# EURASIAN JOURNAL OF BUSINESS AND MANAGEMENT

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# THE IMPACT OF KNOWLEDGE MANAGEMENT ON ORGANIZATIONAL PERFORMANCE: AN EMPIRICAL STUDY OF KUWAIT UNIVERSITY†

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## Abstract

Knowledge management (KM) is a process that transforms individual knowledge into organizational institutionalized knowledge. The purpose of this paper is to shed light on KM infrastructure at Kuwait University to see how faculty members evaluate KM influence on organizational performance. Study findings provide insights into the infrastructure and process capabilities needed to provide knowledge support for organizational activities. The study was based on a stratified random sample consists of (355) faculty members from various colleges at Kuwait university. Study results show that faculty members evaluate knowledge management as "very good" with a (3.52) mean score at Likert five point scale, which indicates that Knowledge management components are highly related to organizational performance. Implications, imitations of the study, and recommendations regarding appropriate investments in knowledge management to enhance organizational performance are discussed.

**Keywords:** Knowledge Management, Information Technology, Organizational Performance, Kuwait University

## 1. Introduction

Management theories adopt different approaches for getting things done for achieving specific goals efficiently and effectively. Classical mechanistic theories assume that effective management depends on abiding by administrative principles such as division of labor, unity of command, suitable span of control, scalar chain, coordination, merit system, among many other principles. Likewise, the behavioral school of management stresses human relations approach as a key to management. Quantitative school of management, however, focuses on decision making as the core of effective management, and assumes that decisions quality depends on information input. From this perspective, KM is seen to be crucial for better decision making and of great importance for better organizational performance.KM has been defined as the explicit and systematic management of vital knowledge and its associated processes of creation, organization, diffusion, use and exploitation (Skyrme, 2001). The resources which make up knowledge capability of any organization include knowledge creation, information technology, and knowledge organization. When taken together, these resources determine the knowledge management capability, which in turn has been linked to organizational performance. The importance of knowledge has been highlighted by both academics and practitioners as a source of competitive advantage if it is well managed, as it is unique, imperfectly mobile, imperfectly imitable and non-substitutable (Wu and Lin, 2009; Emadzade *et al.* 2012; Zack, 1999). Organizations that create new knowledge and apply it effectively and efficiently can be

successful at creating competitive advantages (Grant, 1996; Gold *et al.* 2001; Lee and Sukoco, 2007; Zack *et al.* 2009; Alavi and Leidner, 2001). Many empirical research results have showed that KM have great influence on organizational outcomes in terms of innovation, product quality, and improvement of employees morale (Alzoubi and Alnajjar, 2010; Sireteanu and Grigoruta, 2007; Pentland, 2003).

The purpose of this paper is to examine KM infrastructure at Kuwait University to see how faculty members evaluate KM influence on organizational performance. It is hoped that study findings can provide insights into the infrastructure and process capabilities needed to provide support for organizational performance. The paper starts with a theoretical background which discusses KM basic elements, organizational performance, and establishes the study hypotheses. Subsequent sections describe the methodology, results, and analysis. Finally, the last section discusses conclusions, recommendations, implications, and directions for future research.

## 2. Literature Review
### 2.1. Definition of Knowledge Management (KM)

KM is an important asset of any organization and nothing is truer about this fact than academic organizations, as intellectual capital is the corner stone for gaining a sustainable competitive edge in the age of tough competition. KM refers to the full utilization of information and data in their explicit and implicit forms (Warier, 2003; Newman, 1991). It is 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 (Lueg, 2001). Davenport and Prusak (1998) state that KM aims to identify, manage, and value items that organizations know or could know. Gartner Group states that KM promotes an integral approach for identifying, capturing, retrieving, sharing, evaluating an enterprise's information assets and that knowledge management system is a key component in innovation and competitiveness (see Chaudhary, 2005; Carneiro, 2000). KM has been the subject of many discussions by various researchers and authors as it has an effect on organizational performance from the resource-based view's perspective (RBV) which offers useful lens for understanding this link (Allee, 1997; Bhatt, 2002; Davenport and Prusak, 1998; Probst *et al.* 2000). RBV argues that organizations should have needed resources, which enable them to achieve competitive advantage and a further subset which leads to superior long-term performance (Wernerfelt, 1984). Thus, it is important that organizations identify technology and infrastructure capabilities that directly impact positively organizational performance (Ocasio *et al.* 2015; Wade and Hulland, 2004; Zack *et al.* 2009). Henceforth, decision makers in all organizations, and particularly in academic and research institutions, should carefully consider building up successfully knowledge organizations, which can apply learned knowledge, and accumulated experiences, to make breakthroughs in the educational process. It can be concluded that KM is a systematic management of acquisition, creation, organization, and usage processes of explicit and implicit knowledge, which is of great importance to organizational decision making and needs. In other words, KM is considered an important element in the success of any organization, and it depends on the quality of knowledge any organization can create on one side, and on how this infrastructure could be managed on the other side, which needs paying attention to the technical and the human side of this integrated process (Lueg, 2001; Carneiro, 2000).

