# Hakemli Yazılar / Refereed Papers

Investigating the Influence of Attitudes and Behaviours of Knowledge Professionals on the Effectiveness of Knowledge Management System: A Study on Turkish Corporations

Bilgi Yönetim Sisteminin Etkinliği Üzerinde Bilgi Profesyonellerinin Tutum ve Davranışlarının Etkisinin İncelenmesi: Türk Firmaları Üzerine Bir Araştırma

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#### Abstract

The purpose of this study is to investigate the relationship between attitudes, behaviours of knowledge professionals, and the efficiency of knowledge management process on the effectiveness of knowledge management system in Turkish private sector companies. The data were gathered from knowledge professionals (N=304) currently employed in different sectors, located in Turkey. The factor, correlation, duncan and regression tests were conducted to analyze the relationship between the variables. The empirical findings indicate that attitudes of knowledge professionals and administrative behaviours of employees have a significant positive effect on effectiveness of knowledge management system. There has been no significant relationship found between the efficiency of process and the effectiveness of the system.

Keywords: Knowledge management; knowledge professionals; Turkish private sector.

# Öz

Bu çalışmanın amacı, bilgi profesyonelleri olarak bilinen bilgi işçilerinin ve bilgi sağlayıcılarının tutum ve davranışları ile bilgi yönetim sürecinin etkinliğinin bilgi yönetim sistemi üzerindeki etkilerini araştırmaktır. Araştırma örneklemini Türkiye'de faaliyette bulunan çeşitli özel şirletlerde çalışan bilgi profesyonelleri (N = 304) oluşturmaktadır. Çalışmada değişkenler arasındaki ilişkiyi analiz etmek için faktör, korelasyon, duncan ve regresyon testleri yapılmıştır. Araştırma bulguları, bilgi profesyonellerinin idari davranışları, tutumları ile bilgi yönetim sistemi üzerinde olumlu etkisini ortaya koyarken, bilgi yönetim sisteminin etkinliği arasında anlamlı bir ilişkiye rastlanmamıştır.

Anahtar Sözcükler: Bilgi yönetimi; bilgi profesyonelleri; Türk özel sektörü.

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# Introduction

For the last 20 years, the global changes have accelerated the transition process from the industrial economy to the knowledge economy. Scholars have argued upon the value of knowledge as an asset which is assumed to be one of the major drivers of competitive advantage. The most important reason for the need for the transition today is that, knowledge appears as an essential factor of production for the organizations to achieve their long term goals (Karabay, 2010). In fact, the significance of the traditional economic factors of production such as land, labor, capital and entrepreneurship began to decline (Toit, 2003). Therefore, the ability to create, share, obtain and manage knowledge better has become increasingly important.

Knowledge management (KM) is an emerging phenomenon that enables all the resources of firms, mainly knowledge, to be used effectively (Chou, Chang, Tsai and Cheng, 2005). The new world order is expected to benefit from new types of workers and citizens, as knowledge becomes a commodity and site of production (Blackmore, 2002). This is enforced with the fact that knowledge-intensive industries face more severe and stricter competition in the global market place than ever before (Karabay, 2011). Corporations have recently been focusing on ensuring the organizational dynamics of employees engaged in decision-making processes. This is particularly valid for the service sector, where the employee's productivity is considered as an important input, mainly for the knowledge-intensive industries (Kavak and Vatansever, 2007). In an organization, attitudes, perceptions and behavioral outcomes of an employee can be important determinators of an organizational performance. In knowledge intensive sectors these employees are the knowledge professionals that use the knowledge-based assets efficiently. Hence, an increasing number of qualified staff within the service sector appears to be a clear indicator of the increasing interdependence of economic activities in different sectors (Miles, Kastrinos, Flanagan, Bilderbeek, Hertog, Huntink and Bouman, 1994; Hipp and Grupp, 2005). Despite there are various studies that present empirical evidence related to employees' attitudes and behaviors, the literature is of limited evidence which provide notable evidence from knowledge professionals' attitudes and behaviours with regard to effectiveness of knowledge management system.

The main goal of this research is to fulfill the gap by investigating the relationship between attitudes and administrative behaviours of knowledge professionals and the efficiency of knowledge management process on the effectiveness of knowledge management system. This study is organized as follows: First, the conceptual framework with regard to knowledge, knowledge professionals, knowledge management is highlighted. Following this, the interaction with the concepts and the literature review is given to build the research hypothesis. Next, the research methodology is explained. The concluding remarks are discussed in the last section.

#### **Theoretical Framework**

#### Knowledge Economy

Intensive use of knowledge in daily life and benefiting from the power of knowledge compared to man-power or machines in production cycle has caused the knowledge to attract more attention in business (Tonta and Küçük, 2005, p. 2). Today, knowledge has become one of the main drivers for acquiring competitive advantage through the production, processing, distribution and management of knowledge in organizations. This is explained with the terms knowledge economy and knowledge society (Uçkan, 2006; Çetin and Karabay, 2010). Despite knowledge society seems like a new concept, it's keystones can be said to be laid in the 1900s. The emergence of knowledge-based economies, on the other hand, has been put into historical perspective and explored by many researches (Tonta and Küçük, 2005; Yeşilorman and Koç, 2014; David and Foray, 2002).

