



Influential Organizational and Human Factors for Knowledge Management Process Adoption and Implementation: A Literature Review

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Authors' contributions

This work was carried out in collaboration between all authors. Author HNAM conducted the literature search, wrote the first draft of the manuscript and served as corresponding author. Author AB revised and edited the first draft of the manuscript and helped in making all changes suggested by the reviewers. Author MAS made some comments. All authors read and approved the final manuscript.

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ABSTRACT

Aims: This paper reviews the growing literature on influential organizational and human factors for Knowledge Management (KM) process adoption and implementation in both public and private sector.

Methodology: It is based on literature published during the period 1997-2016. Only original research papers have been included in this literature review. A thematic structure has been adopted. In the beginning, significance of knowledge as well as significance and definition of KM will be clarified. Afterwards, the underlying problems and methodological issues raised in the literature will be touched upon. The paper also reviews the relationship between organizational readiness and

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the organizational and human contributing factors. Finally, significant differences in employees' attitudes and willingness to be involved in the KM process according to different demographic variables will be examined. At the end of each part, a summary is provided in a table.

Results: All studies indicated that it is essential to assess organizational readiness before embarking on KM projects. In addition, it was indicated that both organizational factors, namely, culture, structure, and information technology (IT) infrastructure, and human factors, namely, acceptance of KM and willingness to participate in the KM process, influence organizational readiness for KM.

Conclusion: A mixed-approach investigation consisting of both quantitative and qualitative methods is recommended to provide a comprehensive understanding of the contributing factors influencing organizational readiness for KM.

Keywords: Knowledge management; readiness; organizational factors; human factors; literature review.

1. INTRODUCTION

Knowledge is a major component of success for different organizations. Organizations should pay close attention to knowledge since it is more important than other assets such as land, labor, and capital [1]. Ghorbani [2] argued that Knowledge is a major component of success for different organizations. Nejadhussein and Zadbakht [3], meanwhile, highlighted that knowledge can be a very important resource in helping organizations to achieve their goals and objectives if it is managed effectively. Nonaka and Takeuch [4] made the point that organizations can be successful if they are capable of creating new knowledge, disseminating it, and embodying it in their products and services. They indicated that creating new knowledge fuels innovation.

In practice, KM is the identification of intellectual assets, generating new knowledge for the purpose of competitive advantage, making common information accessible, sharing the best practices, and employing technology to achieve these objectives [5].

Uriarte [1] provided a very simple definition of KM. He defined it as "the conversion of tacit knowledge into explicit knowledge and sharing it within the organization" (p.24). He phrased this definition more technically by defining KM as "the process through which organizations generate value from their intellectual and knowledge based assets" (p.24).

According to Nejadhussein and Azadbakht [3], KM is one of the solutions to assist organizations in avoiding failure, meeting challenges, as well as enhancing learning competencies. They argued that the first step is to determine the

organization's readiness before starting any KM application.

Readiness is a condition for any organization that intends to implement the KM process. Razi and Karim [6] defined readiness for KM process implementation as "the intention to be involved in the KM process by the organizational individuals within the prevailing organizational context" (p. 323).

There are a few studies that have addressed the impact of organizational and human factors on the readiness of private and public organizations for KM process implementation. Therefore, this paper reviews the growing literature in this research area.

1.1 Objective of the Study

The present study aims to review the literature to explore the influence of organizational and human factors on Knowledge Management process adoption and implementation.

1.2 Research Questions

This literature review seeks to answer the following research questions in order to achieve the research objective:

1. To what extent do KM enablers, namely, organizational culture, organizational structure, and IT infrastructure, affect the readiness of private and public organizations to implement KM processes?
2. What are the expectations of employees towards KM?
3. To what extent does the employees' willingness to be involved in the KM

process affect the success of organizations in implementing KM?

4. What is the impact of demographic factors on employees' adoption of and intention to be involved in the KM process?

2. METHODOLOGY

This paper is based on the literature published during the period 1997-2016. Only original research papers have been included in this literature review. It covers only studies based on a scientific methodology. Therefore, opinion-based works have been excluded. A thematic structure has been adopted. This study reviews the literature available in English and Arabic, therefore, papers published in any other language were not included. The first part of the paper deals with studies related to readiness of organizations for KM process implementation. Thus, this part focuses on studies that discuss the enablers of KM in general, and organizational culture, structure, and IT factors in particular. The second part discusses the studies on employees' acceptance of KM. The third part reviews studies on employees' intention to be involved in the KM process. The last part sheds light on studies related to the demographic factors influencing employees' adoption and intention to be involved in the KM process.

