

EXAMINING SYNERGISTIC IMPACT OF LEARNING INPUTS ON ORGANISATION INNOVATION

Neetu Andotra

Professor, Dept. of Commerce, University of Jammu
Jammu, e-mail:neetu.bipan@rediffmail.com, Mob: 09419617503

Jyoti

Research Scholar, Dept. of Commerce, University of Jammu
Jammu, e-mail:jyotisarkhandia@gmail.com, Mob: 09622100583

ABSTRACT

Turbulent market changes and fierce technological competition is impelling organizations to generate knowledge & learning faster than competitors to achieve a high market share, productivity, super fast economic growth and expansion etc. Learning inputs are core for foundation of learning in an organization and positively affect innovation. Based on the sample of 138 employees of public and private General Insurance Companies in J&K, the study found positive impact of commitment to learning, open mindedness, shared vision, knowledge management infrastructure, reward, communication & embedded system and trust on innovation in the organization. To encourage learning climate , managers must understand and predict employees and customer needs, welcome new ideas, pay much attention to the cause & effects of subordinate actions and detect & correcting errors, build teams, improve communication technologies, encouraging interdependence of employees to makes them feel safe in displaying proactive behavior, synchronizing personal objectives with organizational goals, organizing mentoring or apprenticeship program and rewarding outstanding performances of employees.

Keywords: Learning inputs, Innovation, Performance

INTRODUCTION

To survive and thrive in knowledge based economy characterized by turbulent market changes and fierce technological competition, an organization must always ready to adapt to the shifting needs of the new environment, more demanding customers, smarter workers by proactively developing new products, processes and services (Dodgson, 1993; Kim and Mauborgne, 2005; Singh, 2008; Joo, 2007). Organisations which understand and strive to take the lead for change and who willingly learn and implement new ideas will triumph (Sun, 2003). Global competitiveness has created tremendous opportunities for organisations as the markets have expanded across the national boundaries forcing organisations to adopt new standards and practices, to create a learning environment. Furthermore, competitiveness thus, can no longer continue with traditional management approaches which lead to change in organisational setting and leadership as well. Organisations that will truly excel in the future will be those that discover how to tap people's commitment and capacity to learn (Senge, 2006; Deborah & Daley, 2008). Organisations that learn and encourage learning among their people are termed as learning

organisations (Sebestoval and Rylkova, 2011). A learning organisation generates knowledge & learning faster than competitors and turns that learning into a strategic advantage to out-market, out-manage and outsell competition (Kapp, 1999). Empirically, learning organisation achieves a high market share, productivity (Kapp, 1999), super fast economic growth and expansion of financial services (Singh, 2010).

COMPONENTS OF LEARNING INPUTS

The word “learning” was coined in the 1980’s to describe organisations that experimented with new ways of conducting business , learn better and faster from their successes and failures, from within and from outside (Marquardt, 1996). Organizational flexibility and adaptability decreases chances of the failure posed by this rapidly changing environment. Organisations must create and assimilate new knowledge at an increasing pace, encourage innovation and learn to compete in new ways (Dess and Picken, 2000). In present scenario, knowledge has become a valuable asset and organisations place emphasis on people who have the desire to seek knowledge and the willingness to learn. Thus, organisations encourage employees at all levels to express themselves, recognizing the fact that knowledge could be created at any level in an organization. Akhtar and Khan (2011) described that learning inputs are core for foundation of learning in an organisation which consist of commitment to learning, open mindedness, trust, communication, reward and knowledge management. Commitment to learning considers learning is an important investment that is crucial for survival in the learning organisation. ‘Open mindedness’ is the willingness to critically evaluate the organization’s operational routine to accept new ideas (Liao, 2006). Trust is essential for stable social relationships. When employees trust their supervisors, they may have confidence in that they can achieve better long-run outcomes with cooperative behaviour. Interpersonal trust is fundamental to all social situations that demand cooperation and interdependence (George and Swap, 1982). Communication plays an important role to reduce uncertainty and break down barriers in organisation caused by fear or lack of knowledge (Johnson et al., 1997). Reward systems are based on quantitative or non-quantitative criteria to evaluate employee’s performance that enhance learning in the organisation (Akhtar and Khan, 2011). The knowledge management infrastructures are the mechanism for the learning to develop its knowledge and also to stimulate the creation of knowledge within the organisation as well as the sharing and protection of it (Zaied, 2012).

