



ADOPTION OF KNOWLEDGE MANAGEMENT IN PAKISTAN: AN INVESTIGATION OF CRITICAL SUCCESS FACTORS

Adoção da gestão do conhecimento no Paquistão: uma investigação de fatores críticos de sucesso

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ABSTRACT

Although, knowledge has been recognized as a key business asset, firms are still in the infancy stages of comprehending the practical implications of knowledge management. Developing countries are widely believed to be falling far behind in competitiveness and socio-economic development, due to their inability to develop capacities to enable themselves to take part in the emerging global networks of knowledge creation. There is a dire need for a more organized and purposeful study, on critical success factors for knowledge management adoption in developing countries like Pakistan. However, no research, so far, has been conducted to empirically investigate a detailed list of CSFs for KM adoption in Pakistan. This paper evaluates and disseminates the findings of a self-administered survey to investigate the critical success factors for the implementation of KM in banking sector of Pakistan. A survey questionnaire having 11 factors, consisting 66 items is adopted in this study, which is statistically tested for its validity as well as reliability. Data are collected from banking officials. The level of importance, as well as the ranking list of the critical success factors for KM adoption is statistically examined. This paper provides a priority list of CSFs—figured out in order of their importance—for KM adoption in the banking sector of Pakistan. Human resource management, motivational aids, and processes and activities are found to be the most important, while measurement and organizational infrastructure are found to be the least important factors, perceived by the bankers.

Keywords: Human resource management; Motivational aids; Processes and activities; Critical success factors; Knowledge management; Banking Sector; Pakistan.

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ADOÇÃO DA GESTÃO DO CONHECIMENTO NO PAQUISTÃO: UMA INVESTIGAÇÃO DE FATORES CRÍTICOS DE SUCESSO

Adoption of knowledge management in Pakistan: an investigation of critical success factors

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RESUMO

Embora o conhecimento tenha sido reconhecido como um ativo comercial importante, as empresas ainda estão nos estágios iniciais de compreensão das implicações práticas da gestão do conhecimento. Acredita-se amplamente que os países em desenvolvimento estão ficando para trás em termos de competitividade e desenvolvimento socioeconômico, devido à sua incapacidade de desenvolver capacidades que lhes permitam participar das redes globais emergentes de criação de conhecimento. Há uma necessidade urgente de um estudo mais organizado e objetivo sobre os fatores críticos de sucesso para a adoção da gestão do conhecimento em países em desenvolvimento como o Paquistão. No entanto, nenhuma pesquisa, até agora, foi conduzida para investigar empiricamente uma lista detalhada de CSFs para adoção de KM no Paquistão. Este artigo avalia e divulga os resultados de uma pesquisa auto-administrada para investigar os fatores críticos de sucesso para a implementação do KM no setor bancário do Paquistão. É adotado neste estudo um questionário de pesquisa com 11 fatores, composto por 66 itens, que é testado estatisticamente quanto à validade e confiabilidade. Os dados são coletados de funcionários do banco. O nível de importância, bem como a lista de classificação dos fatores críticos de sucesso para a adoção de GC, são examinados estatisticamente. Este documento fornece uma lista de prioridades de CSFs - classificados em ordem de importância - para adoção de KM no setor bancário do Paquistão. A gestão de recursos humanos, as ajudas motivacionais e os processos e atividades são considerados os mais importantes, enquanto a medição e a infraestrutura organizacional são os fatores menos importantes percebidos pelos banqueiros.

Palavras-chave: Gestão de recursos humanos; Auxílios motivacionais; Processos e atividades; Fatores críticos de sucesso; Gestão do conhecimento; Setor bancário; Paquistão.

INTRODUCTION

Although, knowledge has been recognized as a key business asset, firms are still in the infancy stages of comprehending the practical implications of knowledge management (KM). KM is gradually emerging as an integral business function for different organizations (Metaxiotis, Ergazakis et al. 2005). Recently, governments have started understanding the importance of knowledge and its management; hence fostering the related activities largely headed by high level officials and particularly in economically and academically advanced countries of the world (Akhavan; Emami-Abarghoie et al. 2008).