### 2.2. Knowledge Management (KM) in Educational Organizations

As far as higher education organizations (HEOs) are concerned, they are involved in developing and sharing knowledge, throughout various administrative departments and colleges to reach a setup of knowledge domains (Shermon, 2002). Henceforth, HEOs need to focus on developing strategies and methodologies to manage knowledge assets to meet challenges facing them in order to survive, excel, and thrive. They can do so by identifying, capturing, retrieving, sharing and evaluating knowledge through data and information processing using information technologies (Malhotra, 1997). Such endeavor will have an effect on organizational

performance in their efforts to achieve their goals. Moreover, academic staff in particular, plays an important role in this respect as many empirical studies have shown (Petrides and Nodine, 2003). Henceforth, HEOs must make best use of knowledge management as a vehicle for meeting their strategic goals. Moreover, KM is a very complex issue which should be addressed from various organizational, technical, and cultural dimensions in order that experiences and practices can be standardized and utilized to make difference in education (Agrawal, 2003).

## 3. Literature Review and Hypotheses Development

For measuring knowledge management, it is important to define a set of key elements of KM which include knowledge, information technology (IT), and knowledge organization (KO). Knowledge consists of information accumulation, utilization, sharing, and ownership identification practices which have a positive impact on overall knowledge management process (AlMashari *et al.* 2002). IT refers to the use of management tools to capture and store explicit and implicit knowledge. KO refers to organizational culture and processes (Anantatmula and Kanungo, 2006; Artail, 2006; Carmeli and Tishler, 2004; Moffett *et al.* 2003; Syed-Ikhsan and Rowland, 2004; Kulkarni and St. Louis, 2003; Perez *et al.* 2004). With regard to organizational effectiveness it refers, in this context, to the degree organizational objectives are achieved, and to the extent to which targeted problems are dealt with. Regarding literature review on this subject, many research studies have been conducted. The most relevant studies which focus on different dimensions of KM are mentioned.

### 3.1. Studies on KM Dimensions and Organizational Performance Studies

Valmohammadi and Ahmadi's study (2015) examined the impact of knowledge management practices on organizational performance. They presented a holistic approach regarding evaluation of knowledge management practices on organizational performance in the framework of four perspectives of balance scored card (BSC). Research findings revealed that KM practices positively and meaningfully impact overall organizational performance.

Akpotu and Lebari (2014) examined the relationship between knowledge acquisition practices and performance of administrative employees in educational institutions in South-South Nigeria. The study findings revealed a significant relationship between knowledge acquisition and administrative employee performance.

Romano *et al.* (2014) studied knowledge creation and exploitation in Italian universities and the factors that affect academic patent activities. The study showed that this activity is mainly influenced by the internal policies of the universities and this is seen by academics as a signal of the university inclination and attempt to develop an environment conducive to patent activities, and to offer structured support to inventors in the different phases of the patenting process .

Rasula *et al.* (2012) studied companies in Slovenia and Croatia companies to show that organizations can enhance organizational performance through creating, accumulating, organizing and utilizing knowledge. The study showed empirically that information technology, organization and knowledge positively affect organizational performance.

Emadzade *et al.* (2012) examined the impact of specific KM dimensions on organizational performance of (245) small size business owners and managers at a management-level in their firms from (86) enterprises in Isfahan. The study results showed that some knowledge resources are directly related to organizational performance, while others are not.

Mills and Smith (2011) evaluated the impact of specific knowledge management resources on organizational performance using survey data from (189) managers and structural equation modeling. The study showed that some knowledge resources are directly related to organizational performance, while others, though important preconditions for knowledge management are not directly related.

Stefanescus and Stefanescus (2008) discussed the factors that motivate in sharing knowledge before implementing any KM strategy to sustain the successful implementation of

reengineering projects. The study concluded that in order to achieve success with reengineering projects, organizations should possess and share knowledge about many different facets of this process; and that improvement of performance of engineering projects comes because of coupling IT capabilities with KM strategy.

Ababneh (2008) examined the impact of knowledge management and organization learning on organizational innovation. The study showed a strong positive correlation between knowledge management, organizational learning and organizational innovation, and that demographic variables have a significance impact on practicing each dimension, while educational level and department size have no significant impact.

Sujatha (2007) explored critical success factors for implementation KM. The study highlighted barriers and challenges that face KM efforts and showed that organizations have knowledge distributed across people, technologies, and organizational practices, and have and acquire new knowledge that will enable them to stay competitive in the market place.

Wong and Aspinwall (2005) investigated critical success factors for adopting knowledge management in small and medium-sized enterprises in the UK. The results were a list of critical success factors in order of importance for implementing KM.

Smith and Mor (2004) outlined an approach to determine the effectiveness of knowledge management in knowledge intensive organizations. The researchers introduced knowledge governance framework that includes knowledge acquisition, knowledge development, three types of KM, and organizational objectives, and suggest that KM objectives can be qualitative, implicit, and emergent.

## 3.2. Studies on Knowledge Management (KM) at Universities

Popov and Vlasov (2014) studied knowledge generation at universities and compared research output of universities with transaction costs. The study results revealed that transaction costs determines research performance in terms of published research, obtaining patents, and participation in conferences and exhibitions and are directly proportional to the number of economic units established at universities for promoting the application of research achievements.

