Knowledge Organization And Performance Effectiveness Of Commercial Banking Sector In Jordan

Ahed Al-Haraizah

Department of Administrative and Financial Sciences, Oman College of Management and Technology, Muscat, Oman. E-mail: ahed.alharaizah@omancollege.edu.om

ABSTRACT:

What the world is witnessing today of changes, developments, and transformations affecting various aspects of life, which does not stop at a certain point in this global environment. Therefore, knowledge economy perspective verified that knowledge organization is a competitive strategic element so as to achieve global competitive advantage. Thus, this study aimed at identifying the impact of knowledge organization on performance effectiveness: applied study on the commercial banking sector in Jordan, which was done through monitoring the reality of the organization and application of knowledge (knowledge creation, sharing, and structuring) within banking sector in Jordan. Moreover, highlight the role of knowledge organization in achieving activities' effectiveness within these banks. Significantly, this study has developed a set of questions and hypotheses that have addressed the problem of the study with its various dimensions. This research paper has used a quantitative technique to collect data from participants, afterwards, SPSS statistical techniques were used to obtain the findings of this research. The findings showed that commercial banks utilize the organization of knowledge through their practices within various operations. In light of the results of this study, a set of recommendations have been introduced that enhance the organization uses the organization of knowledge and enhance performance effectiveness of commercial banks in Jordan.

Keywords: Knowledge Organization, Knowledge Creation, Knowledge sharing, Knowledge structuring, Performance Effectiveness, Banking Sector, Jordan.

I. INTRODUCTION

Management today lives an that age characterized by many of the variables that are imposed challenges on local and global business organizations. These challenges have forced business organizations to adopt strategies that lead to more innovation, creativity, efficiency, organization of knowledge, and excellence of performance in order to be able to achieve survive and the ability to compete and meet the challenges. Possibly the most important strategies that have led to more creativity, innovation, which has been proven in the case of adoption by business organizations are those

based on knowledge management systems. Therefore, knowledge management systems are based on the necessity of business organizations to discover, create and store knowledge regarding organization's internal and external environment and then share this knowledge to maximize the benefit and achieve the goals and objectives of these organizations (Yang, 2004). Knowledge Management (KM) includes the systematic processes for acquiring, organizing, sustaining, applying, sharing, and renewing all forms of knowledge, to enhance the organizational performance and create value (Davenport and Prusak, 1998; Alavi and

Leidner, 1999; Al-Hawamdeh, 2003; Choo, 2006). KM is about acting to build and leverage knowledge through an understanding of how it is created, acquired, processed, distributed, used, harnessed, controlled, etc. (Wiig, 1994). Thus, KM aims to facilitate the access, use, and reuse of valuable knowledge resources (Dieng-Kunz Matta, 2002). Effective knowledge management involves learning to manage knowledge as both an object and as a process (van den Berg, 2013; Choo, 2006), which requires executives to develop a general understanding of what knowledge is, as well as efficient and systematic methods for managing it within the organization. Knowledge management enables an organization to gain insight from its self-experience and procedures. One of the crucial concerns that have emerged associated with knowledge management is how to achieve it successfully. Hence, it is considered essential to identify the factors that influence the success of knowledge management initiatives (Theriou et al, 2011). Drucker (1991) noticed that raising the productivity of knowledge workers as the single greatest challenge that managers confront, which will ultimately determine the competitive performance of organizations. Knowledge became one of the most key factors driving forces for business success. Knowledge management supports organizations to find, select, organize, distribute, and transfer vital information. Consequently, a successful knowledge management (KM) organizations improve their effectiveness and gain competitive advantage (Theriou et al, 2011). The progress of KM has led to the need of identifying its critical success factors that enable knowledge management to achieve organizations' performance effectiveness such as creation, sharing, and structuring knowledge. Hence, this research paper is structured as follows: Section two refers to the theoretical underpinning of the study and the empirical evidence concerning the various factors of

knowledge organization that affect performance effectiveness. Section three presents the theoretical model and its associated hypotheses. Section four describes the research method adopted and the characteristics of the participants. Section five refers to the statistical analysis of the research results. Finally, section six includes research discussion, implications and future research.