3. MEASURING ORGANIZATIONAL READINESS FOR KM PROCESS IMPLEMENTATION

The first category of the literature review includes four groups of studies. First, it reviews key studies that have investigated the readiness of organizations for KM process implementation. The papers included in this section investigated the impact of a number of organizational and human factors on KM process adoption and implementation using different research approaches. Therefore, they are considered as key studies. Then, the different cultural, structural, and IT factors influencing the readiness of organizations for KM process implementation are reviewed separately.

3.1 Key Studies Measuring Organizational Readiness for KM Process Implementation

In Israel, Sivan [7] proposed an analytic framework for organizations to plan, implement, and evaluate their KM activities. He argued that

organizations need to practice KM in order to fulfil their vision. According to the author, KM practice is based on a knowledge infrastructure. The results revealed that knowledge infrastructure includes culture, technology, processes, users, switchboard, services, value, design, and premises.

In order to measure the readiness of an Air Force agency to implement KM, Holt et al. [8] browsed the literature to develop an appropriate instrument. It was designed to determine the employees' thoughts regarding their readiness for change. The study aimed to investigate the relationship between KM attitudes and five subscales representing the following facets of KM readiness: individual measures, context measures, content measures, process measures, and KM attitudes. A questionnaire was completed by 146 civilian and military personnel of various grade levels, with results reflecting that their attitudes towards KM exhibited strong relationships with the majority of the individual, context, content and process variables. For instance, pessimism was positively related to individual characteristics including negative affect, innovativeness and negatively related with other individual, context, content and process variables. Furthermore, the results reflected a negative relationship between affective commitment, which measured the participants' commitment to provide support for KM initiatives, and negative affect and innovativeness respectively. Meanwhile, it was positively related with all other study variables. Finally, the results revealed that the individual and context variables – which are deeply rooted in the organization's fabric – are influential and difficult to change.

Mohammadi, Khanlari, and Sohrabi [9] extracted eighteen success factors from the literature. They intended to assess the readiness of an IT firm in Iran. The factors were categorized into the following five groups: culture of knowledge, structure, support for change, infrastructure, and vision for change. The results indicated that infrastructure and culture of knowledge scored highest on readiness. All of the measures for these two groups recorded high scores. In addition, the results suggested that readiness according to some measures for the other three groups was at a medium level (such as education, management support, and reward system). Therefore, attention should be paid to these aspects in order to achieve readiness for KM. The study suggested that more focus should

be given to people and culture because many KM projects that had solely emphasized technology had failed.

Razi and Karim [6] conducted an intensive review of KM literature related to assessing organizational readiness for KM process implementation. They identified some research gaps in this area. Therefore, they proposed a basic research model and instrument to enable organizations to assess their readiness for KM process implementation. The research model was based on two theories, namely, theory of reasoned action and theory of planned behavior. It was also founded on various frameworks which were developed based on the theory of knowledge creation and the KM enablers. In addition, it considered individual characteristics. They found that it can be assumed that employees' intention to be involved in KM process implementation can be influenced by KM enabling factors, namely, organizational culture (OC), organizational structure (OS), and IT support (ITS). In addition, individual acceptance of KM as well as moderating factors such as gender, and age can be considered as contributing factors.

Al-Bastaki and Shajera [10] conducted a study to explore the factors affecting organizational readiness for KM in the Gulf States. They aimed to examine the readiness of three aspects of KM infrastructure, namely, organizational culture, structure, and IT infrastructure within the University of Bahrain. The results revealed that all of the seven variables, namely, collaboration, trust, learning, centralization, formalization, reward systems, and IT support, are significant and need to be promoted by the university. The findings indicated that such promotion would require changes in the university culture and structure. In addition, the results reflected a high to medium readiness level for two variables, specifically IT support and reward system, while a medium to low level of readiness was revealed for the other five variables. The study suggested several ideas for promoting KM infrastructure at the university, for example, promotion of trust and collaboration as well as shifting from a hierarchal to a horizontal structure.

To investigate the concept of KM readiness Shahriza, Razi, and Mohamed [11] conducted an empirical study. They used the concept of intention to be involved in the KM processes of socialization, externalization, combination, and internalization (SECI). The results revealed that

all variables of intention to be involved in KM SECI processes were significant measures for KM readiness. The study suggested that organizational readiness for KM process implementation can be assessed by investigating the influence of organizational culture, structure, IT, and other human attributes on employees' intention to be involved in KM process implementation.