Alnaweigah's study (2013) discussed the impact of KM functions on the organizational excellence from the perspective of the University of Al-Taif staff. The study assessed the reality of KM at the university and explored its impact on increasing excellence of its employees. The study findings showed a statistically significant impact of KM dimensions on organizational excellence among the staff of the university, and a statistically significant difference in their evaluation of the level of KM which can be attributed to their functional and demographic characteristics. Alzoubi and Alnajjar (2010) studied KM architecture of Jordanian universities, tested a set of variables related to Knowledge management. The study revealed that the pillars of knowledge management architecture consist of strategy and commitment, information systems, culture, and communications. Basu and Sengupta (2008) assessed success factors for learning in business schools in India. Study results showed that many successful KM initiatives were taken by business schools, which are both expensive and risky propositions. Sireteanu and Grigoruta (2007) examined perspectives of knowledge management in Jordanian universities. The study revealed that universities can accomplish their missions as learning organizations through KM, aiming to acquire knowledge used to improve organizational performance, with an accent on improving efficiency, effectiveness, and innovation. Maponya (2004) highlighted KM practices in academic libraries in South Africa. The study found that the role of academic libraries is changing to provide a competitive advantage for the parent universities, and their success depends on their ability to utilize information and knowledge of its staff to better serve the needs of the academic community.

It can be concluded from the surveyed literature review indicates that most studies tend to view some factors, such as knowledge strategy, leadership commitment, communications, culture, and information systems, as major forces for building up knowledge management organization. The connection between IT and elements of knowledge was researched, and results show that the better the use of IT tools, the better the knowledge creating processes

(Lee and Choi, 2003). Extensive use of IT tools has a positive relationship with the performance of knowledge transfer and the creation of knowledge assets (Skerlavaj *et al.* 2006). Furthermore, research findings indicate that technological infrastructure directly affects KM practices, and that information and communication technology and information management are prerequisites to, and enablers of KM (Moffett *et al.* 2003; Kruger and Johnson, 2010). Likewise, research findings show that organizational climate has its beneficial effects on KM through increasing trust and communication between employees and organizational structure can improve social interaction, and in turn, results in a higher degree of knowledge sharing and application (Chen and Huang, 2007). In short, strong relationships are found between organizational elements, information technology and knowledge management. These conclusions make it imperative for universities to have a well-defined knowledge management strategy as a high priority item in their agenda and to see the impact of KM on organizational performance form faculty members' perspectives and how does this relate to demographic factors as well.

### 3.3. Research Questions and Hypotheses
### 3.3.1. Research Questions

The research questions of the study are as follows:
- How do faculty members at Kuwait University evaluate KM?
- How do faculty members at Kuwait University evaluate the impact of KM on organizational performance?
- Is there a significant difference between demographic factors (college, academic rank, gender, length of experience, age, nationality) and KM?

### 3.3.2. Research Hypotheses

One of the key benefits of introducing KM practices in organizations is its positive impact on organizational performance. Some research studies suggest that KM positively affects organizational outcomes of innovation, product improvement and employee improvement and organizational performance (Fugate *et al.* 2009). Aligned with those conclusions and the results of literature review, the aim of the present study is to examine the current state of KM at Kuwait University and its influence on organizational performance from faculty members' perspectives. Therefore, the following research hypotheses are proposed: **H1**. Knowledge acquisition is positively related to organizational performance; **H2**. Information Technology is positively related to organizational performance; **H3.** Knowledge organization is positively related to organizational performance; and **H4.** There are no differences between faculty members' evaluation of KM attributed to college, academic rank, and gender, length of experience, age group, and nationality.

### 4. Research Methodology

This study examines whether a set of measurable KM variables are related, and if they have an impact on organizational performance. These variables are: (1) knowledge accumulation, utilization, sharing practices and ownership identification), (2) information technology (the ability of technology to capture knowledge and usage of information systems), and (3) knowledge organization (people, organizational climate and processes), (4) organizational performance as a process of goals attainment. The study aims at examining how KM variables relate to organizational performance from faculty members' perspectives. Secondary and primary data collection was engaged. Secondary data was collected based on the findings of surveyed literature. Primary data collection was carried out using a self-designed questionnaire based upon the literature review. The questionnaire consisted of two parts, the first included (6) demographic items of the study sample regarding college, academic rank, gender, experience, age, and nationality. The second part included (25) items covering two variables. The first includes KM aspects which are (a) KM acquisition (KMA (1-7), (b) information technology (KMB

(1-6), and (c) knowledge organization KMC (1-9). The second variable is organizational performance. The items were measured with 5-points Likert scale. The value of Cronbach alpha of these constructs was (0.943), indicating a high internal consistency (Sekran, 2003). The face validity of the questionnaire was ensured through a pilot study by presenting the questionnaire to (10) specialized faculty members, the format of the questionnaire was modified according to their comments and suggestions. Descriptive statistics methods such as mean, standard deviation, variance, percentage calculation, and inferential statistics (T-test) have been applied to analyze the data, and SPSS software (version 22) was used for statistical calculation.