Knowledge society is characterized as a new type of multi-dimensional society that appears in the final stage of social development having technological, economic, socio-cultural and political aspects (Yeşilorman and Koç, 2014, p. 118). The wave of new economy continues to affect enterprises, organizations, individuals, societies and nations. This is mainly due to the fact that knowledge is an asset and an invisible source of wealth for the corporations (Çetin and Karabay, 2010, p. 27).

The broad label "knowledge economy" covers a wide array of activities that contribute to technical and scientific advance and interpretations which consist of knowledge-intensive production and services (Powell and Snellman, 2004, p. 200). As knowledge-based communities are considered to be the new emerging organizations, it has become critical to build networks of individuals, to produce and circulate new knowledge within various organizations. While the members of these communities improve their expertise, they become the major actors of new economy (David and Foray, 2002, p. 1).

The restructuring of social society has unveiled the discipline of knowledge management, also fostered by the new economy order. Various researchs have conceptualized knowledge management since today. Broadly, it is referred to the establishment of an organizational system that allows the formation of implicit knowledge transforming into open and structured production, storage and access of structured knowledge (explicit) that is obtained as a result of corporate activities. It has two major components: The first is, every kind of information and communication technologies and technological networks that provide the production, storage, access, circulation and use of tacit knowledge. Secondly is the social networks that provide the disclosure and the sharing of tacit knowledge based on the corporate culture as well as the relationship between the employees mostly used by unofficial channels (Çapar, 2005, p. 49).

#### Knowledge

As mentioned before, knowledge management is the process of capturing, developing, sharing, and effectively using organisational knowledge. Recently, information and information

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technology was one of the most popular approaches that brought added value to organizations (Sağsan, 2007, p. 125). Lately, the structure of modern society has turned into the knowledge society by undergoing change in company with IT revolution Knowledge era is, therefore, shaped as a result of the developments in information and communication technologies (ICT) (Yeşilorman and Koç, 2014, p. 117). As a major outcome of these advances, knowledge has become one of the major factors of production that will guarantee the achievement of goals (Halawi, Aronson and Mccarthy, 2005). In the literature, there exists various definitions of what knowledge is. It is expressed as a conversion of datas and information to the form of knowledge useful for businesses and economic growth (Oort and Raspe, 2005). However, it is fundamentally important to make a distinction between knowledge and information, for the reason that they are used interchangeably.

Knowledge involves the transformation of information and datas to useful applications that will bring economic growth to enterprises (Oort and Raspe, 2005, p. 5). Knowledge herein refers to valuable information (production of datas, individual records or files, market research or competitive information gathered from various resources) created inside or outside the organization (Tonta, 2004, p. 3). Intellectual assets are developed by the experiences and services of employees in an organization or products. This knowledge can either be documented as explicit or tacit knowledge which covers the undocumented information (Davenport and Prusak, 1998, p. 70; Tonta, 2004, p. 3). Tacit knowledge, is obtained through a social interaction between who owns and needs the knowledge (knowledge as a process). Knowledge empowers its possessors with the capacity for intellectual or physical action, in whatever field it locates. In this sense, knowledge fundamentally emerges as an outcome of cognitive capability in organizations. Information, on the other hand, takes the shape of developed and structured datas that remain passive until used by individuals. Within KM implementations, reproducing knowledge is much more expensive process since cognitive capabilities may not be articulated explicitly or transfered to others easily (David and Foray, 2002, p. 4).

Knowledge is investigated in the related literature either under different categories of information. Nevertheless, to better understand the knowledge it is also critical to specify the concepts of datas and information (Özdemirci and Aydın, 2008). Since it is difficult to define datas, information, and knowledge, one can distinguish the differences between them through external means or the user's perspectives (Bhatt, 2001). There is a common assumption that knowledge has a higher perception level than information as it covers information just as information covers datas (Fitchett, 1998). Zaim (2005), in his study, confirms this by acknowledging that data is composed of raw reality, information is a set of datas whereas knowledge is the acquired information.

In any circumstances, knowledge is personal and tacit in the beginning. It is formed when the datas and information are linked to perceptions, intuitions, emotions and values and used in actions like decision making, planning, comparison, evaluation and analysis. Nevertheless, for the knowledge to be used for social goals, it has to codified, explicit, delivered and the user has to be disclosed (Çapar, 2005, p. 49).

The knowledge was expressed by Ackoff (1989) through hierarchical levels. At the bottom level, knowledge is understood as datas, which comprises mostly the unprocessed raw information. At the next level is information which often refers to the intermediate steps of any forms of processed datas. At the third level of the pyramid is "knowledge" filtered through personal experience, observation, perception, mind, emotion, and intuition that are ready to be used in business processes (Çetin and Karabay, 2011, p. 31). At the top level there exists the wisdom. Barutçugil associates the knowledge with pyramid where datas, information, knowledge and wisdom is developed in an hierarcical order. Wisdom, at the top of the pyramid, emerges literally when the knowledge is intagrated, digested by and synthesized (Barutçugil, 2002, p. 60). The pyramid, later, was reexpressed in various studies (Bellinger, Castro and Mills, 2004; Faucher, Everett and Lawson, 2008; Hicks, Dattero and Galup, 2006). Knowledge is often the most difficult form of information because it is relatively individual-based and situation-specific (Robert, 2005).

