

A Study on Organisational Factors that Facilitate Knowledge Management

Joshin Joseph

Junior Research Fellow

St Thomas College, Pala, Kerala - 686574.

Received Oct. 14, 2017

Accepted Nov. 19, 2017

ABSTRACT

Knowledge is considered as an organizational resource that enables an organization to have a competitive edge over its rivals. It is because of this, the management of knowledge and its application have vital role in organizations. The model of knowledge management (KM) recognize four phases for its practice: knowledge acquisition, storage, distribution, and utilization. The KM is characterised as an interdisciplinary approach that involves both technical and social aspects. For the effective practice of KM requires proper integration of these dipole aspects-which heavily depend up on factors that as internal to organisation. Therefore the purpose of this study is to identify factors, which are internal to an organization that support KM. To achieve this goal an exploratory study was conducted based on data obtained through questionnaire from a sample of 160 managerial and the result indicates the presence of six factors which are internal to an organization that support KM process in the organizations.

Introduction

Knowledge is an intangible characteristic and tacit component which is responsible for generating a differential advantage to an organization that is difficult for competitors to imitate (Choo, 1998). This implies the importance of knowledge to organization, however the concept of KM is of recent origin; mostly discussed in the late of 90s. The KM is a process promoting the flow of knowledge between individuals and groups within the organization which consists of four essential steps-acquisition, storage, distribution and knowledge utilization (Alavi & Leinder, 2001). The main task of KM is to develop an organisational context that facilitate the creation of new knowledge through explorative and exploitative learning as well as to create premises that allow the retention of knowledge, explicit or implicit and to allow its distribution to individuals within the organization for application in routine, incremental improvement or innovation activities and there by generating competitive advantage (March, 1991).

According to (Gupta & Govindarajan, 2000) for the effective practice of KM, organizations should develop an internal environment that can facilitate the process of KM. This is because of the fact that they establish organizational behaviour, from the cultural point of view, from human resources and their forms of relationship, from the structure and how knowledge is developed and absorbed, which relate to the KM process: the acquisition, storage, distribution, and knowledge utilization. Without the commitment to the development of these factors, any organizational initiatives aimed at KM will not achieve the expected benefits. The basic objective of this study is to identify these internal environmental factors that facilitate KM in organisations. Though the concept of KM is of recent origin. Because of its greater significations to organizations, it has now become an active topic for academicians and researchers. Different scholars have proposed many different KM models. However only a few studies have specifically tried to identify the internal factors that facilitate KM process in organisations. And it is where this study contribute.

The study is structured into four sections including this introductory part. After the introduction, the second section consist of literature review and the identification of variables that promote KM in organization. The next following section inculcate the methodology followed for the study and the final section consist of analysis and interpretation based on empirical evidence obtained as the part of the study.

Literature Review and Identifications of Variables that Promote KM in Organization

This section focus on reviewing the available literature on construct and models that promote KM in organisation with the aim of identifying the different constructs as well as variables proposed by scholars that are capable of promoting KM.

Human Resource Development

Taylorist approach of human resource management (HRM) which is based on the concept of functional foremanship that separates thinkers from performers has now become obsolete. The modern approach of HRM have their values rooted in work and problem solving groups, greater work involvement, as well as the identity and goals shared by them. The modern approach of HRM focus on improving the employee attitude (Zarifian, 2001)

The successfulness of KM initiatives depends up on the employee willingness to share their knowledge and expertise. No organizations can generate knowledge without qualified and motivated employees(Cross & Sproull, 2004).With regard to the transfer of knowledge human resource development (HRD) is essential for the growth of the absorptive capacity and utilization of knowledge (Sparkes & Miyake, 2000). Table 1 shows variables relating to HRD prospective that are capable of promoting KM.