The cornerstones of competitiveness in the recent economy have shifted from tangible and hard resources to a rather soft and intangible resource—knowledge. The main focus of information systems has also shifted from the processing of information to the management of knowledge. Businesses capable of gently capturing the embedded knowledge to utilize it into their day to day processes, operations, and services are likely to have a competitive advantage. Recently, a large number of firms are being considered as knowledge-based companies where KM is very crucial. KM is increasingly considered an indispensable business activity for firms as they widely recognize the fact that only effective knowledge management can produce competitiveness (Davenport and Grover 2001; Moffett, McAdam et al. 2002)

Developing countries are widely believed to be falling far behind in competitiveness and socio-economic development and prosperity, due to their inability to develop capacities to enable themselves to take part in the emerging global networks of knowledge creation. So, particularly in developing countries there is a dire need for a more organized and purposeful study on critical success factors (CSFs) for effective knowledge management adoption. It is inevitable for organizations now to be more vigilant and informed about CSFs influencing the success of a KM initiative. Underestimation and ignorance of the significant factors can hinder a firm's efforts to materialize their full potential (Wong, 2005). Adekunle and Helena (2002) attribute KM to be the underlying source for successful organizations, irrespective of their locality and size.

Researchers and practitioners in the field of KM have identified various CSFs for its adoption (Alazmi and Zairi 2003; Wong and Aspinwall 2005; Akhavan, Jafari et al. 2006; Changiz 2010). There is an abundant literature describing the successful implementation of KM in companies mostly centered in or originated from developed countries (Shanks, Parr et al. 2000; Chen; Chen et al. 2006; Migdadi 2009). Very few attempts have been made, to date, addressing the CSFs for KM adoption in companies belonging to, originated from, or centered in developing countries (Chong 2006; Akhavan, Hosnavi et al. 2009; Changiz 2010). Moreover, the literature is also very deficient due to the limited empirical studies evaluating these CSFs particularly in Pakistan (Rehman, Mahmood et al. 2010; Imran 2014).

This research attempts to find out the most important CSFs for KM adoption, using the know-how and insights of the workers to measure the significance of a set of CSFs for initiating KM in banking sector of Pakistan. The research offers the findings of a survey study conducted in different private and public banks in Pakistan. It draws on the research frameworks of recent studies that have identified the CSFs of knowledge management adoption.

The paper starts with a literature review of the CSFs for KM adoption, and then describes the methodology used for this survey. Next part outlines the various results of the study using statistical tools, techniques, and tests, followed by the discussion and evaluation of the overall findings drawn from the survey. At the end, the paper describes the conclusions drawn, study limitations and proposed future research directions.

1 THE MANAGEMENT OF KNOWLEDGE IN ORGANIZATIONS

Knowledge Management Defined:

Knowledge management is an interdisciplinary concept endorsing the acquisition, creation and dissemination of organizational knowledge to make it widespread and shared by many people (Gupta and McDaniel, 2002). Although knowledge management has been studied extensively by researchers and academicians but still there is

no generally accepted definition of knowledge management. Defining knowledge management is not so easy, because it multifaceted and interdisciplinary in nature and also it is a combination of strategies, tools and techniques. Various authors and researchers have presented different definitions of knowledge management.

Wiig (1997) suggests that knowledge management is a set of well-defined process or the methods used to find key information among different activities in organizations. He said that knowledge management is designed both to help the organizations to act intelligently in order to ensure its viability and success, and to achieve the best value for their knowledge assets. Therefore, the overall objective of Knowledge management is to maximize the efficiency of the organization (Wiig 1997).

Jennex, Smolnik et al. (2007) defines KM as the practice of capturing knowledge from prior experiences, and from existing and future activities with the explicit purpose of improving the efficiency of the organization. According to Holsapple and Joshi (2004) knowledge management is a systematic and deliberate phenomenon to process knowledge in a way that adds value to the organization in a positive direction to achieve their purpose. There are three explicit points of view on KM, each for a different definition (Kebede, 2010). From economic perspective, the management of knowledge is reflected in strategic orientations, business policy and organizational practice at all levels of the organization, thereby creating a congruency between the organization's explicit and implicit intellectual assets, and more useful business outcomes (Barclay and Murray, 1997).

From the point of view of science, knowledge is the basic resource that allows us to act intelligently to process information. Over time, knowledge changed in other ways, such as books, technology, methods, and traditions, in all types of organizations and in society at large. This transformation has resulted in accumulated experience which is used to increase effectiveness (Wiig, 1993).