ORGANISATIONAL INNOVATION

Innovation is a creative human activity, which develop positive change in structure of entrepreneurial subjects and results in positive effect on organisation performance (Sebestoval and Rylkova, 2011). Rogers (1995) defines innovation as an idea, a product, process, system or device that is perceived to be new to an individual, a group of people or firms, an industrial sector or a society as a whole. Hall (2005) considered innovation as the implementation of discoveries which leads to growth provides new employment opportunities and positive balances of trade that enhance the nation’s standard of living. Ramstad (2009) viewed innovation as renewals in the structures, processes or boundaries of an organisation, which help to achieve savings, improved ability to respond to customer needs. Changes in government policies and

Examining Synergistic Impact Of Learning Inputs On Organisation Innovation

competitive moves might force organisations to look for new markets, adapt new technologies and new sources to innovate (Lovelock and Wright, 2001). Innovation emerges when organisations develop new business solutions by capturing and combining the demands, opportunities and ideas existing within and outside their boundaries, blending of multiple perspectives, customer's need and designer's knowledge. It includes creation of new services, strategies, identification of new markets and development of more effective accounting systems, personnel policy and technology. Senge (1990) analyses that building a shared vision is to develop and hold a shared picture of the future to be created. With a genuine vision, people are galvanised to action and transform their organisation to a learning organisation.

REVIEW OF LITERATURE

Knowledge management has become the basic necessity of all organisations in these days due to limited resources and increasing competition (Alipour et al., 2010). The efficient management of knowledge in the organisation increases the skill and capabilities of employees which helps to increase its competitive advantage, improve business processes, make financial savings, generate greater revenues, enhance user acceptance and increase the competitiveness (Chua and Lam, 2005; Julia and Rog, 2008). This knowledge is initiated through a process of permanent changes in behaviour that result from environmental interactions (Dulbecco and Garrouste 1999; Lazaric 2000; Levinthal and March 1993). Researchers have found differences in organisational performance due to learning and adaptability capabilities. Organisation's commitment to learning is the amount to which an organisation considers learning as valuable and tries to not only prop up the process of learning but also to generate and brace an atmosphere for learning in organisation (Norman, 1985). Commitment to learning as an important investment which is necessary for organization's maintenance (Sinkula, et al., 1997) and plays a fundamental role in updating the organization's assets and abilities related to key efforts (Wang, 2008). Calantone et al., (2002) and Hult et al., (2004) found commitment to learning and shared vision are basic stimulus to innovation whereas Bucis (2004) considered reward as necessity for innovation. Organisations that committed to learning pay much attention to the cause and effects of their actions and detect and correct errors in use (Liao, 2006). Open-mindedness refers to the critical evaluation of organization's daily operations and the acceptance of new ideas (Sinkula et al., 1997). In other words, it is a process through which organization engages in reviewing the existing knowledge or the old assumptions and habits (Nguyen and Barrett, 2006). According to open-mindedness, the existing knowledge can make as a fundamental obstacle that prevents organisation from taking environmental changes into account and by decreasing the ability to predict market, it causes damage to the long-term relationship between firm with customers, distribution channels and suppliers (Schindehutte et al., 2008). Shared vision refers to the concentration of all members of organisation on learning that leads to the strengthening of their energy, commitment and purposefulness, develop and hold a shared picture of the future to be created (Sinkula et al., 1997). With a genuine vision, people are galvanised to action, not because they have to, but because they want to. Organisations cannot be ordered to change, but a powerful vision can pull people in a desired direction (Tee NG, 2004). Trust is defined as the willingness of a party to be vulnerable to the actions of another party and fundamental to all social situations that demand cooperation and interdependence (Liao, 2006). Trust presupposes the existence of a climate in which employees feel safe in displaying proactive behavior and

confident in that they can achieve better long-run outcomes with cooperative behavior (Ramaswami et al., 1997; Bhattacharya and Devinney, 1998). Johnson et al., (1997) opined enhanced communication quality and embedded system is entirely associated to innovation but Ruppel et al. (2001) viewed level of trust encourage innovation in organisation. Kohli and Jaworski (1990) analysed open-mindedness as fundamental factor that leads to innovation while Kogut and Zander (1992) examined innovation is directly related with knowledge management infrastructure. Therefore, all these inputs are regarded as basic ingredients for innovation.

