due to religious belief our organization is profitable	.742	
	Renewal Capital (3.507%)		
RNW1	We allow experienced employees to take important decision within the firm	.776	0.946
RNW2	My company's employees put team objectives ahead than personal objectives	.838	
RNW3	Mistakes are acceptable in the organization	.846	
RNW4	Reasonable risk is acceptable in the business	.844	
RNW5	Expressing original ideas is encouraged within the organization	.733	

The six factor extracted have been given appropriate name (Human Capital, Structural Capital, Relational Capital, Social Capital, Spiritual Capital, Renewal Capital) on the basis of the variables represented in each case.

D. Confirmatory Factor Analysis for “Intellectual Capital Scale”

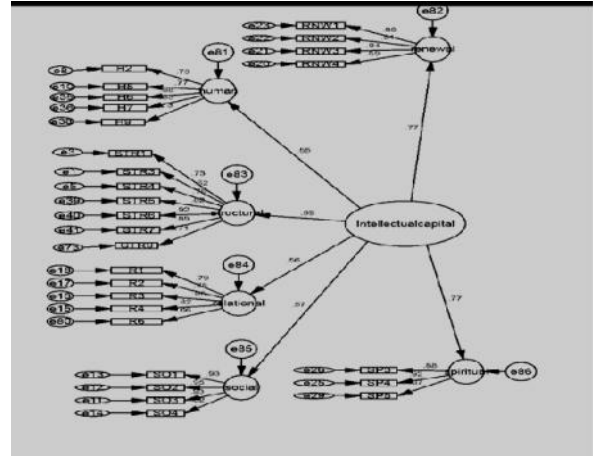
CFA was run on the six extracted factors as the dimensions of Intellectual Capital and in (as shown in table 2). CFA was applied to validate the ‘Intellectual Capital Scale’ but the psychometric properties showed poor model fit so that we need to drop some of the items because of high modification indices. Four items (H1, H3, H4, H8) were dropped out of 9 items from the dimension of Human capital. In Structural capital dimension 4 items (STR2, STR8, STR11, and STR12) were dropped out of 11 items because of high modification indices and high standardize residual covariance. Only 1 item (R5) were dropped out of 6 items from relational capital dimension. SP1, SP2 these two items had maximum modification indices so that these items were deleted from spiritual capital dimension. RNW5 items also deleted from renewal capital because of high standardize residual covariance and high modification indices (Vij and Farooq, 2015). After deleting all the items the psychometric properties of the model indicate good model fit.

Table V Model Fit indices for Intellectual Capital Scale

CFA model	R M R	G FI	AG FI	N FI	IF I	T LI	C FI	RMS EA	CMI N/df
Structural Model	.198	.906	.889	.938	.966	.963	.966	.049	2.1

Following constructs shows that all the standardize regression weights of the second order construct was above 0.5 and cronbach’s alpha also above 0.7. On the other hand the squared multiple correlation of the following construct was also above 0.2. Intellectual Capital construct satisfy all the conditions of model fit so that this model recommended for further analysis.

Fig.1 Confirmatory Factor Analysis



E. Convergent validity of ‘Intellectual Capital Scale’

Convergent validity shows to what extent the items of the construct converge or share a high proportion of variance in common. All the standardized regression weights of all the items were greater than 0.5 and cronbach alpha of single dimension were greater than 0.7. The convergent validity were also verified by computing the composite reliability (CR) and average variance extracted (AVE) for each construct. Following table shows that the AVE of intellectual capital scale above 0.50 and CR were also above recommended value 0.8 (Awang, 2014, Vij and Farooq, 2015)

Table VI AVE and Composite Reliability of Intellectual Capital Scale

Dimensions	AVE	CR	Cronbach alpha
Human capital	0.625	0.892	.891
Structural capital	0.614	0.916	.915
Relational capital	0.615	0.888	.886
Social capital	0.873	0.965	.964
Spiritual capital	0.791	0.919	.918
Renewal capital	0.820	0.948	.947

F. Discriminant Validity of Intellectual Capital Scale

Discriminant validity is achieved when the measurement model is free from redundant items. With this, it is concluded that the discriminant validity for all the six constructs were satisfied (Vij and Bedi, 2012)

Table VII Discriminant Validity Construct

	Renewal	Structural	Human	Social	Relational	Spiritual
Renewal	0.905					
Structural	0.344	0.783				
Human	0.380	0.515	0.790			
Social	0.500	0.346	0.299	0.934		
Relational	0.381	0.394	0.370	0.276	0.784	
Spiritual	0.650	0.441	0.352	0.381	0.436	0.890

G. *Reliability and Validity of Organisational Capability Scale*

Table VIII Reliability Statistics

Cronbach's Alpha	N of Items
.925	16

The reliability of scale was checked through cronbach's alpha and the cronbach's alpha of organisational capability was 0.925 which were above 0.7. So that above table indicates that all the items of the construct were technically free from error (Vij and Farooq, 2016).

