

The Impact of Knowledge Management and Organization Learning on Organizational Innovation: The Case of the Greater Amman Municipality in Jordan

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ABSTRACT

Organizations are forced to manage knowledge and to learn faster than competitors. This study aims at exploring the impact of knowledge management and organizational learning on organizational innovation as perceived by the employees of Greater Amman Municipality in Jordan. A random sample of 255 employees was selected to answer the designated questionnaire. The study findings show that both knowledge management and organizational learning explain about 59% of the variation of organizational innovation. Results, also, show that knowledge management and organizational learning has a strong positive correlation with organizational innovation. Further, the findings reveal that variables of (job title, age, training course, nature of job) have a significance impact on practicing each dimension. Finally, the analysis reveals that education level and department size factors have no significant impact on all variables of the study.

Keywords :

knowledge management, organizational learning, organizational innovation, Jordan.

1- INTRODUCTION

Organizations are challenged and forced to be innovative, responsive, and proactive to achieve a competitive advantage. The environment has dramatically changed more than before, forcing organizations to innovate in the ways they operate and to learn more or to fail (Fang and Wang, 2006). Focusing on customer orientation and continuing improvements is a crucial interest of modern organization. Therefore, organizations should focus on customers by continuously increasing quality service through concentrating on the organizations ability to learn and create innovative and timely solutions. In addition, organizations with innovative competency have the ability to convert the knowledge and ideas of their employees into products and services tailored to meet the needs of customers as well as into innovations in the

creative production of goods and services (Hung and Lien, 2005).

Innovation and innovativeness have become critical factors for organizations to survive (Fang and Wang, 2006). Several antecedent factors play a crucial role in building an innovative organization. According to (Garvin, 1993) and (Senge, 1997), Organizational learning is a major requirement of building an innovative organization. In addition, organizations cannot sustain a competitive advantage and innovation without continuous learning and developing new knowledge (Brown and Woodland, 1999; Abou-zeid and Cheng, 2004). Knowledge has been considered to be the most important production factor and learning the most important process in today's world (Lundvall & Boras, 1999). Learning and knowledge creation are the driving force of innovations leading to a competitive advantage (Harmaakorpi & Melkas, 2005).

In order to build an innovative organization, components of knowledge management and organization learning should be fully understood and addressed. Organizations can employ their innovative competencies to differentiate themselves from other companies to create unique competitive advantage (Hung & Lien, 2005). According to Fang & Wang (2006), studies in the literature tend to examine innovation-related issues by linking them with "hard" subjects such as the relationships between marketing activities, R&D, and organization's strategy. Relatively, few of them have examined links with "soft" subjects such as knowledge and learning.

Unfortunately, very few systematic studies have been conducted to investigate the impact of knowledge management and organizational learning as two major antecedents of innovation on various organizational members. In their theoretical study, Hung and Lien (2005) asked for further investigation in order to understand the proposed impact and know the strength of relationships among these constructs empirically. This gap of knowledge has encouraged the researcher of this paper to explore empirically the impact of knowledge management and organizational learning on the administrative innovation as perceived by the employees of Greater Amman Municipality in Jordan. This study aims to enhance the understanding of knowledge management,

organizational learning, and innovation. It will also provide mechanisms and new insights that should be considered by practitioners to build up an innovative organization to increase performance. In this paper a brief overview concerning organizational innovation, knowledge management and organizational learning will be followed by analysing of results from empirical research in Greater Amman Municipality in Jordan as a case study. Thereafter, discussion, implications, and future research are presented.

2- LITERATURE REVIEW

2.1 Organizational Innovation

Innovation is widely recognized and considered as a core renewal process within organizations. Organizational innovation has been defined as the adoption of an idea or behavior that is new to the organization (Hage, 1999). Amabile et al. (1996) defined innovation as the successful implementation of creative ideas within organization. The innovation process can be defined in terms of the problem solving and decision-making involved in the development of new products or processes (Gopalakrishnan & Damanpour, 1997). Managers need to share an understanding of the nature of innovation, and in particular the way it operates as a process to achieve high performance. According to Bates and Khasawneh (2004), innovation is equated with the adoption and application of new knowledge and practice. In the same vein, organizational innovation includes the ability of an organization to adopt or create new ideas and implement them in the development of new and better products, services, and work processes or procedures (Hung & Lien, 2005).