The literature reviewed revealed that many researchers have focused on conceptual analysis and few on empirical analysis of learning inputs on manufacturing companies, libraries, SOE, private firms , computer manufacturing , banking, health care and telecommunication. It has been found that there is scarcity of empirical research on exploring the synergistic effects of learning inputs on innovation in insurance sector.

HYPOTHESES DEVELOPMENT AND MODEL BUILDING

Learning inputs are stimulus that increases the capacity of a firm's innovation (Calantone et al., 2002; Hult et al., 2004). Organization's commitment to learning is to increase firm's ability to innovative which is because of its creating and developing knowledge, ability to recognize and predict opportunities (Calantone et al., 2002). The organisation that has commitment to learning is more capable of innovation (Cahill, 1996; Damanpour, 1991). Kohli and Jaworski (1990) opined that there always exists a need for developing new knowledge and vision and this leads to create the attitude of open-mindedness in organisation. To have this attitude, firms continuously increase their ability to learn by constantly reviewing the existing knowledge; they manage to support their innovation. Without shared vision, learning of individual in organisation will be extremely meaningless (Calantone et al., 2002). Organisations are unable to perform creative ideas without shared vision between them (Hult, 1998). Hence shared vision leads to strengthening of innovation. Learning by integrating new knowledge or mixing existing knowledge in different ways, leads to newness and thus to innovation. If a company is good at acquiring new knowledge and articulating existing knowledge with new knowledge or existing knowledge in a different way, this company should be good at producing innovations (Kogut and Zander, 1992). Bucis (2002) examined reward enhance creativity and that in turn promote innovation in an organisation. Johnson et al., (1997) opined enhanced communication quality and embedded system is positively related to innovation because members with a broader awareness of the consequences and implications of an innovation are more likely to facilitate them and even they break down the barriers of innovation. Exchange partners that trust each other are willing to make extra efforts beyond the letter of a contract in order to overcome difficulties and help each other solve problems. McEvily and Marcus (2005) viewed trust is a critical antecedent to joint problem solving, which in turn promote innovation. Levels of trust in organisations can be causally related to collaborative climates that encourage innovation (Ruppel et al., 2001). Based on review of literature, following hypotheses have been framed to analyze the impact of learning inputs on organizational innovation (Fig. 1)

H₁ Commitment to learning has positive impact on innovation

Examining Synergistic Impact Of Learning Inputs On Organisation Innovation

H₂ Open mindedness has significant impact on innovation

H₃ Shared vision has positive impact on innovation

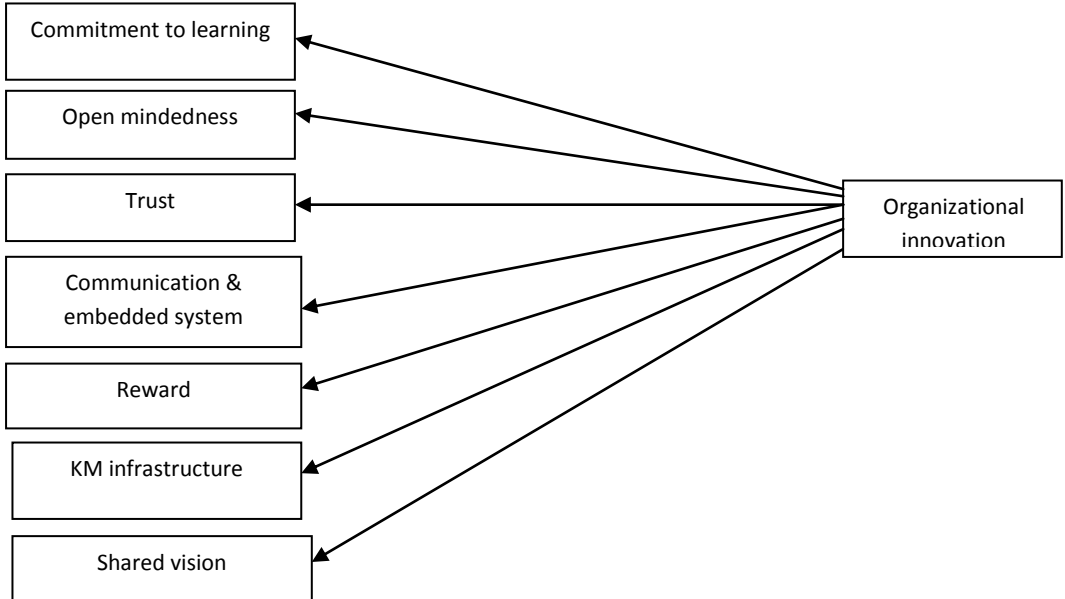
H₄ Knowledge management infrastructure positively affects innovation

