Knowledge Management Concepts as viewed by executive managers in Jordan

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ABSTRACT

What is the major knowledge management (KM) concept that the executive managers viewed? To answer this question a total of 45 questionnaires were used in this research. SPSS, ANOVA, T-test and sheffee test were used for the 45 respondents result .The chi-square goodness-of-fit test was used for checking non-response bias.

The results of this research provide evidence that: KM concepts are statistically significant and provide guidelines for future research. KM drives economic growth. The executive manager who works with a Company with fewer than 50 employees feels that KM informs decision-making. KM can be translated into a profitable venue is significant for the manager who works in industry and Irbid City female and has a Bachelor degree.

INTRODUCTION

In recent years, the rise of the knowledge economy has created new challenges for strategic management and made managing intellectual capital an integral part of the firm's strategy, thus making the creation, development and capturing of value from knowledge and competencies a critical issue.

This development has led to a burst of attention to knowledge assets in the management, organization and strategy literatures. The rise of competencies and capabilities approaches to firm organization during the last decade has been linked to the knowledge economy and the increasing importance of innovation, rapid technological change, and knowledge assets, among other things (Eisenhardt and Martin, 2000).

There are different levels of knowledge that can be recognized and understood in an organization's knowledge resources (Greenberg, 2003). The easiest form of knowledge to understand is that of structured knowledge.

The hardest form of knowledge (in terms of understanding or detection) is tacit

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knowledge, which is the most transparent and subjective form of knowledge (Griffith, 2003).

An organization's knowledge resources have pertinently been described as an iceberg (Haldin-Herrgard, 2000). Structured, explicit knowledge is the visible top of the iceberg. This part of the knowledge resource is easy to find and recognize, and therefore easy to share.

Knowledge assets are very important to all organizations as they play a major role in all decision making. However, very little attention is given to how knowledge is created and how the knowledge creation process can be managed. According to Teece, knowledge assets cannot be bought and sold and need to be built in-house by organizations, and "they must also be exploited internally in order for full value to be realized by the owner" (Teece, 2000, p. 36). He further argues that the nature of knowledge itself makes organizational knowledge difficult to transfer as it is embedded in the organizational processes, procedures, routines and structures (Bogdanowicz, 2002). According to Bloodgood and Salisbury, every organization needs to identify where knowledge resides in the organization. It is very important especially when designing strategies "in order to ensure knowledge is being created, transferred and protected in the right way and with the right individuals" (Bloodgood and Salisbury, 2001, p. 55). With reliable collections of knowledge assets, then knowledge can be transferred to the respective person at the right time and at the right place with great accuracy so the management of knowledge sharing across organizational borders should focus on the nature of knowledge integration and key

factors that facilitate it. Managers hoping to create value by bringing together diverse knowledge streams from others must understand that economic action is embedded within a social structure in which different types of social capital obtain, impacting the nature of knowledge integration. Therefore, social structures of human interaction must not be left as mere constructs to be understood. Rather, they must be managed. Conscious decisions must be made about the design of roles, responsibilities, authority, and coordination of activities to facilitate knowledge integration.

Knowledge integration also depends on social capital. The transfer of information and knowledge at micro- and macro-levels between individuals and between organizations depends on people initiating and facilitating those transfers (Denning, 2002; Hinds, 2003). Consequently, all those things that encourage or inhibit inter-personal communication affect knowledge transfer. Of these, the importance of trust has long been noted (Sole, 2000).

Knowledge management can be generally understood as the understanding, regulation, and creation of policy associated with relevant information. The field has been particularly studied within the context of the enterprise, with a focus toward how certain approaches toward the knowledge within the organization can lead to a competitive advantage.

A key element in analyzing how technology is transferred internally within the firm is to consider the wider issue of knowledge and information flows. Technology can be transferred in terms of tangible assets, such as new products, plant and equipment, and in intangible form through formal

mechanisms, such as patents and licences, and informally through information flows and knowledge sharing (Menzler-Hokkanen, 1995). A more recent form of organizational innovation in multinational firms is where senior managers, planning intra-firm technology transfer activities, have employed different organizational designs to facilitate the exchange and combination of knowledge in the development of a technology transfer process.

There are two predominant conceptions of what is meant by knowledge: "exogenic" and "endogenic". One can differentiate these conceptions by the difference between "knowledge" and "knowing".