According to Senge (1990), building up a learning-based organization with continuous learning and improvement is one of the best ways to create an innovative and competitive advantage. Organizations are highly advised to assemble people of diverse talents and employ their expertise to gain access to new technologies and new markets to foster organizational innovation (Hung & Lien, 2005).

As new outputs, innovation may come from new knowledge as well as from the combination of existing knowledge to create architectural innovations Henderson & Clark (1990). Adopting both incremental and radical innovations, organizations require knowledge management (Dewar & Button, 1986). Innovation would occur when the operational is paired with knowledge management technology that is capable of exploiting the organizational knowledge wealth (Ghosh & Scott, 2007; Forcadell & Guadamillas, 2002).

According to Chapman and Hyland (2004), successful product innovation and the ability of companies to continuously improve their innovation processes are rapidly becoming essential requirements for competitive advantage and long-term growth in organizations. These continuous innovation capabilities are closely associated with a company's knowledge management systems and

processes and organizational learning. The next sections introduce two possible antecedents to explain organizational innovation, i.e., knowledge management and organizational learning.

2.2 Knowledge Management

Knowledge is the key source in organizations that facilitates a sustained competitive advantage in the global competition and increasingly dynamic environment (Hung & Lien, 2005). According to Grant (1996) and Therin (2002) knowledge is the most strategically important of the firm's resources. Knowledge is a "meaning" made by the mind - without meaning, knowledge is inert, static, and disorganized information (Marakas, 1999). Knowledge is defined as any information that is relevant, actionable, and is based on a person's experience (Davenport et. al. 1998). De Jarnett (1996), defined knowledge management as including knowledge creation, which is followed by knowledge interpretation, knowledge dissemination and use, and knowledge retention and refinement. Swan et. al. (1999) define knowledge management as "any process or practices of creating, acquiring, capturing, sharing and using knowledge, wherever it resides, to enhance learning and performance in organization." According to Therin (2002), knowledge management is the acquisition and communication of knowledge. Knowledge management includes knowledge creation, knowledge access, knowledge transfer, and knowledge application (Hung & Lien, 2005; Ghosh & Scott, 2007). These four elements used as the major concepts of knowledge management in this study.

Regarding knowledge creation and knowledge access, Lueg (2001) argued that knowledge not only depends on information processing, but also on shared interpretation of the information and the filtering of the knowledge into degrees of importance. Employees at all levels facilitate meetings for exchanging knowledge and developing constructive dialogue to achieve the designated objectives of the organization. Knowledge transfer implies that learning relies on using and utilizing knowledge database and connecting people with reusable and codified knowledge (Hansen et al. 1999). For knowledge application, organizations move from implicit into explicit knowledge by utilizing several instruments such as experience groups and quality circles. Organizations apply knowledge learned from experience through solving problems or developing new product and services.

Results from a survey of 195 firms in Taiwan suggest that managers can leverage their best innovation by matching this implementation orientation to knowledge management with organization context (Liao, 2007). In China, Yang et. al. (2006) found empirically that the innovation capability of high technology firms is significantly related to knowledge acquisition in these firms. The innovation capability also has been shown to positively contribute to long-term corporate growth. In their study of process innovation at Samsung SDI, Jang et al (2002) described the recursive relationship between the knowledge produced during process innovation activities

and knowledge management. They also indicate how this relationship is realized through different knowledge manipulation activities mainly collecting, monitoring, and distributing process innovation knowledge.

Still, there is very limited research discussing the relationship between knowledge management and organizational innovation (Bates & Khasawneh, 2004; Abou-zeid & Cheng, 2004). Knowledge management provides opportunities for organizations to accumulate knowledge to improve their innovation competencies (Hung & Lien, 2005). Carneiro (2000) found that knowledge management system is a key component in innovation and competitiveness. Hung and Lien (2005) argue that the greater the knowledge possessed and shared throughout the organization, the more the organization will be inclined to innovate.