2. THEORETICAL UNDERPINNING

Advances in information technology rapidly have pushed the world in a new economical era. Knowledge management (KM) has been an topic interesting in several business communities. The capability to deal with knowledge is becoming increasingly more crucial in today's knowledge economy (Theriou et al, 2011). The task of effective and competitive management of organizations becomes necessary, and knowledge management, if understood and applied properly, may be a useful tool for business transformation as well as the key to competitive advantage (Jennex, 2006). Knowledge Management is an outstanding, multidisciplinary, and controversial concept. Knowledge Management enables the existing individual knowledge to be captured and transformed into organizational knowledge, which in turn must be diffused and shared by many employees. These employees use this knowledge but they also create new individual, which becomes organizational, and so on. Knowledge Management is also the management of organization's knowledge that can improve many features of organizational performance so as to be more "intelligent acting" (Gupta et al, 2000).

2.1 KNOWLEDGE

Knowledge is defined as the monitoring that is configured from the proceeds of scientific

research, thinking, field studies and the development of innovative projects, and other forms of intellectual production of mankind through time (Sivan, 2000: 182). Stettner (2000) stated that knowledge is a cumulative complementary process composed relatively long periods of time to become available for application and use in order to address the problems of certain conditions, and then the knowledge is being used to interpret the available information on a particular case, and make decision about how to manage and address this situation. Therefore, knowledge can be known in accordance with the prepared research paper as "The information contained in commercial banks, which assists administrative body to understand the internal and external environmental indicators in order to make the right decision".

2.2 KNOWLEDGE ORGANIZATION

Knowledge organization process is articulated as operations which aim to knowledge classification, indexing or knowledge tabulation and drawing. Organizations receive very large amounts of data and information, which need to be assembled and classification, interpretation and dissemination effectively, and these data and information comes in various forms, and must be picked up and support this process, a wellestablished procedures of investigation, editing and issuing. Moreover, selected data and information should be organized in arranged groups called knowledge maps, which assists in data and information classification (Najem, 2005). At this stage, the process of knowledge organization is illustrated via classifying discovered knowledge, knowledge archiving and organization according to a clear format for easy retrieval and search operations, and this necessarily means that the importance of using information technologies in order to achieve knowledge organization.

In addition, it is very significant to distinguish between what an individual experiences is recommended to be considered and what is the business rules that have been agreed to be bound, which is based on the firm's expertise and rules. Employees can suggest ways and methods of work used by them and try it, also can be distributed and shared as a part of their working experiences, while the firms must establish rules and procedures so that workers know and follow to ensure the compatibility of the business and to prevent conflicting or opposes it.

2.3 KNOWLEDGE CREATION

One of the most influential theories of organizational knowledge creation is developed by Nonaka and Takeuchi (1996). In their analysis, an organization creates new knowledge through the conversion and interaction between its tacit and explicit knowledge. Understanding the reciprocal relationship between these two kinds of knowledge would be the key to understand the knowledge creating process. The conversion of tacit and explicit knowledge is a social process between individuals. Knowledge conversion occurs in four modes: socialization from tacit knowledge to tacit knowledge, externalization from tacit knowledge to explicit knowledge, combination from explicit explicit knowledge to knowledge, internalization from explicit knowledge to tacit knowledge. According to Nonaka Nishiguchi (2001) knowledge is often in the eye of the beholder, and one gives meaning to a concept through the way one uses it. Consequently, knowledge is a construction of reality rather than something that is true in an objective or universal way. Knowledge is both explicit and tacit and effective knowledge creation depends on an enabling context. Such context can be physical, virtual, and mental. Knowledge is dynamic, relational, and based on human action; it depends upon the situation and

people involved rather than on absolute truth or artifacts (Popadiuk and Choo, Knowledge creation involves the utilization of and external resources organization to generate new knowledge for achieving the organizational goals. Brainstorming methods and conducting research to make the best use of the knowledge assets of customers, suppliers and staffs are strategies applied in many prosperous SMEs for creating knowledge (Moodysson, 2008).