Table 1 Variables associated with HRD prospective

Authors	Relevant aspects	Variables	ID
Zarifian (2001)	Employee Evaluation	The company has a structured method for assessing the skill required for the employees.	HR1
Cross and Sproull (2004)	Training and refreshment programmes	The company offers programmes to improve employee competence	HR2
Leonard (1992); Quigley et al. (2007)	Reward system employed	The companies reward system considers competence	HR3
Fleury and Fleury (2000);Zarifian (2001)	Proactive posture	The management search for self-improvement strategies	HR4
		The management is able to make decisions and manage risk	HR5
Zarifian (2001)	Understanding of Organizational goals	Employees recognize the importance of their work in relation to the corporate strategy.	HR 6

Organizational Culture

Organizational culture (OC) is defined as the values and behaviours of a group of people that contribute to the unique social and psychological environment of an organization. When an organization adopts a system of KM without considering the culture development to foster it the organizational efficiency becomes limited (Skervlavaj, Stenberger, Skrinjar, & Dimovski, 2007). KM initiatives derives from cultural adaption, encourages employees to share the tacit knowledge acquired and problem resolution process (Alavi & Leinder, 2001). Organizations with more open values and focused on mutual support between individuals are predisposed to build a culture of knowledge (Gold, Malhotra, & Segars, 2001). Table 2 shows variables associated with OC prospective capable of promoting KM.

Table 2 Variables associated with OC Prospective

Authors	Relevant aspects	Variables	ID
Gold et al., (2004);Skervlavaj et al., (2007)	Knowledge sharing	Employees often share information and experiences when they face a problem	OC1
		When an employee has an improvement idea, there is cooperation from colleagues	OC2
Delong and Fahey (2000)	Employee identification and interest in relation to company	Employees are aware of the changes taking place in the company and of their individual qualifying needs as well	OC3
Irani et al., (2009); Prajogo and McDermott (2011)	Management attitude	When an employee has an improvement idea, the management acknowledges it	OC4
		There is constant communication between employees and management regarding the company situation	OC5
		Company managers can identify best practices under their responsibility	OC6
Irani et al., (2009); Delong and Fahey (2000)	Risk bearing	The company encourages the employees to make decisions and assumes its risk The company interprets errors, committed by employees as the part of learning process.	OC7 OC8

Teamwork

KM depends on the social context based on teamwork (TW) which is groups that share ideas and aptitudes and promote continuous learning for the individuals(Orlikowski, 2002). A central aspect for the group work effectiveness is the knowledge integration process (Okhuysen& Eisenhardt, 2002). The individual knowledge must be integrated to the groups by the process of assimilation and interpretation(Grand, 1996). Table 3 shows variables associated with TW prospective that are capable of promoting KM.

Table 3 Variables associated with TW Prospective

Authors	Relevant aspects	Variables	ID
London and Sessa (2007)	Routine and improvement activities performed by group	The project team plan, evaluate, perform and analyse the result together	TW1
Okhuysen and Eisenhardt (2002); Lee et al., (2013)	Interaction among group members	The company encourages learning and information exchange among employees	TW2
		Employees of a group are aware of knowledge and skills mastered by their colleagues	TW3
London and Sessa (2007)	Autonomy in decision making	The employees are given autonomy to solve operational problems	TW4
		Employees in a group have the autonomy for self-organization	TW5

Organizational Structure

Organizational structure (OS) is the frame work that links the organizational activities together. The OS is based on three elements, the degree of formalization, centralization, and integration(Liao, Chuang, & To, 2011). High degree of formalization as well as centralization organizations prevents the spontaneous behaviour of that are necessary to stimulate innovations(Tasi, 2002). On the other hand high degree of integration facilitate heavy information flow and there by promote knowledge sharing(Andrews & Kacmar, 2001). The OS has a significant role in determining the flow of information within the organization. Organizations, divided in to departments, subsidiaries and units depends on OS that store, formalize, and distribute knowledge to the individuals and therefore OS act as a facilitator of the KM process (Faraj, Ssirkka, & Majchrzak, 2011). Table 4 shows variables and authors of OS context.

Table 4 Variables associated with OS Prospective

Authors	Relevant aspects	Variables	ID
Faraj et al., (2011): Gaimon (1997)	Knowledge socialization	The company virtual environment for employee discussions (virtual forms, email groups, Skype)	OS1
Garicano and Wu (2012)	Information flow direction	There is an ease of communication in between the departments	OS2
Faraj et al., (2011):	Access to knowledge base	Sufficient access to the company database is granted, irrespective to level of hierarchy	OS3
Ostroff (1999)	Internal changes	When necessary, the company can change the departments, positions and assignment structure	OS4
Ostroff (1999)	Functional integration	For diverse projects, it is common to have the participation of various departments or groups	OS5
Leonard Barton (1992)	Storage of knowledge in integrated databases	The company have an integrated information system, thus allowing access to all areas within it	OS6
		There is a great interest from the company to establish procedures, methods, or instructions for activities	OS7