Based upon the above discussion, the first hypothesis can be stated as follows: Knowledge management (creation, access, transfer, and application) is positively related to administrative innovation in Greater Amman Municipality in Jordan (Hypothesis 1).

2.3 Organizational Learning

There are several definitions of learning organizations, scholars and practitioners have agreed on one thing: certain traits and elements are required for developing a higher level of organization learning than others (Alas & Vadi, 2003). For instance, organization learning has been generally defined as a vital process by which organizations adapt in their social, political, or economic settings (Rosenstiel & Koch, 2001). Huber (1991) defines organizational learning as processing information to increase the range of potential behaviors. In a more detailed definition, Tsang (1997) defines organizational learning as learning which occurs in an organization and produces real or potential change after a shift in the relationship between thought, organizational learning and the environmental response. Most definitions of organizational learning imply changes in cognitive, actual practice, or in potential behavior of organization members.

The outcomes of individual learning are in turn the prerequisites for organizational learning. According to Argyris (1999:157), "organizations learn through individuals acting as agents for them. The individual's learning activities, in turn, are facilitated or inhibited by ecological system of factors that may be called an organizational learning system". Developing organization learning requires the ability to work together as a team (Senge, 1997).

Several barriers to organizational learning have been proposed and found in different environments by scholars and practitioners. Experimentation and risk-taking are critical to achieve high level of learning are often avoided as a result of fear of failing (Harrison, 1995). Learning is also restricted in organizations by competitive feelings and attitudes (Alas & Vadi, 2003). In most organizations, the level of competition is unhealthy and inimical to both individuals and organizational learning.

Organizations should tolerate making mistakes while learning because only through learning can a learner understands associations and principles (Strike & Posner, 1985). To overcome these barriers, Argyris and Schon (1978) proposed increasing openness to information and feedback and collaboration.

According to Senge (1990), organizational learning is measured by five main dimensions: shared vision, personal mastery, team learning, mental models, and system thinking. Organizational learning calls for a paradigm shift in thinking about products and services and requires higher level of changes. The adoption of organizational learning features enables companies to develop more flexible and adaptable systems that improve long-term performance (Guns, 1996). In their review of the organizational learning-related literature, Kao and Lee, (1996) concluded that managerial scholars consider organizational learning as an effective mechanism to create and sustain organizational competitiveness and to improve efficiency and innovation. A few studies have been conducted in Jordan regarding organizational learning. In their empirical study, Ababneh and Adwan (2008) found that transparency, teamwork, and empowerment are critical factors in influencing organizational learning in local administration units in Jordan.

There is a mutual relationship between learning and innovation. On the one hand, innovation depends on new ideas learned or experienced with the organization or from competitive or benchmark organizations in the market. On the other hand, learning requires new ideas and innovative initiatives that are transferred to organization members at different levels to learn and apply them. As most individuals innovate in different ways, innovation also differs between organizations. These differences occur as a result of variation in learning and knowledge systems. In their empirical study of Danish private sector, Lundvall and Nielson (2007) found that firms that introduce several organizational learning practices are more innovative than the average firm. In his empirical study, Therin (2002) found that organizational learning positively influence organization innovation. In the same vein, Victor et. al (2007) found that organizational learning influences organizational performance positively on a sample of 401 Spanish firms, both directly and indirectly through organizational innovation, then in turn organizational innovation influences organizational performance positively.

Although few studies have integrated organizational learning with innovation, it is reasonable to investigate the interrelationship between organizational learning and administrative innovation. Previous literature proposes that innovation is closely related to organizational learning (Bates & Khasawneh 2004; Kiernan, 1993). Therin (2002) emphasizes that innovation is the by-product of organizational learning indicating organizational learning should be positively related to innovation. Thus, it can be proposed that *organizational learning is positively related to administrative innovation in Greater Amman Municipality in Jordan* (Hypothesis 2).

