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Critical Success Factors Affecting Knowledge Management Systems Applications: A Theoretical Framework

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Abstract

In the modern era, the developments in information technology have been dramatically shaping the ways people live as well as the ways organisations deal with their businesses in their professional business domains implementing various kinds of information systems. Knowledge Management Systems (KMS) has been recognized as one of the necessary tasks organizations have to perform in order to continue to survive. Given the tremendous amount of efforts organisations have devoted to the implementation of KMS, organizations are still continuously suffering from the failures of Knowledge management (KM) implementation. The purpose of this paper is to provide a conceptual theoretical framework that can help organisations to understand the context of KMS implementation. By having accurate assessments, the framework can in turn help the organisations to develop effective strategies or policies in order to maximize the probability of success in implementing KMS.

Keywords: Knowledge Management, Knowledge Management Systems, Critical Success Factors

1. Introduction

The rapid trend towards globalisation during the past 20 years has led to organisations seeking alternative strategies in order to remain competitive in an increasingly global marketplace (Wooliscroft et al., 2013). The overarching need to gain competitive advantage has led companies to look for new ways to lever value from their knowledge assets as a means of remaining competitive. Nowadays, developments in information technology have been dramatically shaping the way people live, as well as the ways organisations operate their businesses (Wang, 2005). Companies have been implementing complex technologies, such as Enterprise Resource Planning (ERP) systems, Decision Support Systems (DSS), and Knowledge Management Systems (KMS), in an effort to stay competitive and able to respond to the increased customer demand (Iqbal and Mahmood, 2012; Pina et al., 2013). Despite the tremendous amount of effort organisations have devoted to the implementation of KMS, organisations are continually affected by the absence of Knowledge Management (KM) implementation.

The main aim of this paper is to explore the factors that can help organisations to gain a better understanding of the important factors that can affect the successful implementation of KMS. By providing accurate assessments, our proposed framework can assist organisations to develop effective strategies and policies in order to maximize the probability of success in implementing KMS.

The last few years have witnessed the continuing growth of developments in KMS to capture the information flows within organisations, and turn them into exploitable management information systems, contributing to the improvement the organisations' work and thus improving their competitive advantage. However, such developments in KMS and frameworks do not necessarily take into account the specific nature of organisations, particularly when considering the acceptance of KMS, and the factors that influence this acceptance (Abdelrahman and Papamichail, 2016). Therefore, this research will explore the development of a knowledge management adoption framework, and will develop a conceptual theoretical framework that will serve as an instrument to assist the adoption of KMS in organisations.

This research focuses on the acceptance of KMS and the factors that affect the adoption and acceptance of KMS in the information systems domain. Previous studies have shown that system acceptance and usage is increasingly viewed as an important element of the measurement of the success of information systems (Hossain and de Silva 2009); in the IS domain there have been two distinct approaches to the study of attitudes towards new

technology and its acceptance. The Technology Acceptance Model (TAM) (Davis 1989; Davis and Davis 1990; Davis 1996; Venkatesh and Davis 2000; Venkatesh, Morris et al. 2003); and the Social Information-Processing Model (SIPM). There are also other theories regarding technology usage, such as Task-Technology Fit (TTF) and Activity Theory (AT), but in this study the focus will be on TAM.

The next section discusses knowledge management from several perspectives while it outlines the concept of knowledge management and KMS, along with the factors that influence KMS implementations. Additionally, the literature review summarises the critical success factors that affect KMS applications and we conclude our paper with a suggestion for a conceptual theoretical framework which can be very useful for academics as well as practitioners.

2. Knowledge Management

Knowledge Management (KM) is traditionally rooted in the study of knowledge, which has been a deeply controversial issue (Drucker, 1993; Turban and Aronson, 2001). However, Knowledge Management as a field of study was emerged in the early 1990s (Drucker, 1993; Metaxiotis and Prusak, 2001; Ergazakis and Psarras, 2005). Recently, KM has received substantial attention in scholarly and practitioner-oriented literature (Gonzalez-Padron et al, 2010; Iqbal and Mahmood, 2012; Jennex, 2012; Jetz et al, 2012; Moshari, 2013); professional service firms, and business organisations of all industrial sectors. Due to the large demand for concepts and theories to support the systematic intervention into the way an organisation handles knowledge, the field has attracted researchers from different disciplines, and has absorbed a wide array of research questions and approaches to solve these questions (Maier, 2002; Peinl and Maier 2011).

