



Impact of Knowledge Creation on Organizational Performance in the Service Organizations of Bangladesh

Bikash Barua

Assistant Professor, State University of Bangladesh, Bangladesh

Abstract

This study is conducted to identify the relationship between knowledge creation process and organizational performance with mediating role of organizational creativity. A Self-administered questionnaire survey among 270 the top and mid-level managers of selected service organizations in Bangladesh was used to collect data. Multiple regression method was employed to determine the relationship among knowledge creation process, organizational creativity, and organizational performance. Also, Baron and Kenny (1986) and Sobel (1982) approach were used to test the mediating role of organizational creativity. It is found from the result that knowledge creation process has significant positive association with organizational performance. Also, knowledge creation process is found to have significant positive association with organizational creativity. Furthermore, it is confirmed that organizational creativity has significant positive association with organizational performance. Lastly, organizational creativity is found to mediate the relationship between knowledge creation process and organizational performance. Based on the findings, conclusions, implications, limitations of the research were drawn and future research scope is suggested.

Keywords: Knowledge creation process, SECI, organizational creativity, organizational performance.

1. Introduction

Knowledge creation and its expansion are essential and inherent characteristics of the knowledge management process (Dul et. al., 2011). It is important for an organization to develop competency in creating knowledge in order for surviving in the competition (Hislop, 2013). Knowledge creation is the outcome of our day to day activities in our work or in social setting. Knowledge creation takes place through various vibrant ways. Some of these emerge through some human actions or through some technical means. New knowledge that emerges from knowledge creation process helps organizations to develop its ability to generate new knowledge, innovate, and add value. This new knowledge fosters developing new and innovative product, improving internal processes, or enhancing organizations' decision making ability (Omotayo, 2015). Ramirez et. al. (2011) contended that knowledge creation influences specifically and in a roundabout way organizational learning indicating larger existence of the knowledge creation process in the organization, i.e. organizational learning promotes attempts to enhance organizational performance.

Knowledge creation is also considered to be a crucial factor for innovation and competitive advantage. Hsiaoping (2008) noted that inter organizational interactions among partners promotes codifying the knowledge hence it strengthens organization's innovative capacity. As Nonaka and Takeuchi (1995) mentioned, organizations' innovative capacity is contingent upon their ability to create new knowledge. Thus, creative organizations consider knowledge creation as one of the most valuable asset for them (Merx-Chermin and Nijhof, 2005). New knowledge created in the organization promotes enhancement in internal management aspects as well as enhance inventive manufacturing aspects which rightfully focuses on customers' needs and preferences. Therefore, knowledge creation is considered to be one of the chief assets for an innovative (Pei, 2008). Knowledge creation also has influence on knowledge application (Andreeva and Kianto, 2011). Therefore, Jonas (2003) advocated that organization that is efficient in creating knowledge has more diversified knowledge base to kindle the

knowledge use. Furthermore, Yli-Renko et. al. (2001) also suggested that knowledge creation enhances possible exploitation of knowledge.

From the above discussions it is evident that knowledge creation is a critical activity for an organization for survival, growth, and sustainability in the market place. In light of that the objective of this paper is to identify the effect of knowledge creation on organizational performance with the mediating role of organizational creativity in selected service organizations of Bangladesh. The knowledge creation has been explored in terms of SECI process and organizational performance has been analyzed in terms of balanced score card approach.

2. Literature Review

2.1. Knowledge Creation Process (KCP) and Organizational Performance (OP)

Empirical studies have found relationship between knowledge creation and organizational performance (Shahbakhsh, 2013; Derakhshan, 2016; Abtahi, 2012, Berraies and Chaher, 2014). Mills and Smith (2011) mentioned that organizations not only need to plan their tangible assets effectively but also require to operationalize information in proper way in order to become successful. An organization's capability to generate new knowledge is contingent upon ability to create new knowledge (Nonaka and Takeuchi, 1995). Superior application of knowledge creation process enables an organization to link new knowledge in innovative ways that enhance customer value through augmenting market offerings of the organizations (Huang et. al., 2009). According to Yong et. al. (2009), firms that are better in creating knowledge through SECI process are more successful in attaining capability, growth, and yield. Hence, knowledge creation is key to improve organizational performance (Huang et. al., 2009).

Gholami et. al. (2013) in a study on SMEs found that organizations need to create and implement new technology to facilitate strategic decision making that leads to improvement in productivity, financial and staff performance, innovation, work relationships, and customer satisfaction. Nawab et. al. (2015) found that knowledge creation generates innovation in banking industry which ultimately improves organizational performance. Berraies and Chaher (2014) ascertains that knowledge creation process is a catalyst for firms' innovation. The authors concluded that socialization has the strongest influence on innovation performance. Laeque and Babar (2017) also confirm that knowledge creation leads to improvement in firm performance due to the development in innovation capability. Nguyen et. al. (2016) argued that inculcating knowledge creation does not lead to organizational performance unless it transforms into product innovation. Chung et. al. (2009) draws conclusion that knowledge creation based on agility improve organizational creativity which subsequently results in superior organizational performance.