## 4.1. Population and Sample

The total population of the study represented 1365 faculty members at Kuwait University at the time of conducting the study. The study sample consisted of 355 faculty members who were selected through a standardized random sampling and investigated through a standardized instrument designed by the researcher. Questionnaires were administered during the last quarter of 2014 by two trained research assistants. The main source of data was the database of faculty members' administration at Kuwait University. The researcher received 300 completed questionnaires which accounts for 84% response rate. The frequencies and the percentages of respondents with regard to demographic characteristics are as shown in Table 1, 58.7% were from colleges of arts, human sciences, and social sciences, while 41.3% were from colleges of engineering, basic sciences, and medical sciences. Regarding academic rank, full professors constitute 19.3%, associate professors 28.7%, assistant professors 52%. Regarding gender, males constitute 56.7%, females 43.3%. With respect to experience, 16.3% of respondents have up to 5 years of experience, 37.4% 6-10 years, and 46.3% 11 years or more. Regarding age, 13.7% of the sample were less than 36 years old, 51.6% 36-50 years old, and 34.7% 51 years or more. With regard to nationality, 70% of the sample were Kuwaitis, 30% non-Kuwaitis.

### Table 1. Profile of the Sample

| Demographic Characteristics | Frequency | Percentage |
|---|---|---|
| **College** | | |
| 1. Arts, Human Sciences, and social Sciences | 176 | 58.7 |
| 2. Basic Sciences, Engineering, and Medical Sciences | 124 | 41.3 |
| **Academic  Rank** | | |
| 1. Full Professor | 58 | 19.3 |
| 2. Associate Professor | 86 | 28.7 |
| 3. Assistant Professor | 156 | 52.0 |
| **Gender** | | |
| 1. Male | 170 | 56.7 |
| 2. Female | 130 | 43.3 |
| **Experience** | | |
| 1. 5 years or less | 49 | 16.3 |
| 2. 6-10 years | 112 | 37.3 |
| 3. 11 years and more | 139 | 46.3 |
| **Age Group** | | |
| 1. Less than 36 years | 41 | 13.7 |
| 2.  36-50 years | 155 | 51.7 |
| 3. 51 years or more. | 104 | 34.7 |
| **Nationality** | | |
| 1.  Kuwaiti | 210 | 70.0 |
| 2. Non Kuwaiti | 90 | 30.0 |
| **Total** | **300** | **100** |

**Notes:** (N= 300).

**5. Data Analysis**
**5.1. Knowledge Management (KM) and Organizational Performance**

In Table 2, KM and organizational performance are presented, using 3 measurement variables for KM, one for organizational performance, and 24 measurement items for both. The variables include knowledge acquisition, information technology, knowledge organization, and organizational performance. Each item was measured on a five-point Likert scale (1 to 5) with "strongly disagree," "disagree," "neither agree nor disagree," "agree," and "strongly agree" as the choices. When measuring items, respondents were asked about their degree of dis/agreement. Calculated weights of respondents 'answers on a five points Likert scale were interpreted as follows: Less than 3 points = weak, 3-3.5 points = good, 3.51-3.99 points = very good and 4 points or more = excellent.

**Table 2. Operationalization of KM and Organizational Performance**

| Measurement Variable | Item |
|---|---|
| **Knowledge Acquisition** (**KMA**) | 1. Faculty members obtain a good extent of new knowledge from external sources. |
| | 2. Faculty members obtain a good extent of new knowledge from contacts with their counterparts in other universities. |
| | 3. Faculty members exchange knowledge with their colleagues. |
| | 4. Faculty members rely on experience, skills and knowledge. |
| | 5. Faculty members rely on written sources |
| | 6. Faculty members share their knowledge orally at formal meetings or informal gatherings |
| | 7. Faculty members share their knowledge through formal procedures |
| **Information Technology** (**KMB**) | 1. IT tools are used to store data on implemented projects, tasks, and activities. |
| | 2. IT tools are used to store information on various topics. |
| | 3. IT tools are used to support collaborative work. |
| | 4. IT tools are simple to use and have a user friendly interface |
| | 5. IT tools enable effective work. |
| | 6. IT tools are effective   as it prevents loss of knowledge. |
| **Knowledge Organization** (**KMC**) | 1. There is a general inclination among faculty members to cooperate in exchanging experiences |
| | 2. The management/leadership of the university promotes    cooperation and exchange of experience among employees. |
| | 3. Employees of the university trust each other; they can easily rely on knowledge and skills of their colleagues. |
| | 4. Good work is rewarded in the university. |
| | 5. Innovative practices are rewarded In the university. |
| | 6. Faculty members are prepared to exert additional efforts and work when that is needed. |
| | 7. The administration/leadership of the university motivates employees to engage in formal education systems to achieve a higher level of education. |
| | 8. The administration/leadership of the University motivates employees to engage in informal education systems (e.g. seminars, courses). |
| | 9. There is support for the exchange of data, information and knowledge among various departments. |
| **Organizational Performance** (**OP**) | 1. The goals of the university truly reflect the interests and needs of its stakeholders |
| | 2. The university can clearly measure the benefits it provides to stakeholders. |
| | 3. The university's performance was excellent in the last three years in achieving its objectives. |

**5.2. Knowledge Acquisition**

First, as Table 3 shows, item scores for knowledge acquisition (KMA) indicate an overall average at very good level evaluation with a mean score is (3.75), and 'mean scores' (3.45-4.10) range.