H₅ Reward is positively influenced by innovation

H₆ Communication & embedded system are positive to innovation

H₇ Trust has positive impact on innovation

FIG 1: MODEL DEPICTING IMPACT OF LEARNING INPUTS ON INNOVATION



RESEARCH METHODOLOGY

A sample of 138 employees based on convenience sampling method was used to elicit response both from public and private general insurance companies operating in Jammu District of J&K State. Public General Insurance Companies are United India Insurance, The Oriental Insurance Co. Ltd., National Insurance Co. Ltd., The New India Insurance, The New India Assurance Co. Ltd. Private General Insurance Companies contacted were ICICI Lombard General Insurance Co. Ltd., Reliance General Insurance, IFFCO Tokio General Insurance Co. Ltd., Bajaj Allianz General Insurance Co. Ltd., Tata AIG General Insurance Co. Ltd, Future Generali. The effective response was received from 102 employees. Questionnaire items were constructed to measure each of the underlying variables discussed in the conceptual framework. For the attributes of a learning organization, this involved developing a large pool of items to capture the facilitators categories described (Liao, 2006; Maatoofi and Tajeddini, 2010; Abbas et al., 2011; Sinkula, 1997 and Laverie, 2008). Items for innovation were self generated as it is an outcome for learning organisation that shows whether above facilitators leads to effective innovation or not. An initial

pool of 123 items was developed to measure the learning inputs. All items had a five-point Likert scale response.

RELIABILITY AND VALIDITY

Reliability reflects the internal consistency of indicators measuring a given factor. Cronbach's alpha coefficient is the most commonly applied estimate reliability and in the present study, its values are above 0.70 for all the constructs. Another way of establishing reliability is through construct reliability (CR), which is often used in conjunction with SEM model. The rule of thumb for construct reliability estimate is 0.70 or higher (Fornell and Larcker, 1981) and in the present study, it is above 0.90 for all scales, which indicates the internal consistency of the data. Construct reliability has been judged through convergent validity and discriminant validity.

a. Convergent Validity: Convergent validity tests the extent to which the covariance between the two measures is uniquely explained by the trait factor (Lim and Ployhart, 2006). In the present study, it has been measured through:

i Factor Loadings: High factor loading i.e., above .50 or ideally 0.7 or higher indicates higher level of convergence. Convergent validity gets established in the present study as all standard loadings are above 0.50. It reveals that all the indicators effectively measure their corresponding construct and support convergent validity (Anderson and Gerbing, 1988).

ii Variance Extracted: In CFA, the average percentage of variance extracted (VE) among a set of construct items is a summary of indicator of convergence (Joreskog, 1981). AVE should be 0.50 or greater to suggest adequate convergent validity. AVE in the present construct is closer to 0.50 (Table 7).

Discriminant Validity: Discriminant validity refers to the distinctiveness of different constructs (Campbell and Fiske 1959). High discriminant validity provides evidence that a construct is unique and captures some phenomena, which other measures do not. Discriminant validity has been assessed by comparing AVE with squared correlations between constructs. The squared correlation between pair of constructs was less than AVE in almost all the cases, thereby suggesting discriminant validity (Chihyung et al., 2005).

DATA ANALYSIS AND DISCUSSION

The collected responses were purified using EFA and 7 factors of learning inputs with 90 items were extracted. The factors arrived had mean score ranging from 2.00-2.75 and standard deviation 0.52-0.80 as shown in Table 1. Thereafter, CFA was carried and the items retained were 4 for commitment to learning, 7 for shared vision, 7 for open mindedness, 5 for reward, 7 for trust, 7 for CES and 7 for KMI and 12 for innovation. The value of chi-square for all factor was less than 5 (CMIN/DF) and RMSEA was 0.8 or less than 0.8, the value of GFI, AGFI, CFI and NFI was closer to 9 as shown in Table 2. Table 3 displays the highest correlation 0.7344 was between commitment to learning and shared vision, while the other correlations ranges from 0.2416 to