At a time when firms need to “know what they know” and must use that knowledge effectively, the size and geographical dispersion of many of them make it especially difficult to locate existing knowledge and get it to where it is required (Davenport and Prusak, 1998). If an employee leaves an organisation, it can be difficult to retain the knowledge that has been built up over years of work and experience, thus adversely affecting the company’s competitive advantage. Such issues make it necessary for firms to find the means to overcome these challenges. KM is still gaining a more comprehensive understanding among practitioners and academics, whilst generating wide interest as a new resource for organisations.

Different definitions of KM have emerged in the literature of IS. KM can be comprehensively defined as “an emerging set of organisational design and operational principles, processes,

organisational structures, applications and technologies that helps knowledge workers dramatically leverage their creativity and ability to deliver business value" (Gurteen, 1998; Wong and Aspinwall, 2005). KM can be viewed as a system designed to capture, store, retrieve, reuse, create, transfer and share knowledge assets within an organisation in a measurable way, completely integrated in its operational and business goals, in order to maximize innovation and competitive advantage (Dayan and Evans, 2006). Further perspectives of Knowledge Management see it as a conscious strategy for getting the right knowledge to the right people at the right time, and helping people to share and put information into action in ways that strive to improve organisational performance (APQC, 1999).

In brief, Knowledge Management can be defined as the management function responsible for the regular selection and implementation of an organisation's way of handling internal and external knowledge, in order to improve the organisation's performance. The implementation of knowledge strategies comprises all person-oriented, organisational and technological instruments which are deemed suitable for dynamically optimising the organisation-wide level of competencies, education and ability to learn about the organisation as well as to develop collective intelligence (Maier, 2003). More definitions of Knowledge Management can be added to illustrate the nature of KM, and to provide different aspects through which Knowledge Management can be viewed. Knowledge Management is the formalisation of and access to experience, knowledge and expertise that create new capabilities, enables superior performance, encourages innovation and enhances customer value (Beckman, 1997).

Bock (2001) defined Knowledge Management as a management programme, which manages and diffuses a set of activities of knowledge-resource acquisition, creation, and sharing in order to improve organisational performance and maintain a competitive advantage. Nonaka and Krogh (2009) defined knowledge as a dynamic human process for identifying personal belief in relation to truth. They consider Knowledge Management as a knowledge conversion activity for knowledge creation. Alavi (1999); and Wasko et al., (2009) state that knowledge management refers to organising and communicating both tacit and explicit knowledge of employees to other employees in order to improve efficiency and productivity at work. Knowledge Management is the management of information, knowledge and experience available to an organisation, its creation, capture, storage, availability and utilisation in order that organisational activities build on what is already known and extend it further (Mayo, 1998; Yang 2010; Wei, Choy et al. 2011). A common characteristic among all these definitions of KM is that the concept provides a framework for building on past experiences and for creating

new mechanisms for exchanging and creating knowledge. The most famous definitions in the literature refer to the same basic ideas, that Knowledge Management can incorporate any or all of the following four items: Information technologies; Business processes; Knowledge repositories; and Individual behaviours (Lytras, 2002).

From this review of definitions and concepts of KM it can be seen that there are two approaches: human and technology oriented. The human/process oriented approach has an organisational learning background, while the technological/ structural organisational learning approach has an MIS or computer science/ artificial intelligence background. However, many of the concepts fail to integrate the two approaches. Most holistic approaches appear to focus on the human oriented side, and merely mention technology as one of the enabling or implementing factors. KM is based on definitions focussing on a life cycle of knowledge tasks, functions or processes, strategy or management-oriented definitions, technology oriented definitions, and multiple definitions (Maier, 2002).