From technology point of view, knowledge management transforms the information into actionable knowledge and makes it available in a form that can be used by the people who can apply that knowledge (Malhotra, 2005).

Critical success factors for KM adoption

Knowledge management is a gauge for the effectiveness and ineffectiveness of business operations. KM is a novel and dynamic mechanism having multiple complex factors affecting its adoption and implementation. These factors, commonly known as enablers of KM, should be known to the firms, not merely because of their significance for knowledge creation, but also because they facilitate people in organizations in sharing and transferring their knowledge and experiences to each other (Yeh, Lai et al.; 2006).

A huge number of important and significant factors for KM adoption have been introduced, identified and explored in the management literature. One of the pioneer studies of critical knowledge management factors was conducted by Skyrme and Amidon (1997), who highlighted CSFs as key mechanisms for organized and directed organizational knowledge. Wong and Aspinwall (2005) highlights strong ties between the business needs and visions, architecture of strong leadership, knowledge creation, cultural exchange, continuous learning and development, and technical infrastructure, as the key success factors for KM adoption.

Davenport, David et al. (1998) investigated 31 knowledge management projects in 24 companies, in order to determine the factors associated with efficient KM adoption. The results identified eight success factors; economic performance or industry value, the clear purpose and language, the quality of information, the flexible structure, multiple channels for knowledge transfer, cultural infrastructure, technological and organizational change practices, motivation and support from top management. Mathi (2004) suggested factors such as people, processes and technology to be considered critical for implementing knowledge management; focusing primarily on people followed by processes and then technology.

Consulting (1999) attributes people, corporate vision, and information technology as the main facilitators for the implementation of knowledge management. Liebowitz (1999) also proposed the key ingredients for successful knowledge management in organizations. He noted the need for an approach to information management with the support of senior management, chief knowledge officer (CKO) or equivalent, knowledge infrastructure, knowledge repositories, knowledge management tools, incentives for sharing information and encouraging a supportive culture as CSFs for KM adoption.

Holsapple and Joshi (2000) first examined the factors that can affect the success of knowledge management, derived from various literature sources. And then they used Delphi technique to assess the suitability of the factors to be considered useful for Km adoption. It proposes three types of factors, environment, management and resources, each has different variables. Crawford, Hasan et al. (2009) claimed to understand the different success factors of knowledge management. Success factors are leadership, culture, structure, roles and responsibilities, and measure of IT infrastructure. Similarly Chourides, Longbottom et al. (2003) focuses on five categories of factors namely, strategy, human resources management (HRM), information technology, quality and marketing.

Wong and Aspinwall (2005) first drew 11 factors from literature and then empirically tested them for reliability and validity to be adopted as a tool for studying important factors for KM adoption; namely, management leadership and support, culture, information technology, strategy and purpose, measurement, organizational infrastructure, processes and activities, motivational aids, resources, education and training and HRM.

2 METHODOLOGY

The method of data collection was a self-administered survey to collect empirical data from private and public banks in Pakistan. The tool has been established by Wong and Aspinwall (2005), including 11 factors consisting 66 items. It is divided into three main parts; the first part was to explore the basic characteristics of organizations such as company size, industry type, second was to confirming the KM initiatives taken by the banks and potential reasons for not initiating any KM practices, third part was to measure important success factors for KM adoption. In the third portion of the tool, the level of importance of different success factors for Km adoption was asked to the respondents to rate at a six-point Likert scale.

Data were collected from 301 respondents from 11 different banks from 4 major cities of Punjab (Lahore, Sialkot, Faisalabad, and Rawalpindi). This information has been carefully checked and tested to ensure that it is correct and up to date. The officer and above rank employees were the unit of analysis for this study.

The reliability of the tool (or scale) examines internal consistency by calculating Cronbach's alpha value. This method shows the amount of elements in the range of homogeneity or correlated i.e. different items of the scale measure the same characteristic (Badri, Davis et al. 1995). In general, the alpha value of 0.7 or above is considered satisfactory (Cuieford 1965), whereas Rungasamy, Antony et al. (2002) and Black and Porter (1996) have used it at 0.6 and considered satisfactory.