#### Knowledge Workers

Knowledge management, as mentioned before, is generally a process that involves the defining, gathering, processing and the storage of knowledge as well as all technologies that help to deliver that knowledge from place to place via networks and communication (Yeşilorman and Koç, 2014, p. 118). Knowledge economy has enforced corporations implementing a more knowledge-based approach as knowledge has become one of the main components of enterprises. The most important reason for this is the need for knowledge in all sorts of activities. Most of the enterprises have difficulties in revealing the strategic corporate knowledge they possess and managing such knowledge efficiently (Çetin and Karabay, 2010, p. 47). This brings up a new debate among academics and practitioners. Are "new skills and abilities" required for a better integration into knowledge economy?

Today, different from the traditional view, in order to thrive and prosper in business the organizations should be able to manage professional and managerial skills within knowledge management perspective (Wiig, 2003). Teamwork, communication and learning skills of employees are known as "soft skills" that can hardly be described as new. The need to keep up with incessant change is essentially what drives employees to develop new kinds of skills and abilities (David and Foray, 2002, p. 9). In the related literature, there are various research studies underlining the importance of knowledge professionals (Davenport, 2005; Dragunov, Dietterich, Johnsrude, McLaughlin, Li and Herlocker, 2005). Most of them refer knowledge professionals to librarians, technology experts such as IT specialists, and knowledge users (Materska, 2004; Todd, 2001).

As Brinkley (2006) in his study states, in the knowledge economy, the knowledge workers are categorized into various types:

• the employees at the top three levels such as managers, experts, specialized assistants,

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• the talented staff that are identified according to their degrees or other qualifications, and

• *the ones that can perform their tasks with their expertise and communication skills* Knowledge management involves setting up an environment that allows the workers in organizations to create, capture, share, and exploit knowledge to improve performance (Chou et al, 2005). Most of them are the white-collar employees. Besides white-collar employees, blue-collar workers (such head masters) in strategic points may contribute to the production of knowledge (Çapar, 2005, p. 50). It is assumed that knowledge workers that are donated with technical skills like strategists, engineers, technicians, researchers are able to offer insights into problems and/or new situations. They can also contribute drastically by providing more values to organization in order to generate the client's preferences. In fact, they are mostly known for their expertise (Carneiro, 2000).

Participation in knowledge-based economies require intangible-capital investments with efforts directed to forming the basic skills and abilities (reading and writing) (David and Foray, 2002, 10). Organizations, can step ahead for organizational success only if they adopt their knowledge-based systems to the new global competitive environment, integrate in-house corporate knowledge management strategies, and create positive energy from knowledge workers. The shift from a product-based to a knowledge-based economy has revaled the need for skilled and specialized knowledge workers who are capable of higher-order thinking and solving intricate problems in the business place (Ong and Lai, 2007). The researches also sets back knowledge enablers as a complementary component of KM system.

# Knowledge Enablers

KM is a discipline required to deal directly with how people and organizations create and utilize knowledge in their daily work lives to analyze situations, make decisions and execute actions (Wiig, 2003). In order to apply effective knowledge management in an organization, it is necessary to enable each member of an organization into the process (Gholipour, Jandaghi and Hosseinzadeh, 2010, p. 1863). Perhaps the most crucial component in the knowledge management process is knowledge enablers. "Knowledge enablers" are defined as organizational mechanisms that develop knowledge intentionally and consistently (Ichijo, Krogh and Nonaka, 1998). This is because they stimulate the creation of knowledge, facilitate the sharing of knowledge in an organization and motivate the group members to share their knowledge and experiences with eachother. This is expected to allow the organizational knowledge being developed systematically (Yeh, Lai and Ho, 2006). Knowledge enablers are responsible for the overall organizational activities that positively affect knowledge-creation.

# Literature Review and Development of Hypothesis

#### Effectiveness of Knowledge Management System

Knowledge communities are basically characterized by their strong knowledge production and reproduction capabilities and the intensive use of information technologies. To better function, they must have overcome many challenges when managing their knowledge assets (David and Foray, 2002, p. 19). In the phase of knowledge era, a large number of organizations started to conduct the knowledge management initiatives in order to increase their strategic competence. During this process, the first challenge an organization may face, is how to define its' knowledge assets (Li and Tsai, 2008). Organizations decide whether knowledge is an asset according to the purpose of their trade (Karabay, 2010) due to the fact that knowledge represents the value of a company (Li and Tsai, 2008).