2.4 KNOWLEDGE SHARING

Knowledge assets are retrieved from the organizational memory, to be shared (disseminated/communicated) both internally and externally. The timing and frequency of sharing can be either pre-established (e.g., immediately after the new/updated knowledge asset has been stored - similar to a 'push' approach) or in an ad-hoc fashion, based on immediate need (similar to a 'pull' approach). The process through which knowledge is shared is important, as employees are seldom aware of its existence, particularly when new knowledge is created and stored (Evans et al, 2015). The sharing of more tacit forms of knowledge may be encouraged through coaching, mentoring, and apprenticeships programs as well as through storytelling, narratives, and anecdotes (Swap et al, 2001; Peroune, 2007). It is also significant to choose the optimal mix of technologies and dissemination channels, as communication media have their own strengths and weaknesses (Dalkir, 2011). It should also be noted that the share phase of the Knowledge Management and Cycle (KMC) model can be seen as a bridge between the upstream knowledge 'hunting and gathering' and the downstream putting knowledge into practice (exploitation and exploration) (Evans et al, 2015). Mostly, effectiveness is depends on how well knowledge is shared between teams,

individuals or units (Goodman and Darr 1998; Pentland, 1995). It is well established fact that individuals and organizations and is more productive when the knowledge is shared (Argote and Ingram, 2000). Krogh et al (2000) has paid attention on efficient knowledge sharing leads to the better business processes such as organizational creativity, operational effectiveness and value of products and service.

2.5 STRUCTURING KNOWLEDGE

The structuring of knowledge are the limits that are based on the determination of locations which knowledge is existing, it is Constitution, which explains the size available knowledge according organizational levels and the relationships with other knowledge in the organization. Knowledge structuring is based on sorting, organizing, codifying, analyzing, and reporting information that provides information retrieval of the organization's needs in the future. Structuring knowledge are processed repeatedly through ICT infrastructure which includes the structuring databases, organize data for analysis, data classification, and the collection and management of databases (Awad and Ghaziri, 2004). Structuring knowledge is classifying data and information through certain types of classification tools, which can be retrieved in a timely manner. This means that the mapping, storage and retrieval of information are important elements in the structuring of knowledge. Drawing information maps refers to the identification of sources of organization's information and knowledge of the individuals within the organization. More precisely, cartography consists of forms of text, graphical, audio, and visual, in a form of Implicit and explicit knowledge and the search of appropriate sources information organizations. Significantly, Information storage containing knowledge repositories such as

databases, data warehouses, and information centers, which refers to the environment of organizational memory. Also, the most important factor in the structuring of knowledge is called information retrieval. At this stage, the information storage and retrieval can be achieved through information retrieval systems such as proxies, user interface, and the query vector. Moreover, the purpose of information retrieval is to access to information the retrospective of organization and participation of all users who need the Information (Sagsan, 2006).

2.6 PERFORMANCE EFFECTIVENESS

According to Hlupic et al (2002) knowledge management is considered to be the vehicle for organization effectiveness and competitiveness. Knowledge management facilitates companies to be faster, more efficient, and more innovative. the effective application of knowledge management enables a firm to become innovative, better harmonize its efforts, quickly commercialize new products, foresee surprises, become more responsive to market changes and decrease redundancy of knowledge and information available to it(Gold et al,2001). Knowledge management activities, including knowledge acquisition, knowledge storage, knowledge creation, knowledge sharing and knowledge implementation can help organizations achieve necessary capabilities, such as problem solving, dynamic learning, strategic planning, decision-making, improving their organizational performance as a whole (Zack and Singh, 2009).

2.7 KNOWLEDGE ORGANIZATION COMPONENTS

Based on the conceptualized Knowledge Organization model, this research paper is trying to identify the role of knowledge organization elements in improving performance effectiveness within banking sector in Jordan. The following model presenting these components associated within Knowledge Organization model and their role in achieving performance effectiveness in the banks of Jordan.

