

# Knowledge Management in the Jordanian Telecommunications Industry, Theoretical Perspective Approach

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**Abstract:** The study was approached from the theoretical perspective. Study thoroughly reviews and analyzes the literature by developing a link between knowledge management and Organization Performance. The studies were explored from selected databases including “Google scholar”, “Emerald” and “ProQuest” using the keyword search, namely, “Knowledge Management (KM)”. Knowledge management is an important predictor of Organization Performance which can be strengthened by developing strong interpersonal relationships with all stakeholders. The study is based on a theoretical model and an apparent limitation is the non-existence here of contributions and discussions that have been based on empirical data. This work contributes primarily to the development of the literature on knowledge management and its relationship with business performance in the Jordanian context.

**Keywords:** Knowledge Management (KM), Organization Performance OP, Jordan, Jordanian telecommunications companies.

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## I. INTRODUCTION

Corporate Organizations all over the world are facing challenges resulting from digital business designs and transactions. The management and funding partners are concerned about the survival of the organization. While the owners want to maximize the benefits, the financiers want to minimize the risk in the investment portfolio. It is essential for organizations to advance their performances so as to obtain sustainable competitive advantage to endure in nowadays competitive environments. This aids as the powerful force for some innovative strategic change in several organizations. To handle the changes in expectation of the organizations there is necessity for incessant enhancement of the performance of the organization.

In the knowledge-based era, Knowledge Management (KM) is regarded as the best way to enhance innovation and improve OP (Rhodes, Hung, Lok, Ya-Hui Lien, & Wu, 2008). According to Jafari, Rezaeenour, Akhavan, and Fesharaki (2010), KM means an oriented method in creating and managing knowledge when utilizing knowledge assets of the organizations to enhance and improve OP.

Based on Resource-Based View (RBV) and Knowledge-Based View (KBV) theories, knowledge is a crucial resource to survivals, stabilities, and growths of the organisations. Thus, since 1990s the success of organisations is thoroughly associated to management of knowledge (Jiang & Li, 2009; Kim & Gong, 2009; Liao & Wu, 2010). Consequently, the core modern issues in knowledge domain is in what way to creating and managing it (Kiessling, Richey, Meng, & Dabic, 2009; Rhodes et al., 2008). Hence, KM application nowadays had attracted abundant attentions in several businesses and academic domains. In another word, numerous organisations are seeing KM implementations as a great savior in the changeable and dynamical environments.

## II. BACKGROUND OF THE STUDY

Expanding growth on the use of telecommunication facilities since the last millennium has positioned telecommunication as one of the economic blue chips of any emerging economy (AL-Nawafleh, ALSheikh, Abdullah, & Tambi, 2019). Part of the challenges of globalization is the ability to cope with innovations and new discoveries of life such as the Global System for Mobile telecommunication (GSM). The increase in the number of mobile service providers as a result of technology expands, massive accelerations and the huge developments have intensified competition in the market (Al-edenat, 2017). The competition also results from various applications (Apps) and features introduced to make the services user friendly (Martin & Leurent, 2017). The telecommunication companies globally are committing large fund into research and development to gain a competitive advantage over one another in the rapid growth sector of the economy.

Currently, the increase in KM implementations are generally credited to its capability to offer valued advantages of the organisation. For instance, it is disputed that KM implementations are capable to offer benefit to 80% of the major organisations worldwide. In another word, the KM implementations could assist telecommunication industry to enhance several domain like performance, competitive advantage, productivity,

decision making, responsiveness, innovation, product and service, learning curve, employee retention, flexibility and cost efficiency (Chin Wei, Siong Choy, & Kuan Yew, 2009).

Development of technology had changed the world to one large nation, a concept which signify globalization. Jordan is a emerging nation and could extremely have benefits from this increase in rapid developing technology. Lately, the telecommunication sector had obtained huge attentions due to the modern technology which cater to the rising demand of society. Innovation is the main component in this equation, mainly in telecom industry where competition is keen and accountable to deliver the newest products and services which improve the numerous aspects of life.

### III. EVOLUTION OF TELECOM SECTOR

The telecommunications industry evolves from the telegraphs, the number one mechanical devices. It reduced communications from days to hours – more as contemporary mobile technologies reduced the time duration to send big quantities of data from hours to seconds. The reason for these changes is because of technologies and they change the way people live and do businesses. In certain times, telecommunication require physical wire that connect houses and companies. In modern societies, technologies have gone mobile; digital, wireless technologies have become the main system of communications.

The sector structures have also evolved from a limited big players to a decentralized systems with reduced regulations as well as entries. The main public companies play the role of the service providers, whereas small corporations sell and service the equipment, like routers, switches, and infrastructures, which allow this communication. For development investors, these corporations offer the greatest opportunity for share price appreciations. Contrarily, bigger corporations incline to be haven for conservatives, income focused investors.