Hareem and Al-Saa'e'd (2006) emphasize that knowledge management practices are influenced by demographic and occupational factors of respondents. Ababneh and Adwan (2008) argue that the attitudes of employees toward the practice of organizational learning are influenced by the demographic and occupational factors. Abdelhalim and Ababneh (2008) examined innovation practice in nine Jordanian public enterprises and found that as the number of employees increased, the practice level of innovation decreased in organization. Mohyeldin and Suliman (2001) found that demographic factors significantly impacted the attitudes of employees toward innovation in Jordanian industrial firms. Accordingly, the researcher argues that demographic and occupational variables influence the perception of employees toward the three constructs in this study. Thus the third hypothesis is stated as follows: *Demographic and occupational factors influence the attitudes of employees toward knowledge management, organizational learning, and organizational innovation in Greater Amman Municipality in Jordan* (Hypothesis 3).

In sum, the literature review seems to indicate that most studies in the previous literature tends to view knowledge management and organizational learning as a two major antecedents of organizational innovation. The next section presents the findings of the empirical study conducted by the researcher in Greater Amman Municipality in Jordan.

3- THE EMPIRICAL STUDY

3.1 Framework

The research model shown in Figure 1 illustrates the scope and framework of this study. The primary construct of the current study is organization innovation. Two organization factors, knowledge management and organizational learning are considered as the antecedents of organizational innovation. Knowledge management and organizational learning are measured based on models proposed by Hung and Lien (2005) and Senge (1990), respectively.

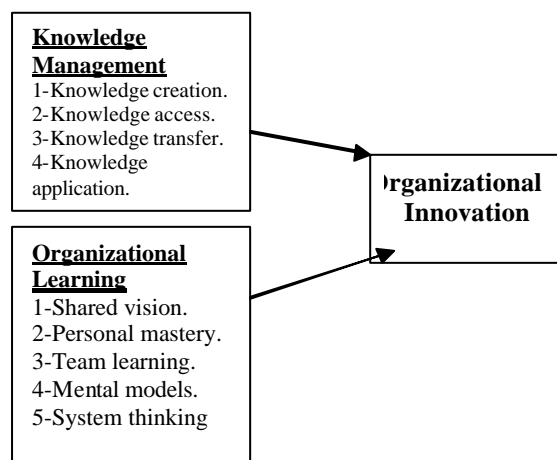


Figure 1. Framework of the Study

3.2 Measuring Constructs

To measure the constructs, the study employed a questionnaire survey to collect data. The three constructs are measured as follows:

1-Organizational innovation: The survey covers 8-item measures for this construct developed by the author based on previous related literature. The descriptors are designated as “permission of experimentation” and “encouragement of risk taking.” The items are measured with a 5-point Likert scale (1=very low degree, 5= very high degree). The value of Cronbach alpha of these constructs was (.89), indicating a good internal consistency. The reliability value is better than the 0.6 level of minimal acceptability (Mohyeldin and Suleiman, 2001)

2- Knowledge management: Based on the four dimensions proposed by (Hung & Lien, 2005; Ghosh and Scott, 2007), the author developed 22 statements to measure this construct. The items are measured by a 5-point Likert scale (1=very low degree, 5= very high degree). The value of Cronbach alpha of this construct was (.91), indicating a good internal consistency.

3- Organizational Learning: of the three constructs, organizational learning has the fewest empirical studies and it seems not have been well established yet (Fang & Wang, 2006). The author employed the 20-item survey developed by (Ababneh & Adwan, 2008) that covers the five dimensions of organizational learning proposed by Senge (1990). The items are measured with a 5-point Likert scale (1=very low degree, 5= very high degree). The value of Cronbach alpha of these constructs is (.90), indicating a good internal consistency.

3.3 The Sample

Greater Amman Municipality is a financially independent private corporation. It is a real Municipality, the functions of which are administered by its council whose members are 40, including the Mayor of Amman. The Council is the Municipality’s highest governing body. Twenty members who are residents of Amman are elected for the council while the other twenty, representing official, commercial, and economic bodies and other services departments in the City are appointed to the council. The Mayor is appointed for the post by the Jordanian Council of Ministers. Greater Amman Municipality is considered as the major example of the local administration unit in Jordan since it is responsible of all administrative services in the capital city of Jordan, Amman. The Greater Amman Municipality is divided into 27 administrative regions, each of which has full staff of employees.