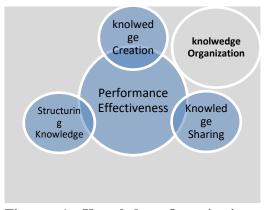


Figure 1 Knowledge Organization and Performance Effectiveness

The proposed research paper assumes that the application of knowledge organization and associated components will allow for more performance effectiveness within banking sector in Jordan. Accordingly, the following hypotheses, entirely formulated in the setting of the banking sector in Jordan, are predicted to be true. Hence, the questions employed in the questionnaire will attempt to sustain all of these hypotheses.

H1: there will be a positive relationship between Knowledge Organization and performance effectiveness in the banks of Jordan.

This hypothesis is divided into three subhypotheses as follows:

H1_a: there will be a positive relationship between knowledge creation and performance effectiveness in the banks of Jordan.

 $H1_b$: there will be a positive relationship between knowledge sharing and performance effectiveness in the banks of Jordan.

H1_c: there will be a positive relationship between structuring knowledge and performance effectiveness in the banks of Jordan.

3. METHODOLOGY

A deductive research approach will be used to test and verify existing theories in a new context. In this research paper, a quantitative approach is applied, in view of the fact that, there are elements which need to be examined by quantitative tools for instance knowledge creation, knowledge sharing, structuring knowledge, and performance effectiveness. The quantitative research technique is conducted for the internal consistency reliability which was fulfilled to illustrate the reliability of the measurement constructs. The generalization of the research findings from deductive approach depends on statistical probability.

The research population in this study is all Jordanian banks presented by 16 banks as following (Association of Banks of Jordan, 2021):

Table 1. List of Jordan banks (research population)

Sequence	Bank Name
1	Arab Bank
2	Jordan Ahli Bank
3	Cairo Amman Bank
4	Bank of Jordan
5	The Housing Bank for Trade and Finance
6	Jordan Kuwait Bank
7	Arab Jordan Investment Bank
8	Jordan Commercial Bank
9	Jordan Islamic Bank
10	Investment bank
11	Arab Banking Corporation Jordan
12	Bank Al Etihad
13	Societe General Bank of Jordan
14	Capital Bank of Jordan
15	Islamic International Arab Bank
16	Jordan Dubai Islamic Bank

A random sample has been chosen of employees in the banks of Jordan. The actual sample size was approximately 151 employees. A self-administrated questionnaire was used to collect data from respondents. In addition, the internal consistency reliability technique was used to verify the reliability of the scales utilized in the questionnaire. Cornbach Alpha was used to

measure internal consistency for survey and research variables based on sample estimation. Cronbach Alpha can be increased in either the average correlation or number of items (Zander & Kogout, 1995). Nunnally (1978) emphasized that Cronbach Alpha must be greater than 0.7 to be considered good and acceptable for most research. Moreover, value more than 0.6 is

regarded as a satisfactory level (Dinev & Hart, 2002; Nunnally, 1978; Hair et al, 2000). Table 2.

presents the Cronbach's Alpha scores number of items used in the final scale of the study.

Table 2: Reliability coefficient for internal consistency of Cronbach alpha

Construct	Number of items	Cronbach's Alpha		
Knowledge creation	4	77		
Knowledge sharing	5	72		
Structuring knowledge	4	83		
Performance effectiveness	2	88		

Reliability coefficient as demonstrated in the table explaining that all multi-item scales produced high reliability scores and therefore were valid for large samples. Research findings from quantitative analysis were based on a number of statistical techniques (SPSS) such as descriptive statistics, multiple linear regression, simple linear regression, and f-test.

4. FINDINGS OF STUDY

This segment presents findings of this study, which shows that there is a confirmation of the relationship between knowledge organization and performance effectiveness. From the table (3), it can be understood that a high level of confirmation of the significance of knowledge creation to the targeted banks (M=4.50, SD=1.44). The table also points out that a high level of contribution referred to knowledge sharing from the viewpoint of surveyed banks (M=4.43, SD=0.72). The structuring knowledge component also has received a high level of significance by tested banks presented by (M=4.301, SD= 0.71), last but not least, respondents have given the performance effectiveness variable a high level mean (M=4.38, SD=0.86).