The exogenic viewpoint views knowledge as static, unchanging, facts, existing independently of the knower, located in the world as discoverable "truths". In the exogenic viewpoint there is little or no link between knowledge and "knowing" (Kakabadse, 2003).

The endogenic viewpoint views knowledge as dynamic, changeable facts, cognitions, feelings, and emotions, dependent on the knower, located in the mind with possible various "correct" versions of the truth. Knowledge can be created and is inherently subjective (Kakabadse, 2003).

A third, emerging viewpoint is social constructivism where knowledge is neither exogenic nor endogenic. Knowledge or knowing is the product of the knowledge system at the point where the knower interacts with the world.

Tacit knowledge remains in people's heads. What we are trying to access on the other side of the spectrum is how do we connect the person who needs knowledge (or a particular piece of information) with the person who has that knowledge or information sitting in his head. Because all knowledge is experiential, it is something that the person alone has acquired or cultivated because of his or her past experience.

Knowledge is widely recognized as a key competitive asset of organizations (Nonaka and Takeuchi, 1995). Good management practice must take into account the tacit knowledge emerging from knowledge deliberation and sharing. Knowledge of good management practices may be stored in human agents and in various information artifacts, it also reside in organizational actions as organizations learn through the expansion of their repertoires of actions and procedures (Cohen and Bacdayan, 1994;Lin, 1982). People in various organizational roles access knowledge in different ways and for different reasons. Their knowledge-related activities are influenced by a number of factors, including their areas of expertise, trust and privacy among workers, and the feasibility and effectiveness of knowledge sharing. Thus, sharing the knowledge held in organizational memory requires not only identifying the location of the knowledge sources, but also facilitating strategies of knowledge retrieval and use.

Knowledge is used at different levels of the organization in different contexts by different types of know-how contributors. The middle manager in an insurance company who makes sure that organizational strategy is understood and implemented by the employees in the department; the butcher in the food section of a department store who uses his expertise to identify the requirements of his customers and to select and prepare meat in such a way

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as to meet those requirements; and the machinist on the shop floor of a manufacturing plant who uses a short-cut based on experience, which reduces the duration of the process without sacrificing quality . What do all these different types of know-how contributors have in common? The fact is that they all use knowledge.

Literature review

The term "knowledge" is defined as the boundaries encompassing job-related entities (such as operational thoughts, behaviors, standard operation procedures, organizational routines, and competitor and customer knowledge) and individuals' insights and their past working experience which is relevant to the current job.

A significant point for management to understand is that "a company's knowledge management strategy should reflect its competitive strategy" (Hansen., 1999, p.). The KM strategy chosen should create value for the firm's customers, turn a profit for the firm, and focus on how the firm's employees deliver on the value and economics. Second, the firms should not attempt to implement and excel at both strategies. Rather, they should use one strategy primarily and use the second strategy to support the first.

The concept of knowledge is based on a theoretical perspective whereby networks are defined as social relationship among individuals or groups (Elsawy, 2001)

Tomi Hussi(2004) critically discusses the definitions of knowledge management. The analysis shows that different concepts actually focus on different angles of the topic. Based on this, a model will be built that ties all of them into a unitary entity. At the same time, this model gives a reconfigured

definition of the concept of knowledge management.

The study of (Mie Augier & Thorbjørn Knudsen 2004) meets the challenge of modeling the knowledge organization by introducing a new, unifying way of thinking about the organization of knowledge. Building on ideas set forth in the behavioral theory of the firm we present a modeling framework in which the central idea is to represent the organization of knowledge as a structure that defines the flow of information among members with limited levels of cognitive skill. Such a structure is referred to as architecture. The need to design architectures that help their members make less errors by rejecting bad alternatives and accepting good ones is an important but largely overlooked issue in knowledge management. The present article offers an approach to think about this issue in a systematic way. The use of the proposed modeling framework is illustrated through examples. The article omits treatment of the technical details of the proposed modeling framework. A useful way of designing organizations that make fewer errors is outlined. This paper advances a new way of thinking about knowledge organizations that may be relevant for both researchers and practitioners.