In order to uncover empirically the impact of knowledge management and organization learning on innovation in Greater Amman Municipality in Jordan, the researcher employed the questionnaire survey. The author distributed 287 questionnaires; the response rate was 89% making a total of 255 respondents. According to their personal data, a slight majority of the respondents was male (56%). Of the respondents, about 55% had more than

6 years of experience. Respondents were predominantly 30-45 years old (55%), and held a bachelor's degree or higher (54%). Almost 51% of respondents did not participate in training courses related to either knowledge management or organizational learning. The respondents were also compared according to their professional data. According to position only one-fourth respondents held managerial position, one-third perform technical job, and work in departments size 6-10 employees (48%). All respondents filled in a questionnaire related to measure knowledge management, organizational learning, and innovation.

3.4 Findings

The research model suggests that both knowledge management and organizational learning directly influence organizational innovation. The means, standard deviations, correlations estimates are presented in table 1. All analyses were conducted with SPSS-PC. The findings suggest that the employees of Greater Amman Municipality perceive relatively high level of knowledge management (73%= 3.67/5). Respondents reported that the order of knowledge management's dimensions is knowledge creation, knowledge access, knowledge application, and knowledge transfer with mean values 3.80, 3.70, 3.59, and 3.56 respectively (the variables were measured on a 5 point Likert scale where 5 denoted "strongly agree"). Standard deviation values for the four dimensions ranged from (.56) to (.77) indicating that the data were relatively reasonably homogenous.

Regarding measuring organizational learning, mean value indicates also relatively high level of practice (3.66) as perceived by the employees of Greater Amman Municipality. The order of organizational learning dimensions as perceived by the subjects is shared vision (3.75), mental models (3.67), personal mastery (3.65), team learning (3.62), and system thinking (3.60). Moreover, standard deviation values for each dimension indicates the data were relatively reasonably homogenous. The practice level of organizational innovation as reported by respondents was also relatively high (69%), with a value of standard deviation (.76) indicating a reasonable homogenous in their attitudes.

Knowledge management showed significant correlation with organizational innovation. The value of Pearson correlation was (.74) which is significant at the (0.01) level. This result supports the first proposed hypothesis, which tends to reinforce previous research findings. The results from the analysis showed that organizational learning was also significantly correlated with organizational innovation (.68) at the (0.01) level. Based on this finding, the second hypothesis is accepted.

Table 1: Descriptive Statistics and Correlation (n= 255)

| Dimension | Mean | SD | Knowledge Management | Organizational Learning |
|-------------------------------|------|-----|----------------------|-------------------------|
| 1-Knowledge Management | 3.67 | .54 | | |
| a- knowledge creation | 3.80 | .56 | | |
| b- knowledge access | 3.70 | .64 | | |
| c- knowledge transfer | 3.56 | .77 | | |

| | | | | |
|------------------------------------|------|-----|-------|-------|
| d-knowledge application | 3.59 | .66 | | |
| 2-Organizational Learning | 3.66 | .54 | | |
| e- shared vision | 3.75 | .84 | | |
| f- personal mastery | 3.65 | .95 | | |
| g- team learning | 3.62 | .93 | | |
| h-mental models | 3.67 | .90 | | |
| f- system thinking | 3.60 | .94 | | |
| 3-Organizational Innovation | 3.45 | .76 | .74** | .68** |

** Correlation is significant at the 0.01 level (2-tailed).

Two stepwise regression models were calculated to examine how much of independent variables (knowledge management and organizational learning) explain the variation of the dependent variable (organizational innovation). Results from the test of model 1 show that knowledge management was a significant predictor of organizational innovation (adjusted R-square =.56, p=0.01) indicating that knowledge management explains (.56) of the variation of organizational innovation. The second regression model shows that organizational learning significantly explains only (.03) of the variation of organizational innovation. The two independent variables explained .59 of the variation of organizational innovation. These findings support the inference in that knowledge management and organizational learning have a direct influence on organizational innovation at Greater Amman Municipality.

