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A Managerial model for knowledge management in Algerian Organizations

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Abstract—

Purpose - This study examines the relationship between knowledge management framework (enablers) and knowledge management processes from knowledge based-view in managerial approach. We present a model that links the factors of knowledge management framework (leadership, organizational culture, organizational structure and information technology) to knowledge management processes (creation, sharing, storage, application and evaluation).

Design/methodology/approach – The unit of analysis is Algerian Telecom Company- Tlemcen direction. To obtain the data a Questionnaire survey was used. The response sample included 123 responses. The relations among variables were tested using the Ordinary Least Squares (OLS) Method.

Findings – The results of this study indicate that organizational structure, information technology, and organizational culture have a significant positive effect on knowledge management processes, but the leadership hasn't a significant effect, so it isn't considered as a determinant of knowledge management processes.

Originality/value – Previous studies on knowledge management framework and knowledge management processes have been fragmented in that they have explained some aspects of this relationship but they have not provided a direct relationship between these components. In addition, this study examines the managerial model of knowledge management in Algerian organizations.

Keywords— knowledge management, knowledge based-view, knowledge management processes, knowledge management framework, Algerian organizations

I. INTRODUCTION

Knowledge management is generally emerged as a discipline in 1990 and it was widely used by consulting organizations and it is developed through international conferences and meetings. In fact, Peter Drucker has invented "knowledge economy" and "knowledge workers" (Lambe, 2011, p. 179).

Accordingly, the purpose of this paper is to examine the impact of knowledge management enablers on knowledge management processes in Algerian organizations. The remainder of the paper proceeds as follows. The next section considers the relevant literature and sets out the hypotheses of this study. After, we present the methodology of the study. Then, the paper presents the results of the empirical study in achieving the goals as those set out above.

ISSN: 2356-5608, pp.26-37

II. RESOURCES BASED-VIEW: LITERATURE REVIW

Cyert and March consider that the firm is a place of collective learning (Weinstein, p. 91). According to Nelson and Winter, the firm is defined as "a dynamic set of competence," and firms are distinguished by the nature of their expertise they have accumulated over the years. Evolutionary theory has a principle that every organization reacts differently to adapt to their environment, and it has its mechanisms, its capacity for innovation and organizational learning system and its autoorganization (Plane, 2003, p. 153).

Thus, the competitiveness of the firm is based on the "core competence" (Weinstein, p. 94). The "core competence" of the organization are based on organizational and technological routines and knowledge which are tacit and not imitable (Plane, 2003, p. 153; Coff et al, 2006, p. 452).

According to evolutionary theory, the organization is guided by «guiding rules of action» for their survival, it is the behavior of «satisfacing» not «maximising» (Coriat and Weinstein, 1995, p. 111).

D. J. Teece considers the organization as "a set of differentiated technological skills, complementary assets and routines that constitute the basis of the competitive capabilities in a particular activity". This "core competence" is based on routines, learning that result more organizational knowledge. These routines are tacit and therefore not imitable (Filleau and Marques-Ripoull, 1999, p 144).

According to evolutionists, learning is defined as "a processes by which through the repetition and experimentation, tasks are done better and faster, and new opportunities in the procedures are

experienced" (Dosi, Teece and Winter, 1990, p. 242).

Indeed, Edith T. Penrose is generally recognized as the pioneer author of resource based-view. In her book "The theory of growth of the firm," Penrose emphasizes the importance of the tangible and intangible resources to explain the existence and growth of the firm (Penrose, 1955). In 1984, this theory is officially named the "Resource-based view" with the authors: Wernerflet (1984), Dierickx and Cool (1989) and Barney (1991). Then it was developed especially in the field of strategic management in these last decades (Brulhart et al, 2010, p. 83).

Resources are defined by Dosi et al. (1991) as "a set of differentiated skills, complementary assets and routines and organizational capabilities that support competitive enterprise capabilities in a particular sector". (Métais, 2004, p. 31), and for Barney "The include assets, resources all capabilities, organizational processes, attributes, information, knowledge, competencies ... which are controlled by the organization, and that enabling it to formulate implement strategies to improve effectiveness and efficiency (Barney, 19991, p. 101).

The Resources based-view is based on the influence of organizational capabilities and particularly competencies and knowledge on competitive advantage and performance (Luc, 2009, p. 36).

In addition, Wernerfelt explains the resource as "anything that can be considered as strength or a weakness for the organization" (Wernerfelt, 1984, p. 172).

For that reason, several authors consider knowledge as the most important resource in the organization; it is a strategic resource, and now, managers must based on the production, acquisition, transfer and

ISSN: 2356-5608, pp.26-37

use of knowledge (Spender, 1996, p. 49; Bollinger and Smith, 2001, p. 10; Bhatti, Zaheer and Ur Rehman, 2011, p. 2847; Chuang, Chenchen and Shinyi, 2013, p. 218; Kim, Seokwoo, Sambamurthy and Lyoul, 2012, p. 1047). Knowledge is seen as the main source of economic rent (Spender and Grant, 1996, p. 05). Many scholars consider the firm as a set of knowledge (Spender, 1996, p. 45). However, the literature of knowledge management focuses on the use of knowledge to create added value (Grant, 1996, p. 111). Consequently, the main objective of the organization is to acquire and create organizational knowledge. Organizational knowledge is defined as circumstances, resources, objective, attitudes and causal mechanisms ... of the organization. The operating rules, technologies, and database of consumers are tangible representations of enterprise knowledge (Kogut and Zander, 1992, p. 384).