Development and Knowledge Absorption (DKA)

The absorptive capacity refers to the ability of an organization to recognize the value of knowledge, assimilate it, and apply it to gain competitive advantage. While organizations with higher absorptive capacity tends to be more dynamic and proactive, that is able to exploit opportunities independently. On the other hand companies with lower absorptive capacity tends to be reactive (Cohen & Levinthal, 1990). The organizations which are proactive, that is exploring new knowledge generate larger performance and is of long term in nature. While those are of reactive in nature, that is focused on exploitation leads to stable performance. And both these strategies are essential to stay competitive(Zollo & Winter, 2002). Table 5 shows variables associated with DKA capable of promoting KM.

Table 5 Variables associated with DKA prospective

Authors	Relevant aspects	Variables	ID
March (1991); He and Wong (2004)	Use of existing knowledge to enhance the competitiveness	The company has a structured approach to problem solving	DKA1
		The knowledge developed by employees is utilised for improvement	DAK2
Zollo and Winter	Ability to rebuild its	The knowledge utilization and aptitudes acquired	DAK3

(2002)	internal skills	over time, keeps the company competitive	
Zollo and Winter (2002)	Access to new technologies	The company has ample access to new technologies (sourced from external experts, collaborations, partnerships, etc.,)	DKA4
Cohen and Levinthal (1990); March (1991); He and Wong (2004)	Ability to absorb and explore new knowledge	The company anticipates innovations in the market The company have dominance over technology in the area of expertise	DKA5 DAK6

Methodology

As the objective of the study is to identify new factors that can facilitate KM process in organization, an exploratory design was followed for the study. The study make use of both primary as well as secondary data. The primary data was obtained through questionnaire designed at Qualtrics, which is then hosted at Microworkers for a period of one month from 05/11/2014 to 10/12/2014.

Sample Design

The study is based on the response of 160 managerial staff, who are employed among various sectors. As the number of variable identified stands at thirty two and based on factor analysis. The sample strength is fixed at 160. The sample respondents for the study were identified utilising the database of Microworkers-an online crowdsourcing database platform that holds the contract details of large number of individuals. The questionnaire were posted at Microworkers for collecting response.

Scope of the Study

The present study is based on the response of the managerial staff employed either at manufacturing or at service sector across India. Sample respondents were identified by utilizing the database strength of an online crowdsourcing platform, Microworkers.

Tools and Techniques Used

The data required for the study was obtained with the help of questionnaire. Seven point agreement rating scale was used to measure the respondents response towards variables identified. And the analysis was done with the help of SPSS 22.0 software.

Method of Analysis

The analysis effected on the data collected consist of two part. The first part consist of descriptive statistics, to understand the profile of respondents identified as sample and the second part consist of multivariate analysis, which considers the statistical treatment of factor analysis. When the objective of the study is to understand the meaningful underlying dimensions factor analysis can be used (Ho, 2006). The appropriateness of factor analysis, that is the intercorrelation between the variables studied tested with Kaiser-Meyer-Olkin (KMO) test and with Bartlett’s test of sphericity. Determination of number of factors to be extracted is based on eigenvalues criterion. Only factors with eigenvalues of one or greater are considered to be significant (Ho, 2006).

Analysis and Interpretation

Profile of Respondents

The aim of this part is to understand the surveyed respondent’s personal profile. Table 6 shows 66 percent of respondents belongs to the service sector, where as 34 percent belongs to manufacturing sector. It also indicate that 90 percent of respondents have experience less than 5 years.

Table 6 Respondents Organizational Background and Experience

			Experience			Total
			< 5 years	5 - 10 years	> 10 years	
Company Type	Manufacturing/Production	Count	48	6	1	55
		% of Total	30.0%	3.8%	0.6%	34.4%
	Service	Count	96	6	3	105
		% of Total	60.0%	3.8%	1.9%	65.6%
Total	Count	144	12	4	160	
	% of Total	90.0%	7.5%	2.5%	100.0%	

Table 7 shows 48 percent of respondents were from lower level, 41 percent from mid-level, and 11 percent from top level management respectively. This table also demonstrate that 61 percent of respondents were of male and 39 percent were of female.