0.7195. Although several variables showed significant correlations, their tolerance values ranged from 0.621 to 0.957, indicating that multi-collinearity is not a likely threat to the parameter estimates (Hair et al., 1998). Structural Equation Modeling (SEM) was conducted by using AMOS 16.0 to assess fitness and to test the hypothesized relationships in the model. The overall fit measures suggest that the data provide a good fit for the hypothesized causal model (Bagozzi and Yi 1998; Baumgartner and Homburg 1996). After running SEM, we examined significant relationships depicted in Table 4. The goodness-of-fit index (GFI=0.956), adjusted goodness-of-fit index (AGFI=0.919), root mean square error of approximation (RMSEA=0.066) and standardized root mean square residual (RMR=0.014) were within the acceptable range. The other indices like normed-fit index (NFI), comparative-fit index (CFI) were above 0.9 therefore, it can be concluded that the model exhibits a reasonable fit to the data. On the basis of SEM results, the framed hypotheses have been tested and the results are Commitment to learning ($\beta = 0.90$; $T = 4.02$; $P < 0.01$), Open-mindedness ($\beta = 0.73$; $T = 3.05$; $P < 0.01$), shared vision ($\beta = 0.72$; $T = 4.87$; $P < 0.01$), Communication and embedded system ($\beta = 0.32$; $T = 2.64$; $P < 0.01$), Knowledge management infrastructure ($\beta = 0.90$; $T = 1.08$; $P < 0.01$), Reward ($\beta = 0.45$; $T = 3.67$; $P < 0.01$), and trust ($\beta = 0.19$; $T = 2.52$; $P < 0.01$) have significant influence on firm innovation. Hence all hypotheses are accepted.

Continuous improvement programs are sprouting up all over as organisations strive to better themselves and gain an edge. In the absence of learning, companies—and individuals—simply repeat old practices. Change remains cosmetic and improvements are either fortuitous or short-lived. Employees of general insurance companies have high perception about supporting learning inputs in their organisation. Organisation's commitment to learning leads to strengthening the culture of learning in organization. In fact, this culture impels to create and use knowledge, provides opportunities for learning, thus increasing the capacity for innovation. Moreover, the findings of the study shows that learning will be meaningless, unless there is a single thing to which personnel can focus their attention. Otherwise, they won't know what to learn even if they are all highly motivated to learn, so shared vision also leads to innovation. Trust is a significant predictor of joint problem solving, which in turn promote innovation. Levels of trust in organizations can be causally related to collaborative climates that encourage innovation. In same way effective communication and reward system encourage innovative culture in the organisation. Managers can foster learning climate by understand and predict employees and customer needs, welcoming new ideas, paying much attention to the cause & effects of subordinate actions and detect & correcting errors. Open –mindedness can be inculcated by critically evaluating organization's daily operations and to challenge previous learning through deleting repetitive methods, assumptions and previous beliefs. To boost communication and embedded system, managers can build teams, giving employees a higher degree of interdependence to cooperate with others and motivating them to exchange information by improving communication technologies including e-mail and instant messaging etc. Trust can be generated by creation of cooperative behavior, interdependence of employees and makes them feel safe in displaying proactive behavior. To increase shared vision, managers should encourage interaction between employees and connecting their personal objectives with organizational goals. By focusing on new ways of thinking and acting, fostering risk-taking & experimentation, long-term commitment, encouraging personal vision and respect individual freedom leads to increase shared vision. Knowledge management can be increased by periodically organizing

mentoring or apprenticeship program and motivating the employees to use knowledge in the development of new products/services. Rewarding outstanding performances by provide monetary and non monetary incentives is most important in increasing promotional aspects of employees. Manager should ask employees about how they want to get the work done instead of intercede and direct too much. That makes them feel great and encourage them to do things differently than the way other do. Financial partnership with employees, communicating the outcomes and results most valued by the organization and creation of flexible means of rewarding high performers can be a good way to motivate employees. Feedback - both positive and performance improving - is vital to continuous improvement and inspires people to continually move toward using more of their potential. Feedback needs to be timely, specific and presented in such a way that the individual is clear about what behaviors or skills they need to modify (or continue using) in order to improve performance. If performance is enhanced through feedback, it acts as strength. Managers must invest in employees with a sense of ownership in the business, be transparent and share information, give employees the gifts of trust and responsibility and praise their work periodically.

CONCLUSION

All efforts were made to maintain objectivity, reliability and validity of the study, yet certain limitations could not be ignored. The study has measured learning inputs and performance on the basis of employees’ responses which might have been guided by their likes and dislikes.