Effectiveness of knowledge management system allows to value creation in organizations knowledge (Sveiby and Simons, 2002). In the last few years, it has been argued that the effectiveness of knowledge is also related to how the transfer of the existing knowledge and the value creation is organized (Nonaka and Takeuchi, 1995). Knowledge management effectiveness for any company explains whether the organization receives and understands the knowledge needed to perform its tasks (Gupta and Govindarajan, 2000; Jensen and Meckling, 1996). KM effectiveness, in this sense, distinguishes from KM efficiency, the latter reflecting the cost and speed at which knowledge becomes available to the concerned entity (Gupta and Govindarajan, 2000). Although there have been various studies, there is limited research on the effectiveness of knowledge management practices in organizations (Oltra, 2005, Khalifa, Lam and Lee, 2001; Sveiby and Simons, 2002) that provides a comprehensive model which use organizational aspects of knowledge management. Sabherwal and Becerra (2003) measured the perceived knowledge management effectiveness in their cross-sectional research through perceived individual-level effectiveness, perceived group-level effectiveness of KM, and perceived organizational-level. Another study conducted by Sveiby and Simons (2002) reveal that, process design, office design, and sharing knowledge help to improve the effectiveness in knowledge management practices.

#### Knowledge Professionals' Attitudes

While the transition to knowledge economy continues to reshape the entire business system, the value of knowledge professionals has significantly risen in business. The most important reason for this is the need for all types of skills of KM users' related to their knowledge management activities in all stages of process (Çetin and Karabay, 2010). Today, employee power is one of the most important factors to maintain competitive advantage for organizations. In the past two decades, there have been significant researches in understanding organizational outcomes as well, which is not yet well understood by KM practitioners. Particularly, there is a confusion and debate among practitioners on the topic of employee attitudes and various dimensions of organizational behaviours (Saari and Judge, 2004). Therefore, it is very critical to have

knowledge about attitudes to maximize the outcome of the employee power in an organization (Hogan, 2008; Çetin, Karabay, Özcan and Taşkıran, 2013). Although the literature consists of some evidence (Ong and Lai, 2004; Lee and Choi, 2003) there is still a limited scope of research that explains the interaction between organizational knowledge management efficiency and employee attitudes (Chou et al, 2005). Liaw, Chen and Huang (2008) investigated learners' attitudes toward web-based collaborative learning systems. Based on their research, the results showed that five attitude factors like system functions, system satisfaction, collaborative activities, learners' characteristics, and system acceptance should be examined at the same time when building a web-based collaborative learning system. The findings also suggest that the factor of collaborative activities appears as the most significant predictor when investigating users' acceptance toward the system.

In the related literature, there exist some studies revealing that employees are required to perform more than the traditional tasks to enhance the quality of knowledge management system (Lim, Ahmed, Pervaiz and Zairi, 1999). In this study, we discuss the effects of attitudes on the effectiveness of KM in this study, knowledge workers and knowledge enablers' attitudes may influence the organizational outcomes. Based on the given literature, we develop the hypothesis as:

H1: There is a positive significant relationship between the attitudes of knowledge professionals and effectiveness of knowledge management system.

# Administrative Behaviour

Transition to the knowledge economy continues to influence all sectors and all industries (Havens and Knapp, 1999). Service sectors play an important role in the growth of economies since economies are getting highly globalized (Kamath, 2007). Knowledge management is applied by motivating the core competencies of knowledge professionals' attitudes towards entrepreneurship within the company (Beijerse, 1999). The most important factors that affect the personal characteristics of a knowledge worker are education level, attitudes and values, as well as innovativeness and creativity (Eagly and Chaiken, 1993). In the literature, there are insufficient amount of studies focusing on the employee attitudes and other managerial issues. Geng, Townley, Huang and Zhang (2005), in their pilot study, compare KM priorities, needs, tools, and administrative structure components in large Chinese and American universities. According to the findings, large Chinese and American universities provide different forms of administrative support for KM. Furthermore, American university leaders consider KM projects essential to improving organizational performance. Despite some studies, the literature is still far from providing evidence with regard to managerial attitudes of KM professionals. This study aims to fulfill the gap by examining the relationship between the administrative support and theoretical foundations of knowledge management. Based on the given literature, we develop the hypothesis as:

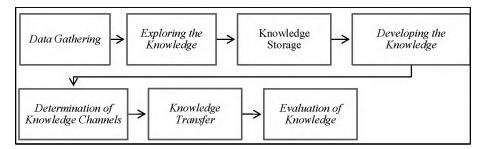
H2: There is a positive significant relationship between the administrative behaviour of

knowledge professionals and effectiveness of knowledge management system.

#### Efficiency of Knowledge Management Process

Since today organizations have needed knowledge in all sorts of activities. While knowledge has gained such a considerable strategic importance, most of the enterprises have difficulties in revealing the corporate knowledge they possess and managing such knowledge efficiently (Çetin and Karabay, 2010). Knowledge management process deals with organizations leveraging and extracting value from their intellectual or knowledge assets (Kulkarni, Ravindran and Freeze, 2007). It also embodies organizational processes that seek a synergistic combination of the data and knowledge processing capacity of information technologies and innovative capacity of human beings (Chou et al, 2005; Malhotra, 1998).