Katsuhiro Umemoto & others (2004) examines the evolution of R&D knowledge management at Japan's business equipment maker Fuji Xerox, from the *sashimi* system, a Japanese origin of concurrent engineering, to its successor

zen-in system, which is composed mainly of a real high-tech discussion room equipped with databases that provide technical information and two 70-inch displays that

show virtual but real-size, three-dimensional graphic models. We found that Fuji Xerox has chosen the "hybridization strategy" that mixes human-based and IT-based knowledge-sharing techniques. We also argue that concurrent engineering provides not only efficiency benefits but also positive effects on group and organizational creativity. Finally we present a conceptual framework of "how concurrent engineering works", i.e. uncertainty and diversity necessitate concurrency which produces such benefits as efficiency and creativity, and which in turn realizes product integrity.

The paper of Lang&others (2004) argues that social contexts and social capital enable knowledge integration; that different social contexts combined with different types of social capital enable different types of knowledge integration. Four types of social contexts are distinguished based on the extent of social embeddedness and closeness of interorganizational coupling; four types of social capital are also described. Based on the diversity of knowledge streams, the extent of tacitness of knowledge to be exchanged, and value created through such exchanges, four modes of knowledge integration are identified, namely frontier, incremental, combinative, and instrumental. This paper provides new insights about the processes of interorganizational transfer of knowledge: the unique combination of a specific social context with a specific type of social capital means firms can achieve equally effective yet highly differentiated approaches to different modes of knowledge integration.

The vast majority of knowledge positions require individuals to interpret, analyze and/or synthesize information. Today, these terms can be used as synonyms for managing organizational processes. A process in which humans become responsible for inferences, diagnoses, judgments and decision making, often under severe time limits (Dixon, 1999). Since manipulating information is the knowledge worker's main task, everybody, including senior management, is "manipulating" information. Theoretically, the knowledge worker does it for the benefit of the organization, but in practice for his/her own interests. In addition, members of the organization have to integrate information into the organizational context. Therefore an infrastructure is needed to create an ongoing collective interpretation that means another tool to manipulate information.

Research problem

The research attempts to provide an in-depth empirical investigation of the issue of the KM concept as viewed by Jordanian excusive managers whom they have some knowledge about KM concept and know how to build a knowledge base.

Research importance

Knowledge flow in informal mechanisms is highly dynamic compared to formal mechanisms, since links and connections are not formally defined. The strengths of informal relationships can easily vanish or persistently survive in this kind of network. Human nodes are important to keep the networks functioning because each human node can be a highly capable search agent, knowledge repository, etc.

(Crosse, 2000) suggested "to build better networks, focus on who knows what". Informal role players who contribute to knowledge integration capabilities might affect competitive advantage by influencing

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the type of knowledge integration. Grant (1996) introduces three dimensions of knowledge integration: efficiency, scope, and flexibility. The efficiency of integration is the level of accessibility of expertise knowledge that resides across the organization. From all of these the importance of the research comes to help the decision makers to take advantage of KM and apply it in their organization.

Research instrument

The first step in developing this research instrument was an extensive and in-depth literature review. The questionnaire was measured on a 1 to 5 Likert scale. Second, many practising executive managers and other experts critiqued the instrument. After numerous iterations, improvements were incorporated into the survey.

Three types of validity were carefully applied to this instrument (Eisenhardt., 2000): content, construct, and criterion-related (predictive) validity. Content validily assesses the concept of the designed scale such as information technology. In this research, content validity is established through an extensive literature review, face-to-face interviews with administrators and other experts. Construct validity evaluates the appropriateness of variables.

The questionnaire was sent to 50 executive managers. Each questionnaire included a personalized cover letter that promised anonymity. To prompt questionnaire participants to fill out the survey, a follow-up letter was sent two weeks after the questionnaire was mailed. A follow-up telephone call was also made to each administrator during the next two weeks. These managers are the only ones who see the overall picture of KM.

A total of 45 questionnaires were used in this research. SPSS, ANOVA, T-test and sheffee test were used for the 45 respondents result .The chi-square goodness-of-fit test was used for checking non-response bias.

The reliability of scales was assessed by Cronbach's coefficient alpha. Reliability is an assessment of the internal consistency of the construct indicators. The Cronbach alpha values of 0.60 or higher are generally considered to be acceptable (Nunnally, 1978). The alpha values for this research scale are 0.79.