Shahidi, Abdolvand, and Harandi [12] tested six hypotheses, assuming that six factors, namely, organizational culture, individual, IT infrastructure, knowledge process, strategy, and senior management commitment, would have effects on organizational readiness for KM implementation in three different organizations representing IT services, education and commerce. The results revealed that the effect of culture was rejected in all organizations, while IT infrastructure and senior management commitment effect was confirmed in the educational and commerce organizations. It was found that those two factors had a negative effect on the IT organization. Moreover, the results indicated that the knowledge process had an effect on the commerce organization, while it had negative effects on the other two organizations. The negative effect was due to the lack of documented processes and procedures to access the required knowledge as well as a lack of knowledge workers. Finally, the study suggested that organizations should promote employees' technical skills in the use of information systems through classes and workshops.

Kamaruzzaman, Zawawi, Shafie, and Noor [13], meanwhile, conducted an empirical study to assess the readiness of Malaysian facilities management (FM) organizations to implement KM systems. Interviews were conducted among key FM staff at one of the country's technology institutes to determine factors influencing success in KM. A questionnaire consisting of ten critical success (CSF) factors, namely, leadership, culture/structure, processes, explicit knowledge, tacit knowledge, knowledge hubs, technology infrastructure, measure, exploitation, and people/skills, was used as a basis for interviews. The results showed that of the ten CSF there were only two for which Malaysian FM organizations were not prepared, specifically, leadership and measurement. It was interpreted that FM organizations have no specific strategy for storing and managing knowledge KM at a significant level. In addition, assessment of the

contribution of the existing knowledge is poor. On the other hand, eight CSF passed the standard score of readiness. To illustrate, people and skills achieved the standard score. This is interpreted as meaning that these organizations understand that their success depends on their employees' knowledge. Finally, the results indicated that technology infrastructure was formally managed in such a way as to link employees efficiently.

One of the most recent studies, which investigated KM initiatives and the factors impacting these initiatives, was conducted by Patil [14]. A descriptive research design was followed to explore the impact of four factors, namely, management initiatives, organizational culture, ICT adoption, and employee participation in KM initiatives. An overview of twenty previous studies showed that organizational culture, particularly trust and collaboration, as well as ICT, influence KM initiatives. The results revealed that the four factors have positive impacts on KM initiatives. In addition, they indicated that management initiatives including motivation, support of subordinates, training programs, and dynamic reallocation of resources and absence of bureaucracy were major factors in fostering KM in the business schools studied. Moreover, ICT implementation was found to enable knowledge transfer and sharing among stakeholders. Finally, the study recommended that schools should develop an overall organizational culture of socialization, externalization, combination, and internalization of both tacit and explicit knowledge.

The previous studies about measuring organizational readiness for KM process implementation have been summarized based on their contribution, contributing factors, and key findings (Appendix, A).

3.2 Organizational Culture Factors

In Canada, Connelly and Kelloway [15] investigated the impact of some organizational and individual factors on employees' perceptions of a KS culture. The results revealed that perceptions of management's support for KS and perceptions of a positive social interaction culture were significant predictors of a perceived KS culture.

In the United Kingdom (UK), Sieniuch and Sinclair [16] outlined the issues to be addressed in preparing organizations for introducing knowledge lifecycle management (KLM)

processes. They argued that organizational knowledge has a lifecycle, which starts from discovering knowledge and ends when knowledge is lost. The results revealed that organizations must establish an appropriate context for KM in order to get the most added value of the knowledge that is held within the organization. Furthermore, they found that some sub-processes such as building trust through leadership, establishing ownership systems, reviewing rewards policies, using personal appraisal procedures to evaluate performance on KM, and establishing personal performance measures for KS may improve organizational readiness for KLM.

In the United States of America (USA), Taylor and Wright [17] identified factors that influenced the readiness of one public organization to share knowledge effectively. The results revealed that effective KS is influenced by six factors. These factors are open leadership climate, learning from failure, information quality, performance orientation, satisfaction with change process, and a vision for change.

Alkaf [18] conducted a study to investigate the existence of knowledge society requirements in Omani universities. The results indicated that the requirements related to the university's vision to achieve knowledge society had the highest level of availability. He attributed this result to the high awareness of the universities of the importance of the concept of knowledge society.

In a study conducted in the USA, Leidner et al. [19] suggested ways in which organizational culture influences KM initiatives as well as the evolution of KM in two organizations. The results revealed that a bureaucratic culture seems to create the expectation among organizational members that senior management needs to provide a vision of purpose for KM before organizational members should embark on KM activities. Additionally, the study indicated that innovative culture enables subgroups to experiment with KM or create micro KMs. Furthermore, the results found that an individualistic culture inhibits sharing, ownership, and knowledge reuses, while a cooperative culture enables the creation of virtual communities. The findings suggest that KM eventually can become an integral aspect of the organizational culture.