However, There are two approaches of knowledge management: managerial approach and technological approach (Hansen et al, 2003, p 119). In this study, we treat knowledge management in managerial approach.

III. THE DIKW PYRAMID (DATA-INFORMATION-KNOWLEDGE-WISDOM)

A data represents observations or facts out of context, they are therefore not directly meaningful, it has no meaning in itself (Nada et al, 2003, p. 76), it is objective, quantitative or qualitative (Aliouat, 2005, p. 62), it can be stored, captured and manipulated. The data can be extracted for useful information (Kipling, 2007, p. 05; Dilon, 2002, p. 322). But, information is a data in significant context, often in the message (Nada et al, 2003, p. 76-77). In addition, Knowledge is strongly linked to human action (Tsoukas and Vladimirou, 2001, p. 973; Chawla, 2012, p. 15), it resides in individuals as information, experiences, insights and skills,

products/services, activities and processes (Chuang, 2013, p. 218).

Sveiby (1997), defined knowledge as "Makes sense in a context or the ability to act" (Almashari et al, 2002, p. 74). For Alavi and Leidner, (2001), it means "Justified personal belief that increases the ability of an individual to take effective action" (Alavi and Leidner, 2001, p. 109).

And finally, according to Cleveland (2002), wisdom means "the application of knowledge to make individual and organizational choices and decisions" (Klinger and Sabet, 2005, p. 200).

In the literature of knowledge management, some authors have agreed about the hierarchy of knowledge (or the pyramid of knowledge) which is shown in Fig. 1.

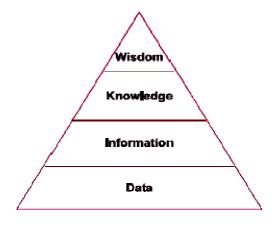


Fig. 1.: The pyramid of knowledge (Bernstein, 2013, p. 69)

IV. KNOWLEDGE MANAGEMENT

Knowledge management is topicality concept, it appeared as a discipline in the 1990s (Earl, 2001, p. 215; Chuang, Chenchen and Shinyi, 2013, p.218). In the literature, there is no universal definition of knowledge management. For that reason, the table No. 1 presents some definitions:

Authors	definition		
Wiig (1995)	Clearly defined methods and processes		

ISSN: 2356-5608, pp.26-37

	used to search the important knowledge
	between the different operations of
	knowledge management (Liu, Chen and
	Tsai, 2005, p. 637).
Sveiby, (2001)	"An art of creating value from intangible
	assets of an organization" (Wild and
	Griggs, 2008, p.492).
(Aboelmaged,	Processes of capturing, sharing and using
2012)	knowledge (Aboelmaged, 2012, p. 44).
Chuang,	Systematic and organizational processes
Chenchen and	for the creating, transfering, integrating
Shinyi, (2013)	and leveraging particular knowledge of a
	functional unit, this knowledge is
	applicable across the units that create a
	particular competitive advantage.

TABLE I: KNOWLEDGE MANAGEMENT DEFINITION

There are many models of knowledge management processes that describe the relationship between the main processes extending from three steps (generate, codify, transfer) to seven steps (create, acquire, identify, adapt, organize, distribute, apply) (King, 2009, p. 06). In fact, Lachachi, Kerzabi and Houhou, (2013) propose a global model for knowledge management processes (see fig. 2).

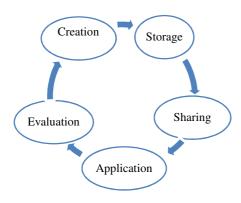


Fig. 2 Knowledge management processes

(Lachachi, Kerzabi and Houhou, 2013, p. 167)

1. Knowledge creation

The creation and acquisition processes were designed to acquire the necessary knowledge to perform tasks such as participation in seminars, and

the acquisition from suppliers and customers. They also aim to create new ideas, best practices and even patents (Wong, Pin, Sheng and Peng, 2014, p .04). Knowledge creation can be defined as "a processes of development of new knowledge". The major issues regarding the creation of knowledge is relating to the four modes of Nonaka and Konno (Socialization, Combination, Externalization, Internalization) (Nonaka and Konno, 1998, p. 43).

2. Knowledge storing

After creating and acquiring new knowledge, mechanisms of knowledge management should be implemented to memorize it in order to maximize its impact and its reusability in a long-term. Knowledge can be stored in many forms such as databases and written documents (Kuah and Wong, 2013, p. 204). Then, created knowledge must be stored and archived in the organizational memory (Alegre, Sengupta and Lapiedra, 2011, p. 455).