Table 7 Respondents Managerial Level and Gender

			Employee Class/ Management Level			Total
			Top level management	Mid-level management	Lower level /supervisor	
Gender	Male	Count	12	43	43	98
		% of Total	7.5%	26.9%	26.9%	61.3%
	Female	Count	5	23	34	62
		% of Total	3.1%	14.4%	21.3%	38.8%
Total		Count	17	66	77	160
		% of Total	10.6%	41.3%	48.1%	100.0%

Identification of Factors that support KM in Organization through Factor Analysis

The factor analysis aims to synthesize the original variables into new dimension called factors with minimum loss of information by establishing the correlation structure between the identified variables.

Determination of the Factorability of Variables

For determining the factorability of variables KMO test of sampling adequacy and Bartlett’s Test of Sphericity were used. Table 8 shows the test result.

Table 8 KMO and Bartlett’s Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.764
Bartlett’s Test of Sphericity	Approx. Chi-Square
	df
	Sig.
	14044.661
	496
	.000

Table 8 shows KMO test produced a value of .764, which is greater than .49. It indicates that the variables are not measuring a common factor. Table 8 also depletes that the Bartlett’s Test of Sphericity test yielded a value of 14044.664 and an associated level of significance smaller than 0.05. Thus the null hypothesis is rejected and concluded that there is significant correlation among at least some of the variables. Therefore it is meaningful to proceed with factor analysis.

Determination of the Factor Number

The latent root Eigenvalue criterion together with percentage of variance criterion was applied to determine the factor number. According to Eigenvalue criterion, only those factors have Eigenvalue value more than one are considered significant and the percentage of variance criterion states that factors should be retained in order to explain at least 60 percent of the variance total.

Table 9 Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.188	25.589	25.589	8.188	25.589	25.589	7.032	21.976	21.976
2	7.023	21.946	47.535	7.023	21.946	47.535	5.835	18.234	40.211
3	5.334	16.670	64.205	5.334	16.670	64.205	5.798	18.120	58.330
4	4.521	14.128	78.334	4.521	14.128	78.334	4.746	14.831	73.161
5	1.739	5.435	83.768	1.739	5.435	83.768	2.341	7.317	80.478
6	1.027	3.211	86.979	1.027	3.211	86.979	2.080	6.501	86.979
7	.606	1.895	88.874						
8	.423	1.320	90.195						
9	.417	1.302	91.497						
10	.381	1.190	92.687						
11	.349	1.092	93.779						
12	.299	.935	94.714						
13	.270	.844	95.558						
14	.253	.790	96.349						
15	.219	.685	97.033						
16	.178	.557	97.590						
17	.157	.490	98.080						

18	.111	.346	98.426						
19	.096	.299	98.725						
20	.081	.252	98.977						
21	.068	.213	99.190						
22	.065	.204	99.394						
23	.051	.160	99.554						
24	.043	.135	99.689						
25	.029	.091	99.780						
26	.021	.065	99.845						
27	.017	.054	99.900						
28	.011	.035	99.935						
29	.008	.026	99.961						
30	.007	.022	99.983						
31	.003	.010	99.993						
32	.002	.007	100.000						

Extraction Method: Principal Component Analysis.

Table 9 shows that there are six factors that have Eigenvalue value more than one and these six factors taken together can accounts for 86.979 percent of the total variance. Therefore these six factors were kept and rotated.