H. *Validation of Organisational Capability Scale*

Exploratory factor analysis was used in the study and the correlation matrix was computed and examined. The

results indicated that Kaiser-Meyer-Olkin Measure of Sampling Adequacy was found to be .927. Bartlett's test of sphericity showed a statistically significant number of correlations among the variables (approx $\chi^2 = 5742.693$, $df = 120$, significance = 0.000). Hence, all of these standards revealed that data was fit for factor analysis. Principal Component Analysis (PCA) was employed for extracting factors. The number of factors to be extracted was finalized on the basis of 'Latent Root Criterion'. Rotation converged in 25 iterations. All factor loadings greater than 0.60 (ignoring signs) have been considered. Three factors were extracted, which accounted for 69.558 % of the total variance. Three factors have been given appropriate names on the basis of variables represented in each case. (vij and Farooq,2014 and vuenand mungule 2016).

Table IX Result of Exploratory Factor Analysis

	ORGANISATIONAL CAPABILITIES (% of Variance)	Factor Loading	Cronbach alpha
	<i>Innovation Capabilities (48.794%)</i>		
1.	To innovate high quality product at low cost	.783	.859
2.	Focus to innovate the new logistic methods for customers	.844	
3.	To innovate new techniques to improve the production processes	.809	
4.	Ability to innovate new marketing methods	.594	
5.	Update the technology of the firm on regular basis	.812	
	<i>Learning Capabilities (13.183%)</i>		
1.	Ability to learn new ideas, concepts and methods of production	.771	.899
2.	Employees actively participate in decision making process	.756	
3.	Our employees always open for the new experiences	.830	
4.	Ability to learn lesson from their past experiences	.798	
5.	To integrates the learning from the business competitors	.669	
	<i>Knowledge Management Capabilities (7.182%)</i>		
1.	To use knowledge to improve the efficiency of the firm	.664	.909
2.	To acquire knowledge about their customers	.786	
3.	Equipped with the ability to store knowledge with in the firm	.792	
4.	Inability to acquire knowledge about suppliers of the firm	.825	
5.	Unable to prevent knowledge from an inappropriate use inside or outside the organization	.618	
6.	Maintain supportive climate for knowledge sharing within the firm	.816	

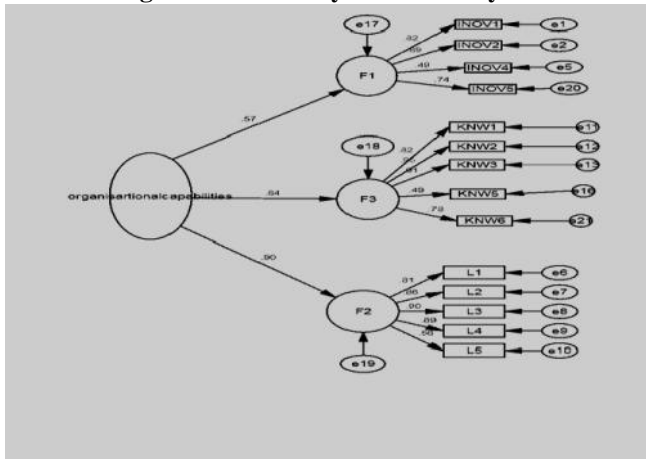
I. *Confirmatory Factor Analysis for "Organisational Capability Scale"*

CFA was applied to validate the 'Organisational capability Scale' but the psychometric properties showed poor model fit. So that we decided for item purification and drop some of the items because of high modification indices. One items 'INOV 3' were dropped out of 5 items from 'Innovation Capability' dimension. From 'Knowledge Management Capability' dimension KNW 5 items were dropped out of 6 items. The psychometric properties indicate good model fit.

Table X Model Fit Indices of Organisational Capability scale.