As illustrated in Figure 1, various studies (Fayyad, Shapiro and Smyth, 1996; Bhatt, 2001, Gold, Malhotra and Segars, 2001) reveal that knowledge management is the system of a process composed of many stages such as discovery, organization, transfer, and evaluation of knowledge, as. The discovery of knowledge is also known as the exploration of knowledge, which requires analyzing the properties of knowledge. Knowledge sharing is also of vital importance to organizations, enabling them to develop skills and competences, increase value, and sustain their competitive advantage. Knowledge, in this sense, must be managed as a strategic investment (Zack, 2002). Yahya and Goh (2002) examine the linkages between human resources and KM. They associate the four human resources areas (training, decision making, performance appraisal and compensation) with the five areas of knowledge management (acquisition, documentation, transfer, creation and application).



(Figure 1): Knowledge Management Process

The findings of recent studies suggest that a knowledge organization requires a different management approach from non-knowledge organization. To efficiently manage it, organizations need to measure knowledge (Çetin and Karabay, 2010). Chen and Burstein (2006) state that knowledge management is more than just the advantage of technology, intranet and internet including organizational issues with the cultural change which is important in the knowledge management implementation process. Therefore, apart from various tools and approaches, knowledge measurement is highly associated with information technologies.

Knowledge management systems refer to a class of information systems applied to managing organizational knowledge, which are IT-based system that supports the organizational

knowledge management behaviour (Alavi and Leidner, 2001). In this regard, KM emphasizes the importance of integrating organizational core knowledge, both tacit and explicit, with adequate IT infrastructure. Clearly, managers seeking to acquire efficient knowledge management system must balance both the content of the organizational knowledge and capabilities to leverage the infrastructure and process of knowledge (Gold et al, 2001). This will allow the organizations define their sources of knowledge and follow the knowledge management applications efficiently (Özdemirci and Aydın, 2008). Based on the assumptions stated so far, we develop the hypothesis as:

H3: There is a positive significant relationship between the efficiency of knowledge management process and effectiveness of knowledge management system.

#### **Research Methodology**

#### **Research** Goal

The purpose of this study is to investigate the effect of the attitudes, administrative behaviours of employees and the efficiency of the KM process on the effectiveness of knowledge management system. In order to analyze the proposition, a survey was conducted.

#### Sample and Data Collection

The research sample of questionnaire represents the people employed in various sectors including; archive, consultancy, customer relationship management (CRM), documentation, financial services and accounting, human resources, information security and quality, information technologies, institutional communication, knowledge and document management, library, logistics, process management, public relations, statistical research, supply chain management, technical support, warehousing located in Istanbul, Turkey. A survey was prepared and delivered to 400 people working in various service companies. After the deficiently and wrongly completed surveys were omitted, there were 304 completed surveys in total. In this way the turnaround ratio is 76%.

The research adopts an exploratory model and an online data collection. The scales in the survey are adopted from literature and consist of 4 parts. To measure the effectiveness of knowledge management system the scale developed by Becerra-Fernandez and Sabherwal (2001), to measure the users' attitudes related to knowledge management system, the LWC scale developed by Liaw et al (2008), to measure the questions related to the administrative behaviour of knowledge users, the survey developed by Geng et al (2005), to measure the efficiency of KM process the scale of Karabay (2010) and the scale of Gold et al (2001) were used. All the items in the questionnaire were accompanied by a 5-point rating scale (from 1: Strongly Disagree to 5: Strongly Agree).

# Data Analysis Method

Gathering data has firstly been used to determine the demographical traits of the respondents. The factor analysis, reliability analysis, regression and variance analysis tests have been conducted to reduce the scale into sub-dimensions. Also the correlation analysis and multiregression analysis are used to analyze the relationship between variables.

# Results

According to the results, 58, 2% of the participants are male, and 41, 1% of the participants are female. As we take a look at the age distribution, 28,9 % of the participants are aged between 18-30, 49,3 % of the participants are aged between 31-40, 15,5 % of the participants are aged between 41-50, 2,0 % of the participants are aged 51-60 and 0,7% of the participants are aged above 61. According to the results about the education of the participants, 4, 3 % of the participants are high school graduates; 68, 8 % of the participants have a bachelor's degree; 13, 2 % of the participants hold a master's degree; 2,3 % of the participants have a doctorate degree while 5.6 % of the participants hold a pre-bachelors degree. 53 % of the participants have a work experience of less than 5 year; 26,6 % of the participants have a work experience of 6-10 years; 12,2 % of the participants have a work experience of 11-15 years, and 5,6 % of the participants have been working for more than 16 years. When the affiliation of the respondents are considered; 30, 3% of the participants are titled as executive manager; 5, 3% of the participants are general manager; 19, 7% of the participants are specialist and 44, 7% of the participants are employed as staff in the various sectors. When the sector distribution is considered; academics constitute % 5,6 of the participants, while banking %10,9; communication %6,9; education %8,9; energy %4,9; food % 2,3; health %1,0; insurance %2,0; logistics %7,2; manufacturing % 10,9; pharmacy %9,2; retail %9,5; telecommunication % 14,8, and textile % 5,6 respectively.