3. Knowledge Management Systems (KMS)

A rich knowledge base facilitates improved business environment scanning and an enhanced understanding of diverse competition and technology, which yields better anticipation of and planning to deal with changes (Carlo et al., 2012). KMS provide an innovative tool to conduct organisational change and to enhance knowledge flows within an organisation (Yang, Bernard et al. 2011). Organisations nowadays are keen to adopt new technologies, and adopting KMS will help to achieve this objective. Both practitioners and academia argue that, with the implementation of a KMS, an organisation can maintain its long-term competitive advantage (Gonzalez-Padron et al., 2010; Liu and Lai, 2011), sustain high performance (Pina et al., 2013;) and become more innovative (Gonzalez-Padron et al., 2010; He and Abdous, 2013), especially in the current business environment, which is conceived of as a knowledge-driven economy. Therefore, managing knowledge becomes a requirement for organisations wishing to survive in competitive marketplaces (Arvanitis et al. 2015).

However, this new technology requires a large amount of investment, and consequently organisations have to prepare in order to achieve the successful adoption of technology. This study will attempt to provide a tool that could determine how both employees and companies can better understand, accept and work positively with this new technology. The researchers use the Technology Acceptance Model (TAM) as the theoretical framework to define critical success factors (CSFs) that may affect this adoption. TAM has been chosen because it provides

one of the most successful models in the study of technology acceptance, and has been widely tested over the past 20 years (Hsiao and Yang, 2011).

Goffin and Koners (2011) argue that often people do not realise the knowledge they possess or how it can be valuable to them and others. Effective transfer and usage of that knowledge requires extensive personal contact, regular interaction and trust. Similarly, Pienen (2014) discusses that an extensive knowledge base increases a company's potential for combining previously unconnected knowledge elements in creative ways. This can enable businesses to overcome innovation barriers stemming from the path-dependent nature of an organisation's internal knowledge generation processes (Iqbal and Mahmood, 2012).

KMS have emerged as technological tools to manage organisational knowledge, although there remains a considerable variance in the literature and business practices about what exactly KMS are. Many researchers and practitioners believe that IT is the most important factor or vehicle for the implementation of KM initiatives. KMS are multi-faceted, and involve far more than just technology; encompassing broad cultural and organisational issues.

These emerging systems target professional and managerial activities, by focusing on creating, gathering, organising, and disseminating an organisation's "knowledge" as opposed to "information" or "data." A wide range of terminology has emerged in the literature to refer to KMS, such as 'information and communication technology' (Borghoff and Pareschi, 1998; Alavi, 1999; Schultz and Boland, 2000; Kuo et al., 2011), and 'knowledge-based information system'. More specifically, KMS refer to a class of systems developed to support the processes of knowledge creation, storage/retrieval, transfer and application (Alavi and Leidner, 2001). KMS tools such as Intranet infrastructures, document and content management systems, workflow management systems, artificial intelligence technologies, business intelligence tools, visualization tools, Groupware, and e-learning systems (Maier, 2002; Taticchi et al., 2009). Recently, the market for KMS has been a very dynamic one and many vendors, for example, document management systems, content management systems, e-learning systems, groupware and web server systems as well as business intelligence tools, have attempted to build KMS functions into these systems. Additionally, several vendors offer KM tools, such as knowledge visualisation tools, profiling, personalisation and recommendation tools and new integrative systems, such as enterprise portals (Maier, 2002). The next section will discuss the main critical success factors for these complex systems.