**Table 3. Knowledge Management and Organizational Performance Dimensions**

| Item (Knowledge Management KM) and Organizational Performance (OP) | Order | Mean | Standard Deviation |
|---|---|---|---|
| KMA1 | 2 | 4.06 | .95845 |
| KMA2 | 5 | 3.56 | 1.08470 |
| KMA3 | 6 | 3.49 | 1.07723 |
| KMA4 | 1 | 4.10 | .93071 |
| KMA5 | 3 | 3.83 | .90026 |
| KMA6 | 4 | 3.73 | .91926 |
| KMA7 | 7 | 3.45 | 1.17162 |
| **KMA** | | **3.75** | **.67345** |
| KMB1 | 2 | 3.71 | 1.11679 |
| KMB2 | 3 | 3.67 | 1.02418 |
| KMB3 | 5 | 3.52 | 1.20872 |
| KMB4 | 6 | 3.49 | 1.20617 |
| KMB5 | 1 | 3.76 | 1.11649 |
| KMB6 | 4 | 3.64 | 1.04505 |
| **KMB** | | **3.64** | **.94105** |
| KMC1 | 4 | 3.40 | 1.20201 |
| KMC2 | 6 | 3.34 | 1.12131 |
| KMC3 | 5 | 3.37 | 1.14564 |
| KMC4 | 8 | 3.24 | 1.23662 |
| KMC5 | 5 | 3.37 | 1.25401 |
| KMC6 | 1 | 3.82 | 1.07726 |
| KMC7 | 3 | 3.45 | 1.12177 |
| KMC8 | 2 | 3.48 | 1.03271 |
| KMC9 | 7 | 3.29 | 1.12105 |
| **KMC** | | **3.41** | **1.40559** |
| OP1 | 1 | 3.33 | 1.00998 |
| OP2 | 2 | 3.19 | 1.01394 |
| OP3 | 3 | 3.00 | 1.23763 |
| **OP** | | **3.1800** | **.97278** |

It also indicates that faculty members evaluate experience, skills and knowledge at an excellent level as an extremely important source of knowledge with a mean score (4.10), followed by external sources written sources, formal meetings or informal gatherings, contacts with their counterparts in other universities, exchange knowledge with their colleagues, and that formal procedures as a source for knowledge acquisition with a mean score (3.45). This means that respondents evaluate all items within this measurement variable as "very good".

## 5.3. Information Technology

With regard to (KMB) information technology measurement variable, it got an overall average of very good level with a mean score is (3.64), and 'mean scores' range (3.29- 3.82). It also shows that the IT tools enable effective work has been evaluated as very good with a mean score (3.76), while evaluation relates to IT tools as a user friendly interface came last in the list with a mean score (3.49). This result means that respondents evaluate all items within this measurement variable at "good" level.

## 5.4. KM Organization

Regarding the third KM measurement variable, management organization (KMC), an overall average with a mean score is (3.41), and 'mean scores' range for the nine items (3.29- 3.82). These results reflect that respondents evaluate all items within this measurement variable as very good with an overall (3.59) mean score, which means that faculty members evaluate KM practices at Kuwait University as very good. As far as the dependent variable measurement (OP) is concerned, item scores for indicate an overall average at a good level with an overall mean score (3.18) for its three items. They were, in a descending order, as follows: the goals of the university truly reflect the interests and needs of its stakeholders (3.33), the university can clearly measure the benefits it provides to stakeholders (3.19), and the university's performance was excellent in the last three years in achieving its objectives (3.00). These results demonstrate that respondents evaluate various items, which relate to KM dimensions and organizational performance of Kuwait University as "good". These results show that the highest evaluation was for knowledge acquisition (3.74), followed by information technology (3.63), and knowledge organization (3.41). These results pinpoint to areas where more efforts can be exerted, and appropriate investments in knowledge management initiatives be allocated to strengthen knowledge management structure, particularly knowledge organization, and knowledge information technology infrastructures. Such efforts can contribute to upgrade organizational performance from the current level (3.18) to higher levels. These results are similar to research findings of Popov and Vlasov (2014) that transaction costs determine research achievements.

## 6. Testing Hypotheses

**H1**. Knowledge acquisition is positively related to organizational performance.
To test the hypothesis, Pearson's correlations were applied. The mean score for knowledge acquisition, as shown in Table 3, was (3.74) which reflect a strong positive correlation at a (.000) statistically significant level, as Table 4 indicates which supports the hypothesis. This results are similar to similar research results which revealed that KM practices positively and meaningfully impact overall organizational performance (Valmohammadi and Ahmadi, 2015; Akpotu and Lebari, 2014; Alnaweigah, 2013; Ababneh, 2008).