In order to find the factor loadings of items for attitudes, administrative behaviour, efficiency of KM process and the effectiveness of KM system, factor analysis with varimax rotation was used. All factors have passed KMO Measure of Sampling Adequacy (0,921) and Barlett Test of Sphericity (p<0.000) which means that our data set is appropriate for factor analysis. For the measure, items which factor weight 0.50 and unique items in a factor, and items with close factor weights are leaved out of evaluation. Table 1 shows the factor loadings of variables.

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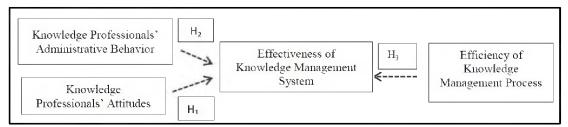
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# (Table 1): Factor Analysis for Efficiency of KM Process, Users' Attitudes, Administrative Behaviour and the Effectiveness of KM System\*

Idamu e	]	Factor Loadings		
Items	1	2	3	4
In my organization, information technologies are used for knowledge sharing.	0,783			
In my organization, information technologies are used for access to information.	0,750			
In my organization, information technologies are used for task flow planning.	0,728			
In my organization, information technologies are used for knowledge transfer.	0,721			
In my organization, information technologies are used for decision making process.	0,716			
In my organization, information technologies are used for developing knowledge management strategies.	0,716			
In my organization, information technologies are used for knowledge analysis.	0,706			
In my organization information technologies are used for enterprise resource planning.	0,684			
The accessibility of knowledge improves the efficiency of performing my tasks.		0,801		
I am satisfied with the accessibility of knowledge required for the performance of my tasks.		0,784		
I am satisfied with the accessibility of knowledge required for the department I am employed.		0,761		
The accessibility of knowledge improves the efficiency of the department I work for.		0,757		
I am satisfied with the knowledge sharing among my colleagues.		0,697		
In my organization, knowledge management system is important for developing new fields of job.			0,802	
In my organization, knowledge management system is important for developing new methods of job in management and organization.			0,708	
In my organization, knowledge management system is important for increasing the productivity and the performance.			0,698	
My organization plays active role in developing knowledge management system among other units.			0,646	
In my organization, knowledge management system is important for achieving strategic advantage.			0,621	
My organization makes great effort for improving the knowledge management system by investing on knowledge technologies.			0,532	
Other units in my organization consider the knowledge management projects as essential tools for increasing organizational performance.			0,415	
I am satisfied with the speed of the system.				0,818
I am satisfied with the quality of the system.				0,816
I am satisfied with the current job performance methods in my organization.				0,783
My colleagues have willingness for sharing their experiences with me.				0,537
I use knowledge management system to share my experience with my colleagues.				0,475

\* Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Total Variance Explained: 67.177

Depending on the factor results our research model is developed as below:



#### (Figure 2): Research Model

Table 2 summarizes the means, standard deviations and correlations among the variables. Reliabilities are located along the diagonal of the correlation matrix. According to correlation analysis, all variables are significantly correlated with each other, as expected. As a result of the correlation analysis, it has been found out that the attitudes of knowledge professionals were positively correlated with effectiveness of KM system (r=0,540); administrative behaviour (r= 0,573); efficiency of process (r=0,539). Administrative behaviour was positively correlated with attitudes (r=0,669) and efficiency of process (r=0,565). Additionally, efficiency of process was positively correlated with administrative behaviour (r=0,644).

(Table 2): Means, Standard Deviations, Correlations Among Variables and Alpha Reliability

	Maan	C D	Alaba	1	2	2	4
	Mean	S.D.	Alpha	1	2	3	4
Effectiveness of Knowledge Management System	1,6500	0,57678	0,838	1			
Attitudes of Knowledge Professionals	1,9886	0,67223	0,833	0,540(**)	1		
Administrative Behaviour of Knowledge Professionals	1,8915	0,64539	0,861	0,573(**)	0,669(**)	1	
Efficiency of Knowledge Management Process	1,7901	0,61379	0,910	0,539(**)	0,565(**)	0,644(**)	1

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

For analyzing the Hypothesis 1, 2 and 3, multiple regression tests are applied to the data. Results of this analysis are shown on Table 2. The standardized beta coefficients, t-values and their significance levels of the regression analyses are illustrated below:

(Table 3): Factor Analysis for Efficiency of KM Process, Users' Attitudes, Administrative Behaviour and the Effectiveness of KM System

Dependent Variable: Effectiveness	Standardized Coefficients	Τ	Sig.
of KM System	Beta	В	Std. Error
(Constant)		2,396	0,018
Attitudes	0,252	3,003	0,003
Administrative Behavior	0,378	4,202	0,000
Efficiency of KM Process	0,141	1,839	0,068
	Adjusted R2=0,562		
	F= 47,896		
	Sig.0,000		

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As a result of the multiple regression analysis it has been found out that attitudes of knowledge professionals have a positive effect on effectiveness of knowledge management system (p=0,003;  $\beta$  =0,252) and administrative behaviour has a positive effect on effectiveness of knowledge management system (p=0,000;  $\beta$  =0,378). According to Table 3, no significant relationship is found between the efficiency of KM process and effectiveness of KM system. Therefore, we reject H3 hypothesis and accept H1 and H2.