Sample Size

The sample size is shown in table 1

Table 1

Company Size (number of employees):
Less then 50=14
50 to less then 100=15
100 and more=16
Kind of services that the company offers:
Education=6
Medical=10
Industry=14
Public=15
Location of the company:
Amman=21
Zarka=13
Irbid=11
Years of experience of the executive manager:
Less than 10 years=17
10 years to less than 15 years=15
15 years and more=13
Sex of the executive manager:
Male = 33
Female= 12
Education of the executive manager:
Less than Bachelor's degree= 8
Bachelor's degree = 27
Graduate study = 10

Research limitations

There are several limitations of this research. First, this research is dependent on questionnaire data.

The second is the small sample size. The small number of the sample could be said to be too small to be statistically representative of the entire companies. Nevertheless, the findings were not considered by the company's management to be untypical of the company, and the managers took the results seriously.

Hypotheses

The hypotheses are as follows:
H1: there are   statistical differences between KM concepts and company size at
 $<=0.05$
H2: there are   statistical differences between KM concepts and the kind of services
 at $\alpha <=0.05$

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H3: there are   statistical differences between KM concepts and location of the company at $\alpha <=0.05$

H4: there are statistical differences between KM concepts and the years of experience of the executive managers at $\alpha <=0.05$

H5: there are   statistical differences between KM concepts and the sex of the executive managers at $\alpha <=0.05$

H6: there are statistical differences between KM concepts and the education of the executive managers at $\alpha <=0.05$

Statistical results

What is the major KM concept that the executive managers viewed? To answer this question we find the mean for each variable (table 2). A quick review of the result in table 2 reveals clearly that variable 7(KM drives economic growth) has the highest mean value (4.9556) and this means that the executive managers feel very strongly that KM drives economic growth. This should not come as a surprise. Indeed, the Jordanian executive managers feel that KM is very necessary for economic growth.

 Variable 10 has the least mean value, which means that the executive managers feel very weakly that KM is a strategic advantage for the company.

Table 2

Descriptive Statistics

Variables	N	Minimum	Maximum	Mean	Std. Deviation
KM is a strategic advantages for the company	45	1.00	5.00	4.4222	.91674
KM can be translated into a profitable venue	45	3.00	5.00	4.4667	.69413
KM drives innovation	45	3.00	5.00	4.6667	.60302
KM informs decision making	45	4.00	5.00	4.7333	.44721
KM is a key for gaining a competitive advantage	45	2.00	5.00	4.7333	.65366
KM is a human resource practice	45	3.00	5.00	4.8000	.45726
KM reduces future search costs	45	3.00	5.00	4.8889	.38271
KM involves knowing how to take data & share it	45	4.00	5.00	4.9111	.28780
KM turned data into information	45	4.00	5.00	4.9111	.28780
KM drives economic growth	45	4.00	5.00	4.9556	.20841
Valid N (listwise)	45				

To test the first hypothesis (*H1*: there are statistical differences between KM concepts and company size at $\alpha <=0.05$) the researcher used the ANOVA test (Table 3).

Table 3
ANOVA For Company Size

Variables		Sum of Squares	df	Mean Square	F	Sig.
KM turned data into information	Between Groups	978	2	.489	7.700	.001*
	Within Groups	2.667	42	.063		
	Total	3.644	44			
KM informs decision making	Between Groups	1.422	2	.711	4.048	.025
	Within Groups	7.378	42	.176		
	Total	8.800	44			
KM reduces future search costs	Between Groups	1.111	2	.556	4.375	.019
	Within Groups	5.333	42	.127		
	Total	6.444	44			

The results shown in table 3 state that variables: 2, 3 and 9 are significant at $\alpha <=0.05$. To know which company's size was higher than the others we used scheffe test (Table 4).

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Table 4
Multiple Comparisons Scheffe for the size

Dependent Variable	(I) SIZE	(J) SIZE	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
KM turned data into information	1.00	2.00	-.3333	.09759	.006	-.5810	-.0857
		3.00	-.3333	.09391	.004	-.5716	-.0950
	2.00	1.00	.3333	.09759	.006	.0857	.5810
		3.00	.0000	.08809	1.000	-.2235	.2235
	3.00	1.00	.3333	.09391	.004	.0950	.5716
		2.00	.0000	.08809	1.000	-.2235	.2235
KM informs decision making	1.00	2.00	.2667	.16232	.270	-.1453	.6786
		3.00	.4444	.15620	.025	.0481	.8408
	2.00	1.00	-.2667	.16232	.270	-.6786	.1453
		3.00	.1778	.14653	.485	-.1941	.5496
	3.00	1.00	-.4444	.15620	.025	-.8408	-.0481
		2.00	-.1778	.14653	.485	-.5496	.1941
KM reduces future search costs	1.00	2.00	.3333	.13801	.065	-.0169	.6836
		3.00	.0000	.13280	1.000	-.3370	.3370
	2.00	1.00	-.3333	.13801	.065	-.6836	.0169
		3.00	-.3333	.12458	.037	-.6495	-.0172
	3.00	1.00	.0000	.13280	1.000	-.3370	.3370
		2.00	.3333	.12458	.037	.0172	.6495

The mean difference is significant at the .05 level.