3. Knowledge sharing

Knowledge sharing is "the processes of exchange of knowledge between individuals in the organization, it's a two-way interaction" (Rossion, 2008, p. 50). The organization must establish a culture that promotes the knowledge sharing. The community of practice (CoP) is a method in which knowledge is shared completely in the group. Knowledge sharing also includes the transfer of knowledge which is a unilateral interaction (Kuah and Wong, 2013, p. 204). Sharing knowledge reflects how knowledge is transferred and interpreted vertically and horizontally within the organization in order to improve organizational processes and performance (Aboelmaged, 2012, p. 45).

4. Knowledge application

Knowledge application is the main objective of knowledge management (Aboelmaged, 2012, p. 45). The application is marked by the development of new products and services, improving the quality, cost reduction and customer satisfaction

ISSN: 2356-5608, pp.26-37

(Aboelmaged, 2012, p. 45) and also the implementation of best practices after its creation (Wong, 2014, p. 04).

5. Knowledge evaluation

Finally, in order to be competitive, knowledge must be evaluated to ensure its appropriate and accurate to situations defined (Sammour, Schreurs, Al-Zoubi and Vanhoof, 2008, p. 469).

V. KNOWLEDGE MANAGEMENT INFRASTRUCTURE (ENABLERS)

The enablers are the structural and cultural technical factors that help to maximize the use of intangible assets of an organization (Gold, Malhotra and Segars, 2001) and particularly knowledge. The processes of knowledge management are influenced by several factors such as organizational culture, information technology, organizational structure and top management (leadership) (Chen, Elnaghi and Hatzakis, 2011, p. 19; Hsiao and Wen, 2011, p. 411).

The knowledge management framework is a collection of elements (or factors) that work together in varying combinations as a system to support the knowledge capital of an organization and to ensure performance and learning for sustainable development (Gorelick and Tantawy-Monsou, 2005, p. 126).

1. Leadership

Knowledge management is an important function of the leader, because the degree of support from top management determines the success or failure of knowledge management project. Leader behavior can facilitate the transmission of knowledge by supporting knowledge sharing which affects the efficiency of the organization. Lakshman (2007) suggests that the role of the leader in knowledge management begins with the awareness of the importance of knowledge management in the performance of the organization. (Lakshman, 2009, p. 340-344).

2. Organizational culture

Organizational culture is the result of social interactions in the organization (Kim, Seokwoo, Sambamurthy and Lyoul, 2012, p. 1049). For effective knowledge management, organizational culture is considered as the most important factor (Gold, Malhotra and Segars, 2001, p. 189). According to Kim, Seokwoo, Sambamurthy and Lyoul (2012), organizational culture is a set of norms and values concerning individual and organizational behavior in the processes of developing new knowledge (Kim, Seokwoo, Sambamurthy and Lyoul, 2012, p. 1049).

3. Organizational structure

The organizational structure is defined as "the formal rules, tasks, functions and authorities which are in an organization, including policies, processes, reporting relationships, reward systems, departmental separations ... etc (Gold, Malhotra and Segars, 2001, p. 188-189).

4. Information technologies

The information technologies are seen as a crucial element that mobilizes members of the organization to create and share knowledge with each other because it eliminates barriers and facilitates communication between the different departments of the organization (Gold, Malhotra and Segars, 2001, p. 187).

VI. THE RELATIONSHIP BETWEEN KNOWLEDGE MANAGEMENT INFRASTRUCTURE AND KNOWLEDGE MANAGEMENT PROCESSES

1. Leadership and knowledge management processes

Leaders implement practical management of human capital, stimulate organizational learning and establish an organizational culture that promotes knowledge sharing (Birasnav, 2013, p. 02). They also participate in the acquisition, creation, sharing and application of knowledge in the organization (Birasnav, 2013, p. 07). Leaders must create a

ISSN: 2356-5608, pp.26-37

culture that values knowledge, strengthening its shares, keeping the employees and improves their fidelity for the organization (Bollinger and Smith, 2001, p. 14).

2. Organizational culture and knowledge management processes

Organizational culture is a most important factor in knowledge management because it encourages individuals to create and share knowledge through dialogue between them and even between groups and units (Bollinger and Smith, 2001, p 13; Chuang, Chenchen and Shinyi, 2013, p. 220; Ho, Hsieh and Hung, 2014, p. 736).

Organizational culture makes the knowledge management processes efficient and effective by stimulating the active participation of individuals in the activities and practices of knowledge management (creation, sharing and use ... etc) (Kim, Seokwoo, Sambamurthy and Lyoul, 2012, p. 1048). Dialogue between individuals and between groups within the organization stimulates the creation of new ideas and participates in the innovation processes (Gold, Malhotra and Segars, 2001, p. 189). Therefore, the organization must establish an appropriate culture that encourages individuals to create and share knowledge (Lee and Choi, 2003, p. 188).

3. Organizational structure and knowledge management processes

The organizational structure promotes knowledge sharing in the organization; it also participates in the implementation of knowledge management practices (Ho, Hsieh and Hung, 2014, p. 736). The organizational structure can encourage creativity and knowledge sharing (Pandey and Dutta, 2013, p. 436). Many scholars focus on the organizational structure, because usually a formal structure prevents interaction between employees and even between units (Conley and Zheng, 2009, p. 339).