In the study, independent samples T-test for categorical items are conducted for the variables having two items for gender and marital status. As a result of the t-test for the gender groups' differences no significant relationship was found between the variables. Analyses of variance was conducted in order to understand if any variance exists between groups of possible categories of answer for the following questions: ages, work experience and sector experience. Then, post-hoc Duncan tests were conducted in order to understand the differences of means for each category. The values of the means range on a scale from 1 to 5.

	Age	Work Experience	Sector Experience
Variables	F	F	F
Efficiency of KM Process	2,087	3,697***	1,261
Administrative Behaviour of KM Professionals	2,047	1,107	2,694**
Users' Attitudes	4,979**(0,001)	1,426	3,185**
Effectiveness of KM System	3,064***	0,936	4.049(0.008)

(Table 4): Results of the Analyses of Variance

\*\*\* Significant at the 0.01 level, \*\* significant at the 0.05 level, \* significant at the 0.001 level.

Table 4 shows that users' attitudes, and effectiveness of KM system are significantly different concerning the different levels of age while efficiency of KM process is differs regarding the different levels of work experience. The result also show that administrative behaviour, users' attitudes, and effectiveness of KM system are significantly different concerning the different levels of sector experience. Results of the Duncan tests for the level of age are summarized in the Table 5 while tests for the level of sector experience are summarized in the 6, 7, and 8.

(Table 5): Results of the Duncan Tests: Means of Administrative Behaviour of KM Professionals at Different

Ages	

	n	Subset For Alpha = .05
Age	-	1
31-40	150	1,8387
41-50	47	1,8894
51-60	6	1,9333
61 and above	2	2,2000
20-30	88	2,2227

According to Table 5, it can be stated that the professionals at the level of ages between 20 and 30 show a higher lower amount of administrative support significantly different from

the professionals ranging between the ages of 31-40. Similarly, the professionals at the level of ages 60 show a higher lower amount of administrative support different from the professionals aging between 41 and 50.

(Table 6): Results of the Duncan Tests: Means of Users' Attitudes for Different Levels of Sector Experiences

	Ν	Subset For Alpha = .05		
Sector Experience		1	2	
16 years and above	45		1,8844	
11-15 years	52		1,8904	
6-10 years	106		1,8972	
0-5 years	92	2,1522		

According to Table 6, the professionals having a sector experience less than 5 years show higher level of attitudes significantly different from professionals with an experience of 16 years and more.

(Table 7): Results of the Duncan Tests: Means of Effectiveness of KM System for Different Levels of Sector Experiences

	n	Subset For Alpha = .05			
Sector Experience		1	2		
16 years and above	45	1,6100			
11-15 years	52	1,4808			
6-10 years	106	1,6127	1.6127		
0-5 years	92		1,8022		

According to Table 7, the professionals having a sector experience less than 5 years are more influential for the effectiveness of KM system significantly different from professionals with an experience of 16 years and more.

(Table 8): Results of the Duncan Tests: Means of Administrative Behaviour for Different Levels of Sector Experiences

Sector Experience	n	Subset For Alpha = .0		
		1	2	
16 years and above	45		1,7349	
11-15 years	52	1,7518	1,7518	
6-10 years	106	1,9628	1,9628	
0-5 years	92	1,9777		

Again according to Table 8, the professionals having a sector experience less than 5 years show higher level of attitudes significantly different from professionals with an experience of 16 years and more.

# Conclusion

Knowledge, today, is considered to be the main source of the economy and regarded as one of the emerging factors of production that will lead the organization to sustain its competitive advantage. Since the late 1990s knowledge management phenomenon has significantly entered the agenda of organizations and nations by the advances in technology, globalization and the increasing importance of intellectual capital. Organizations, have recognized that knowledge management is of great importance because it converts implicit knowledge. This allows the organizations empower its dynamics. Therefore, organizations invest on the management of knowledge systems that will maintain their presence in the new economic order. However, the effective use of these investments cannot be obtained unless the efficient management should be provided. To maintain the competitive advantage the organizations need to benefit from knowledge professionals that are specialized and skilled in terms of the ability to determine the knowledge needed to perform knowledge management practices.

The study aims to investigate the effect of attitudes and administrative behaviours of knowledge professionals and the efficiency of knowledge management process on the effectiveness of knowledge management system. Empirical findings reveal that attitudes and administrative behaviour of knowledge professionals have positive effect on effectiveness of knowledge management system. Additionally, the results imply that attitudes of knowledge professionals are related with administrative behaviour and the efficiency of process. Efficiency of KM process is also correlated with administrative behaviour. The empirical findings support the assumption that knowledge management in organizations. Depending on the literature and the empirical findings it can be stated that both attitudes and administrative behaviour of knowledge professionals are critical in the improvement of entire knowledge management system of organizations. In this sense, knowledge based organizations, today, have to take into account the knowledge providers and enablers as knowledge professionals to increase their knowledge management implications.