**H2.** Information Technology is not (directly) related to organizational performance.
To test this hypothesis, Pearson's correlations were applied. The mean score for information technology, as shown in Table 3, was (3.63) which reflect a strong positive correlation (.515) at a (.000) statistically significant level as shown in Table 4, which gives support to the hypothesis. This result is verified in other research findings (Stefanescus and Stefanescus, 2008; Sujatha, 2007).

**Table 4. Pearson's Correlations between Respondents' Evaluations of Kuwait University KM and Organizational Performance**

| KM Dimensions | | Organizational Performance |
|---|---|---|
| KM Acquisition | **Pearson Correlation** | .428[**] |
| | **Sig. (2-tailed)** | .000 |
| | **N** | 300 |
| KM Information Technology | **Pearson Correlation** | .515[**] |
| | **Sig. (2-tailed)** | .000 |
| | **N** | 300 |
| Organizational Performance | **Pearson Correlation** | .788[**] |
| | **Sig. (2-tailed)** | .000 |
| | **N** | 300 |
| Means of All KM Dimensions | **Pearson Correlation** | .735[**] |
| | **Sig. (2-tailed)** | .000 |
| | **N** | 300 |

**Notes:** ** Correlation is significant at the 0.01 level (2-tailed). * Correlation is significant at the 0.05 level (2-tailed).

**H3**. Knowledge organization is positively related to organizational performance.
To test this hypothesis, Pearson's correlations were applied. The mean score for knowledge organization, as shown in Table 3, was (3.41) which reflect a very strong positive correlation (.788) at a (.000) statistically significant level as shown in Table 4, which validates the hypothesis. This result is substantiated by other research results which show that patent activities are mainly influenced by the internal policies and organizational structure of the universities (Romano *et al.* 2014; Alnaweigah, 2013).

**H4.** There are no differences between faculty members' evaluation of KM attributed to type of college, academic rank, gender, experience, age group, and nationality.
To test this hypothesis, ANOVA was applied to compare means, and examine variation between groups. The results, as Table 5 shows, reveal significant variations in respondents' views attributed to college, gender, experience, age group, and nationality but not to academic rank. These results are similar to other research results that the level of knowledge management can be attributed to their functional and demographic characteristics (Alnaweigah, 2013).

**Table 5. ANOVA of Respondents' Evaluation of KM and Demographic Variables**

|  |  | Sum of Squares | Freedom Degrees | Mean of Squares | F | Significance |
|---|---|---|---|---|---|---|
| College | Between Groups | 37.189 | 1 | 37.189 | 45.095 | .000** |
|  | Within Groups | 245.758 | 298 | .825 |  |  |
|  | Total | 282.947 | 299 |  |  |  |
| Academic Rank | Between Groups | .513 | 2 | .256 | .270 | .764 |
|  | Within Groups | 282.434 | 297 | .951 |  |  |
|  | Total | 282.947 | 299 |  |  |  |
| Gender | Between Groups | 5.039 | 1 | 5.039 | 5.403 | .021* |
|  | Within Groups | 277.908 | 298 | .933 |  |  |
|  | Total | 282.947 | 299 |  |  |  |
| Experience | Between Groups | 15.867 | 2 | 7.933 | 8.822 | .000** |
|  | Within Groups | 267.080 | 297 | .899 |  |  |
|  | Total | 282.947 | 299 |  |  |  |
| Age | Between Groups | 6.949 | 2 | 3.474 | 3.739 | .025* |
|  | Between Groups | 275.998 | 297 | .929 |  |  |
|  | Total | 282.947 | 299 |  |  |  |
| Nationality | Between Groups | 19.966 | 1 | 19.966 | 22.625 | .000** |
|  | Between Groups | 262.980 | 298 | .882 |  |  |
|  | Total | 282.947 | 299 |  |  |  |

**Notes:** **Significant at the 0.01 level. * Significant at the 0.05 level (2-tailed).

To further investigate differences among respondents' evaluation according to experience, and age group, as revealed by ANOVA, Post Hoc Tests were applied**.** The results, as shown in Table 6, show that more experienced respondents evaluate the impact of knowledge management on organizational performance higher than the less experienced respondents at a (.001) statistically significant level. This result emphasizes the importance of providing more opportunities for faculty members to engage in joint and group efforts such as workshops, seminars, and conferences which increases knowledge acquisition and sharing.

**Table 6. Post Hoc Tests of the Impact of Years of Experience on Organizational Performance**

| | | | | | 95% Confidence Interval | |
|---|---|---|---|---|---|---|
| (I) Experience | (J) Experience | Mean Difference (I-J) | Std. Error | Sig. | Lower Bound | Upper Bound |
| Less than 5 years | 6-10 | -.55485-* | .16242 | .001 | -.8745- | -.2352- |
| | 11 and more | -.11760- | .15755 | .456 | -.4277- | .1925 |
| 6-10 | Less than 5 years | .55485* | .16242 | .001 | .2352 | .8745 |
| | 11 and more | .43724* | .12041 | .000 | .2003 | .6742 |
| 11 and more | Less than 5 years | .11760 | .15755 | .456 | -.1925- | .4277 |
| | 6-10 | -.43724-* | .12041 | .000 | -.6742- | -.2003- |

**Multiple Comparisons**
Dependent Variable: OPMEAN
LSD

**Notes:** * The mean difference is significant at the 0.05 level.

**OVERALLMOP * Experience**

OVERALLMOP

| Experience | Mean | N | Std. Deviation |
|---|---|---|---|
| Less than 5 years | 2.9184 | 49 | .92178 |
| 6-10 | 3.4732 | 112 | .96343 |
| 11 and more | 3.0360 | 139 | .94510 |
| Total | 3.1800 | 300 | .97278 |

With regard to respondents' age group views, regarding the impact of knowledge management on organizational performance, those faculty members in older age groups, as shown in Table 7, evaluate the impact of knowledge management on organizational performance higher than faculty members in younger age groups at a (.05) statistically significant level.