Table 3: Descriptive Statistics

Construct	N	Mean	Std. Deviation
Knowledge creation	151	4.50	1.44
Knowledge sharing	151	4.43	0.72
Structuring knowledge	151	4.30	0.71
Performance effectiveness	151	4.38	0.86

To test the main hypothesis of this research:

H1: there will be a positive relationship between

H1: there will be a positive relationship between Knowledge Organization and performance effectiveness in the banks of Jordan.

A Multiple Linear Regression Analysis was used between performance effectiveness as dependent variable, and Knowledge Organization as the independent variable. Table 4 shows the relationship between Knowledge Organization and performance effectiveness.

Table 4: Results of Multiple Regressions Analysis for performance effectiveness (Dependent Variable) and Knowledge Organization (Independent Variables)

Model (Independent Variable		F	R	\mathbb{R}^2
Knowledge Organization	0.00	11.93	0.44	0.20

 $(\alpha \leq 0.05)$

As shown in table 4, the entire model has a significant effect on performance effectiveness, and the calculated F value is (11.93), indicate at the level of (α =0.02<0.00). In the complete model for all the predictors, R2 explains 20% of the variance related to performance effectiveness, and thus supports hypothesis H1. To test the sub-hypotheses of this research paper, simple linear regression used in order to explain the relationship between the components of the model as following:

H1_a: there will be a positive relationship between knowledge creation and performance effectiveness in the banks of Jordan.

A Simple Linear Regression Analysis was utilized between performance effectiveness, as the dependent variable, and knowledge creation as the independent variable. According to table 5, the Standardized coefficient (beta) value for knowledge creation is positive, and the entire model has a significant effect on performance effectiveness, the calculated F value is (4.26) indicate at the level of (α =0.00<0.05). In the entire model, R2 explains 3% of the variance related to performance effectiveness. Therefore, H1a was confirmed.

Table 5. Results of Simple Linear Regressions Analysis for performance effectiveness (Dependent Variable) and knowledge creation (Independent Variables)

Model (Independent Variable)	sig	Beta	F	R	\mathbb{R}^2
Knowledge creation	0.04	.17	4.26	0.17	0.03

 $(\alpha \le 0.05)$

H1_b: there will be a positive relationship between knowledge sharing and performance effectiveness in the banks of Jordan.

A Simple Linear Regression Analysis was utilised between performance, as the dependent variable, and knowledge sharing as the independent variable. As per table 6, the

Standardized coefficient (beta) value for knowledge sharing is positive, and the entire model has a significant effect on performance effectiveness, the calculated F value is (8.20) indicate at the level of (α =0.00<0.05). In the entire model, R2 explains 5 % of the variance related to performance effectiveness. Consequently, H1b was supported.

Table 6. Results of Simple Linear Regressions Analysis for performance effectiveness (Dependent Variable) and knowledge sharing (Independent Variables)

Model (Independent Variable	sig	Beta	F	R	\mathbb{R}^2
Knowledge sharing	0.00	.23	8.20	0.23	0.05

H1_c: there will be a positive relationship between structuring knowledge and performance effectiveness in the banks of Jordan.

A Simple Linear Regression Analysis was utilised between performance effectiveness, as the dependent variable, and structuring knowledge as the independent variable. Based on table 7, the Standardized coefficient (beta) value for structuring knowledge is positive, and

the entire model has a significant effect on performance effectiveness, the calculated F value is (28.96) indicate at the level of (α =0.00<0.05). In the entire model, R2 explains 16% of the variance related to performance effectiveness. Accordingly, H1c was confirmed.

Table 7. Results of Simple Linear Regressions Analysis for performance effectiveness (Dependent Variable) and structuring knowledge (Independent Variables)

Model (Independent Variable	sig	Beta	F	R	\mathbb{R}^2
Structuring knowledge	0.00	.40	28.96	0.40	0.16

5. DISCUSSION

As discussed in previous sections, encompasses knowledge creation, knowledge and structuring knowledge. considering these components, the research model has been conceptualized operationalized among banking sector in Jordan. Results showed that structuring knowledge has higher factor loading compared with other KO practices. In addition, results showed that the banks' KO practices positively and significantly influenced their organizational performance. based on this research findings, it can be said that correlation coefficient between components of knowledge organization and performance effectiveness were confirmed, which is reflected in several antecedent studies for instance (Gholami et al, 2013; Massaro et al, 2014; Theriou et al, 2011; Akram and Bokhari,

2011). This would be articulated by the significance assigned by the management of these banks with respect to knowledge creation, sharing, and structuring knowledge in order to enhance sustainable organizational performance effectiveness.