Liao and Wu (2010) empirically justified that knowledge creation activities positively influences organizational performance. Knowledge-creation systems and practices create new process knowledge and thus, are influential in achieving superior, competitive firm performance (Alegre et. al., 2013). Knowledge creation facilitates knowledge exchange and knowledge use which decidedly influences knowledge use, exchange and utilization of knowledge. Knowledge utilization, exchange and use of knowledge decidedly influence organizational learning. Knowledge segments and organizational learning has strong relationship with business development and organizational performance (Sarand et. Al., 2015; Ramirez and Kumpikaite, 2012). Yang (2010) also deliver his opinion in favour of knowledge creation process in improving organizational performance since this kind of activities aid in extracting and utilizing knowledge of different members of the organizational supply chain which ultimately provides firms with an opportunity to achieve profit, growth, efficiency, and sustainable competitive advantages. This leads to formulation of following hypothesis:

- H1: Knowledge creation process (KCP) has positive association with organizational performance (OP).

2.2. Knowledge Creation Process and Organizational Creativity

Creativity requires the support of knowledge—creativity itself is the result of knowledge creation (Wang and Noe, 2010). An employee's engagement in innovative work behavior requires the employee to be both able and willing to be innovative. Employees may exhibit creativity by developing new knowledge, advanced technologies, or by making process improvements that will lead to innovations (Parjanen, 2012). Auernhammer and Hall (2013) mentioned that individuals need to be supported so that they both engage in the routine to develop their expertise and experience, and periodically step out of it in order to explore new ideas. Exposure to heterogeneous knowledge is found to improve both the creative potential of focal actors as well as work team's innovation in general (Wu et. al., 2011). By interacting with others, employees can accumulate pooled informational resources relevant to their task or problem identified in the workplace, be exposed to a variety of ideas and ways of thinking, and have higher chance of synthesizing the shared resources into a new body of domain of knowledge, which facilitates creativity (Gong et. al., 2012).

Lee and Choi (2003) found that socio-technical enablers such as collaboration, trust, learning, and formalization are significant predictors of knowledge creation process which affects organizational creativity significantly. Migdadi (2005) also found positive relationship between knowledge creation and organizational creativity. The author concluded that existing knowledge has an imperative role in organizational creativity. Therefore, access to information, ideas, and experience enables

individuals and teams to build on good ideas and incorporate them into innovative products and process. Soon and Zainol (2011) showed that the knowledge creation process is positively related to organizational creativity. According to the authors, the knowledge creation process and indeed the whole organizational knowledge creation process is important because this relates to the capability of a company as a whole to create new knowledge, disseminate it throughout the organization, and embody it in products, services, and systems. This enables the “knowledge creating” company to achieve continuous innovation.

Chung et. al. (2009) found that knowledge creation processes improve organizational creativity. The authors concluded that in order for the organization to be creative, it may be just as important, if not more so, to maintain an environment that fosters knowledge creation among employees. When knowledge creation processes afford the organization the freedom to experiment with new ideas and take risks, the enriched knowledge environment can significantly facilitate the organization to be more creative. Rahimi et. al. (2011) emphasized that employee cooperation, networking, objectivity, information sharing, and peer mentoring promotes knowledge creation which ultimately fosters creativity. This leads to formulation of following hypothesis:

- H2: Knowledge creation process (KCP) has positive association with organizational creativity (OC).

2.3. Organizational Creativity and Organizational Performance

The role of creativity for firms' performance and growth cannot be ignored in a competitive dynamic environment. Several Authors have found positive relationship between creativity and organizational performance (Hassan et. al., 2013; Soon and Zainol, 2011; Heffernan et. al., 2009; Chung et. al., 2009; Swann and Birke, 2005; Migdadi, 2005; Lee and Choi, 2003). Rahnama et. al. (2011) established positive relationship between creativity and organizational effectiveness. Chung et. al. (2009) draws conclusion that knowledge creation based on agility improve organizational creativity which subsequently results in superior organizational performance. AlMulhim (2017) found positive relation between organizational creativity and performance in the banks of Saudi Arabia.