Salleh [20] investigated the relationship between KM enablers and tacit knowledge sharing (KS)

processes. He presented a KS model that connected KM enablers and KS processes in a public sector organization in Malaysia. The problem statement of the study was how to convert individuals' tacit knowledge into organizational explicit knowledge. He recorded the perceptions of (203) accountants working in the Accountant General's Department of Malaysia towards the influence of four factors on KS performance. These factors included learning, leadership, technology, and culture. The results revealed that two variables, namely, performance evaluation and incentives, had highly significant impact on tacit KS performance, while other factors had moderate impact. The study suggested that leaders should encourage collaboration and team learning as well as providing an appropriate climate for KS. In addition, it was recommended that promotional and reward systems should be established to encourage KS.

In Australia, Burstein et al. [21] provided a general picture of the role and responsibilities for successful KM strategy development and implementation. The results revealed that a large proportion of organizations within the sample have an individual or a group who is responsible for the establishing of a policy to provide directions of the development and implementation of KM.

Masrek, Noordin, Anwar, and Idris [22] identified relationships between four dimensions of cultural identity, specifically, horizontal individualism, vertical individualism, horizontal collectivism, and vertical collectivism and KS behavior, among university students in Malaysia. The results indicated that the vertical collectivism dimension influenced KS behavior, whilst all dimensions existed among the students. In addition, the Pearson's correlation test showed that both collectivism variables correlated significantly with KS behaviors. In other words, students believe that KS and group work enhance innovation.

In another study, Aljazeera [23] investigated the impact of KM in the Ministry of the Interior in Jordan. He indicated that incentives and training are the key to encourage employees to adopt and implement KM.

Abdul Karim et al. [24], meanwhile, found that trust and collaboration are both strong predictors of KM and essential to facilitating successful implementation of KM; therefore, they need to be

emphasized. Furthermore, it is necessary to conduct training programs to ensure awareness and understanding of the benefits of KM. Finally, reward systems should be established to encourage employees to engage in KM before it is embarked on.

Pinho, Rego, and Cunha [25] reviewed and analyzed (63) papers to identify the barriers and facilitators to KM processes. They highlighted that organizations should focus on facilities, rewards, positive leadership, and recognizing performance. To illustrate, recognizing and rewarding KS, rewarding publishing, facilitating a culture of risk taking and learning from failures will enhance the KM culture. In addition, it was indicated that if organizations want to be successful in KM implementation they should promote education and learning. Moreover, the study indicated that trust and cooperation with others are important facilitators to KM processes.

In her Ph.D. thesis Jawharah [26] used a questionnaire to investigate perceptions of (343) employees from different Algerian hotels on the impact of strategic management on KS. The results revealed that the employees expressed moderate behavioral intention towards KS. In addition, employees indicated that their organizations have policies to motivate their KS initiatives. Furthermore, the study highlighted that the employees' behavioral intention towards KS was motivated by certain factors. These factors were the desire to help others, persuading colleagues of the skills they possess, and enjoying helping colleagues. The results also showed that there was a strong relation between strategic management practices and KS behaviors. To illustrate, strategic management practices encourage hotels to adopt KS strategies. Additionally, the study found that organizational learning culture had a strong impact on KS behaviors and KS strategies. In other words, the existence of an organizational learning culture supported the adoption of KS strategy by these hotels.

3.3 Organizational Structure Factors

Alhasmi [27] indicated that knowledge creation and sharing requires creativity. She argued that organizations that adopt centralization in KM hinder creativity. Decentralization, however, enables individuals to share the required knowledge and then implement it in performing tasks.

Pinho et al. [25] identified decentralization as a very important factor impacting KM processes. It improves functional communication, thereby enhancing the level of knowledge flow.

Alkharoosi [28] investigated the factors influencing academics' behavioral intention towards KS. She found that organizational charts had little or no effect on academics' behavioral intention towards KS. It was noted that this study focused on KS only.

3.4 IT Infrastructure Factors

Alkaf [18] mentioned that IT is the most effective enabler for the knowledge society. He added that the knowledge era imposes the use of IT tools. Therefore, it is difficult to achieve a knowledge society without appropriate IT infrastructure.

Salleh [20] stated that IT should enhance the process of KS by supporting tacit and explicit knowledge capture. The results of the study revealed that IT had a moderate impact on KS performance.

Alajmi [29] conducted a master thesis to investigate the impact of KM implementation on the participation of workers in the telecommunications sector in decision-making. He assumed that technology would have no significant impact on workers' participation in decision-making. The results revealed that there was a significant relation between technology and workers' participation in decision-making as well as an impact on all stages of decision-making.