4. Information technologies and knowledge management processes

The information technologies such as databases (and also knowledge bases), search engines, the groupware, intranet, extranet and data warehouses facilitate knowledge management processes (Chuang, Chenchen and Shinyi, 2013, p. 218). In fact, they contribute to the acquisition, storage, sharing and use of knowledge within the organization (Chuang, Chenchen and Shinyi, 2013, p. 218). The information technologies help people to communicate, facilitate the acquisition and integration of knowledge, people connected with experts in specialized fields (Kim, Seokwoo, Sambamurthy and Lyoul, 2012, p. 1051).

VII. RESEARCH MODEL

This study focused on determination of four factors that affect Knowledge management processes which are: knowledge application, Share and creation of information and knowledge, knowledge evaluation, and knowledge storing. The research model is presented in Fig. 3.

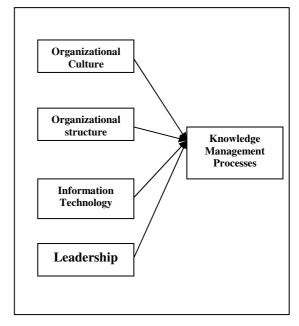


Fig. 3: The research model (Authors) *Theoretical Hypotheses*

ISSN: 2356-5608, pp.26-37

Hypothesis 1: the organizational culture has a positive effect on Knowledge management processes.

Hypothesis 2: the organizational structure has a positive effect on Knowledge management processes.

Hypothesis 3: the information technology has a positive effect on Knowledge management processes.

Hypothesis 4: the leadership has a positive effect on Knowledge management processes.

Hypothesis 5: knowledge management infrastructure (organizational culture, organizational structure, information technology, and leadership) have a positive effect on Share and creation of information and knowledge.

Hypothesis 6: knowledge management infrastructure (organizational culture, organizational structure, information technology, and leadership) have a positive effect on knowledge storing.

Hypothesis 7: knowledge management infrastructure (organizational culture, organizational structure, information technology, and leadership) have a positive effect on Knowledge application.

Hypothesis 8: knowledge management infrastructure (organizational culture, organizational structure, information technology, and leadership) have a positive effect on knowledge evaluation.

VIII. RESEARCH METHODS

Measures of variables

The definition and measurement items for the research variables in this study are outlined in table.

3. The items are adapted from previous studies which have been used and validated for studies in Knowledge management processes and enablers.

Most variables in the model are measured by items written in the form of statements that the

respondent agrees or disagrees with to varying degrees using a three-point scale of likert. The items were revised based on the reviews by three professor scholars in Management, and their comments were taken into consideration in order to improve understandability and clarity of questionnaire.

Sample

The unit of analysis is the employees of Algerian Telecom Organization- Tlemcen direction. The scholars have selected this organization from a list of companies that work in Algeria due to its national leadership in several aspects especially in using new management techniques and providing technological services.

The response sample included 200 responses, where 123 responses were received. The response rate is 61.5 percent. We should note that some of the employees had some reserves because of the organization's reorganization and restructure. So we prefer to avoid their answers. Thus, the final sample included 123 responses.

TABLE II: ITEMS FOR VARIABLES

Variables	Item code
	C1
	C2
Organizational culture	C3
Organizational culture	C4
	C5
	C6
	Str1
organizational structure	Str2
	Str3
	T1
Information technology	T2
	Т3
leadership	L
	O1
Knowledge application	O2
	O3

ISSN: 2356-5608, pp.26-37

	O4
	Sh1
	Sh2
Share and creation of information	Sh3
and knowledge	Sh4
and knowledge	Sh5
	Sh6
	Sh7
	L1
knowledge evaluation	L2
	L3
Knowledge	M1
Storing	M2
Storms	M3
	G1
General Information	G2
Seneral information	G3
	G4

Reliability Test

Firstly, the questionnaire was built basing on many previous studies, with respect to the methodological conditions. Then, Cronbach's alpha is used as a measure of internal consistency, that is, how closely related a set of items are as a group. A "high" value of alpha is often used as evidence that the items measure an underlying (or latent) construct. However, a high alpha does not imply that the measure is one-dimensional. Cronbach's alpha is not a statistical test; it is a coefficient of reliability (or consistency).

Cronbach's alpha can be written as a function of the number of test items N and the average inter-item covariance among the items c-bar and the average variance v-bar. Below, for conceptual purposes, we show the formula for the standardized Cronbach's alpha (Cronbach, Rajaratnam and Gleser, 1963):

$$\alpha = \frac{N \cdot \bar{c}}{\bar{v} + (N-1) \cdot \bar{c}}$$

The alpha coefficient for the four items is 0.8938, suggesting that the items have relatively high internal consistency. (Note that a reliability coefficient of 0.70 or higher is considered "acceptable" in most management research).

Partial Reliability

The partial Reliability test for each variable is shown in TABLE III.