The generalized creative climate or culture as well as specific or focused creative efforts such as R&D and design help enhance innovation and performance (DTI, 2005). Swann and Birke (2005) emphasized on the role of a creative workplace or climate as an important driver of creativity and firm performance. Organizational climate supporting the generation of new ideas, risk taking, empowering the employees, and emphasizing participative decision making increases firm's performance (Cekmecelioğlu and Güncel, 2013). Hassan et. al. (2013) found that motivated and creative employees have positive impact on organizational performance. Kocoglu et. al. (2011) mentioned that shared vision for learning among employee fosters creativity which ultimately affects organizational performance. Soon and Zainol (2011) found that knowledge creation embedded with learning and T-shaped skills enhance organizational creativity which improves organizational performance.

Organizations which emphasized on learning through seminars and training programs, journal articles and books, self-learning techniques, peer learning, and formal and informal workplace training are creative and demonstrates high level of performance (Bai and Fallah, 2012). Auernhammer and Hall (2013) found organizational culture, including leadership and social conditions, influence organizational performance in terms of knowledge creation process related to creativity. Heffernan et. al. (2009) found that reward, open communication, and involvement fosters creative organizational climate that improves organizational performance. This leads to formulation of following hypothesis:

- H3: Organizational creativity (OC) has positive association with organizational performance (OP).

2.4. Mediating Effect of OC between KCP and OP

Several researchers have identified the role of OC as mediator in the relationship between KCP and OP. Lee and Choi (2003), Migadadi (2005), AlMulhim (2017). All of the above researchers found OC to act as a mediator variable in the relationship between KCP and OP. Knowledge creation processes improve organizational creativity because they allow the organization to be more agile (Chung et. al., 2009) which ultimately improves organizational performance. Therefore, this study supposes that OC has a mediating role in the relationship between KCP and OP. Hence, this study formulates following hypothesis:

- H4: OC mediates the relationship between KCP and organizational performance.

2.5. Theoretical Model

Based on the theoretical considerations this study developed a research model shown in Figure 1. This model highlights that KCP, including socialization, externalization, combination and internalization have a positive direct impact on OC which in turn affects OP. The research model was tested empirically in the selected service sectors in Bangladesh.

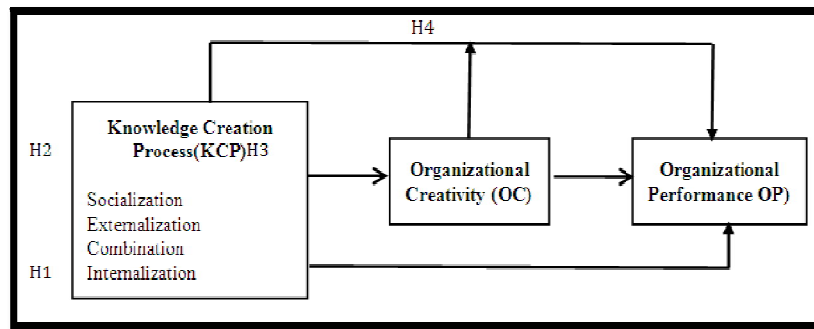


Figure 1: The Research Model

3. Research Methodology

The survey was a single cross-sectional and field survey. The unit of analysis was organization. The respondents were selected from top and middle level management of selected service organizations namely bank, insurance, hospital, university, IT, telecommunication, and real estate.

The simple random sampling method was used to collect data from the respondents. The data was collected through self-administered questionnaire survey. The questionnaire was divided into two sections. The first section asked general characteristics of respondents such as gender, position, highest education level, number of years working in the organization. Also, organizational information regarding industry sector, ownership structure, number of years operating, and organizational size in terms of number of employees. The second part asked questions related to the knowledge creation process, organizational creativity, and organizational performance. The knowledge creation process was measured in 19-item scale based on the study of Nonaka et. al. (2000). While, organizational creativity was measured in 5-item scale based on the study of Migdadi (2005). Organizational performance was measured from balanced score card perspective in 10-item scale based on the study of Huo and Zhu (2014). All the constructs were developed using multiple item method and were measured using five point Likert scale with ‘1’ represents ‘strongly disagree’ and ‘5’ represents ‘strongly agree’ to provide the advantage of standardizing and quantifying relative effects.

In total 650 questionnaire were distributed out of which 288 were returned. Out of the returned questionnaires 270 was considered for analysis with response rate 41.5%. Data was tested for reliability by using Cronbach Alpha method. All the four validity face validity, content validity, construct validity, and criterion validity was tested to confirm the validity of the data obtained. Linear regression method was adopted to test the hypothesis. Moreover, mediating effect of organizational creativity was tested through Baron and Kenny (1986) method. According to the authors, we must verify the significant links between the independent variable (KCP) and the mediating variable (OC) and also between the mediating variable (OC) and the dependent variable (OP). Then, mediation is established if the effect of the independent variable on the dependent variable is reduced by the mediating variable. If the direct effect becomes insignificant, mediating effect is therefore complete. In addition, Sobel test has been employed. Sobel test, in statistics, is a method to test the significance of a mediation effect. Causal approach suggested by Baron and Kenny (1986) is the most basic approach. But, this approach suffers from the limitation that it is not able to test the statistical significance of the strength of the indirect effect. In order to supplement this problem Sobel test has been used. The data was then analyzed in SPSS version 22.