Shahriza et al. [11] investigated the significance of IT in KM adoption. The results indicated that IT support and ICT use and support were key predictors of KM adoption as well as strong predictors of intention to be involved in the KM process. In addition, IT was highlighted as the backbone to any organization. It was also pointed out that ICT use is essential to facilitating successful implementation of KM. Therefore, IT is a very important factor in terms of influencing employees' intention to be involved in the KM process.

Algahwari [30] also indicated that IT has a major role in KM. In addition, he pointed out that in turn it coordinates with other resources, particularly human resources. He mentioned that IT enhances the ability to manage the existing knowledge. Moreover, it enhances not only

interaction between human resources but all the KM processes. He stated that the Ministry of Education pays close attention to implementing IT for the purpose of communication between employees.

4. EMPLOYEES' ACCEPTANCE OF KM

Shahriza et al. [24] mentioned that employees' acceptance needs to be assessed before organizations make any commitment regarding KM initiatives. Such acceptance indicates the organization's readiness for KM process implementation. Since the study aims to identify employees' expectations of KM, the following part will review studies that have discussed this aspect.

Abdul Karim et al. [11] investigated the influence of expectancy of KM among Sri Lankan telecommunication executives. The results showed that respondents had high expectations of KM. To illustrate, they expected that they would benefit from KM and that it would be easy and require little physical and mental effort to engage in the KM process. In addition, the results revealed that performance and effort expectancy of KM were key and strong predictors of intention to be involved in KM processes. Effort expectancy of KM was the strongest predictor, followed by performance expectancy of KM.

Nasr et al. [31] studied the impact of attitudes towards KS on employees' happiness in a university in Iran. They argued that managers should keep employees happy in order to enhance organizational productivity. The results indicated that employees' attitudes towards KS have an effect on their happiness. In addition, the findings indicated that motivation for KS has an effect on employees' happiness. Moreover, it was found that obstacles to KS for others have an effect on employees' happiness. To sum up, when attitudes towards KS are enhanced, the employees' happiness is increased, which will affect organizational productivity positively.

Another study, which investigated employees' expectation of one of the KM processes, was conducted by Asderaki and Samul [32]. Employees in six large public organizations participated to express their attitudes towards the importance of acquiring knowledge and using their competencies in their work. The results revealed that employees are aware of the role they play and find it important to use their full

competencies at work. In addition, the findings showed high expectations of employees in relation to knowledge acquisition opportunities. To illustrate, public organizations should prepare an appropriate climate for knowledge acquisition in order to enhance employees' capabilities and thereby support organizational productivity.

Pee and Kankanhalli [33] conducted an exploratory study to identify factors influencing KM. The results revealed that organizational effectiveness is influenced positively when KM capability is improved. In other words, when employees have capability to implement KM, organizations are influenced accordingly.

One of the most recent and relevant studies on employees' performance expectations of KM was conducted by Kulkarni [34]. It explored expectations of KM systems among IT faculty members and IT heads in business schools in India through a questionnaire and interviews. The author argued that employees' perceptions of KM should be considered before starting any KM practice. The results revealed that improving employees' efficiency as well as improving their skills and knowledge were the most significant expectations related to performance. Moreover, they expected that KM would increase decision making ability as well as preventing duplication of work. Finally, they believed that KM would improve employees' involvement in their work activities.

A summary of different contributions and key findings that were identified in previous studies on employees' acceptance of KM has been provided in appendix (B).

5. EMPLOYEES' INTENTION TO BE INVOLVED IN THE KM PROCESS

Salleh [20] argued that good organizational infrastructure and IT infrastructure will not lead to development of good knowledge assets in any organization if the employees' willingness to share their tacit knowledge is lacking.

Okyere-Kwaye and Nor [35] indicated in their conceptual study that employees' behavior depends on their intentions and willingness towards KS. They pointed out that the literature reveals a lack of willingness among employees to participate in KM in general and KS in specific. Finally, they argued that achieving success in one's job responsibilities requires high recognition of the importance of KM.

Shahriza et al. [11] investigated the intention of (313) executives in the Sri Lankan telecommunication industry to be involved in the KM process and their study found that willingness of employees to be involved in one or all KM SECI processes is a good indicator of organizational readiness for KM. In addition, the results showed a positive level of intention among respondents to be involved in KM SECI processes. Therefore, these findings indicate that the Sri Lankan telecommunication industry is ready for KM process implementation.

Abdulaal [36] found that the willingness of top and middle management to adopt different research strategies to create new knowledge as well as their ability to use a variety of knowledge resources enhanced their knowledge creation behaviors.