CF A model	RM R	G FI	AG FI	N FI	IFI	TL I	C FI	RMS EA	CMI N/df
Model	.106	.959	.942	.967	.982	.978	.982	.048	2.153

Fig. 2 Confirmatory Factor Analysis



Above constructs shows that all the standardize regression weights of the second order construct was above 0.5 and cronbach’s alpha also above 0.7. On the other hand the squared multiple correlation of the following construct was also above 0.2. So that the construct of organisational capability satisfy all the requirements of model fit.

J. Convergent Validity of Organisational Capabilities Scale

The convergent validity were also verified by computing the composite reliability (CR) and average variance extracted (AVE) for each construct. Following table shows that the AVE of organization capabilities scale above 0.50 and CR were also above recommended value 0.8. Convergent validity of organisational capability scale were achieved. (Awang, 2014, Vij and Farooq, 2015)

Table XI AVE and Composite Reliability of organisational capabilities scale

Dimension	AVE	CR	Cronbach alpha
Innovation	0.565	0.832	0.819
Learning	0.664	0.906	0.899
Knowledge Management	0.650	0.899	0.888

K. Discriminant Validity of Organisational Capability Scale

Discriminant validity is achieved when the measurement model is free from redundant items. With this, it is concluded that the discriminant validity for all the three constructs were satisfied (Vij and Bedi, 2012)

Table XII Discriminat Validity of organisational Capability

	Learning	Innovation	Knowledge Management
Learning	0.815		
Innovation	0.509	0.751	
Knowledge Management	0.756	0.475	0.806

L. Hypothesis Testing

H1 empirically tests whether Intellectual Capital and Organisational capability positively related to each other. To test this hypothesis, a structural equation modeling approach has been used.

Some of the items were dropped in because of high standardize residual covariance and modification indices H6 were dropped from human capital and SO1, SO4 dropped from social capital dimension. RNW1 were dropped from renewal capital. STR1and R1 was dropped from structural and relational capital respectively. In organisational capability scale from learning dimension 3 items (L2, L3 and L4) were deleted out of 5 items. From knowledge management KNW1, KNW3, KNW4 items were dropped out of 6 items because of high modification indices and high standardize residual covariance.

After dropping some of the items the psychometric properties indicate good model fit.

Following table shows the summary of the model fit indices.

In the first instance, the measurement model was tested for checking the covariance’s between the two constructs i.e. Intellectual Capital and Organisational capability. Part A of following table shows the summary of the model fit indices and supports a good model fit. In the next stage, structural model was fitted to check whether the path of intellectual capital and organisational capability was significant or not, as shown in following Fig. 3. The standardized regression weights for the model, as reported in the AMOS output, are depicted in following figure of structural model. All the regression weights were greater than threshold value 0.4 and all the standardize factor loading were greater than 0.5.

Fig. 3 Structural Model

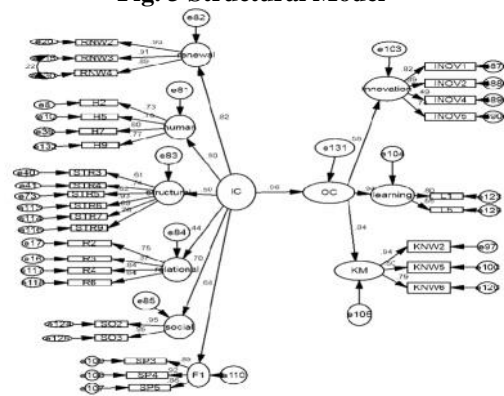


Table XIII Model Fit indices for Measurement Model and Structural Model

	GF I	AG FI	NF I	IFI	TL I	CF I	RMS EA	CMIN /df
Measurement Model	.90 0	.88 3	.92 2	.96 0	.95 6	.96 0	.044	1.964
Structural Model	.90 0	.88 3	.92 2	.96 0	.95 6	.96 0	.044	1.964

There was no change in model fit indices while moving from measurement model to structural model, which indicates that structural model did not reduce the model fit due to its specific relationship. The standardized estimates for path IC → OC was 0.96, significant at 1% level. Thus, the hypothesis 'Intellectual Capital has significant and direct and positive relationship with Organisational Capabilities' is supported and proved.