4. Reliability and Validity of the Variables

Table 1 presents reliability of all research variables. From Table 1 it is found that Cronbach’s alpha value of all the research variables is above the cut-off level of 0.7. This indicates a high level of internal consistency in the reliability of the variables.

Variable	Cronbach's Alpha
Socialization	0.753
Externalization	0.878
Combination	0.763
Internalization	0.718
Knowledge Creation Process	0.795
Organizational Creativity	0.906
Organizational Performance	0.897

Table 1: Reliability of All Factors

Table 2 presents convergent validity and discriminant validity of the research variables. Convergent validity was measured by using item-to-total correlation. Items with item-to-total correlation above cut-off level (0.4) were considered for further analysis. Factor analysis with varimax was used to check the discriminant validity of the items. Items with loading factors below 0.5 were not considered. Factor analysis was used not only to measure the validity of the items but also it serves as a tool for authenticating the uni-dimensionality of the items of the research variables. There are several approaches to select the number of factors. In this research, factors were determined based on eigen value. Those factors which had eigen values more than 1 were retained for further analysis.

Variable	Factor Loading	Item-to-total Correlation	% of Variance Explained
KCS1	.715	.521	Socialization: One factor is generated out of five with 50.636% variance explained.
KCS2	.686	.481	
KCS3	.807	.638	
KCS4	.727	.546	
KCS5	.608	.414	
KCE1	.795	.676	Externalization: One factor is generated out of five with 67.783% variance explained.
KCE2	.852	.751	
KCE3	.766	.643	
KCE4	.859	.761	
KCE5	.840	.738	
KCC1	.741	.585	Combination: One factor is generated out of five with 52.231% variance explained.
KCC2	.736	.580	
KCC3	.791	.598	
KCC4	.729	.525	
KCC5	.603	.412	
KCI1	.717	.470	Internalization: One factor is generated out of four with 54.450% variance explained.
KCI2	.784	.568	
KCI3	.697	.462	
KCI4	.750	.529	
KCP_Socialization	.845	.743	Grouping Items of Knowledge Creation Process (KCP): One factor is generated out of four with 66.179% variance explained.
KCP_Externalizati	.779	.629	
KCP_Combination	.827	.712	
KCP_Internalizati	.694	.536	
OC1	.865	.782	Organizational Creativity: One factor is generated out of five with 73.280% variance explained.
OC2	.906	.846	
OC2	.813	.709	
OC4	.841	.750	
OC5	.853	.755	
OP1	.646	.625	Organizational Performance: Two factors are generated out of ten with 63.139% variance explained.
OP2	.738	.727	
OP3	.712	.581	
OP4	.733	.642	
OP5	.716	.599	
OP6	.664	.558	
OP7	.740	.710	
OP8	.708	.599	
OP9	.725	.634	
OP10	.831	.795	

Table 2: Validity of All Variables

5. Regression Result

Table 3 presents the regression results of knowledge creation process (KCP) as independent variables with organizational performance (OP) as dependent variable. The overall regression model is significant with R²value 0.46 and Fvalue 21.802. It is also evident from the table that knowledge creation process has significant positive association with organizational performance ($\beta = .215, t = 4.669$). Hence, hypothesis 1 is proved.

Table 3 also presents the regression results of knowledge creation process (KCP) as independent variables with organizational creativity (OC) as dependent variable. The overall regression model is significant with R²value 0.513 and Fvalue 472.547. It is also evident from the table that knowledge creation process has significant positive association with organizational creativity ($\beta = .716, t = 21.738$). Thereby, hypothesis 2 is proved.

Table 3 further presents the regression results of organizational creativity (OC) as independent variables with organizational performance (OP) as dependent variable. The overall regression model is significant with R²value 0.35 and Fvalue 16.038. It is also evident from the table that organizational creativity has significant positive association with organizational performance ($\beta = .186, t = 4.005$). Therefore, hypothesis 3 is proved.