Alkharoosi [28], furthermore, found that academics' behavioral intention to share knowledge is influenced by both intrinsic and extrinsic factors. She noted that supporting the work environment will enhance KS behaviors.

One of the recent studies investigating the relationship between KM and employees empowerment was conducted by Ghorbani [2]. He found evidence of a significant relationship between KM and employees' empowerment in an agricultural bank in Iran. In specific, there is a relationship between KM and all empowerment dimensions (self-esteem, self-organization, feeling of effectiveness, self-effectiveness, and feeling of being significant). In other words, employees' empowerment is influenced by the KM situation. KM is considered an antecedent of employees' empowerment. It is also pointed out that participation among organizational members can be enhanced by improving employees' abilities and cooperation in different activities in organizations.

6. DEMOGRAPHIC FACTORS INFLUENCING EMPLOYEES' ADOPTION AND INTENTION TO BE INVOLVED IN KM PROCESS

The following part of the literature review will discuss the impact of some demographic variables on employees' attitudes towards KM enablers, employees' acceptance of KM, as well as in their intention to be involved in the KM process.

In Canada, Connelly and Kelloway [15] found that gender was a significant predictor of employees' perceptions of KS culture. Hence, female participants required a more positive social interaction culture before they would perceive the KS culture as positively as their male counterparts.

Alkaf [18] pointed out significant differences in attitudes towards the availability of knowledge society requirements relating to the University of Nizwa. It can be interpreted that the university pays most attention to the concept of knowledge and having a clear vision of the knowledge society. The study also identified significant differences in relation to the job of academic leader. It was interpreted that this category of staff have precise knowledge of the latest developments related to the provision of knowledge management society compared to faculty staff. Finally, the study pointed out significant differences relating to the level of work experience.

Almansoori [37] investigated, in his master thesis, the differences between demographic variables among academics at Sultan Qaboos University and the degree of application of KM processes by the university. The results did not show significant differences related to gender, position, and nationality, while significant differences emerged relating to college and experience. To illustrate, the academics with long experience believed more in the importance of KM. The study suggested that awareness about the concept of KM and its importance as well as the best practices of KM should be promoted, potentially by training programs, workshops, and symposiums.

Albalushi [38] determined the relationship between certain demographics of employees and barriers to KM implementation in the Ministry of Education in Oman. The results revealed that those in high job positions had significantly different attitudes towards the implementation of KS. Meanwhile, the study did not reveal differences related to educational level. With regard to barriers, the results did not point out any differences in attitudes towards the presence of barriers impacting KM implementation in terms of job title. On the other hand, the results indicated that educational level had an impact on attitudes towards barriers. To clarify, employees holding a bachelor degree were more influenced by barriers compared to diploma holders.

Albarashdi [39] explored the impact of demographic factors on KS among managers in Omani industrial enterprises. She found that whilst gender had no impact on KS, experience and educational level influenced KS positively. To elucidate, managers holding high qualifications or who had long experience were more active regarding KS processes.

Alajmi [29] found no significant differences regarding the work environment culture and technology as dimensions of KM in relation to gender, position, and work experience. On the other hand, the results highlighted significant differences related to age and educational level. The study suggested that IT infrastructure should be enhanced and drew attention to the importance of KM for all employees regardless of their years of experience and educational level.

One of the most relevant studies was conducted by Razi, Karim, and Mohamed [40]. They analyzed the factors moderating relationships contributing to executives' intention to be involved in the KM process in Sri Lankan telecommunication industries. The results revealed that while demographic factors including age, experience, and management level had no moderating effect on any relationships, gender differences had a moderating effect on the relationship between (ICT use and support for searching and sharing) and intention to be involved in the KM process among females when compared to males. To explain, extensive use of ICT and support for searching and sharing encouraged females more than males to be involved in the KM process. Similarly, the perceived usefulness of KM encouraged females more than males to be involved in the KM process. Therefore, the study suggested that possible gender differences should be considered by policy makers when planning to implement KM initiatives and when making policies, especially in regard to IT.

The impact of demographic factors on employees' adoption and intention to be involved in KM process has been summarized according to the previous studies (Appendix, C).

7. CONCLUSION

The present review of the literature in the area of organizational readiness for KM showed that the successful implementation of KM is influenced by many factors. Some of these factors are organizational, whereas others are human.

Some studies indicated that trust and collaboration are the most important predictors of KM adoption and success [16,38,11,25,24], whereas others indicated that incentives and reward system are more important. Thus, it was found that some had high and positive influence on organizational readiness and adoption of KM, whereas others had moderate or low influence. Therefore, organizations need to investigate the impact of different factors on their KM practices.