6. IMPLICATIONS TO RESEARCH AND FUTURE RESEARCH

The main objective in this study is to scrutinize the influence of knowledge organization's components (creation, sharing, and structuring knowledge) on performance effectiveness within banking sector in Jordan. Consequently, it began with the process of administrating questionnaires. Then, the internal consistency reliability was conducted to exhibit the reliability of the measurement constructs. Both validity and reliability were pointed out and

acceptable for further analysis. Research findings were based on a number of statistical methods for example descriptive statistics, multiple linear regressions, simple linear regression, F test.

Moreover, the empirical evidence of the influence of KO on performance effectiveness within banks of Jordan is confirmed. It interprets the figures and tables from statistical analysis into comprehensible statements. The findings are disputed in consistency with previous research. The role of each determinant component influencing performance effectiveness is argued.

Explanations are discussed and some suggestions for future research are stated as follows:

- Bank's management should concentrate on the development of confidence among workers, who have knowledge and encourage them to achieve high levels of performance.
- Information investment in the field of organizing knowledge and make it valuable for workers and beneficiaries.
- Make excellence in organizing knowledge as a hub for Jordanian commercial banks, those who have an organizational intellectual capital.
- Senior management should adopt a strategic thinking in order to organize knowledge and working to encourage and apply it through various programs.

REFERENCES

1. Akram, F., & Bokhari, R. (2011). The role of knowledge sharing on individual performance, considering the factor of motivation-the conceptual framework. International journal of multidisciplinary sciences and engineering, 2(9), 44-48.

- 2. Alavi, M., & Leidner, D. (1999).

 Knowledge management systems: issues, challenges, and benefits. Communications of the Association for Information systems, 1(1), 7.
- 3. Al-Hawamdeh, S. (2003). Knowledge management: cultivating knowledge professionals. Elsevier.
- Argote, L., & Ingram, P. (2000). Knowledge transfer: A basis for competitive advantage in firms. Organizational behavior and human decision processes, 82(1), 150-169.
- Davenport, T. and L. Prusak (1998), Working Knowledge: Managing What Your Organization Knows, Boston: Harvard Business School Press, MA.
- Awad, M.A. and Ghaziri, H.M. (2004)
 Knowledge Management. Upper Saddle River, New Jersey: Pearson Education, Prentice Hall.
- Choo, C. W, (2006) The knowing organization: How organizations use information to construct meaning, create knowledge, and make decisions, 2nd edition, New York: Oxford University Press.
- 8. Diney, T., & Hart, P. (2002). Internet Concerns and Trade-off Factors-Empirical Study and Business Implications. In International Conference on Advances in Infrastructure for e-Business. Education, e-Science, and e-Medicine on the Internet.
- 9. Drucker, P. F, (1991) 'The new productivity challenge', Harvard Business Review, vol. 69, no. 6, pp. 69-
- Evans, M., Dalkir, K., & Bidian, C.
 (2015). A holistic view of the knowledge life cycle: the knowledge

management cycle (KMC) model. The Electronic Journal of knowledge management, 12(1), 47.