TABLE 1: DESCRIPTIVE STATISTICS OF EXTRACTED FACTORS

Variables	Mean	SD
Commitment to learning	2.75	0.71
Open mindedness	2.43	0.72
Shared vision	2.29	0.79
Communication	2.00	0.734
Trust	2.71	0.78
KMI	2.65	0.80
Reward	2.37	0.528
Innovation	2.42	0.756

TABLE2: FACTORS AFTER CFA& MEASUREMENT VALUES

Dimensions	Chi-sq	RMR	GFI	AGFI	NFI	CFI	RMSEA
CTL	1.111	.007	.999	.994	.999	1.000	.058
SV	1.943	.045	.945	.873	.909	.952	.078
OM	1.692	.068	.948	.996	.947	.977	.080
TRST	1.321	.025	.961	.909	.960	.990	.057
CES	1.432	.030	.954	.894	.960	.987	.066
RD	1.639	.032	.976	.911	.979	.991	.080
KMI	1.106	.021	.974	.920	.986	.999	.033
INO	1.123	.056	.967	.923	.987	.989	.076

TABLE 3: INTERRELATION AMONG FACTORS

	1	2	3	4	5	6	7	8
--	---	---	---	---	---	---	---	---

Examining Synergistic Impact Of Learning Inputs On Organisation Innovation

Commitment to learning	1.000							
Open-mindedness	0.5742	1.000						
Shared Vision	0.7344	0.6462	1.000					
Communication	0.5422	0.5739	0.7772	1.000				
Trust	0.4473	0.3312	0.5542	0.5678	1.000			
KMI	0.3268	0.3711	0.3616	0.2434	0.2705	1.000		
Reward	0.5298	0.6096	0.7195	0.5712	0.3894	0.2416	1.000	
innovation	0.6844	0.6785	0.7854	0.5334	0.3443	0.5476	0.2443	1.000

TABLE 4: OVERALL FITNESS INDICES OF MODEL

1	Chi-sq	RMR	GFI	AGFI	NFI	CFI	RMSEA
Model	1.610	.014	.956	.919	.973	.989	0.066

TABLE 5: STANDARDIZED PATH COEFFICIENTS FOR MODEL

FACTORS	Path	MODEL	
		β	T
Commitment to learning	innovation	0.90	4.02**
Open-mindedness	innovation	0.73	3.05**
Shared Vision	innovation	0.72	4.87**
CES	innovation	0.32	2.64**
Trust	innovation	0.19	2.53**
KMI	innovation	0.80	2.68**
Reward	innovation	0.45	3.67**
KMI	innovation	0.90	1.08**

TABLE 6: STANDARDIZED REGRESSION WEIGHTS OF SEM RELATIONSHIPS

Relationships	Estimates
CTL----→IN	.766
OM-----→IN	.724
SV-----→IN	.770
CES-----→IN	.736
TRST-----→IN	.720
RD-----→IN	.727
KMI-----→IN	.617
IN	.740