The study showed that a number of studies [16,18,11,29,30] indicated that IT is one of the most effective enablers for KM implementation. To illustrate, it was pointed out that IT enhances all KM processes and supports employees' intention to be involved in the KM process.

With regard to organizational structure factors, a number of studies pointed out that decentralization is a very important factor impacting KM. In addition, studies [18,11,30] indicated that IT plays a vital role in the KM process.

This literature review included three studies [15,11,34] which found that employees' perceptions and expectations should be considered before starting any KM practice. On the same lines, it was indicated that employees' willingness to participate in KM process led to successful implementation [35,11,36]. Moreover, the employees' willingness to be involved in KM process is influenced by their expectations.

One of the studies covered in this literature review [40] revealed that there is a difference in employees' intention to be involved in the KM process related to female gender. Another study [15] also indicated that female gender was a significant predictor of employees' perceptions of KS culture. Meanwhile, other studies indicated that there were no differences related to gender [37,29,39]. On the other hand, many studies found that there were significant differences related to work experience and management level for those having long work experience and high positions [18,37,39].

In terms of research methodology, a mixed method study, which combines a quantitative approach (relying on surveys) and a qualitative method (using interviews and focus group sessions), is recommended to provide a comprehensive understanding of the contributing factors influencing organizational readiness for KM.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Appendix A. An overview of previous key studies measuring organizational readiness for KM process implementation

Source	Contribution	Profit or non-profit organization	Factors	Key findings
[7]	<ul style="list-style-type: none"> Proposed an analytic framework for organizations to plan, implement, and evaluate their KM activities. 	General	Culture, technology, processes, users, switchboard, services, value, design, and premises.	<ul style="list-style-type: none"> Organizations need to practice KM in order to fulfil their vision. This KM is based on a knowledge infrastructure.
[8]	<ul style="list-style-type: none"> Investigated the relationship between KM attitudes and the facets of KM readiness. Proposed an instrument. 	Non-profit (military)	Individual attributes, internal context, initiative content and process	<ul style="list-style-type: none"> Attitudes towards KM exhibited strong relationships with the majority of the individual, context, content and process variables. Individual and context variables are influential and difficult to change
[9]	<ul style="list-style-type: none"> Assessed the readiness of an IT firm in Iran. Developed an instrument. 	Non- profit	Culture of knowledge (trust...), structure (centralization...), support for change (education...), infrastructure (quality of information...), and vision for change (benefit...)	<ul style="list-style-type: none"> Infrastructure and culture of knowledge had the highest score of readiness. Some measures for the other three groups indicated medium readiness (such as education, management support, reward system)
[6]	<ul style="list-style-type: none"> Assessed organizational readiness for KM process implementation. Developed a research model and instrument. 	General	<ul style="list-style-type: none"> Individuals' intention to be involved in KM process. KM enablers (organizational culture, organizational structure, and IT support). In addition, individual acceptance of KM as well as moderating factors such as gender, and age. 	Organizational readiness for KM process implementation depends on willingness of organizational members to be involved in these processes
[10]	<ul style="list-style-type: none"> Explored the factors affecting University of Bahrain's readiness for KM. Proposed a research model and instrument. 	Non-profit (education)	Organizational factors: Culture: (collaboration, trust and learning), Structure (centralization, formalization and rewards systems) and IT infrastructure (IT support)	<ul style="list-style-type: none"> All of the seven variables are significant and need to be promoted in the university. IT support and reward system readiness level is high to medium, while the other variables scored medium to low.
[11]	<ul style="list-style-type: none"> Identified the contributing factors to KM process implementation 	Profit (telecommunication industry)	Organizational culture, structure, IT infrastructure, and individual acceptance	<ul style="list-style-type: none"> The four factors had an influence on employees' intention to be involved in KM process.
[12]	<ul style="list-style-type: none"> Examined whether the affective factors in the assessment of readiness for implementation of the knowledge management 	Profit and no-profit (education, IT, and commerce)	Organizational culture, individuals, information technology infrastructure, knowledge process, senior management	<ul style="list-style-type: none"> The effect of culture was rejected in all organizations. IT infrastructure had effect on commerce and educational organizations.