Table 4 shows that the executive manager who works in a company has which fewer than 50 employees feel s strongly that KM inform decision making more than the ones who worked in a company with fewer than 50 employee.

Table 4 also shows that the executive manager who works in a company with 100 employees or more feels strongly that KM turned data into information more than the ones who worked in a company with 50 employees.

And that the executive manager who works in a company having 50 or fewer than 100 employee feels strongly that KM reduces future search cost more than the ones who worked in a company with 100 and more employees.

To test the second hypothesis (*H2*: there are statistical differences between KM concepts and the kind of services at ± <=0.05) the researcher used the ANOVA test (Table 5).

Table 5

ANOVA For Kind of services

Variables		Sum of Squares	df	Mean Square	F	Sig.
KM can be translated into a profitable venue	Between Groups	4.171	3	1.390	3.348	.028*
	Within Groups	17.029	41	.415		
	Total	21.200	44			

*α <=0.05

The results shown in Table 5 state that variable 6 is significant at α <=0.05. To know which kinds of services are higher than the others we used the scheffe test (Table 6).

Table 6
Multiple Comparisons
Scheffe for the services

Dependent Variable	(I) Service	(J) Service	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
KM can be translated into a profitable venue	1.00	2.00	.5000	.33280	.527	-.4702	1.4702
		3.00	.9286	.31447	.046	.0119	1.8453
		4.00	.4000	.31130	.651	-.5075	1.3075
	2.00	1.00	-.5000	.33280	.527	-1.4702	.4702
		3.00	.4286	.26683	.470	-.3493	1.2064
		4.00	-.1000	.26310	.986	-.8670	.6670
	3.00	1.00	-.9286	.31447	.046	-1.8453	-.0119
		2.00	-.4286	.26683	.470	-1.2064	.3493
		4.00	-.5286	.23949	.199	-1.2267	.1696
	4.00	1.00	-.4000	.31130	.651	-1.3075	.5075
		2.00	.1000	.26310	.986	-.6670	.8670
		3.00	.5286	.23949	.199	-.1696	1.2267

The mean difference is significant at the .05 levels.

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Table 6 shows that the executive manager who works in an industrial company feels strongly that KM can be translated into a profitable venue more than the ones who worked in education.

To test the third hypothesis (*H3*: there are statistical differences between KM concepts and the location at $\alpha <=0.05$) the researcher used the ANOVA test (Table 7).

Table 7
ANOVA For the location

Variables		Sum of Squares	df	Mean Square	F	Sig.
KM informs decision making	Between Groups	2.589	2	1.294	8.753	.001*
	Within Groups	6.211	42	.148		
	Total	8.800	44			
KM is a human resource practice	Between Groups	1.339	2	.669	3.576	.037*
	Within Groups	7.861	42	.187		
	Total	9.200	44			
KM can be translated into a profitable venue	Between Groups	4.547	2	2.274	5.734	.006*
	Within Groups	16.653	42	.396		
	Total	21.200	44			

*$\alpha <=0.05$

The results shown in Table 7 state that variables: 3,5 and 6 are significant at $\alpha <=0.05$. To know which locations are higher than the others we used the Scheffe test (Table 8).