VI. CONCLUSION

The findings of the study were that the intellectual capital show significant improvement in organisational capabilities (Darvish et al, 2012; Moradi et al, 2013). Firm intellectual capital or Firm intelligence level help to develop the innovation and improve organizational learning capabilities. Firm with high intellectual capital boost the firm to develop their knowledge capability and improve the firm performance. The study also shows that the effect of Intellectual Capital on Organisational Capabilities' is more pronounced in small and medium firms. Probably larger firms having huge financial resources can depend upon hiring highly skilled, trained and mature employees and they spend huge amount in managing intellectual assets. On the contrary, smaller firms with meager financial resources have to depend upon their semi-skilled and immature labour but they are better to manage their intellectual capital with small financial resources and to improve their organisational capabilities. This research creates awareness among SME's about the applications of intellectual capital to improve the organisational capabilities. This study also contributes to the new body of knowledge and gives new direction to the entrepreneurs/managers of SME's to understand their organizational issues more swiftly. The study also contributes by developing and validating the scales of 'intellectual capital and organisational capability' scale. Future researchers may benefit from the use of these scales.

VII. Limitation and Suggestion for Future Research

The findings of the study are based on survey of firms from Punjab state only. This study throws light on important issues concerning relationship of intellectual capital with organisational capabilities. Future researchers may also explore the intellectual capital in different sector like service sector. Intellectual capital may also be explored by using secondary data. Intellectual capital impact on firm

performance will also be explored for new research. They may also explore the intellectual capital impact on firm performance with the mediating role of organisational capability.

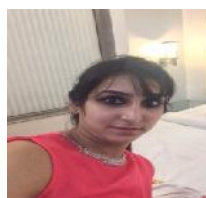
VIII. REFERENCES

- [1] Awang, Z., Abdullahi, M. S., Ghazali, P. L., Tahir, I. M., Mat Ali, N.A., "The Effect of Finance, Infrastructure and Training on the Performance of Small and Medium Scale Enterprises (SMEs) in Nigeria.", *International Journal of Business and Technopreneurship*, Vol. 5, No. 3, pp.421-452, 2015.
- [2] Awais Siddiqui, M. and Ali Asad, "Relational Capital and Performance: A Case of Brand Developing Firms", *Journal of Scientific Research*, Vol. 21, No.11, pp. 2115-2122, 2014.
- [3] Bontis, N., Keow, W. C. C., Richardson, S., "Intellectual Capital and Business Performance in Malaysian Industries", *Journal of Intellectual Capital*, 2000 <http://www.emeraldinsight.com/sci>
- [4] Bozbura, T. F., "Measurement and application of intellectual capital in Turkey", *Journal of the Learning Organization*, Vol. 11, No. 4/5, pp. 357 – 367, 2004
- [5] Badrabadi, H. H. and Akbarpour, T., "A study on the effect of intellectual capital and organizational learning process on organizational performance", *African Journal of Business Management*, Vol. 7, No.16, pp. 1470-1485, 2013.
- [6] Cabello, C. and Kekale, T., "Managing intellectual capital in small ITC companies", *Journal of Business Strategies Series*, Vol. 9, No. 4, pp. 163-167, 2008, DOI. 10.1108/17515630810891825.
- [7] Cohen S, Kaimenakis, N., "Intellectual capital and corporate performance in Knowledge- intensive SMEs", *Journal of Learning Organization*, Vol. 14, No. 3, pp. 241-262, 2007.
- [8] Choudhury Jyotirmayee, "Performance impact of intellectual capital: A study of Indian IT sector", *International Journal of Business and Management*, Vol. 5, No. 9, pp. 72-80, 2010.
- [9] Chen, Y. C., Chiou, C. C., "Relations among Learning Orientation, Innovation Capital and Firm Performance: An Empirical Study in Taiwan's IT/Electronic Industry", *International Journal of Management*, Vol. 29, No. 3, pp. 321-331, 2012.
- [10] Dadasahib Earnest, F. and Sofian, S., "The Mediating Role of Corporate Governance on Intellectual Capital