Table 2: Regression Analysis (n=255)

| Models | R-Square | Adjusted R Square | Beta | F-Value | Sig. |
|--|----------|-------------------|------|---------|------|
| 1-Knowledge management | .749 | .56 | .74 | 323.5 | .000 |
| 2- Knowledge management, organization learning | .768 | .59 | .26 | 181.7 | .000 |

Dependent Variable: Organizational Innovation, p<0.001

In order to test hypothesis three, table 3 shows the influence of demographic and occupational factors of respondents on all study variables. T-test and F-test were used to examine the influence; Post hoc analysis with Tukey's test was conducted when a significant trend was identified. The analysis clearly shows that job titles have a significant impact on the attitudes of employees working at Greater Amman Municipality. According to Post hoc analysis with Tukey's test, managers reported a higher level of practice of each dimension as compared to respondents who hold job title either department head or employee.

Table 3: ANOVA Analysis (n=255)

| Variables | Gender | Age | Job title | Educational level | Experience | Dep. size | Training | Nature of job |
|-------------------------------|--------|-----|-----------|-------------------|------------|-----------|----------|---------------|
| 1-Knowledge Management | | * | | | * | | ** | * |
| a- knowledge creation | .1 | | * | | | | | * |
| b- knowledge access | | | * | | | .4 | | ** |
| c- knowledge transfer | .3* | * | ** | | ** | | ** | |
| d-knowledge application | | | ** | | | | * | |
| 2- | | ** | | | * | | * | |

| | | | | | | | | |
|------------------------------------|----|----|----|--|---|--|----|--|
| Organizational Learning | | | | | | | | |
| e- shared vision | * | ** | * | | | | | |
| f- system thinking | | ** | ** | | | | | |
| g- personal mastery | | * | ** | | * | | | |
| h-mental models | | * | * | | * | | | |
| f- team learning | | * | | | * | | | |
| 3-Organizational Innovation | .8 | | ** | | * | | ** | |

* Significant at the 0.05 level (2-tailed).

** Significant at the 0.01 level (2-tailed).

Male respondents showed a higher level of knowledge transfer and shared vision compared with female respondents with a significant difference at $p < 0.05$ level. In general, older respondents reported higher level of all variables except of knowledge creation and application as presented in table 3. According to Post hoc analysis with Tukey's test, high experienced subjects relatively reported more positive attitudes toward knowledge management, knowledge transfer, organizational learning, personal mastery, mental models, team learning, and organizational innovation. Respondents who participated in a training course related either to knowledge management or organizational learning reported higher attitudes toward knowledge management, knowledge transfer, knowledge application, organizational learning, and organizational innovation compared to none participants. Respondents with administrative job reported more positive attitudes toward knowledge management, knowledge creation, and knowledge access compared with respondents who hold a technical job. Finally, the analysis revealed that education level and department size factors had no significant impact on all variables of the study.

Based on the above findings, it can be concluded that the third hypothesis is partially supported. The findings confirmed, in general, that demographic and occupational factors play a vital role in influencing employees' perception toward knowledge management, organizational learning, and innovation.

4. DISCUSSION AND FUTURE RESEARCH

This study took the perspective that building knowledge and learning systems pertain developing and applying intellectual capital to make organizations more productive and innovative. Specifically, it was suggested that knowledge management and organizational learning are two major antecedents of organizational innovation. In general, previous studies tended to examine knowledge management, organizational learning, and innovation individually. This study, in contrast, tries to examine how both knowledge management and organizational learning influence organizational innovation by distributing a questionnaire survey to a sample of employees (255) in Greater Amman Municipality in Jordan. It was significantly found that knowledge management and

organizational learning predict organizational innovation. The findings are consistent with (Carneiro 2000; Hung & Lien, 2005; Bates & Khasawneh 2004; Therin 2002; Kiernan, 1993; Lundvall & Nielson, 2007).