4. Critical Success Factors (CSFs) Affecting Knowledge Management

Given the importance of Knowledge Management in achieving competitive advantage, in order to build and adopt KMS there are many factors that influence the success of these projects. Many researchers have studied the critical success factors (CSFs) inherent in KM (Abdelrahman and Papmichail, 2016; Skyrme and Amidon, 1997; Hasanali, 2002; Chourides 2003; Hung 2005; Khalid 2006; Conley and Zheng 2009; Egbu, Wood et al. 2010; Conley 2011; Mas-Machuca and Costa 2012). Seven CSFs have been identified in an international study of practice and experience of leading organisations in KM, these factors include Knowledge Management Systems Usage, Organisational Culture, Knowledge Sharing, Decision Making Processes, Perceived Ease of Uses, Perceived Usefulness and Knowledge Management Practices (Abdelrahman and Papmichail, 2016). Moreover, Davenport et al. (1998) examined the practices of 31 Knowledge Management projects in 24 companies in order to determine the factors linked to their effectiveness. Among the projects, 18 were classified as successful, from which eight CSFs were identified to have contributed to their effectiveness. These eight CSFs linked KM to senior management support, knowledge-friendly culture, technical and organisational infrastructure, standard and flexible knowledge structure, clear purpose and language, economic performance or industry value, multiple channels for knowledge transfer, and change in motivational practices. However, the authors referred that linking the identified factors to the success of KM should be viewed as assumptions only. Baldanza and Stankosky (1999) designed a model for Knowledge Management with four pillars, including four critical success factors to adopt Knowledge Management in a beneficial way. The four pillars are leadership, organisation, technology and organisational learning. Additional taxonomies for CSFs have been introduced by other researchers, for instance Liebowitz (1999) presented six factors that embody the need for a knowledge management strategy with support from senior management, a chief knowledge officer (CKO) or equivalent, and KM infrastructure, knowledge ontologies and repositories, KM systems and tools, the need for incentives to encourage knowledge sharing and a supportive culture. Most of these factors identified in this paper were devised from important lessons learnt from organisations that applied knowledge management in different sectors (i.e: oil industry). Researchers around the globe have suggested additional factors, for example, Choi (2000) conducted an empirical study in Nebraska University and found that three CSFs in particular influence the successful implementation of knowledge management. These factors were information technology, top management leadership/commitment, and information systems. Similar studies have been conducted to discover CSFs in KM such as that of Hasanli, (2002) who identified five CSFs relevant to the

successful implementation of knowledge management; leadership, culture, structure, roles and responsibilities, information technology infrastructure and measurement.

In an expanded study, Chourides et al. (2003) surveyed 100 companies using a survey of the Financial Times Stock Exchange (FTSE). They also conducted a longitudinal study with six organisations, where they showed a range of CSFs affecting KM adoption in five organisational function areas: strategy, human resource management, information technology, total quality management, and marketing. Hung et al. (2005) carried out a study to determine the relationship between CSFs and implementation of KMS in terms of enhancing a firm's competitiveness whilst keeping costs to a minimum. Using statistical analysis, this study identified seven CSFs: a benchmarking strategy and knowledge structure, the organisational culture, information technology, employee involvement and training, the leadership and the commitment of senior management, a learning environment and resource control, and evaluation of professional training and teamwork.

More recently, Abdelrahman and Papamichail (2016) and Jennex (2017) agrees that KM is essential for today's firms and recognises the following critical components for the successful implementation of a KMS: a knowledge strategy that identifies users, sources, processes, storage strategy, motivation and commitment of users including incentives and training; an organizational culture and structure that supports learning and the sharing and use of knowledge; senior management support including allocation of resources, leadership, and providing training; and finally there needs to be a clear goal purpose for the KMS.

From the literature review, it is possible to discern that most CSFs for adopting knowledge management and KMS revolve around leadership and management, culture, information technology, strategy, human resources, training and education, marketing and measurements.

Table (1) shows a summary of the studies that have investigated CSFs.

Authors	General Factors	Marketing	Human resources Management	Training and Education	Resources	Motivation Aids	Processes and Activities	Organisational Infrastructure	Measurement	Information Technology	Culture	Management	Leadership
Skyrme and Amidon (1997)	✓	✓	✓	✓			✓	✓	✓				
Davenport et al (1998)	✓	✓	✓	✓	✓	✓	✓						
(Liebowitz 1999)	✓	✓	✓	✓		✓		✓					
APQC (1999)	✓	✓	✓	✓	✓								
Zack (1999)				✓									
Ahmed et al (1999)					✓								
Holsapple and Joshi (2000)	✓				✓		✓	✓	✓			✓	
Choi (2000)	✓		✓								✓		
McDermott and O'Dell (2001)			✓										
Alavi and Leidner (2001)				✓									
Hauschild (2001)								✓					
Horak (2001)												✓	
Hasanali (2002)	✓	✓	✓			✓	✓						
Yahiya and Goh (2002)									✓		✓	✓	
Chourides (2003)				✓	✓							✓	✓
Wong and Aspinwall (2004)								✓		✓		✓	
Hung et al. (2005)	✓	✓	✓					✓		✓	✓	✓	
Wong (2005)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Al-Mabrouk (2006)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Conley and Zheng (2009)	✓	✓	✓	✓		✓	✓				✓	✓	
Egbu, Wood, et al. (2010)	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	
Abdelrahman et al. (2011)				✓				✓			✓		
Machuca and Costa(2012)			✓	✓	✓								
Abdelrahman and Papamichail (2016)		✓	✓	✓		✓				✓	✓	✓	✓