TABLE III: THE PARTIAL RELIABILITY TEST

Variable	Cronbach's α	Result
Knowledge	0.8938	internal
management processes	0.0750	consistency
Knowledge application	0.8256	internal
Timo wreage appreciation	0.0250	consistency
Share and creation of		internal
information and	0.7983	consistency
knowledge		consistency
knowledge evaluation	0.9002	internal
	313 002	consistency
Knowledge	0.745	internal
Storing	3.7.13	consistency

So we can conclude that Knowledge application, Share and creation of information and knowledge, knowledge evaluation, Knowledge storing and Knowledge management processes are internal consistency.

Characteristics of the sample

TABLE IV exposes a set of brief descriptive coefficients that describes the general information variables. The measures of central tendency give some main information about the sample selected. From the table bellow we can conclude some important characteristics of the employees (the units in this sample):

- The majority of them are more than 40 years.
- Most of them have a long experience (more than 15 years).
- They are high educated.

ISSN: 2356-5608, pp.26-37

- Most of them are top and middle management because of the nature of the organization.

TABLE IV: DESCRIPTIVE STATISTICS ABOUT GENERAL INFORMATION

	Age	Category	Education	Experience
Mean	3.26	2.29	3.57	4.26
Median	3.00	3.00	4.00	4.00
Maximum	5.00	3.00	5.00	7.00
Minimum	1.00	1.00	2.00	1.00
Std. Dev	0.97	0.81	0.67	2.07
Skewness	0.043	-0.58	-0.25	0.12
Kurtosis	2.11	1.78	2.88	1.45

IX. STATISTICAL HYPOTHESES TESTING:

This study adopts Ordinary least Square model to get the relationship between the study's variables. The equations of the global model can be written as follow:

Knowledge management processes = $\beta_0 + \beta_1$ Organizational culture + β_2 Organizational Structure + β_3 Information technology + β_4 Leadership+ u_{1i} ... (1)

Share and creation of information and knowledge = $\beta_{10} + \beta_{11}$ Organizational culture + β_{12} Organizational Structure + β_{13} Information technology + β_{14} Leadership+ u_{3i} ... (2)

Knowledge storing = β_{20} + β_{21} Organizational culture + β_{22} Organizational Structure + β_{23} Information technology + β_{24} Leadership+ u_{5i} ... (3)

Knowledge application $= \beta_5 + \beta_6$ Organizational culture $+ \beta_7$ Organizational Structure $+ \beta_8$ Information technology $+ \beta_9$ Leadership+ u_{2i} ... (4)

Knowledge evaluation = $\beta_{15} + \beta_{16}$ Organizational culture + β_{17} Organizational Structure + β_{18} Information technology + β_{19} Leadership+ u_{4i} ... (5)

The t test is used to test the individual significance of the parameters. T test investigates the null

hypothesis (H₀) against the alternative (H₁). If the t test leads to accept H₀, the parameter is insignificant at a given level of significance α (Gujarati and Porter, 2009).

$$\begin{cases} H_{0:} \ \beta i = 0 \\ H_{1}: \ \beta i \neq 0 \end{cases}$$

TABLE V: KNOWLEDGE MANAGEMENT PROCESSES MODEL

RESULTS (EQUATION (1))

Statistical null hypotheses		Coefficient	t- cal	result
Н1	Organizational culture doesn't affect Knowledge management processes	0.148***	3.29	rejected
Н2	Organizational Structure doesn't affect Knowledge management processes	0.081*	1.72	rejected
Н3	Information technology doesn't affect Knowledge management processes	0.149***	3.76	rejected
Н4	Leadership doesn't affect Knowledge management processes	-0.021	0.63	accepted

Note: *p< 0.1; **p< 0.05; ***p< 0.01; (the cases of rejection H₀)

Remark: Constant is significant at 1%.

The findings of the study show that Organizational culture and Information technology have a positive and significant effect on Knowledge management processes, and Organizational Structure has a poor positive effect on Knowledge management processes (at 10% level of significant). However, leadership has no significance effect on Knowledge management processes.

TABLE VI: KNOWLEDGE MANAGEMENT PROCESSES
COMPONENTS MODELS RESULTS (EQUATION (2), (3), (4), (5))

	Dependent variables
Independen	

ISSN: 2356-5608, pp.26-37

	t variables	Knowle dge applicat ion	Share and creati on	Knowle dge evaluati on	Knowle dge storing
H 1	Organizati onal culture	-0.092	0.187*	0.433**	0.095
H 2	Organizati onal Structure	0.009	0.121	0.050	0.118
Н 3	Informatio n technology	0.089*	0.271*	0.092	0.238**
H 4	Leadershi p	0.039	-0.069	-0.014	0.004

Note: *p< 0.1; **p< 0.05; ***p< 0.01; (the cases of rejection H₀)

Remark: All constants are significant at 1%.

Results shown in TABLE VI prove that the Information technology is the most important factor, it promotes three knowledge management processes components (Share and creation of information and knowledge, Knowledge storing and Knowledge application). The second main factor according to the study results is Organizational culture, which affects Share and creation of information and knowledge, and Knowledge evaluation.