Table 10 Rotated Component Matrix

	Component					
	1	2	3	4	5	6
HR1	.209	.243	-.180	.196	.769	-.073
HR2	.171	.133	-.066	.022	.852	-.018
HR3	.058	.107	.937	.035	.009	-.145
HR4	-.064	.063	.916	-.019	-.263	.110
HR5	.103	.130	.942	.049	-.029	-.092
HR6	-.025	.065	.763	.019	.013	-.254
OC1	.019	.824	.053	.047	.063	-.054
OC2	.954	-.009	.017	-.002	.136	.108
OC3	-.221	-.017	.776	-.058	-.392	.307
OC4	.965	.021	.033	.003	.093	.103
OC5	.000	.946	.146	.049	.086	-.082
OC6	-.029	.809	.067	.084	.111	-.154
OC7	-.004	.936	.102	.006	.085	-.143
OC8	-.012	.945	.108	.053	.035	-.133
OS1	.039	.002	.023	.974	.040	.014
OS2	.092	.137	.872	.064	-.112	-.132
OS3	.068	.040	.022	.955	.104	.009
OS4	.070	.129	.947	-.005	.011	-.148
OS5	.964	.006	.045	-.003	.078	.142
OS6	-.015	.026	-.024	.910	.080	.026
OS7	.139	.244	-.239	.212	.771	-.005
TW1	-.012	.882	.057	-.008	.075	-.148
TW2	-.043	.770	.079	-.143	.201	.193
TW3	.025	.017	.035	.978	.044	-.022
TW4	.975	.001	-.009	.033	.031	.071
TW5	.050	.003	.049	.971	.098	.008
DAK1	.864	-.051	.000	.061	.060	.101
DAK2	.954	-.006	.065	.036	.135	.090
DAK3	.949	.012	.009	.062	.105	.083
DAK4	.378	-.191	-.260	-.054	.000	.800
DAK5	.448	-.341	-.253	.079	-.092	.695
DAK6	.472	-.316	-.232	.094	-.094	.712

Table 10 presents the six factors after Varimax rotation. Seven variableseach loaded on Factor 1, Factor 2, and Factor 3 respectively; five variables loaded on Factor 4; three variables each loaded on Factor 5 and on Factor 6. Table 11 demonstrate factors extracted together with variables included and the label identified for each of the extracted factors as well as rational followed for labelling.

Table 11 Factor Labelling

Variables Included together with ID		Label (Rationale)
FACTOR 1	When an employee has an improvement idea, there is cooperation from colleagues OC2 When an employee has an improvement idea, the management acknowledges it OC4 For diverse projects, it is common to have the participation of various departments or groups OS5 The employees are given autonomy to solve operational problems TW4 The company has a structured approach to problem solving DAK1 The knowledge developed by employees is utilised for improvement DAK2 The knowledge utilization and aptitudes acquired over time, keeps the company competitive DAK3	Problem solving and improvement (variables relates to problem solving and improvement strategy practiced by the organization)
FACTOR 2	Employees often share information and experiences when they face a problem OC1 There is constant communication between employees and management regarding the company situation OC5 Company managers can identify best practices under their responsibility OC6 The company encourages the employees to make decisions and assumes its risk OC7 The company interprets errors, committed by employees as the part of learning process OC8 The project team plan, evaluate, perform and analyse the result together TW1 The company encourages learning and information exchange among employees TW2	Learning culture (variables reflects the learning procedure and practices followed by the organization)
FACTOR 3	The companies reward system considers competence HR3 The management search for self-improvement strategies HR4 The management is able to make decisions and manage risk HR5 Employees recognize the importance of their work in relation to the corporate strategy HR6 Employees are aware of the changes taking place in the company and of their individual qualifying needs as well OC3 There is an ease of communication in between the departments OS2 When necessary, the company can change the departments, positions and assignment structure OS4	Proactive attitude and structural flexibility (variables reflects the proactive stance from the part of management and employees as well as structural flexibility)
FACTOR 4	The company virtual environment for employee discussions (virtual forms, email groups, Skype) OS1 Sufficient access to the company database is granted, irrespective to level of hierarchy OS3 The company have an integrated information system, thus allowing access to all areas within it OS6 Employees of a group are aware of knowledge and skills mastered by their colleagues TW3 Employees in a group have the autonomy for self-organization TW5	Communication (variables relates to information system integration, access, and sharing)
FACTOR 5	The company has a structured method for assessing the skill required for the employees HR1 The company offers programmes to improve employee competence HR2 There is a great interest from the company to establish procedures, methods, or instructions for activities OS7	Evaluation and skill development (employee evaluation and skill improvement)
FACTOR 6	The company has ample access to new technologies (sourced from external experts, collaborations, partnerships, etc.) DAK4 The company anticipates innovations in the market DAK5 The company have dominance over technology in the area of expertise DAK6	Innovation strategy (reflects the innovative ability of the company)

By analysing the factors presented on Table 11, it is very clear that these were the conditions that are related to the internal environment of an organization. And each of these identified factors has two aspects. One is the social aspect which relates to the human element, which includes both the management as well as the employee attitude. The development of a humane approach increases the primary knowledge

base, and, consequently, the ability to absorb new knowledge and accumulate it. Moreover, motivational aspects, such as award and reward systems, are important to develop a greater interest in the work; thus, encouraging a proactive stance with regard to decision making and problem solving. And the other, technological aspect which relates to the technical capabilities processed by an organization. A proper balancing of these aspect is very essential for the effective practice of KM.