Table 1. Summary of Literature Review that Identifies CSFs Affecting KM Adoption in Organisations

Accordingly, there are many factors that can affect the adoption of new technology and KMS.

The literature review outlined a number of these, but this paper will investigate three key

elements that influence organisational change since various factors may influence the implementation of new technologies in the organisations, especially the implementation of KMS. In the next section the factors with the greatest influence on KM implementation in the organisations will be discussed and explained.

4.1 Organisational Culture

One of the most important elements contributing to the successful implementation of the KM initiative is organisational culture (OC). This refers to the unique configuration of norms, values, beliefs and ways of behaving that characterise the way groups and individuals combine to get things done (Eldridge and Crombi, 1974; Schein, 2010).

Organisational culture can be defined as the values, attitudes, beliefs and behaviours that represent an organisation's working environment, organisational objective, and vision (Hofstede, 1984). Organisational culture is generally regarded as a moderating factor in accepting and adopting IS and KM (Rashid et al., 2004; Chai and Pavlou, 2004; Fey and Denison, 2003; Frotaine and Richardson, 2003; Skoumpopoulou and Nguyen, 2015).

Additionally, organisational culture can have a vital impact on many initiatives and projects, and may ultimately have an influence on the failures and successes of IS, KM, and on other projects aiming to engender change within organisations (Waring and Skoumpopoulou, 2013).

A number of authors (Cameron and Quinn, 1999; 2011; McDermott and O'Dell 2001) conducted studies on five companies in the USA, looking at the impact of organisational culture on knowledge sharing. The results showed that culture plays a significant role in the success of Knowledge Management efforts. In particular, the approach, tools and structures for supporting knowledge sharing have to match the style of the organisation, and the networks for sharing knowledge have to be built on top of the existing networks which people use in their day to day activities. Cabrera and Bonache (1999) proposed a framework for ensuring consistency between organisational culture (i.e. the way of performing things in an organisation) and CSFs, in order to create an effective formula for achieving success within organisations. One important aspect of culture is the extent of collaboration between employees. Collaboration has been empirically shown to be a significant contributor to knowledge creation (Lee and Choi, 2003).

Organisational culture within KM places a great value on knowledge, and encourages its creation, sharing and application. In fact, most KM efforts are devoted to enhancing elements in such a culture, making it a major challenge for an organisation. Furthermore, some of the previous studies have emphasised knowledge management in a cross-cultural business context

(Liu and Fellows, 2008; Nazari et al., 2011). Nevertheless, the relationship between organisational culture and knowledge management processes, and their link with organisational performance, has been ignored in previous knowledge management research (Saifi, 2015).

4.2 Information Technology

Information technology (IT) is different from KM. IT is a key enabler in adopting successful KM. In addition, it is considered the most effective means of capturing, storing, transforming and disseminating information (Syed-Ikhsan and Rowland, 2004). According to Mathi (2004), IT infrastructure is one of the most important factors for enabling the adoption of KMS associated with organisational culture. Information Technology assists in the search process and facilitates access and retrieval of information, and can support collaboration and communication between organisational employees. In essence, it can play a variety of roles in enhancing an organisation's KM processes (Alavi and Leidner, 2001). In a modern organisation an essential part of the KM infrastructure is an IT system that not only collects, organises and disseminates data, but also aids and facilitates the exchange of ideas, creativity and innovation (Ruggles, 1997; Mas-Machuca and Costa, 2012).