**Table 7. Post Hoc Tests of the Impact of Age on Organizational Performance**

| | | | | | 95% Confidence Interval | |
|---|---|---|---|---|---|---|
| (I) Age | (J) Age | Mean Difference (I-J) | Std. Error | Sig. | Lower Bound | Upper Bound |
| Less than 36 years | 36-50 | -.32688- | .16930 | .054 | -.6601- | .0063 |
| | 51 And more | -.03205- | .17777 | .857 | -.3819- | .3178 |
| 36-50 | Less than 36 years | .32688 | .16930 | .054 | -.0063- | .6601 |
| | 51 And more | .29483* | .12219 | .016 | .0544 | .5353 |
| 51 And more | Less than 36 years | .03205 | .17777 | .857 | -.3178- | .3819 |
| | 36-50 | -.29483-* | .12219 | .016 | -.5353- | -.0544- |

**Multiple Comparisons**
Dependent Variable: Organizational Performance MEAN
LSD

**Notes:** * The mean difference is significant at the 0.05 level.

**OVERALLMOP * Age**

OVERALLMOP

| Age | Mean | N | Std. Deviation |
|---|---|---|---|
| Less than 36 years | 3.0000 | 41 | .84656 |

| 36-50 | 3.3269 | 155 | .96060 |
|---|---|---|---|
| 51 And more | 3.0321 | 104 | 1.01075 |
| Total | 3.1800 | 300 | .97278 |

These results seem to be logical as more experienced and older faculty members appreciate knowledge management more than less experienced and younger faculty members, because accumulated experience and age are influential factors in sharing and exchanging knowledge and tacit knowledge in particular. The implication for these results is that Kuwait University should encourage faculty members from all age groups to participate in formal and informal workshops, seminars, and conferences to allow more opportunities for knowledge acquisition and sharing.

To test differences in respondents' views on the impact of KM on organizational performance attributed to the type of college, gender and nationality, independent T-tests were conducted. The results, as shown in Table 8, reveal that means of respondents' evaluation of KM (3.58) are higher for those from colleges of basic sciences, engineering, and medical sciences, than the means of respondents from colleges of arts, human sciences, and social sciences (2.88), at a (0.000) statistically significant level. This result is understandable, as faculty members from colleges of basic and applied sciences are engaged more in workshops and lab experiments than their colleagues from colleges of arts, human and social sciences because they might not have the same level of formal collective work in terms of experiments, labs and workshops. These results requires that Kuwait university exerts more efforts to encourage team teaching and other group work formats in colleges of arts, human sciences, and social sciences to provide more chances for knowledge acquisition and sharing.

**Table 8. T- Tests of the Impact of Type of College on Organizational Performance**

| Group Statistics | | | | | |
|---|---|---|---|---|---|
| College | | N | Mean | Std. Deviation | Std. Error Mean |
| OPMEAN | Arts, Human Sciences, and Social Sciences | 176 | 2.8845 | .94074 | .07091 |
| | Basic Sciences, Engineering and Medical Sciences | 124 | 3.5995 | .85959 | .07719 |

**Independent Sample T-Test**

| | | Levene's Test for Equality of Variances | | | | |
|---|---|---|---|---|---|---|
| | | F | Sig. | t | df | Sig. (2-tailed) |
| OPMEAN | Equal variances assumed | 1.714 | .192 | -6.715- | 298 | .000 |
| | Equal variances not assumed | | | -6.821- | 278.690 | .000 |

With regard to differences in respondents' views on the impact of KM on organizational performance attributed to gender, the results, as shown in Table 9, reveal that the evaluation mean scores of female respondents of KM are higher (3.32) than the evaluation mean scores of males of KM (3.06) at a (0.02)statistically significant level. These results might be explained by cultural factors as in the Arab World females might be more receptive to consultations and cooperation than males. This might be understood by the fact that there is no coeducation at Kuwait University which offers fewer opportunities of KM activities for female faculty members than those available for their male colleagues.