- and Corporate Performance”, *Journal of Economics, Business and Management*, Vol. 1, No. 4, pp. 339-342, 2014, DOI. 10.7763/JOEBM.2013.V1.73.
- [11] Dujaili A L M. A. A., “Influence of Intellectual Capital in the Organizational Innovation”, *International Journal of Innovation, Management and Technology*, Vol. 3, No. 2, pp. 128-135, 2012.
- [12] Darvish H., Kafashzadeh, A. R., Malekmohamadi Faradonbe, M., Naderifar, A. R., Nejatizadeh, N. O., “An empirical investigation of intellectual capital components on each others and organizational learning capabilities”, *Journal of Management Science Letters*, Vol. 3. pp. 485-490, 2012.
- [13] Hsu, I. C. and Sabherwal, R., “From Intellectual Capital to Firm Performance: The Mediating Role of Knowledge Management Capabilities”, *Journal of IEEE Transactions on Engineering Management*, Vol. 58, No.4, pp. 626-641, 2011.
- [14] Isa, R. M., Abdullah, L. N., Hamzah, N. and Arshad, R., “The Typology of Intellectual Capital and Knowledge Management in Malaysian Hotel Industry”, *Journal of Human Resource and Adult Learning*, Vol. 4, No. 2, pp. 103 -114, 2008.
- [15] Jardon, C. M. and Martos, M. S., “Intellectual capital and performance in wood industries of Argentina”, *Journal of Intellectual Capital*, Vol. 10 No. 4, pp. 600-616, 2009.
- [16] Jardon, C. M. and Martos, M. S., “Intellectual capital as competitive advantage in emerging clusters in Latin America”, *Journal of Intellectual Capital*, Vol. 13, No.4, pp.462 – 48, 2012. <http://dx.doi.org/10.1108/14691931211276098>
- [17] Kline, T. J. and Isaac, R. G., Herremans, I. M., “Intellectual capital management enablers: A structural equation modeling analysis”, *Journal of Business Ethics*, Vol. 93, No. 3, pp. 373-391, 2010. <http://dx.doi.org/10.1007/s10551-009-0227-5>
- [18] Kalkana, A., Bozkurt, O. C., Arman, M., “The impacts of intellectual capital, innovation and organizational strategy on firm performance”, *Journal of Social and Behavioral Sciences*, Vol. 150, pp. 700 – 707, 2014.
- [19] Kavida, V and Sivakoumar, N., “Intellectual Capital: A Strategic Management Perspective”, *Journal of Knowledge Management*, Vol. VII, Nos. 5 & 6, pp. 56-69, 2009.
- [20] Khalique, M., Isa, A. H. M. and Shaari, J. A. N., “Predicting the Impact of Intellectual Capital Management on the Performance of SMEs in Electronics Industry in Kuching, Sarawak”, *The IUP Journal of Knowledge Management*, Vol. 11, No. 4, pp. 53-61, 2013.
- [21] Khalique, M., Isa, A. H. M. and Shaari, J. A. N., “Challenges faced by Pakistani pharmaceutical industry: An intellectual capital perspective”, *International Journal of Research Studies in Management*, Vol. 1, No., pp. 39-45, 2012.
- [22] Khalique, M., Bontis, N., Shaari J. A. N., Isa, A. Md. H., “Intellectual capital in small and medium enterprises in Pakistan”, *Journal of Intellectual Capital*, Vol. 16, No. 1, pp. 224 – 238, 2015.
- [23] Khalique, M., Isa, A. H. M., “Intellectual Capital in SMEs Operating in Boutique Sector in Kuching, Malaysia”, *The IUP Journal of Management Research*, Vol. XIII, No. 2, pp. 17-28, 2014
- [24] Lee, W. R., Chen, C. C., Chen, L. J., “Strategic Capabilities, Innovation Intensity, and Performance of Service Firms”, *Journal of Service Science & Management*, Vol. 1, pp. 111-122, 2008.
- [25] Leana, C. R. and Pil, F. K., “Social Capital and Organizational Performance: Evidence from Urban Public Schools”, *Journal of Organization Science*, Vol. 17, No. 3, pp. 353-366, 2006.
- [26] Lettieri, E., Radaelli, G., Mura, M. and Spiller, N., “Intellectual capital and knowledge sharing: the mediating role of organizational knowledge-sharing climate”, *Knowledge Management Research & Practice*, Vol. 9, pp. 342–352, 2011. DOI. 10.1057/kmrp.2011.29.
- [27] Lijun, HU, Junwei, SHI and Haiyan, FU., “The impact structure of social capital on corporate performance: Empirical evidence from listed companies in China”, *Front. Business Research China*, Vol. 1, No. 1, pp. 136-154, 2007.
- [28] Moradi, M., Jalilian, R. H., Ghanbari, M., Hassani, S. R. and Jalilian, O., “The Relationship between Intellectual Capital and Financial and Non- Financial Performance in West Cement Company in Kermanshah”, *Journal of Basic and Applied Scientific Research*, Vol. 3, No. 6, pp. 427-432, 2013.
- [29] Roos, G., Pike, S. and Peng, T. J. A., “Intellectual capital and Performance indicators: Taiwanese healthcare sector” *Journal of Intellectual Capital*, Vol. 8, No. 3, pp. 538 -556, 2007.
- [30] Ngah, R. and Ibrahim, A. R., “The Influence of Intellectual Capital on Knowledge Sharing: Small