FIG 2: SEM MODEL

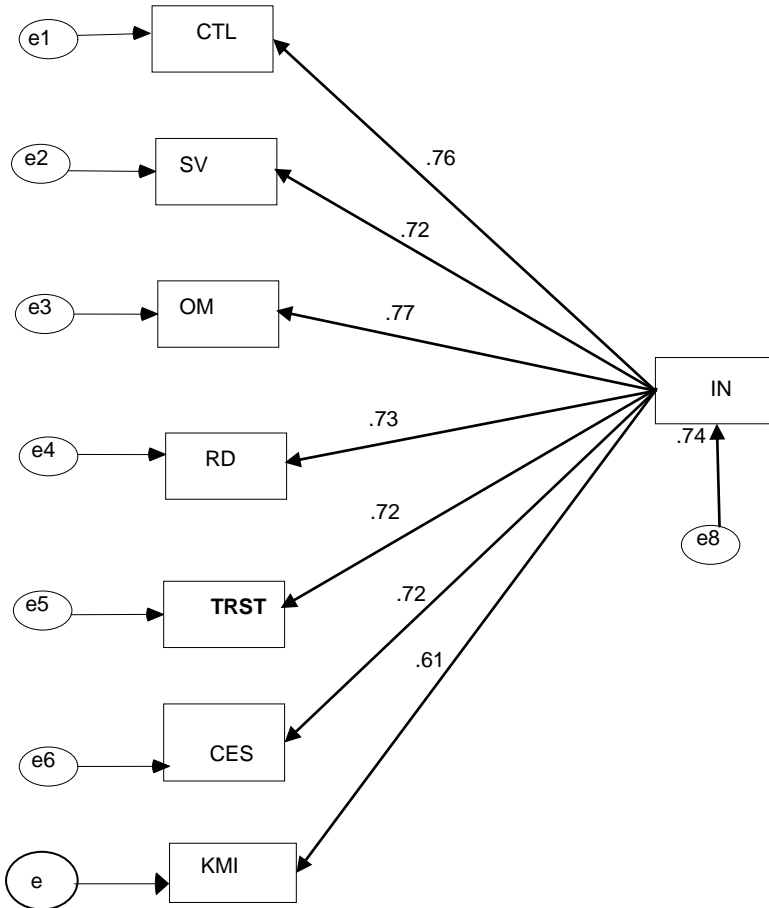


TABLE7: RELIABILITY AND VALIDITY OF LATENT CONSTRUCTS

Constructs	AVE	Composite Reliability	Cronbach's alpha
CTL	.50	.97	.83
SV	.45	.95	.76
OM	.48	.95	.84
RD	.45	.98	.83
TRST	.55	.97	.82
CES	.49	.98	.81
KMI	.51	.98	.88
INO	.51	.97	.78

TABLE 8: DISCRIMINANT VALIDITY OF LATENT CONSTRUCT

Examining Synergistic Impact Of Learning Inputs On Organisation Innovation

AVE/ALPHA	CTL	SV	OM	RD	TRST	CES	KMI
CTL	(.976)	.475	.490	.505	.505	.525	.475
SV	.234	(.955)	.465	.480	.480	.500	.450
OM	.162	.249	(.952)	.495	.495	.515	.465
RD	.317	.288	.331	(.985)	.510	.530	.480
TRST	.047	.012	.023	.028	(.972)	.530	.480
CES	.007	.004	.000	.004	.002	(.979)	.500
KMI	.253	.217	.252	.287	.036	.064	(.982)

REFERENCES

- Akhtar, N., and Khan, R. (2011). Exploring the paradox of organisational learning and learning organisation. *Journal of Contemporary Research in Business*, 2(9), 257-270.
- Anderson, J. C., and Gerbing, D.W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411- 23.
- Bhattacharya, R., and Devinney, T.M. (1998). A formal model of trust based on outcomes. *Academy of Management Review*, 23(3), 459-472.
- Baker, W. E., and Sinkula J. M. (1999). The synergistic effect of market orientation and learning orientation on organizational performance. *Journal of the Academy of Marketing Science*, 27(4), 411-427.
- Chihyung, O., Back, K, and Shanklin C. W. (2005). Modeling roles of service recovery strategy: A relationship-focused view. *Journal of Hospitality and Tourism Research*, 29(4), 484-507.
- Dodgson, M. (1993). Organisational learning: A review of literature of some literatures. *Organisational Studies*, 14(3), 375-394.
- Dess, G. G. and Picken, J. C. (2000). Changing roles: Leadership in the 21st century. *Organizational Dynamics*, 28, 18-34
- Deborah, D., and Daley, B. J. (2008). The learning organisation and its dimensions as key factors in firms' performance. *Human Resource Development International*, 11(1), 51-66.
- Fornell, C., and Larcker D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50.
- George C. J., and Swap W. C. (1982). Measurement of specific interpersonal trust: Construction and validation of a scale to assess trust in a specific other. *Journal of Personality and Social Psychology*, 43(6), 1306-1317.
- Hatcher, L. (1994). *A step-by-step approach to using the SAS system for factor analysis and structural equation modeling*. Cary, NC: SAS Institute, Inc.
- Hult, G., Tomas M., Robert F., Hurley, Gary A., and Knight. (2004). Innovativeness and its antecedents and impact on business performance. *Industrial Marketing Management*, 33(5), 429-438.
- Hall, W. P. (2005). Biological nature of knowledge in the learning organisation. *The Learning Organisation*, 12(2), 169-188.
- Joreskog, K. G. (1981). Analysis of covariance structures. *Scandinavia Journal of Statistics*, 8, 65-92.
- Johnson, D. J., Meyer, M. E., Berkowitz J. M., Ethington C. T., and Miller V.D. (1997). Testing two contrasting structural models of innovativeness in a contractual network. *Human Communication Research*, 24(2), 320-348.
- Joo, B. (2007). The impact of contextual and personal characteristics on employee creativity in Korean firms. *Ph.D. dissertation, University of Minnesota*. Retrieved, from ProQuest Digital Dissertations database (publication no. AAT 3263468).
- Kohli, A.K., and Jaworski B.J. (1990). Market orientation: The construct, research positions and managerial implications, *Journal of Marketing*, 54(2), 1-18.
- Kapp, K. M. (1999). Transforming your manufacturing organisation into a learning organisation. *Hospital Material Management Quarterly*, 20(4), 45-56.
- Kim, W. C., and Mauborgne, R. (2005). Blue ocean strategy: From theory to practice. *California Management Review*, 47(3), 105-121.
- Levinthal, D., and March, J. (1993). The myopia of learning. *Strategic Management Journal*, 14(S2), 95- 112.
- Lovelock, C., & Wright, L. (2001). *Principles of Service Marketing and Management* (2nd ed.): Pearson Education, Inc.
- Liao, L. (2006). A learning organisations perspective on knowledge sharing behaviour and firm innovations. *Human System Management*, 25(4), 227-236.
- Lim, B.C., and Ployhart R. E. (2006). Assessing the convergent and discriminant validity of Goldberg's international personality item pool: A multitrait-multimethod examination. *Organisational Research Methods*,