Table 8
Multiple Comparisons
Scheffe for the location

Dependent Variable	(I) Location	(J) Location	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
KM informs decision making	1.00	2.00	.5678	.13571	.001	.2234	.9122
		3.00	.2251	.14313	.301	-.1381	.5883
	2.00	1.00	-.5678	.13571	.001	-.9122	-.2234
		3.00	-.3427	.15754	.106	-.7425	.0571
	3.00	1.00	-.2251	.14313	.301	-.5883	.1381
		2.00	.3427	.15754	.106	-.0571	.7425
KM is a human resource practice	1.00	2.00	-.3810	.15268	.055	-.7684	.0065
		3.00	-.2900	.16103	.210	-.6987	.1186
	2.00	1.00	.3810	.15268	.055	-.0065	.7684
		3.00	.0909	.17724	.877	-.3589	.5407
	3.00	1.00	.2900	.16103	.210	-.1186	.6987
		2.00	-.0909	.17724	.877	-.5407	.3589
KM can be translated into a profitable venue	1.00	2.00	.0513	.22222	.974	-.5126	.6152
		3.00	.7576	.23436	.009	.1628	1.3523
	2.00	1.00	-.0513	.22222	.974	-.6152	.5126
		3.00	.7063	.25796	.032	.0517	1.3609
	3.00	1.00	-.7576	.23436	.009	-1.3523	-.1628
		2.00	-.7063	.25796	.032	-1.3609	-.0517

The mean difference is significant at the .05 levels.

Table 8 shows that the executive manager who works in Zarka City feels strongly that KM informs decision making more than the ones who worked in Amman City   And the one who works in Amman City feels strongly that KM is a human resource practice. But the executive manager who works in Irbid City feels strongly that KM can translate into a profitable venue more than the ones who worked in Zarka City and Amman City.

To test the fourth hypothesis (*H4*: there are   statistical differences between KM concepts and the years of experience of the executive managers at $\alpha <=0.05$) the researcher used the ANOVA Test (Table 9).

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Table 9
ANOVA For years of experience

Variable		Sum of Squares	df	Mean Square	F	Sig.
KM is a strategic advantages for the company	Between Groups	6.886	2	3.443	4.806	.013*
	Within Groups	30.092	42	.716		
	Total	**36.978**	**44**			

∗α <=0.05

The results shown in Table 9 state that variable 10 is significant at α <=0.05. To know which categories of the years of experience are higher than the others we used the Scheffe test (Table 10).

Table 10
Multiple Comparisons
Scheffe for the years of experience

Dependent Variable	(I) Experien	(J) Experien	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
KM is a strategic advantages for the company	1.00	2.00	.5373	.29985	.213	-.2237	1.2982
		3.00	-.4525	.31186	.358	-1.2439	.3389
	2.00	1.00	-.5373	.29985	.213	-1.2982	.2237
		3.00	-.9897	.32075	.014	-1.8037	-.1758
	3.00	1.00	.4525	.31186	.358	-.3389	1.2439
		2.00	.9897	.32075	.014	.1758	1.8037

The mean difference is significant at the .05 levels.

Table 10 shows that the executive manager who has 10 years of experience and more feels strongly that KM is a strategic advantages for the company more than the ones who have 15 years of experience.

To test the fifth hypothesis (*H5*: there are statistical differences between KM concepts and the sex of the executive managers at α <=0.05) the researcher used the T-test (Table 11).

The results shown in Table 11 state that variables: 2,3 and 6 are significant at ± <=0.05.

Table 11
T-tst For Sex

SEX		KM turned data into information	KM informs decision making	KM can be translated into a profitable venue
Male	Mean	4.9697	4.6364	4.3333
	N	33	33	33
	Std. Deviation	.17408	.48850	.69222
Female	Mean	4.7500	5.0000	4.8333
	N	12	12	12
	Std. Deviation	.45227	.00000	.57735
Total	Mean	4.9111	4.7333	4.4667
	N	45	45	45
	Std. Deviation	.28780	.44721	.69413

Table 11 shows that the female executive manager feels strongly that KM informs decision making and can be translated into a profitable venue more than the male executive manager. But the male executive manager feels strongly that KM turned data into information more than the female manager.

To test the sixth hypothesis (*H6*: there are statistical differences between KM concepts and the education of the executive managers at α <=0.05) the researcher used the ANOVA test (Table 12).

Table 12
ANOVA For Kind of education

Variable		Sum of Squares	df	Mean Square	F	Sig.
KM turned data into information	Between Groups	1.244	2	.622	10.889	.000
	Within Groups	2.400	42	.057		
	Total	3.644	44			
KM can be translated into a profitable venue	Between Groups	3.615	2	1.807	4.317	.020
	Within Groups	17.585	42	.419		
	Total	21.200	44			

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The results shown in Table 12 state that variables: 2and 6 are significant at ± <=0.05. To know which kind of education is higher than the others we used the Scheffe test (tTable 13).