However the other factors (Organizational Structure and Leadership) have no impact on all dependent variables.

In addition, the F test is used to test the global significance of the model. F test investigates the null hypothesis (H_0) against the alternative (H_1). If the F test leads to accept H_0 , all the model parameters are insignificant at a given level of significance α (insignificance of the model) (Gujarati and Porter, 2009).

$$\begin{cases} H_0 \colon \forall \ \beta i, \ \beta i = 0 \ , \ ... \ i = 1, 2, ..., k \\ H_1 \colon \exists \ \beta i, \ \beta i \neq 0 \ , \ ... \ i = 1, 2, ..., k \end{cases}$$

TABLE VII: F TEST RESULTS

Equatio n	Statistical hypotheses	F cal	Result
(1)	Model insignificance	23.32***	rejected
(2)	Model insignificance	16.50***	rejected
(3)	Model insignificance	7.62***	rejected
(4)	Model insignificance	2.63**	rejected
(5)	Model insignificance	16.09***	rejected

Note: *p< 0.1; **p< 0.05; ***p< 0.01;(the cases of rejection H₀)

Four from five equations of the model are significant at 1% as shown in TABLE VII, and equation (4) is significant at 5%. So the results estimated from the equations are accepted.

X. RESULTS ANALYSIS

Then, we accept the theoretical hypotheses: H1, H2, H3, and we reject the theoretical hypotheses H4. According to the rest of the hypotheses we conclude that two factors (Information technology and Organizational culture) affects knowledge management processes components.

XI. CONCLUSION AND DISCUSSION

The knowledge is considered as the most important resource in the organization in these last decades. For that reason, it is necessary to manage this asset of knowledge. Thus, there is two approaches of knowledge management: managerial approach and technological approach. Theoretically, there is a relationship between knowledge management framework and knowledge management processes. But, in practice, we find that the relationship between organizational culture, information technologies and knowledge management processes is significant. In contrast, there is not a relationship between leadership and knowledge management processes; we suppose that the top and middle management are not able to understand the objectives of knowledge management project. In addition, the organizational structure in this organizational is not suitable for sharing and

ISSN: 2356-5608, pp.26-37

creating knowledge. For that reason, the organization began to change its structure to be more effective in knowledge management especially in knowledge sharing.

REFERENCES

- Aboelmaged Mohamed Gamal, (2012), Linking operations performance to knowledge management capability: the mediating role of innovation performance, *Production Planning & Control: The Management of Operations*, Vol. 25, No. 1, pp. 44-58.
- Alavi Maryam and Leidner Dorothy E, (2001), review: knowledge management and knowledge management systems: conceptual foundations and research issues, MIS Quarterly, Vol. 25, No. 1, March, pp. 107-136.
- Aliouat Boualem, (2005), les conditions d'efficacité du « knowledge management » pour l'entreprise dans un contexte de croissance informationnelle : une analyse empirique de la gestion des connaissances, colloque international sur: l'économie de la connaissance, faculté des sciences économique et de gestion, université de Biskra, 12 et 13 Novembre, pp. 57-88.
- Alegre, Sengupta and Lapiedra Joaquin, Sengupta Kishore and Lapiedra Rafael, (2011), Knowledge management and innovation performance in a hightech SMEs industry, *International Small Business Journal*, Vol. 31, No. 4, pp. 454-470.
- Almashari M., Zairi M. and Alathari A., (2002), An empirical study of the impact of knowledge management on organizational performance, Journal of Computer Information Systems, Special Issue, pp. 74-82.
- Barney Jay, (1991), Firm Resources and Sustained Competitive Advantage, *Journal of Management*, Mars, Vol. 17, No. 01, pp. 99-120.
- Bernstein, J. H. (n.d.). The Data-Information-Knowledge-Wisdom Hierarchy and its Antithesis. Retrieved online on March 1, 2013 at http://journals.lib.washington.edu/index.php/nasko/article/viewFile/12806/1128.
- Birasnav M., (2013), Knowledge management and organizational performance in the service industry: The role of transformational leadership beyond the effects of transactional leadership, *Journal of Business Research*, pp. 01-08.
- Bhatti Waheed Akbar, Zaheer Arshad and Ur Rehman Kashif, (2011), The effect of knowledge management practices on organizational performance: A conceptual study, African Journal of Business Management, Vol. 5, No. 7, pp. 2847-2853.
- Bollinger Audrey S. and Smith Robert D., Managing organizational knowledge as a strategic asset, *Journal of Knowledge Management*, Vol. 5, No. 1, pp. 8-18.
- Brulhart Frank, Guieu Gilles, Maltesse Lionel and Prévot Frédéric, (2010), Théorie de ressources: Débat théoriques et applicabilités, *Revue française* de gestion, Vol. 05, No. 204, pp. 83-86.
- Byounggu Choi, (2002), Knowledge Management Enablers, Processes, and Organizational Performance: An Integration and Empirical Examination, doctorat thesis supervised by Heeseok Lee, the faculty of Korea Advanced Institute of Science and Technology, Seoul, Korea, 24 Mai, pp. 213.
- Chawla Deepak and Joshi Himanshu, (2012), An Approach to KM Implementation in Indian