- Gholami, R., Sulaiman, A. B., Ramayah, T., & Molla, A. (2013). Senior managers' perception on green information systems (IS) adoption and environmental performance: Results from a field survey. Information & management, 50(7), 431-438.
- 12. Gold, A. H., Malhotra, A., & Segars, A. H. (2001). Knowledge management: An organizational capabilities perspective. Journal of management information systems, 18(1), 185-214.
- Goodman, P. S., & Darr, E. D. (1998).
 Computer-aided systems and communities: Mechanisms for organizational learning in distributed environments. MIS quarterly, 417-440.
- Gupta, B., Iyer, L. S., & Aronson, J. E. (2000). Knowledge management: practices and challenges. Industrial management & data systems.
- Hair, J.F., Robert, P. B. and Ortinau,
 D.J. (2000) Marketing Research.
 Boston: Irwin McGraw-Hill.
- 16. Hlupic, V., Pouloudi, A., & Rzevski, G. (2002). Towards an integrated approach to knowledge management: 'hard', 'soft' and "abstract issues". Knowledge and process management, 9(2), 90-102.
- 17. Jennex, M. E. (Ed.). (2006). Knowledge management in modern organizations. Igi Global.
- 18. Massaro, M., Pitts, M., Zanin, F., & Bardy, R. (2014). Knowledge Sharing, Control Mechanisms, and Intellectual Liabilities in knowledge-intensive firms. Electronic Journal of Knowledge Management, 12(2), pp117-127.
- 19. Massaro, M., Pitts, M., Zanin, F., & Bardy, R. (2014). Knowledge Sharing, Control Mechanisms, and Intellectual

- Liabilities in knowledge-intensive firms. Electronic Journal of Knowledge Management, 12(2), pp117-127.
- 20. Moodysson, J. (2008). Principles and practices of knowledge creation: On the organization of "buzz" and "pipelines" in life science communities. Economic Geography, 84(4), 449-469.
- 21. Najim, A, (2005) Knowledge Management: concepts, strategies, and operations, Dar Alwraq for publishing and distribution: Amman, Jordan.
- Nonaka, I., & Nishiguchi, T. (2001). Knowledge emergence: Social, technical, and evolutionary dimensions of knowledge creation. Oxford University Press.
- 23. Nonaka, I., & Takeuchi, H. (1996). The knowledge-creating company: How Japanese companies create the dynamics of innovation. Long range planning, 4(29), 592.
- 24. Nunnally, J. C. (1978). Psychometric Theory 2nd edition (New York: McGraw).
- 25. Pentland, B. T. (1995). Information systems and organizational learning: the social epistemology of organizational knowledge systems. Accounting, Management and Information Technologies, 5(1), 1-21.
- 26. Peroune, D. L. (2007). Tacit knowledge in the workplace: The facilitating role of peer relationships. Journal of European Industrial Training.
- 27. Popadiuk, S., & Choo, C. W. (2006). Innovation and knowledge creation: How are these concepts related? International journal of information management, 26(4), 302-312.
- 28. Sağsan, M. (2006). A new life cycle model for processing of knowledge management. In 2nd International

- Congress of Business, Management and Economics (pp. 15-18).
- 29. Sivan, Y. (2000). Nine keys to a knowledge infrastructure: A proposed analytic framework for organizational knowledge management. In WebNet World Conference on the WWW and Internet (pp. 495-500). Association for the Advancement of Computing in Education (AACE).
- 30. Stettner, M. (2000). Skills for new managers. McGraw-Hill Education.
- 31. Swap, W., Leonard, D., Shields, M., & Abrams, L. (2001). Using mentoring and storytelling to transfer knowledge in the workplace. Journal of management information systems, 18(1), 95-114.
- 32. Theriou, N. G., Maditinos, D., & Theriou, G. (2011). Knowledge management enabler factors and firm performance: empirical research of the Greek medium and large firms.
- 33. Van den Berg, H. A. (2013). Three shapes of organizational knowledge. Journal of Knowledge Management.
- 34. Von Krogh, G., Ichijo, K., & Nonaka, I. (2000). Enabling knowledge creation: How to unlock the mystery of tacit knowledge and release the power of innovation. Oxford University Press on Demand.
- 35. Wiig, K. M. (1994). Knowledge management foundations: thinking about thinking-how people and organizations represent, create, and use knowledge. Schema Press, Limited.
- 36. Yang, J. T. (2004). Job-related knowledge sharing: comparative case studies. Journal of Knowledge Management.
- 37. Zack, M., McKeen, J., & Singh, S. (2009). Knowledge management and organizational performance: an

- exploratory analysis. Journal of knowledge management.
- 38. Zander, U., & Kogut, B. (1995). Knowledge and the speed of the transfer and imitation of organizational capabilities: An empirical test. Organization science, 6(1), 76-92.