Table13
Multiple Comparisons
Scheffe for the kind of education

Dependent Variable	(I) Education	(J) Education	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
KM turned data into information	1.00	2.00	.0000	.09623	1.000	-.2442	.2442
		3.00	.4000	.11339	.004	.1123	.6877
	2.00	1.00	.0000	.09623	1.000	-.2442	.2442
		3.00	.4000	.08849	.000	.1754	.6246
	3.00	1.00	-.4000	.11339	.004	-.6877	-.1123
		2.00	-.4000	.08849	.000	-.6246	-.1754
KM can be translated into a profitable venue	1.00	2.00	.7407	.26047	.025	.0798	1.4017
		3.00	.4000	.30693	.435	-.3789	1.1789
	2.00	1.00	-.7407	.26047	.025	-1.4017	-.0798
		3.00	-.3407	.23953	.372	-.9486	.2671
	3.00	1.00	-.4000	.30693	.435	-1.1789	.3789
		2.00	.3407	.23953	.372	-.2671	.9486

The mean difference is significant at the .05 levels.

Table 13 shows that the executive manager who has graduate study feels strongly that KM turned data into information more than the ones who have a Bachelor''s degree and less. And the ones who have a Bachelor's degree feel strongly that KM can translate into a profitable venue more than the ones who have less than Bachelor's degree.

Discussion

All the six hypotheses were statistically significant. We have provided empirical evidence of the concept of KM, as viewed by executive managers.

Clearly, the KM concept should be separate entities (constructs) in future research

Results support our hypotheses

Conclusion

The results of this research provide evidence that:

KM concepts are statistically significant and provide guidelines for future research.

KM drives economic growth.

The executive manager who works with a Company with fewer than 50 employees feels that KM informs decision-making.

KM can be translated into a profitable venue is significant for the manager who works in industry and Irbid City female and has a Bachelor degree.

Further research

The objective of this study was to develop a measurement instrument that identifies

Knowledge management (KM) concept as viewed by Jordanian managers.

In fact, KM can be viewed as a conceptually complex, evolving, broad umbrella of issues and viewpoints. Traditionally, organizational knowledge needs to become a stable resource if it can be translated into a profitable venue for information sharing. There is a growing rate of turnover among managers and/or knowledge workers who accumulate organization-specific knowledge that is ultimately lost to the firm and possibly gained by their competitors. Knowledge needs to be captured, interpreted, and eventually transferred in such a manner that the knowledge will continue to serve the organization, regardless of the individuals' original purpose for collecting the information.

Although little is known about the ways that the dynamics inherent in knowledge influence the eventual production of knowledge, the perception that collaborative research emerging through knowledge will make important contributions to a knowledge-based economy. In order to drive economic growth, recent government policy in both developed and developing nations, demands greater interaction among industry, the government, and institutions of science in the production of knowledge. In spite of broad acknowledgement of the complex dynamics found within these knowledge networks, there remains the expectation that research will produce knowledge that is of immediate use to industry, which in turn will promote the economy.

Marwa Ahmed (Professor)

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A Short Bio of Marwa Ahmed Ph.D.

Marwa Ahmed Ph.D. is a Professor in Business Administration and she is Dean of Faculty of Administrative & Financial Sciences 2002-till now-Philadephia University. Her Main Research interests are Public Relations, Leadership Development, Small Business Management, Quality Assurance in Universities, Knowledge Management, Electronic Management.

Marwa Ahmed (Professor)

Questionnaire

First: Personal Data

Company Size (number of employees):

Fewer than 50

50 to Fewer than 100

100 and more

Kind of services that your company offers:

Education

Medical

Industry

Public

Location of the company:

Amman

Zarka

Irbid

Years of experience of the executive manager:

Less than 10 years

10 years to less than 15 years

15 years and more

Sex of the executive manager:

Male

Female

Education of the executive manager:

Less than Bachelor's degree

Bachelor's degree

Graduate study

Second: KM Variables

Variables	Strongly agree	Agree	Bias	Disagree	Strongly disagree
1. KM involves knowing how to take data & share it					
2. KM turned data into information					
3. KM informs decision making					
4. KM is a key for gaining a competitive advantage					
5. KM is a human resource practice					
6. KM can be translated into a profitable venue					
7. KM drives economic growth					
8. KM drives innovation					
9. KM reduces future search costs					
10. KM is a strategic advantages for the company					

Marwa Ahmed (Professor)