Independent Variable	Dependent Variable			
	Organizational Creativity (OC)		Organizational Performance (OP)	
	β	t	β	t
Knowledge Creation Process (KCP)	0.716***	21.738	0.215***	4.669
Organizational Creativity (OC)			0.186***	4.005

Table 3: Regression Results
***significant at $p < .01$

6. Mediation Analysis

In this study, mediation effect of OC was tested by the conditions suggested by Baron and Kenny (1986). This research assumed organizational creativity as a mediating variable in the relationship between knowledge creation process and organizational performance. Figure 2 presents the mediation graph which depicts the role of OC as mediator between KCP and OP. Research findings reveal that strength of the relationship between KCP and OP is reduced ($\beta = 0.169$) but still remain significant ($p < .05$). Hence, OC as a mediator reduced the total effect of independent variable (KCP) on the dependent variable (organizational performance) by the total of the indirect effect. Also, according to Baron and Kenny (1986), the full mediation would take place if the reduction in total effect becomes insignificant. But in this case, the mediating effect operated by OC in the model tested remains significant thereby indicating partial mediation. Therefore, we can conclude that the mediation is partial. Finally, Sobel test was used and confirmed the significance of the mediating effects ($Z = 2.483, p = 0.013$). Hypothesis 4 is hence partially supported.

Type of Mediation		Significant	
Sobel z-value		2.483568	p = 0.013007
95% Symmetrical Confidence interval			
	Lower	0.0249	
	Higher	0.21138	
Unstandardized indirect effect			
	a*b	0.11814	
	se	0.04757	
Effective Size measures			
Standardized Coefficients			
Total:		0.215	
Direct:		0.169	
Indirect:		0.118	
Indirect to Total ratio		0.549	

Table 4

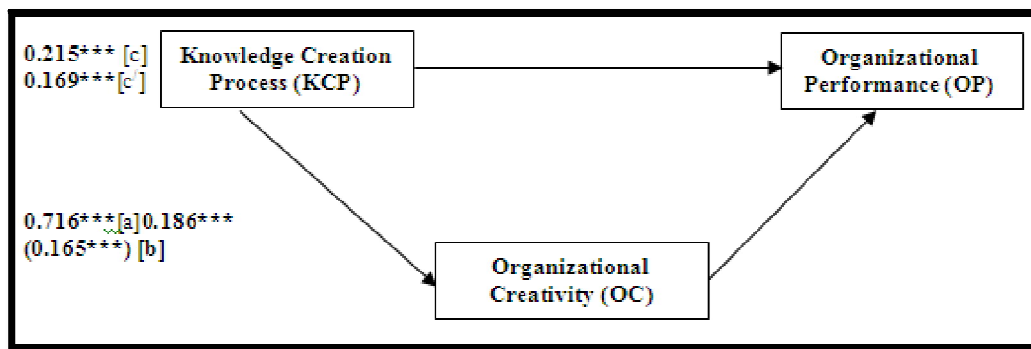


Figure 2: Mediation Graph

7. Conclusion and Implication

This study aimed at identifying the mediating role of OC in the relationship between KCP and OC. In order to achieve the research objective four hypotheses were formulated specifying the relationship among the variables. The study adopted SECI model to explore KCP including socialization, externalization, combination, and internalization. The research has found significant positive relationship between knowledge creation process and organizational performance. The finding is in accordance with previous researches (Shahbakhsh, 2013; Derakhshan, 2016; Abtahi, et. al., 2012, Bihamta et. al, 2012; AIMulhim, 2017). Hence, first hypothesis is supported. Knowledge creation takes place through exchange of tacit and explicit knowledge among employees. In this regard, AIMulhim (2017) emphasized on face to face interaction and discussion, cooperation among employees, learning by doing are essential for knowledge creation to improve organizational performance. To this end, Derakhshan (2016) emphasized on formulating knowledge teams with people involved in knowledge creation and information sharing. Also, creation of atmosphere and idea generation approach organizations can create knowledge to improve performance (Abadi et. al., 2013) The study also found significant positive relationship between knowledge creation process and organizational creativity. This finding is in accordance with previous researches (Lee and Choi, 2003; Migdadi, 2005; Chung et. al., 2009; Soon and Zainol, 2011; AIMulhim, 2017). Therefore, second hypothesis is supported. Organizational creativity stems from organizational culture and environment. Abtahi et. al. (2012) highlighted the role of creating organizational culture and creating the culture in the organization as the driver of knowledge creation to improve creativity. In this connection, learning culture and T-shaped skills are important to drive creativity. Also according to Chung et. al. (2009) organizational agility is vital to drive creativity in the organization.

Furthermore, significant positive relationship has been found between organizational creativity and organizational performance. The finding confirms result of previous researches (Hassan et. al., 2013; Soon and Zainol, 2011; Heffernan et. al., 2009; Chung et. al., 2009; Swann and Birke, 2005; Migdadi, 2005; Lee and Choi, 2003; AIMulhim, 2017). Thus, third hypothesis is supported.

Lastly, this study revealed that organizational creativity significantly mediates the relationship between knowledge creation process and organizational performance. This finding is in line with the study of Lee and Choi (2003), Migadadi (2005), AIMulhim (2017). Accordingly, fourth hypothesis is supported.