- Manufacturing and Service Sector Organizations: An Exploratory Study, *Vision: The Journal of Business Perspective*, Vol. 16, No. 1, pp. 13-25.
- Chen Weifeng, Elnaghi Marwan and Hatzakis Tally, (2011), Investigating Knowledge Management ICT Firms Preformance: An Integrated KM Framwork, *Information Systems Management*, Vol. 28, No. 1, pp. 19-29.
- Chuang Shu-Hui, Liao Chenchen and Lin Shinyi, (2013), Determinants of knowledge management with information technology support impact on firm performance, *Information Technology Management*, Vol. 14, pp. 217-23.
- Coff, Russell W., Coff David D., Eastvold Roger, (2006), The knowledge-leveraging paradox: How to achieve scale without making knowledge imitable, Academy of Management Review, Vol. 31, No. 2, pp. 452-465.
- Coriat Benjamin and Weinstein Olivier, (1995), Les nouvelles théories de l'entreprises, Le livre de poche, Librairie Générale Française, pp. 218.
- Cronbach, L. J., Rajaratnam, N., & Gleser, G. C. (1963). Theory of generalizability: A liberalization of reliability theory. British *Journal of Statistical Psychology*, 16, 137-163.
- **19.** Dilon Martin, (2008), Knowlege Management: Chimera or Solution?, *Librairies and the Academy*, Vol. 02, No. 02, April, pp. 321-336.
- Dosi Giovanni, Teece D., Winter S., (1990), Les frontières des entreprises: vers une théorie de la cohérence de la grande entreprise, *Revue d'économie* industrielle, Vol. 51, 1^{er} trimestre, pp. 238-254.
- FILLEAU, Marie-Georges and MARQUES-RIPOULL, Clotilde, (1999), les théories de l'organisation et de l'entreprise, Ellipses Marketing, Paris, France.
- Grant Robert M., (1991), The Resource-Based Theory of Competitive Advantage: Implications for Strategy Formulation, *California Management Review*, Spring, Vol. 33, No. 3, pp. 114-135.
- Gold Andrew H., Malhotra Arvind and Segars Albert H., (2001), Knowledge management: An organizational capabilities perspective, *Journal of Management Information Systems*, Summer, Vol. 18, No. 1, pp. 185-214.
- Gorelick carol, Tantawy-Monsou Brigitte, (2005), For performance through learning, knowledge management is the critical practice, *The Learning Organization*, Vol. 12 No. 2, pp. 125-139.
- Gujarati, D. N., Porter, D. C. (2009), Basic Econometrics, The McGraw-Hill, International Edition, 05th edition, pp. 653,654, 744-788.
- 26. Hansen .Morten T, Nohria Nitin and Tierney Thomas, (2003), Quelle est votre stratégie de gestion du savoir?, Le management du savoir en pratique, Harvard Business Review, éditions d'organisation, Paris, pp. 117-149.
- Ho Chin-Fu, Hsieh Pei-Hsuan and Hung Wei-His, (2014), Enablers and processes for effective knowledge management, *Industrial Management & Data Systems*, Vol. 114, No. 5, pp. 734-754.
- 28. Hsiao Tien-Hui and Wen Yuang-Feng, (2011), Utilizing the balanced scorecared for performance measurement of knowledge management, *Journal of Statistics and Management Systems*, Vol. 14, No. 2, pp. 411-426.
- Kim Yong Jin, Song Seokwoo, Sambamurthy V., Lee Young Lyoul, (2012), Entrepreneurship, knowledge integration capability and firm performance: An empirical study, *Information system Front*, Vol. 14, pp. 1047-1060.