9(1), 29-54.

- Landis, R. S., Beal D. J, and Tesluk, P. E. (2000). A comparison of approaches to forming composite measures in structural equation models. *Organisational Research Methods*, 3(2), 186-207.
- Maatoofi, A. R., and Tajeddini, K. (2010). The effect of entrepreneurship orientation on learning orientation and innovation: A study of small-sized business firms in Iran. *International Journal of Trade, Economics and Finance*, 1(3), 254-260.
- Norman R. (1995). *Developing capabilities for organizational learning*, In: Pennings JM, editor. *Organizational Strategy and Change*. San Francisco (CA): Jossey-Bass.
- Marquardt, M. J. (1996). *Building the learning organisation: A systems approach to quantum improvement and global success* (3rd ed.) New York: McGraw-Hill.
- Nguyen, Tho D., and Barrett, N. J. (2006). The adoption of the internet by export firms in transitional markets. *Asia Pacific Journal of Marketing and Logistics*, 18 (1), 29- 42.
- Rogers, E. M., and Shoemaker, F. F. (1971). *Communication of Innovations: A cross-cultural approach*. (2nd ed.) New York: Free Press.
- Ramaswami, S. N., Srinivasan, S. S and Gorton, S. A. (1997). Information asymmetry between salesperson and supervisor: Postulates from agency and social exchange theories. *Journal of Personal Selling & Sales Management*, 17(3), 29–50.
- Ruppel, C. P. & Harrington, S. J. (2001). The relationship of communication, ethical work climate and trust to commitment and innovation. *Journal of Business Ethics*, 25(4), 313-328.
- Rogers, E. (1995). *Diffusion of Innovations*. (5th ed.) New York: The Free Press.
- Ramstad, E. (2009). Expanding innovation system and policy an organisational perspective. *Policy Studies*, 30(5), 533-547.
- Sinkula, J. M. (1994). Market information progressing and organizational learning. *Journal of Marketing*, 45(1), 58-35.
- Sun, P., and Scott, J. (2003). Exploring the divide: The organisational learning and learning organisation. *The Learning Organisation*, 10(4), 202-215.
- Senge, P. M. (2006). *The Fifth Discipline: The art and practice of the learning organisation* (2nd ed.) New York: Currency Doubleday.
- Singh, K. (2008). Relationship between learning organisation and transformational leadership: Banking organisations in India. *International Journal of Business and Management Science*, 1(1), 97-111.
- Schindehutte, M., Michael H., Morris and Kocak. A. (2008). Understanding market-driving behaviour: The role of entrepreneurship. *Journal of Small Business Management*, 46 (1), 4-26.
- Singh, K. (2010). An analysis of relationship between the organisation culture and the learning organisation in Indian business context. *Organisations and Markets in Emerging Economics*, 1(1), 142-165.
- Sebestoval, J., and Rlykova, Z. (2011). Competencies and innovation in learning organisation. *Economics and Management*, 16, 954-960.
- Wang, C. L. (2008). Entrepreneurial orientation, learning orientation and firm performance, *Entrepreneurship Theory & Practice*, 34(4), 635–657.
- Zaied. A.N.H., Hussein. G. S. and Hassan M.H (2012). The role of knowledge management in enhancing organizational performance. *International Journal of Information Engineering and Electronic Business*, 5, 27-35.