Table 1 shows the results of the analysis of the reliability of each factor. As all the factors are calculated at alpha value more than 0.7, this clearly shows that all the factors have high internal consistency and thus are reliable.

Table 1 Results of reliability analysis		
Factors	No. of items	Alpha value
Management leadership and support	7	0.808
Culture	8	0.793
Information technology	6	0.733
Strategy and purpose	6	0.809
Measurement	5	0.773
Organisational infrastructure	4	0.755
Processes and activities	10	0.855
Motivational aids	5	0.721
Resources	5	0.832
Training and education	5	0.831
Human resource management	5	0.755

To measure the construct validity of CSFs factor analysis was conducted, separately for number of items contained by each CSF. It is usually implemented to evaluate the unifactoriality in a tool. If all items of a factor measure only one construct, the factor is considered to be unifactorial. The quantity of cases in this survey was sufficient to perform a good factor analysis (Jazani 2004). To estimate the suitability of data for performing factor analysis, the Kaiser-Meyer-Olkin (KMO) was calculated; a value larger than 0.5 corresponds to an adequate condition for factor analysis (Black and Porter 1996; Baron, Field et al.; 2000). The requirement of the value of KMO (greater than 0.5) was successfully met by all the factors, as can be viewed in the column number 2 of Table 2.

The measurements acquired from the factor analysis were acceptable, as the results of this test depicted that all the factors were unifactorial, and hence, have construct validity. Table 2 shows the abridged results of the factor analysis. It can be clearly seen from the results that each combination of items yielded at least more than 50 per cent of the variance from its corresponding factor. In short, all the tests proved the tool, used in this study, to be highly valid and reliable.

Table 2 Results of factor analysis			
Factors	KMO value	Eigenvalue	Percentage variance explained
Management leadership and support	0.851	3.275	66.785
Culture	0.838	3.369	62.118
Information technology	0.831	2.861	57.685
Strategy and purpose	0.861	3.116	51.931
Measurement	0.821	2.629	52.573
Organisational infrastructure	0.754	2.312	57.793
Processes and activities	0.885	4.385	63.854
Motivational aids	0.791	2.676	53.521
Resources	0.835	2.999	59.977
Training and education	0.858	3.001	60.011
Human resource management	0.781	2.482	59.637

3 RESEARCH FINDINGS

Level of Importance of the CSFs

Mean value was calculated for the entire list of factors to measure their perceived importance level. The outcome of the mean statistics has been shown in Table 3. It is evident from the table below, that the mean values varied from 4.1123 (measurement) to 4.5256 (human resource management). Since each value falls somewhere around important and very important, it can be drawn that all the CSFs were perceived to be vital for KM adoption by the respondents. Mean values then led us establish a ranking /priority list of all the factors. All the factors were then assigned a ranking point. This ranking would help Pakistani banks customize their emphasis and focus when addressing the CSFs for the effective adoption of KM.

Factors	Overall mean	Ranking
Management leadership and support	4.1367	9
Culture	4.2051	7
Information technology	4.3134	5
Strategy and purpose	4.1854	8
Measurement	4.1123	11
Organisational infrastructure	4.1229	10
Processes and activities	4.3761	3
Motivational aids	4.4199	2
Resources	4.3076	6
Training and education	4.3575	4
Human resource management	4.5256	1

Ranking of CSFs

Based on the mean values, all the factors were then assigned an overall ranking, in order of importance from 1 to 11. The top three factors according to the banking officials were “human resource management”, “motivational aids”, and “processes and activities” while the least important three were “measurement”, “organizational infrastructure” and “management leadership and support”.

As apparent from the above analysis conducted based on mean scores, the CSFs, according to their order of importance (listed from the top to the bottom) for adopting KM initiatives in banking sector of Pakistan are:

1. human resource management
2. motivational aids
3. processes and activities
4. training and education
5. information technology
6. resources
7. culture
8. strategy and purpose
9. management leadership and support
10. organizational infrastructure and
11. measurement

Davenport et al. (1998) presumed motivational aids, management support, organizational infrastructure, and culture, as the most critical success factors for KM adoption. Whereas, Wong and Aspinwall (2005) suggested management leadership and support, culture, strategy and purpose, and resources to be the most important factors for KM adoption in SMEs of UK. On the other hand, the findings of the current study depicted a total incongruity from this; management support, organizational infrastructure, and culture are found to be less important, whereas, human resource management and processes and activities are assumed to be the most important factors. Since, the findings of Davenport et al. (1998) were overwhelmingly dominated by qualitative observations and intuitive feelings about KM initiatives, and those of Wong and Aspinwall (2005) were confined to the SMEs and did not include large scale organization, so the differences can be tolerated. Moreover, both of the studies were based in advanced and developed countries; so we can attribute these differences to the national variations in the nature and level of KM adoption in economically developed vis-à-vis developing countries.