ISSN: 2356-5608, pp.26-37

- King, William R, (2009), Knowledge Management and Organizational Learning, Annals of Information Systems 4, Springer Science+Business Media, pp. 03-13
- Kipling Rudyard, (2007), Knowledge Management Framework for Government, National Institute for Smart Government, Hyderabad, INDIA, pp. 20
- Klinger, Donald E and Sabet, Gamal M., Knowledge Management, Organizational Learning, Innovation and Technology Transfer What They Mean and Why They Matter, *Comparative Technology Transfer and Society*, vol. 3, No. 3, December, pp. 199-210.
- Kogut Bruce and Zander Udo, (1992), Knowledge Of The Firm, Combinative Capabilities, And The Replication Of Technology, *Organization Science*, Vol. 03, No. 03, August, pp. 383-397.
- Kuah Chuen Tse and Wong Kuan Yew, (2013), Data Enelopment Analysis Modeling for measuring knowledge management performance in Malaysian higher educational institutions, *Information Development*, Vol. 29, No. 3, pp. 200-216.
- 35. LACHACHI ABDELHEQ, KERZABI ABDELATIF AND HOUHOU MUSTAPHA, (2013), THE FORMALIZATION OF THE KNOWLEDGE MANAGEMENT IN THE MANAGERIAL APPROACH IN THE ALGERIAN FIRMS: CASE OF THE TERRITORIAL DIRECTION OF ALGERIA TELECOM OF TLEMCEN, MEDITERRANEAN JOURNAL OF SOCIAL SCIENCES, Vol 4, No 6.
- Lakshman Chandrashekhar, (2009), Organizational knowledge leadership: An empirical examination of knowledge management by top executive leaders, *Leadership & Organization Development Journal*, Vol. 30, No. 4, pp. 338-364.
- Lambe Patrick, (2011), The unacknowledged parentage of knowledge management, *Journal of knowledge management*, Vol. 15, No. 2, pp. 175-197
- Lee Heeseok and Choi Byounggu, (2003), Knowledge Management Enablers, Processes, and Organizational Performance: An Integrative View and Empirical Examination, *Journal of Management Information Systems*, Summer, Vol. 20, No. 1, pp. 179-228.
- Lee Sangjae, Byung Gon kim and Kim Hoyal, (2012), An integrated view of knowledge management for performance, *Journal of Knowledge Management*, Vol. 16, No. 2, pp. 183-203.
- Liu Pang-Lo, Chen Wen-Chin and Tsai Chih-Hung, (2005), An empirical study on the correlation between the knowledge management method and new product development strategy on product performance in Taiwan's industries, *Technovation*, Vol. 25, pp. 637-644.
- Luc Boyer, 2005. 50 ans de Management des organisations, Editions d'Organisation, Paris, pp. 228.
- Métais Emmanuel, (2004), Stratégie et Ressources de l'Entreprise: Théorie et Pratique, Collection Connaissance de la Gestion, Economica, Paris, pp. 143.
- 43. Nada K. Kakabadse, Kakabadse Andrew and, Kouzmin Alexander, (2003) Reviewing the knowledge management literature: towards a taxonomy, *journal of knowledge management*, Vol. 7, No. 4, pp. 75-91.
- Nonaka Ikujiro, Konno Noboru, (1998), The concept of «BA»: Building a Foundation for Knowledge Creation, *California management review*, Vol. 40, No. 3, pp. 40-54.
- 45. Park Min Jae, Dulambazar Tumurpurev and Rho Jae Jeung, (2013), The effect of organizational social factors on employee performance and the mediating role of knowledge sharing: focus on e-gouvernment utilization in Mongolia, *Information Development*, June, pp. 1-16.

- 46. Penrose Edith T., (1955), Limits to the Growth and Size of Firms, *The American Economic Review*, Vol. 45, No. 2, Papers and Proceedings of the Sixtyseventh Annual Meeting of the american Economic Association, May, pp. 531-543.
- 47. Plane Jean-Michel, (2003), *Management des organisations*, Dunod, Paris, pp. 357.
- 48. Spender J-C, (1996), Making Knowledge the Basis of a Dynamic Theory Of The Firm, *Strategic Management Journal*, Vol. 17 Winter, Special Issue, pp. 45-62.
- Spender J-C and Grant Robert M., (1996), Knowledge And The Firm: Overview, *Strategic Management Journal*, Vol. 17, Winter, Special Issue, pp. 5-9.
- Rossion Françoise, (2008), Transfert des connaissances: stratégies, moyens d'action, solutions adaptées à votre organisation, Lavoisier, Paris, pp. 278.
- Sammour George, Schreurs Jeanne, Al-Zoubi A. Y and Vanhoof Koen, (2008), The role of knowledge management and e-learning in professional development, *International Journal Of Knowledge* and learning, Vol. 4, No. 5, pp. 465-477.
- Tsoukas Haridimos and Vlaidimirou Efi, (2001), What is organizational knowledge, *Journal of Management Studies*, Vol. 38, No. 7, November, pp. 973-993.
- Wang Eric, Klein Gary and Jiang Lames J., (2007), IT support in manufacturing firms for a knowledge management dynamic capability link to performance, *International Journal of Production Research*, Vol. 45, No. 11, pp. 2419-2434.
- 54. Wild Rosemary and Griggs Kenneth, (2008), A model of information technology opportunities for facilitating the practice of knowledge management, VINE: The journal of information and knowledge management systems, Vol. 38, No. 4, pp. 490-506.
- Weinstein Olivier, quelques controverses théoriques:
 L'entreprise dans la théorie économique, comprendre l'économie, Vol. 01, cahiers français, n° 345, pp. 91-95.
- Wernerfelt Birger, (1984), A Resource-Based View of the Firm, *Strategic Management Journal*, Vol. 05, No. 02, Avril-juin, pp. 171-180.
- Wiig. Karl M, (1997), Knowledge Management: An Introduction and Perspective, *Journal of Knowledge Management*, Vol. 1, No. 1, pp. 06-14.
- 58. Wong Kuah Yew, Tan Li Pin, Lee Cheng Sheng and Wong Wai Peng, (2014), Knowledge Management performance measurement: measures, approaches, trends and future directions, *Information Development*, pp. 1-19.