Conclusion

The study has identified six factors viz., problem solving and improvement, learning culture, proactive attitude and structural flexibility, communication, evaluation and skill development, and innovation strategy-that are internal to an organization that support KM in organization, thus fulfils the objective of the study. The ultimate aim of KM is to gain competitive advantage through proper integration between individuals and the organization. However when an organization implement KM practices in the organization without proper planning and development, the outcome will be disappointing. Therefore, the identification of these factors elucidates the points to be emphasized by organizations for the successful implementation of KM practices.

References

1. Alavi, M., & Leinder, D. E. (2001). Knowledge management and knowledge management systems: Conceptual foundations and research issues. *MIS Quarterly*, 107-136.
2. Andrews, M. C., & Kacmar, K. M. (2001). Determinating among organizational politics, justice, and support. *Journal of Organization Behaviour*, 347-366.
3. Choo, C. W. (1998). *The knowing organisation: How organizations use information for construct meaning, create knowledge and make decisions*. New York: Oxford Press.
4. Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new prespective on learning and innovation. *Administrative Science Quarterly*, 128-152.
5. Cross, R., & Sproull, L. (2004). More than an answer: Information relationship for actionable knowledge. *Organization Science*, 446-462.
6. DeLong, D. W., & Fahey, L. (2000). Diagnosing cultural barriers to knowledge management. *Academy of Management Executive*, 113-127.
7. Faraj, S., Ssirkka, L. J., & Majchrzak, A. (2011). Knowledge collaboration in online communities. *Organization Science*, 124-139.
8. Figueiredo, P. (2003). Learning, capability accumulation and firms differences: Evidence from latecomer steel. *Industrial and Corporate Change*, 607-643.
9. Garicano, L., & Wu, Y. (2012). Knowlwdge, communication, and organizational capabilities. *Organization Science*.
10. Gold, A. H., Malhotra, A., & Segars, A. H. (2001). Knowledge management : An organizational capabilities perspective. *Journal of Management Information Systems*, 184-214.
11. Grand, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 109-122.
12. Gupta, A. K., & Govindarajan, V. (2000). Knowlwdgw flow within the multinational corporations. *Strategic Management Journal*, 473-496.
13. Ho, R. (2006). *Handbook of Univariate and Multivariate Data Analysis and Interpretation with SPSS*. NW: Taylor and Francis Group.
14. Lee, P. K., Too, W. M., & Ty, B. T. (2013). Team attributes and performance of operational service teams: An emprical tazonomy development. *International Journal of Production Economics*, 51-60.
15. Leonard-Barton, D. (1992). The factory as a learning laboratory. *Solan Management Review*, 23-38.
16. Liao, C., Chuang, S. H., & To, P. L. (2011). How knowledge management mediates relationship between environment and organizational structure. *Journal of Business Research*, 728-736.
17. London, M., & Sessa, V. I. (2007). How groups learn, continuously. *Human Resource Management*, 65-69.
18. March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 71-87.
19. Okhuysen, G. A., & Eisenhardt, K. M. (2002). Integrating knowledge in groups: How formal interventions enable flexibility. *Organization Science*, 370-386.
20. Orlikowski, W. J. (2002). Knowing in practice: Enacting a collective capability in distributed organizing. *Organization Science*, 249-273.
21. Skerlavaj, M., Stenberger, M. I., Skrinjar, R., & Dimovski, V. (2007). Organizational learning culture: The missing link between business process change and organizational performance. *International Journal of Production Economics*, 346-367.
22. Sparkes, J. R., & Miyake, M. (2000). Knowlwdge transfer and human resource development practices: Japanese firms in Brazil and Mexico. *International Business Review*, 599-612.
23. Tasi, W. (2002). Social; structure of cooperation within a multiunit organization: Coordination, competition, and intra-organizational knowledge sharing. *Organizational Science*, 179-190.
24. Zarifian, P. (2001). *Competency goal: A new logic*. Sao Paulo: Atlas Press.
25. Zollo, M., & Winter, S. G. (2002). Deliberate learning and the evolution of dynamic capabilities. *Organization Science*, 339-351.