The findings revealed that managers reported a higher level of practice of each dimension as compared with respondents who hold job titles either department head or employee. Managers are more likely to show positive views about the practices of knowledge management, organizational learning, and organizational innovation because they are responsible in all these aspects in their organization. Managers most often try to show that everything works well in organizations, which in turn influences their positive perception toward the examined constructs. By the same taken, high experienced employees reported more positive attitudes toward knowledge management, organizational learning, and organizational innovation. Those respondents, in general, are in more senior managerial positions that provides them with the opportunity to get access, transfer, apply knowledge, and learn more from the experience of other organization since they are members of the organization councils that meet regularly with well-experienced members from inside and outside their organization. In addition, highly experienced employees are given more opportunities to risk taking, chances of trial and error, testing new ideas which influences their positive views toward innovation.

The results indicate that male employees tend to rate their knowledge transfer and shared vision more positively than female employees. As it is the case in Arab countries, Jordanian society is male oriented Mohyeldin & Suleiman (2001). It speculates that male respondents are given more opportunities to get involvement and participation in organization activities than female employees.

Since older respondents are more mature, experienced, they report a higher level of knowledge management and learning in the current study. In addition, older employees view themselves as a major source of wisdom and guidance to younger employees Mohyeldin & Suleiman (2001). They also tend to rate knowledge management and learning more positively.

The findings showed that employees who participated in a training course related either to knowledge management or organizational learning reported higher attitudes toward knowledge management, organizational learning, and organizational innovation compared with none participants. In general, employees who participate in a training course are more likely to build up their skills and use them in performing their duties, which positively influence their attitudes toward the three main constructs of this study. Accordingly, managers of human resources and training in Greater Amman Municipality are highly encouraged to develop a training program of knowledge management and organizational learning because of their impact on innovation.

Respondents with administrative jobs reported more positive views toward knowledge management compared with respondents who hold a technical nature of

job. Since administrative jobs are more socially oriented, employees are highly tended to exchange ideas and experience in meetings and social activities, which influence their positive views.

Incorporate knowledge and learning practice in organizations lead to more innovation and high performance. The findings of this study are important to managers in the sense that they do reinforce the existing literature advocating the building of an innovative organization by enhancing knowledge and learning activities. In addition, the findings of this study are crucial and important to organizations. According to Kaiser (2000), the organizational learning literature is “startling unclear” of how organization learning improves organization outcomes. The current paper provides a critical initial glimpse of what may be valuable connection between organizational learning and organizational innovation. The practical implication of the current study lies in the results that organizations should design an appropriate combination of organizational knowledge management and learning. Organizations should be cognizant of several contingencies that might guide their choice among various approaches to knowledge management and learning strategies as well as the effects these choices have on the innovation of their organizations.

Cultivating more valid insights and perspectives about the causal antecedents and effects of knowledge management and organizational learning would benefit from future research employing more rigorous research designs mainly by utilizing longitudinal designs and analytic techniques more suited to testing causal hypotheses such as structural equation modeling. The study was conducted in Jordan. National culture might have a significant role in utilizing important constructs such as knowledge management, organizational learning, and organizational innovation. Therefore, more comparative studies are highly encouraged to examine the relation among the three constructs. There is a lack of research that has examined the three constructs in Arabic cultures like that found in the Hashimate Kingdom of Jordan. Accordingly, this study provides an important initial step in cross-cultural research.

The current study examined only the direct interaction of knowledge management, organizational learning and organizational innovation. It is quite possible that other moderators, such as organization structure and human resource management activities and policies (Gloet & Terzovski, 2004) affect this relationship as well. Accordingly, future contingency studies using other moderators are required to gain further insights into the knowledge management, organizational learning and organizational innovation relationship.

There are several limitations in this study are worth mentioning. This study relied on self-report and survey data. In addition, the study was conducted on one site, Greater Amman Municipality, which make the findings of this study limited to local administration units in Jordan. Therefore, further research could replicate this study in other fields. Other variables must be incorporated in the study to fully understand the antecedents and

prerequisites of building an innovative organization. Organization culture and organization structure are also critical aspects to develop an innovative organization. The researcher sincerely hopes that this paper will encourage other researchers to conduct more research on the same constructs and compare their findings with those presented in this paper.

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