In a study of the relationship between organisational elements and performance of knowledge transfer, Syed-Ikhsan and Rowland (2004) showed that technology plays a number of major roles in managing knowledge in organisations, and that it is considered to be an effective tool in capturing, storing, transforming and disseminating information. Even though IT is not the only factor necessary in ensuring the successful implementation of Knowledge Management, ICT infrastructure does enable individuals in organisations to create and share knowledge effectively, and to contribute to the performance of knowledge transfer. IT can be grouped into one or more of the following categories: business intelligence, knowledge base, collaboration, content and document management, portals, customer relationship management, data mining, workflow, search, and e-learning (Luan and Serban, 2002).

According to Maier (2002, p.15) 'the ever-increasing pace of innovation in the field of information and communication technology (ICT) has provided numerous instruments ready to be applied in organisations to support KM approaches'. Maier (2002) highlighted some examples of ICT that are related to KM and need to be considered in the development of KMS, such as:

- Intranet infrastructures that provide basic functionality for communication – e-mail, teleconferencing – as well as storing, exchanging, search and retrieval of data and documents.
- Document and content management systems that handle electronic documents or Web content respectively throughout their entire life cycle.
- Workflow management systems that support well-structured organisational processes and handle the execution of workflows.
- Artificial intelligence technologies that support, for example, search and retrieval, user profiling and matching of profiles, text and Web mining.
- Business intelligence tools that support the analytic process that transforms fragmented organisational and competitive data into goal-oriented “knowledge” and require an integrated data basis that is usually provided by a data warehouse.
- Visualisation tools that help to organize relationships between knowledge, people and processes,
- Groupware supports e.g., time management, discussions, meetings or creative workshops of work groups and teams,
- E-learning systems that offer specified learning content to employees in an interactive way and thus support the teaching and/or learning process.

Thus, Ruggles (1997) ; Mas-Machuca and Costa (2012) supported the important role that IT infrastructure is playing in developing KMS through a study suggesting that in practice many KM programmes are being led from an IT perspective.

4.3 Training and Education

Training and education is another important factor that needs to be considered when adopting successful KMS. Training is usually provided for employees, to enhance their understanding of the concept of KM (Moffett, 2003). It can also provide a common language and perception of how employees might define and think about knowledge (Wong, 2005). Moreover, employees could be trained and educated to use the KM systems and other technological techniques for managing knowledge, thus ensuring that they utilise the full potential and capabilities offered by these technologies.

Similarly, Horak (2001) suggested communication, soft networking, peer learning, team building, collaboration and creative thinking as basic areas for effective KM and skills

development. Moshari (2013) furthermore supports that organisations with a strong focus on team-oriented personnel are more successful at the sharing of knowledge than those who rely upon technological solutions. Therefore, these factors are considered vital for the successful implementation of such complex technologies like KMS.

5. Theoretical Framework

In order to research the theoretical base, this study will rely on the Technology Acceptance Model (TAM) as its conceptual framework. Most of the research using TAM has been conducted in North America and other developed countries (Wang, 2005; Saadé et al., 2007; Straub and Keil, 1997). Because of this limitation, it is necessary to examine its suitability for research into the adoption of new technologies, such as KMS, in organisations. Nonetheless, TAM has been proven to be among the most effective IS models for predicting user acceptance and usage behaviour. The original tool for measuring such beliefs was developed and validated by Davis (1986; 1989; 1993); Davis et al. (1989); and replicated by Adams, Nelson and Todd (1992); Mathieson (1991); Hendrickson, Massey, and Cronan (1993); Segars and Grover (1993); (Chin, Johnson et al. 2008; Zhang, Zhao et al. 2008; Sudarsan and Uchenna, 2009). The TAM Model is suggested as a practical tool for testing early user acceptance, TAM can also provide diagnostic measures to help organisations to identify and evaluate strategies for enhancing user acceptance and capitalising on technological investment (Al-Gahtani, 2011).