These differences in findings largely depict that there is an obvious discrepancy and incongruity in the perceived level of importance of CSFs for KM adoption, between developed and developing countries.

Along with other transformational interventions, a successful adoption of KM demands strong human resource management practices. Irrespective of its significance, as a matter of fact human resource management is perceived as the top most important factor for KM adoption perhaps means that it has got a little attention so far and should be in place as a priority, before addressing any other CSF. HR management departments should strive to promote a positive and supportive culture mutual trust and information sharing across the firms. These departments must also be capable and efficient enough to inculcate positive mindsets may facilitate knowledge creation and transfer. The second highest important CSF, motivational aid, points out the fact that incentives are considered to be the most significant and useful for encouraging people towards normative KM oriented behaviors in developing countries like Pakistan.

The third most important factor, processes and activities, indicates that processes like knowledge acquisition, transfer and practice are the core of KM, without which one cannot even conceive the this concept. Therefore, specific initiatives and interventions should be made to guarantee the proper implementation of KM in the banking sector of Pakistan.

To provide proper training and education is yet another significant prerequisite for successful KM adoption in Pakistan. Formal training helps to comprehend the concept of KM, and fosters individuals towards having positive attitude to becoming a knowledge-worker. Moreover, it provides with the necessary tools and techniques for knowledge acquisition and knowledge sharing in organizations.

Limitations of the study and directions for future research

It was very difficult to convince the respondents to provide their opinions on KM initiatives, partly because of the juvenile behavior towards knowledge management and partly because of the immaturity of this field yet in Pakistan. It made authors anxious about the level of competencies and exposure respondents had in fulfilling the requirement of the questionnaire. Moreover, since, the study was aimed at identifying the perception of the banking officials regarding the significance of the CSFs for KM adoption, it would be more imperative to extend this research in the near future to investigate the practice of organizations in terms of these CSFs. Consequently, the focus will shift from perception of officials to the actual practice in organizations to be successful in KM adoption. In addition, the outcomes of this research were confined to the findings of across-sectional survey which did not encompass the feedback or transitional effects. A longitudinal research, in this regard can provide us with more refined understanding of the subject under study.

CONCLUSION

Developing countries are widely believed to be falling far behind in competitiveness and socio-economic development and prosperity, due to their inability to develop capacities to enable themselves to take part in the emerging global networks of knowledge creation. So, in developing countries, particularly, there is a dire need for a more systematic and directed study, on critical success factors for implementing knowledge management. It is inevitable for organizations now to be vigilant and aware of the CSFs influencing the success of a KM venture. However, no research, so far, has been conducted to empirically investigate a detailed list of CSFs for KM adoption in Pakistan generally and banking sector particularly. This paper evaluates and disseminates the findings of a self-administered survey to investigate the critical success factors for the implementation of KM in banking sector of Pakistan.

A survey instrument comprising 11 factors, consisting 66 items was adopted in this study, which was statistically proved to be valid and reliable. Data were collected from banking officials. The level of importance, as well as the ranking list of the critical factors for KM adoption was statistically examined. Main role of this study is to develop a priority list of CSFs for KM adoption in the banking sector of Pakistan, figured out in order of their importance. Human resource management is found to be the most critical factor perceived by the bankers, while measurement is found to be the least important factor perceived by the banking officials.

This priority list of critical success factors will be valuable for the researchers, academicians, and the managers. It is obvious for companies in developing countries for not being able to address all factors of KM adoption at once, mainly due to resource scarcity and lack of competencies in this field, the ranking of CSFs will

help banks to prioritize their practices regarding KM adoption accordingly. Finally, this study is expected to provide the impetus for further research in this field to have a more refined comprehension of the CSFs for the implementation of KM in banking sector and also in other more important sectors of Pakistan economy.

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