# **Further Discussion**

The study intends to conduct the relations between the various organizational outcomes that are also linked to in knowledge management. This research is the first attempt to examine and explain the relationship between attitudes and administrative behaviours of knowledge professionals, on the effectiveness of knowledge management system in private sector organizations. When the literature is considered, such a study stands to be unprecedented. However, it has some limitations. First of all, the sample only covers the basic sectors to investigate the variables. However, considering the number of employees in Turkish service sector, more researches are needed to be conducted to present more concrete evidence. Secondly, the respondents are

employed in the city of Istanbul. In further studies, the size of the research sample could be expanded to provide more empirical evidence about the attitudes and behaviors of knowledge professionals.

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#### Summary

The wave of knowledge economy continues to enforce enterprises, individuals, societies and nations to restructure and to renew their goal of existence. Knowledge, today, is considered to be the essential source of the economy and regarded as one of the emerging factors of production that will lead the corporations to sustain their competitive advantage. In this respect, organizations need to invest on their knowledge assets. The effective use of knowledge cannot be obtained unless the efficient management of sources is provided. Therefore, it is crucial for the organizations to measure their knowledge-based resources (Karabay, 2011).

Corporations have recently been focusing on maximizing the organizational efficiency of employees engaged in decision-making processes. This is particularly valid for the service sector, where the employee's productivity is considered as an important input, mainly for the labor and knowledge-intensive industries (Kavak and Vatansever, 2007). However, for the organizations to perform well in the knowledge management applications (Çetin and Karabay, 2010) they need to invest in the knowledge workers and knowledge enablers in an organization. Organizations, can step ahead for organizational success only if they can create positive energy from knowledge workers. Knowledge workers are able to offer insights into problems and/or new situations and provide more values to organization (Carneiro, 2000) whereas knowledge enablers are able to stimulate the creation of knowledge, facilitate the sharing of knowledge in an organization and motivate the group members to share their knowledge and experiences with one another.

While the transition to knowledge economy continues to reshape the entire business system, the value of knowledge professionals has significantly risen in business. The most important reason for this is the need for all types of skills of knowledge users related to their knowledge management activities in all stages of process (Çetin and Karabay, 2010). Knowledge management effectiveness is critical for any company that aims to receive and understand the knowledge needed to perform their tasks (Gupta and Govindarajan, 2000; Jensen and Meckling, 1996). Despite intense interest, organizations have difficulties in revealing the knowledge they possess and managing the knowledge efficiently (Çetin and Karabay, 2010). The related literature also consists of limited research that explains the interaction between knowledge management efficiency and employee attitudes (Chou et al, 2005).

This study provides evidence on investigating the effect of attitudes and administrative behaviors of knowledge professionals and the efficiency of knowledge management process on the effectiveness of knowledge management system, in Turkish private sectors. In order to analyze the propositions, a survey was conducted on 400 knowledge professionals working in various service companies. We propose that attitudes and administrative behaviors of knowledge professionals, and the efficiency of knowledge management process are influential on knowledge management effectiveness.

The research adopts an exploratory model and an online data collection. The scales in the survey were adopted from literature and consist of 4 parts. To measure the effectiveness of knowledge management system; the scale developed by Sabherwal and Fernandez (2001), to measure the users' attitudes the LWC scale developed by Liaw et al (2008), to measure the administrative behaviour the survey developed by Geng et al (2005), to measure the efficiency of KM process the scale of Karabay (2010) and the scale of Gold et al (2001) were used. All the items in the questionnaire were accompanied by a 5-point rating scale (from 1: Strongly Disagree to 5: Strongly Agree).

Gathering data has firstly been used to determine the demographical traits of the respondents. The factor analysis, reliability analysis, correlation analysis and multi- regression analysis have been used to test the relationship between variables. The results revealed that the attitudes of knowledge professionals were significant positive correlated with effectiveness of knowledge management system, administrative behavior and the efficiency of process.

Administrative behavior was positive correlated with attitudes and efficiency of process. Efficiency of process was positive correlated with administrative behavior.

As a result of the t-test for the gender groups' differences there was no significant relationship between the variables. As for the categorical items having more than two possible answers, analyses of variance was conducted in order to understand if any variance exists between groups. According to the results, users' attitudes, and effectiveness of KM system are significantly different concerning the different levels of age while efficiency of KM process is significantly different regarding the different levels of work experience. The results also showed that administrative behavior, users' attitudes, and effectiveness of KM system are significantly different levels of sector experience. When the regression findings are concerned, it has been found out that the attitudes of knowledge professionals have a significant positive effect on effectiveness of knowledge management system while administrative behavior has a significant positive effect on effectiveness of knowledge management system. Findings also suggested no significant relationship between the efficiency of KM process and effectiveness of KM system.

To summarize, results have confirmed that the attitudes of knowledge professionals have positive effect on the effectiveness of knowledge management system. Additionally, administrative behavior has a significant positive effect on effectiveness of knowledge management system. Moreover, the results imply that attitudes of knowledge professionals are related with effectiveness of KM system, administrative behavior, and the efficiency of process. Based on the theoretical and practical implications, it can be stated that knowledge based sectors have to take into account not only their investments in information technologies but also to whom they invest in the organization. This research has been the first attempt to examine and explain the relationship between attitudes and administrative behaviors of knowledge professionals, on the effectiveness of knowledge management system in private sector organizations. However, further researches are required to reveal the interaction among variables.