This study has theoretical as well as practical contribution. This research attempted to build an integrated framework by linking KCP, OC, and OP. The significant role of OC in mediating the relationship is highlighted in the research. Also, the study incorporated balanced score card approach to measure organizational performance which is noticeable that differentiates the study from other similar kind of studies. Moreover, this research highlighted the most crucial dimensions of the SECI model in contributing to performance and creativity of the organization. Lastly, adoption of SECI model from different cultural perspective is also a remarkable contribution of this research.

The practical contribution of this research is far reaching. From a practitioner standpoint, this paper provides an opportunity for managers to better recognize KCP and OC as the key factors for performance. Indeed, on the basis of this research, managers have to devote efforts in order to improve KCP through reinforcing the socialization, externalization, combination and internalization processes and to boost effective organizational creativity within companies. Thus, we suggest that in order to satisfy customers' needs and attain competitive advantage; managers have to create a better atmosphere in their organizations and encourage their employees to express new ideas. They also should apply effective ways to manage knowledge workers better. In this way managers can generate new knowledge and offer better services to their customers and consequently improve the overall performance of the firm.

8. Limitations and Future Research Scope

In spite of multifarious contributions, this research is not without limitations which need to be addressed in for offering viewpoint for future research. This study was a cross sectional survey that was conducted only on time. In order for having greater understanding longitudinal study can be conducted in future. This study concentrated only on selected service

organizations in Bangladesh. It is thus necessary to include other sectors specially manufacturing sectors to have larger sample to get more probability in generalizing the conclusions. Moreover, comparative study between service and manufacturing sectors with regard to the practices of knowledge creation process can also be initiated which was not addressed in this research. Also, this study found OC to partially mediate the relationship between KCP and OP indicating that OC is not the only variable that in the model. There might be other variables such as agility, learning process, KM capabilities which can mediate or moderate the relationship. Also, a study on cross cultural comparison with respect to adoption of SECI model can be commendable in future. Lastly, this study adopted quantitative approach in explaining the relationship. It will be more useful if mix of quantitative and qualitative study is conducted to get more in depth understanding regarding the relationship among KCP, OC and OP.