Source	Contribution	Profit or non-profit organization	Factors	Key findings
	system in all organizations are identical		commitment, and strategy	<ul style="list-style-type: none"> • Senior management commitment had effect on commerce organization only. • Individual had effect on educational organization only.
[13]	<ul style="list-style-type: none"> • Assessed the readiness of Malaysian facilities management (FM) organizations for implementing KM systems • Determined factors influencing success in KM • Proposed an instrument. 	Non- profit	Leadership, culture/structure, processes, explicit knowledge, tacit knowledge, knowledge hubs, technology infrastructure, measures, exploitation, people/skills	<ul style="list-style-type: none"> • Only two for which Malaysian FM organizations were not prepared, namely, leadership and measurement. • Eight CSF passed the standard score of readiness
[14]	<ul style="list-style-type: none"> • Explored the impact of four factors, namely, management initiatives, organizational culture, ICT adoption and employee participation, on KM initiatives. • Proposed a research model and instrument. 	Non-profit (education)	Management initiatives, organizational culture, ICT adoption and employee	<ul style="list-style-type: none"> • The four factors all had positive impacts on KM initiatives • Management initiatives including motivation, support subordinates, training program, dynamic reallocation of resources and absence of bureaucracy were major factors for fostering knowledge management in the business schools. • Recommended that schools develop an overall organizational culture of socialization, externalization, combination, and internalization of both tacit and explicit knowledge

Appendix B. An overview of previous studies on employees' acceptance of KM

Source	Contribution	Profit or non-profit organization	Key findings
[11]	Investigated expectancy of the influence of KM among Sri Lankan telecommunications executives	Profit (telecommunication companies)	<ul style="list-style-type: none"> • Respondents had high expectations of KM. To illustrate, they expected that they would benefit from KM and it would be easy and require little physical and mental effort to engage in the KM process. • Performance and effort expectancy of KM were found to be key and strong predictors of intention to be involved in KM process. • Effort expectancy of KM was the strongest predictor, followed by performance expectancy of KM.
[31]	Studied the impact of attitudes towards KS on employees' happiness in a university in Iran	Non-profit (education)	<ul style="list-style-type: none"> • The results revealed that employees' attitudes towards KS have an effect on their happiness. • Obstacles of KS for others also have an effect on employees' happiness. • When attitudes towards KS are enhanced, the employees' happiness is increased, which will affect organizational productivity positively.
[32]	Explored public organizations' expectations toward knowledge acquisition and its impact on organizational productivity	Non-profit (public organization)	<ul style="list-style-type: none"> • Employees are aware of the role they play and find it important to use their full competencies at work. • High expectations of employees related to knowledge acquisition opportunities. • Public organizations should prepare an appropriate climate for knowledge acquisition in order to enhance employees' capabilities and thereby support organizational productivity.
[33]	Identified factors influencing KM.	Non- profit (public organizations)	<ul style="list-style-type: none"> • Organizational effectiveness are influenced positively when KM capability is improved. In other words, when employees have capability to implement KM, organizations are influenced accordingly
[34]	Explored expectations of KM systems among IT faculty members and IT heads in business schools in India	Non-profit (education)	<ul style="list-style-type: none"> • Organizations should consider employees' perceptions of KM before starting any KM practice. • Improving employees' efficiency as well as improving their skills and knowledge were the most significant expectations related to performance. Moreover, they expected that KM would increase decision making ability as well as preventing duplication of work. Finally, they believed that KM would improve employees' involvement in their work activities.

Appendix C. An overview of previous studies on the impact of demographic factors on employees' adoption and intention to be involved in KM process

Source	Contribution	Profit or non-profit organization	Demographic variables had impact	Demographic variables had no impact
[15]	Analyzed moderating factors on perceptions towards KS.	General	Gender	-
[18]	Identified the differences between some demographic variables towards the availability of knowledge society requirements.	Non-profit (universities)	<ul style="list-style-type: none"> • University • Job title • Work experience 	-
[37]	Investigated differences between demographic variables among academics at Sultan Qaboos University and the degree of application of KM processes by the university	Non-profit (university)	<ul style="list-style-type: none"> • College • Experience 	<ul style="list-style-type: none"> • Gender • Position • Nationality
[38]	Investigated the relationship between some demographic factors and attitudes towards dimensions of KM	Profit (telecommunication companies)	<ul style="list-style-type: none"> • Age • Educational level 	<ul style="list-style-type: none"> • Gender • Position • Work experience
[39]	Determined the relationship between demographic factors among employees in the Ministry of Education in Oman and barriers to KM implementation	Profit (banks)	<ul style="list-style-type: none"> • Educational level 	<ul style="list-style-type: none"> • Job title
[29]	Determined the impact of the demographic factors on KS	Profit (industries)	<ul style="list-style-type: none"> • Experience • Educational level 	<ul style="list-style-type: none"> • Gender
[40]	Analyzed moderating factors on relationships contributing to executives' intention to be involved in KM process in Sri Lankan telecommunication industry	Profit (telecommunication industry)	<ul style="list-style-type: none"> • Gender for female 	<ul style="list-style-type: none"> • Age • Experience • Management level

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