5.1 The Expanded TAM for Use in KM Adoption

The literature review suggests that models of information technology adoption and use in organisations may not be enough. Therefore, this study will modify the TAM to make it more applicable for research in organisations by exploring the factors that can affect the success and effectiveness of KMS in organisations. Some of these factors may not have been identified in the existing literature on IT adoption. A review of the literature suggested that whilst the TAM which is the basis of much research into IT diffusion, may be useful, it may need to be extended to include specific issues of organisational culture, training and education and information technology infrastructure. This is shown at Figure 1.

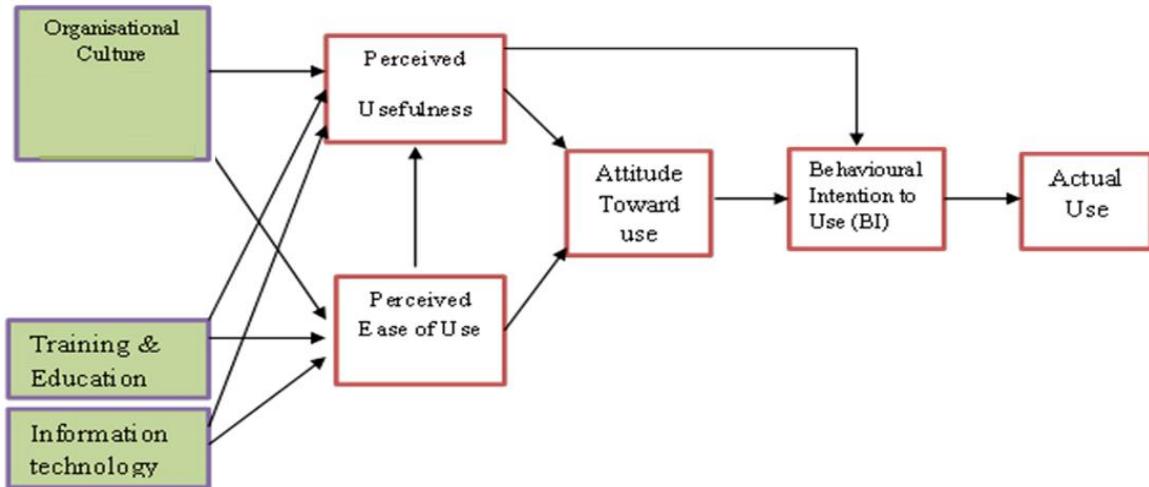


Figure (1) Proposed Theoretical Framework for Study

The theoretical framework for this research has been extended to build a research model to be combined with other selected variables, drawn from a review of the literature of knowledge management, including organisational culture, training and education, and information technology infrastructure.

Accordingly, it can be inferred that there are many factors that influence the successful adoption of KMS. The findings of this literature review suggest that an extension of the Technology Acceptance Model should include three new dimensions. The first, concerning organisational culture; the second dimension is concerned with training and education; whilst the third relates to the information technology infrastructure. The relationship between these factors and the attitude and behaviour of employees will be examined in terms of putting KMS to good use in further research.

6. Conclusion

This paper has presented a review of relevant theoretical perspectives in the KM literature with an emphasis on how individuals and companies accept this technology, and the factors that influence such acceptance. The paper has also presented the theoretical framework for this research, which is based upon the Technology Acceptance Model. To adopt this model as the theoretical base for this research, researchers have extended the model by adding external variables that may influence the acceptance of KMS in organisations. These variables were not included in the original model introduced by Davis (1989). Therefore, this theoretical model has been extended to build a research model combined with other selected variables, drawn from a

review of the literature of knowledge management, including organisational culture, training and education, and information technology infrastructure.

7. Research Contributions

This research can contribute to knowledge and theory by designing an expansion of the technology acceptance model (TAM) with KMS as a new information technology (IT). Furthermore, this study provides a practical contribution to organisations and managers by offering a tool that enables organisations to plan KMS adoption both effectively and successfully, to improve performance, competitive advantage, and to enhance their work.

9. Further research

The new proposed theoretical framework needs to be measured and tested and this can be done in future work through the use of questionnaires, interviews or mixed-methods in order to validate the findings. Finally, this study needs to be tested and conducted in a cross-organisational environment.

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