9. References

- i. Abadi, D.R.H., Haery, F.A., Borandegi, F. & Fatehi, M. (2013). Investigating the Relationship between Knowledge Creation Process and Organizational Performance in a Service-Sector Organization. *International Journal of Academic Research in Progressive Education and Development*, 2(3), 124-131.
- ii. Abtahi, S.M., Edrisi, F. & Mahmoudi, A. (2012). The Influence of Processes of Knowledge Management on Efficiency Improvement of Faculty of Payam-E-Noor University. *International Journal of Academic Research in Business and Social Sciences*, 2(10), 409-418.
- iii. Alegre, J., & Chiva, R) .2013 .(Linking Entrepreneurial Orientation and Firm Performance :The Role of Organizational Learning Capability and Innovation Performance .*Journal of Small Business Management*, 51)4(, 491-507.
- iv. AlMulhim, F .A .2017 .(The Effects of Knowledge Creation Process on Organizational Performance :Evidencefrom Saudi Banking Sector .*International Journal of Management Sciences and Business Research*, 6)1(, 11-22.
- v. Andreeva, T.& Kianto, A) .2011 .(Knowledge Process, Knowledge-Intensity and Innovation :AModerated Mediation Analysis .*Journal of Knowledge Management*, 15)6(, 1016-1034.
- vi. Auernhammer, J. & Hall, H (2013). Organizational Culture in Knowledge Creation, Creativity and Innovation: Towards the Freiraum model. *Journal of Information Science*, 1-14.
- vii. Baron, M.R .& Kenny, A.D) .1986 .(The Moderator-Mediator Variable Distinction in Social Psychological Research : Conceptual, Strategic, and Statistical Considerations .*Journal of Personality and Social Psychology*, 51)6(, 1173-1182.
- viii. Bai, N .& Fallah, Z) .2012 .(Relationship between Learning Culture and Organizational Performance in Iran's Ministry of Sports and Youth .*European Journal of Experimental Biology*, 2)6(, 2206-2211.
- ix. Berraies, S., Chaher, M. & Yahia, B.K. (2014). Knowledge Management Enablers, Knowledge Creation Process and Innovation Performance: An Empirical Study in Tunisian Information and Communication Technologies Sector. *Business Management and Strategy*, 5(1), 1-26.
- x. Bihamta, H, Nowzari, D., Eghtebasi, S., Subramaniam, D.I., Salimi, M. & Salehi, M. (2012). A Descriptive Study on the Impact of Knowledge Creation Mechanism on Organizational Performance: A Case Study in Malaysian Automotive Industry. *International Journal of Academic Research in Business and Social Sciences*, 2(7). 256-265.
- xi. Chung, T.R., Liang, T.P., Peng, C.H .& Chen, D.N) .2009 .(Knowledge Creation and Organizational Performance :An Organizational agility Perspective. The 9th International Conference on Electronic Business, 697-700.
- xii. Cekmecelioglu, H.G .& Guncel, A) .2013 .(The Effects of Individual Creativity and Organizational Climate on Firm Innovativeness.*Procedia-Social and Behavioral Sciences*, 99, 257 –264.
- xiii. Derakhshan, R., Ghorban Hosseini, M., & Moradi Nasab, S) .2016 .(Studying the Influence of Knowledge Management on Organizational Performance)Evidence from Iran .(*Journal of Administrative Management, Education and Training*, 12)2(, 169-174.
- xiv. DTI)2005 .(Creativity, Design and Business Performance .DTI Economics Paper, 15.
- xv. Dul, J., Ceylan, C .& Jaspers, F) .2011 .(Knowledge Workers' Creativity and the Role of the Physical Work Environment . *Human Resource Management*, 50)6(, 715-734.
- xvi. Gholami, H.M., Asli, N.M., Shirkouhi, N.S .& Noruzy, A) .2013 .(Investigating the Influence of Knowledge Management Practices on Organizational Performance :An Empirical Study .*Acta Polytechnica Hungarica*, 10)2(, 205-216.
- xvii. Gong, Y., Cheung, S. Y., Wang, M. & Huang J. C. (2012). Unfolding the Proactive Process for Creativity: Integration of the Employee Proactivity, Information Exchange, and Psychological Safety Perspectives. *Journal of Management*, 38, 1611-1633.
- xviii. Hassan, M.U., Malik, A.A., Hasnain, A., Faiz, M.F .& Abbas, J) .2013 .(Measuring Employee Creativity and its Impact on Organization Innovation Capability and Performance in the Banking Sector of Pakistan .*World Applied Sciences Journal*, 24)7(, 949-959.
- xix. Heffernan, M., Harney, B., Cafferkey, K .& Dundon, T) .2009 .(Exploring the Relationship between HRM, Creativity Climate and Organizational Performance :Evidence from Ireland .*Academy of Management Conference*, 1-35.
- xx. Hislop, D) .2013 .(Knowledge Management in Organizations :A Critical Introduction .3rd Ed .UK: Oxford University Press.