- and Medium Enterprises Perspective”, *Journal of Communications of the IBIMA*, 2011, DOI. 10.5171/2011.444770.
<http://www.ibimapublishing.com/journals/CIBIMA/cibima.html>
- [31] Su, Z., Daou, A., Karuranga, E., “Towards a better understanding of intellectual capital in Mexican SMEs”, *Journal of Intellectual Capital*, Vol. 15, No. 2, pp. 316-332, 2014
- [32] Sheng Ting, K., “How Accumulation of Intellectual Capital of Intellectual Capital Design Firms Listed in Taiwan Impacts Organization Performances: Organizational Learning Capability as the Mediator”, *The Journal of Global Business Management*, Vol. 8, No. 1, pp. 60-73, 2012.
- [33] Subramaniam, M. and youndt, M. A., “The Influence of Intellectual Capital on the Types of Innovative Capabilities”, *The Academy of Management Journal*, Vol. 48, No. 3, pp. 450-463, 2005.
- [34] Snell, S. A. and Morris, S. S., “Intellectual capital configurations and organizational capability: An empirical examination of human resource subunits in the multinational enterprise”, *Journal of International Business Studies*, Vol. 42, pp. 805–827, 2011.
- [35] Sharafi, M., Moghadamb, Y. M. and Sharafi, T., “The relationship between dimensions of intellectual capital and knowledge creation: Case Study of the headquarters of national gas corporation of Iran”, *Journal of Management Science*, Vol. 2, pp. 147-160, 2012.
- [36] Kamaluddin, A. and Rahman, R. A., “Enhancing Organisation Effectiveness Through Human, Relational and Structural Capital: An Empirical Analysis”, *Malaysian Accounting Review*, Vol. 8, No. 1, pp. 1-17, 2009.
- [37] Salleh, M. I. M., Kassim, N. A. and Shoid, M. S. M., “Organizational Learning Capabilities and Knowledge Performance: A Conceptual Framework”, *International Conference on Sociality and Economics Development*, Vol. 10, pp. 604-608, 2011.
- [38] Subramaniam, M. and youndt, M. A., “The Influence of Intellectual Capital on the Types of Innovative Capabilities”*The Academy of Management Journal*, Vol. 48, No. 3, pp. 450-463, 2005.
- [39] Srivihok Anongnart, “Intellectual Capital of Enterprises in Thailand: Measurement Model by Baysean Network Algorithm”, *Journal of Communications of the IBIMA*, Vol. 3, pp.193-199, 2008.
- [40] Vij, S. and Bedi, H. S., “Relationship Between Entrepreneurial Orientation and Business Performance: A Review of Literature”, *The IUP Journal of Business Strategy*, Vol. 9, No. 3, pp. 17-31, 2012.
- [41] Vij, S. Farooq, R., “Knowledge Sharing Orientation and Its Relationship with Business Performance: A Structural Equation Modeling Approach”, *Journal of Knowledge Management*, Vol. XII, No. 3, 2014
- [42] Vij, S. Farooq, R., “The Relationship Between Learning Orientation and Business Performance: Do Smaller Firms Gain More from Learning Orientation?”, *Journal of Knowledge Management*, Vol. 10 XIII, No. 4, 2015
- [43] Van Vuuren, J.J. & Mungule, C.M., “Validating a measurement scale for entrepreneurial actions for sustainable corporate entrepreneurship using confirmatory factor analysis”, *Acta Commercii*, Vol. 16, No. 1, 2016.
<http://dx.doi.org/10.4102/ac.v16i1.397>
- [44] Zenzerovic and Cerne , “The Intellectual Capital Impact on Business Entity Performance”, *Journal of Economic and Social Development*, pp. 665-676, 2008. <http://proquest.com>

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