**Table 9. T- Tests of the Impact of Gender on Organizational Performance**

| Group Statistics | | | | |
|---|---|---|---|---|
| Gender | N | Mean | Std. Deviation | Std. Error Mean |
| OPMEAN Male | 170 | 3.0667 | .97544 | .07481 |
| Female | 130 | 3.3282 | .95279 | .08357 |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | | | |
|---|---|---|---|---|---|---|
| | | F | Sig. | t | df | Sig. (2-tailed) |
| OPMEAN | Equal variances assumed | .004 | .948 | -2.324- | 298 | .021 |
| | Equal variances not assumed | | | -2.332- | 280.910 | .020 |

With regard to differences in respondents' evaluation of the impact of KM on organizational performance attributed to nationality, the results as shown in Table 10 reveal that evaluation mean scores of non-Kuwaiti respondents of KM are higher (3.54) than those of Kuwaiti respondents of KM (3.01) at a (0.000) statistically significant level. These results might be explained by cultural factors as well as non-Kuwaitis, especially non-Arab faculty members, are used more to participatory work and sharing knowledge, as this is akin to their culture more than the case in the Middle Eastern Arab conservative cultures.

**Table 10. T- Tests of the Impact of Nationality on Organizational Performance**

| Group Statistics | | | | |
|---|---|---|---|---|
| Nationality | N | Mean | Std. Deviation | Std. Error Mean |
| OPMEAN Kuwaiti | 210 | 3.0111 | .97735 | .06744 |
| Non Kuwaiti | 90 | 3.5741 | .84361 | .08892 |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | | | |
|---|---|---|---|---|---|---|
| | | F | Sig. | t | Df | Sig. (2-tailed) |
| OPMEAN | Equal variances assumed | 1.146 | .285 | -4.757- | 298 | .000 |
| | Equal variances not assumed | | | -5.044- | 193.566 | .000 |

## 7. Conclusion

The objective of the study was to investigate KM at Kuwait University and show the impact of knowledge management on organizational performance from faculty members' perspectives. Although researchers often imply this positive effect, empirically proven link are rare. In this study, a positive influence of KM on organizational performance is examined and validated. The study results showed that the three knowledge components (knowledge acquisition, information technology, and knowledge organization) have a significant impact on organizational performance. This conclusion can be applied as a starting point for managers who are responsible for KM through their organizations, and suggests appropriate investments in knowledge management initiatives to enhance organizational performance. The three components need to be developed, managed and integrated into organizational processes and

practice. Although resources such as technology and knowledge conversion are necessary for effective knowledge management, some studies showed that they did not impact organizational performance directly (Gold *et al.* 2001). Research findings suggest that although the individual resources collectively determine a firm's overall knowledge management capability which, as a composite, is related to organizational performance, each resource is not directly linked to performance. However, organizations can ill afford to neglect these dimensions, as they work in combination with and support other resources, such as knowledge acquisition and knowledge application that may contribute directly to organizational success (Van den Bosch *et al.* 1999; Seleim and Khalil, 2007). Hence, in order to have a positive impact on elements of knowledge, information, and technology needs to be introduced through a set of organizational changes backed up by changes in people, organizational climate and organizational processes. There should be a strong culture, trust, and transparency in all areas of the organization. Cultural elements, which distinguish organizations from each other, are found to be related to KM efficiency and that knowledge management practices have a positive impact on organizational performance as well.

It can be concluded those three main components which are important for knowledge management, namely: (1) knowledge, (2) information technology, and (3) knowledge organization and connections between those components, and organizational performance. They were presented through main hypotheses and validated empirically. The results of this study confirmed the hypotheses which are: **H1** Knowledge acquisition is positively related to organizational performance, **H2** information technology is positively related to organizational performance, **H3** Knowledge organization is positively related to organizational performance, **H4** there are no differences between faculty members' evaluation of KM attributed to type of college, academic rank, gender, experience, age group, and nationality.

Moreover, the study highlights some of the issues raised by IT implementation to improve KM. The codification of knowledge in information systems, databases and knowledge repositories do not guarantee efficient KM, but has a potential to influence it in a positive way. The results also confirmed a positive effect of knowledge management practices on organizational performance. These findings can be used to improve the knowledge management practice of each college and department of the university. Possible applications include business process restructuring initiatives, human capital development, knowledge mapping, the introduction of more team, cross functional working, increased emphasis on collaboration, and the introduction of more formal channels for knowledge sharing. Finally, it can be argued that the KM conceptual model presented in this paper is a useful starting point to gain a deeper insight into KM elements and their influence to the organizational performance.

## 8. Managerial Implications

In view of the study results, the present researcher suggests that Kuwait University enhance the strength and applications of knowledge management pillars specifically regarding information technology and knowledge organization. This can be done through appropriate investments in knowledge management initiatives and allocation of more resources in these spheres which entails adoption of a clear Knowledge management strategy, and commitment by top management. Knowledge and skills should been integrated within knowledge management pillar's framework into teaching personal practices. Moreover, future research is encouraged to incorporate additional variables to establish more findings that are conclusive.

## 9. Limitations and Further Notes for Research

It is obvious that knowledge management processes have positive and outstanding effects on organizational performance. Although study results are interesting and promising, they need to be taken with caution because there are limitations in this research as it focused only on one institution. Hence, caution should be exercised in generalizing the results to other institutions with a different environment, and this research's result is not sufficient and need to be replicated. Therefore researchers should investigate the key factors in determining various

types of knowledge management in different contexts. Therefore, in future research, a sampling frame that combines different organizations could be adopted in order to provide a more comparative perspective to the subject.

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