- xxi. Hsiaoping, Y) .2008 .(A Knowledge Value Creation Model for Knowledge-Intensive Procurement Projects .Journal of Manufacturing Technology Management, 19)7(,871-892.
- xxii. Huang, L.Y.H., Huang, J.W .& Tsai, M.T) .2009 .(Entrepreneurial orientation and firm performance :The role of Knowledge Creation Process .Industrial Marketing Management, 38)4(, 440-449.
- xxiii. Huo, M .& Zhu, L) .2014 .(Performance Evaluation System of Enterprise Knowledge Management Based on Balanced Scorecard .Business and Management Research, 3)3(, 15-19.
- xxiv. Jonas, R) .2003 .(Enabling Knowledge Creation :Learning from a R&D Organization .Journal of Knowledge Management, 7)1(, 32-48.
- xxv. Laeeque, H.S. & Babar, F.S. (2017). Knowledge Creation and Firm Performance: Is Innovation the Missing Link? Pakistan Journal of Commerce and Social Sciences, 11(2), 505-523.
- xxvi. Lee, H .& Choi, B) .2003 .(Knowledge Management Enablers, Processes, and Organizational Performance .Journal of Management Information Systems, 20, 179-228.
- xxvii. Liao, S .H.& Wu, C .C) .2010 .(System Perspective of Knowledge Management, Organizational Learning, and Organizational Innovation .Expert Systems with Applications, 37)2(, 1096-1103.
- xxviii. Kocoglu, I., Imamoglu, S.Z .& Ince, H) .2011 .(The Relationship Between Organizational Learning and Firm Performance :The Mediating Roles of Innovation and TQM .Journal of Global Strategic Management, 9, 72-88.
- xxix. Merx-Chermin, M.& Nijhof, W) .2005 .(Factors Influencing Knowledge Creation and Innovation in an Organization . Journal of European Industrial Training, 29) 2/3(, 135-182.
- xxx. Migdadi, M.M. (2005). An Integrative View and Empirical Examinations of the Relationships among Knowledge Management Enablers, Processes, and Organizational Performance in Australian Enterprises. Unpublished Doctoral Dissertation, University of Wollongong.
- xxxi. Mills A .& Smith T) .2011 .(Knowledge Management and Organizational Performance :A Decomposed View .Journal of Knowledge Management, 15)1(, 156-171.
- xxxii. Nawab, S., Nazir, T., Zahid, M.M .& Fawad, M.S) .2015 .(Knowledge Management, Innovation and Organizational Performance .International Journal of Knowledge Engineering, 1)1(, 43-48.
- xxxiii. Nguyen, V.T., Phan, T.T.A .& Nguyen, T.T.M)2016 .Knowledge Creation, Innovation and Financial Performance of Firms :Evidence from Vietnam .International Journal of Business and Management, 11)6(, 95-107.
- xxxiv. Nonaka, I., Toyama, R .& Konno, N) .2000 .(SECI, Baand Leadership :A Unified Model of Dynamic Knowledge Creation . Long Range Planning, 33, 5-34.
- xxxv. Nonaka, I .& Takeuchi, H) .1995 .(The Knowledge Creating Company -How Japanese Companies Create the Dynamics of Innovation .New York :Oxford University Press.
- xxxvi. Nonaka, I) .1994 .(A Dynamic Theory of Organizational Knowledge Creation .Organization Science, 5)1(, 14-37.
- xxxvii. Omotayo, O.F) .2015 .(Knowledge Management as an Important Tool in Organizational Management :A Review of Literature .Library Philosophy and Practice)e-journal .(Paper 1238.
- xxxviii. Parjanen, S) .2012 .(Experiencing Creativity in the Organization :From Individual Creativity to Collective Creativity . Interdisciplinary Journal of Information, Knowledge, and Management, 7, 109-128.
- xxxix. Pei, N.S) .2008 .(Enhancing Knowledge Creation in Organizations .Communications of the IBIMA, 3, 1-6.
- xl. Rahimi, H., Arbabisarjou, A., Allameh, M.S. & Aghababaei, R. (2011). Relationship between Knowledge Management Process and Creativity among Faculty Members in the University. Interdisciplinary Journal of Information, Knowledge, and Management, 6, 17-33.
- xli. Ramirez, A.M. & Kumpikaite, V) .2012 .(Creation, Transfer and Application of Knowledge and its Importance for Business Innovation and Organizational Performance .International Proceedings of Economics Development & Research, 46)6(, 27-31.
- xlii. Ramírez, M.I., Morales, J.G.V. & Rojas, M.R. (2011). Knowledge Creation, Organizational Learning and Their Effects on Organizational Performance. Inzinerine Ekonomika-Engineering Economics, 22(3), 309-318.
- xliii. Sarand, F.V., Hanaeinezhad, Z., Pourtaheri, M., Naeinid, G.S., Aboofazeli, M .& Moghadas, H) .2015.(Explaining the Relationships of Knowledge Management Processes with Organizational Performance through the Mediator Organizational Learning .International Journal of Management Academy, 3)3 :(13-20.
- xliv. Shahbakhsh, B.(2013). Knowledge Management and its Relationship with Organizational Performance. Interdisciplinary Journal of Contemporary Research in Business, 5(2), 141-149.
- xlv. Sobel, M .E) .1982 .(Asymptotic Confidence Intervals for Indirect Effects in Structural Equation Models .Sociological Methodology .13, 290-312.
- xlvi. Soon, T.T. & Zainol, F.A. (2011). Knowledge Management Enablers, Process and Organizational Performance: Evidence from Malaysian Enterprises. Asian Social Science, 7(8), 186-202.
- xlvii. Swann, P .& Birke, D) .2005 .(How do Creativity and Design Enhance Business Performance? A framework for Interpreting the Evidence .DTI Think Piece, University of Nottingham Business School.
- xlviii. Wang, S .& Noe, R.A) .2010 .(Knowledge Sharing: A Review and Directions for Future Research .Human Resource Management Review, 20, 115-131.

- xlix. Wu, C.C., Wu, C.H., Li, C.C. & Huang, T.H) .2011 .(Drivers of Organizational Knowledge Management .African Journal of Business Management, 5)11(, 4388-4402.
- i. Yang, W .C., Fang, C.S .& Lin, J.L) .2010 .(Organizational Knowledge Creation Strategies :A Conceptual Framework . International Journal of Information Management, 30)3(, 231-238.
 - ii. Yli-Renko, H., Autio, E .& Sapienza, H) .2001 .(Social Capital, Knowledge Acquisition and Knowledge Exploitation in Young Technology-based Firms .Strategic Management Journal, 22,587-613.
 - iii. Yong-Hui L., Jing-Wen H. & Ming-Tien, T. (2009). Entrepreneurial Orientation and Firm Performance: The Role of Knowledge Creation Process. Industrial Marketing Management, 38, 440–449