#### 3.1 The Jordanian Telecommunication Experience

The information and communication technology (ICT) industry rolls out new generations of technology at a very fast pace where These advancements in technology allow companies to provide better quality, and more services than before (Xu, Thong, & Tam, 2017). The technological transformation and supportive state policies have led to 15 years of rapid growth in the kingdom's ICT sector, now among the largest in its economy (Oxford Business, 2018). The government of Jordan has drawn up and implemented a policy aiming to upgrade and develop the communication infrastructure and services in the country (Aman, Al-Shabil, Mohamed, & Auzair, 2017; Majdalawi, Almarabeh, Mohammad, & Quteshate, 2015). The telecommunication industry in Jordan is characterized by dynamic competition and increased growth and it is continuously being upgraded and extended. The industry happens to be the top competitive one in the whole of the Middle East region. The telecommunication and information technology sectors are viewed as one of the utmost powerful sectors which add to the GDP and the Jordanian economy. By advancing the service offered by telecommunication, it could be viewed as a gate way for the economic growths and social life in Jordan (Al-Weshah, Al-Manasrah, & Al-Qatawneh, 2018). The government of Jordan is mobilising the most extensive possible access to communication services at reasonable costs The Middle East North Africa Financial Network (MENAFN) and is ensuring that the telecommunication sector is fair game in terms of competition (Yaseen, Dajani, & Hasan, 2016). In this regard, the private sector is urged to participate and invest in the development of this service sector (Engelmann, Al-Saidi, & Hamhaber, 2019; Omet & Yaseen, 2015).

Jordan is in the middle in term of the degree of technology acceptance comparing to other Arab countries, and the usage of technologies in education is bigger than other countries (Ameen, 2017). Its mobile penetrations development level is higher (surpasses 100%) and the ICT industry is much liberalized (Ameen & Willis, 2016). However, the nation had issue in term of tax policies of mobile phones usage and its effect on price and mobile operators had experienced a reduction in incomes (GSMA, 2015). It is likewise one of the Levant nations in the Middle East. Jordan is classified higher in terms of mobile phones acceptance and utilization, though the incomes level is lower to middle (GSMA, 2015).

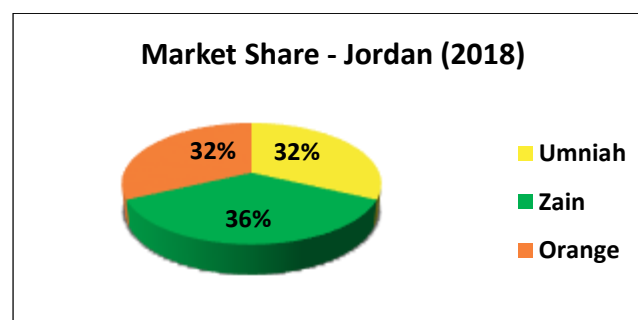
Jordan had seen the liberalisation of the fixed telecommunication sector as well as extraordinary extensions in the Jordanian mobile communication markets. This improvement had head to crucial benefit to the public people, not only in the telecommunication services accessibility and affordability but similarly in the level of options accorded to the subscribers (Al-Weshah et al., 2018). Telecommunications Regulatory Commission (TRC) play vital roles to create and maintain a reputable telecommunications environment. TRC encouraged investments and competitions and obtain favourable results to the subscribers in telecommunication sectors because of increase in competitions degrees in Jordan. TRC is the official and legal body with responsibility to adjust and control ICT services to be compatible with the government policies in Jordan (Wavre, 2016). The telecommunication sectors have attained extraordinary growths, particularly, in the service quality improvement at more reasonable prices (Enas, Abdul Malek, Abdul Aziz, Ghaith, & Puspa, 2018).

Jordan is an active member in World Trade Organization (WTO), the government is devoted in its efforts to totally liberate the markets and place an end to the monopoly of Jordan Telecommunications Companies (JTC). In the last few years, this sector had received the full supports of his majesty King Abdullah II who strongly

promise to eradicate any possible problems that may avert the growth of the telecommunication sectors (Alnassar, 2014).

Generally speaking, the telecommunication sector in Jordan is led by three main players, namely JTG (Orange Jordan), Zain Jordan and Umniah. JTG an incumbent carrier was privatized in 2000. This was registered in September 1999 with the purpose to develop a new, extremely improved mobile communication networks to serve the Kingdom. Orange mobile started commercial operation in September 2000 as the second provider of mobile service in Jordan. The mobile communication sector consists of the mobile communication product and service provided by Orange mobile. The competitions developed with the entry of additional mobile operators which result to renew as well as strong price competitions (Orange Annual Report, 2018). With Franch Telecommunication holding majority share in 2006. To date, France Telecommunication is the majority owner, and it operates as Orange Jordan, whereas the government of Jordan has a 30% ownership stake on the company (Oxford Business, 2017).

While Zain Jordan is the top mobile provider and it has a 36% market share and national coverable throughout 2083 network sites (Zain Group Financial Reports, 2018), Orange Jordan is the second most preferred service provider with 32% market share, and Umniah with 32% market share is the least in this order despite covering about the same market spread. Figure below show the market share in telecommunication companies in Jordan.



**Figure 1: Market Share for Telecommunication Companies**

Furthermore, these companies operate under the umbrella of the Ministry of Telecommunications and Information Technology. This provide much controls and organising for this segment so as to guarantee that these companies offer higher quality of services for the people. Additionally, the ministry offers fairness in competitions and a safety of environments (Awwad, Bello, & Abdullah, 2018; Qasim, Mohammed, & Liñán, 2018).

Zain Jordan emerged the most patronized with large coverage across the nooks and crannies of the Country. The service is rated as the best in terms of voice connectivity, short message charges and fast internet speed (Zain Group Financial Reports, 2017). The penetration of Zain despite the existences of competitors could be attributed to modern IT gadgets and well-structured management team assembled to meet the challenges of a growing telecommunication economy. The management adopted pure private sector driven approach in operations and resources management. This never implies that the company is not facing some challenges, however the strategies employed to weather the storm is yielding appreciable results. The top management constantly reviews the policies, market shares, values, coverage and injects new ideas, thinking, and prosperity in order to sustain the market share.

The incessant liberalization of the ICT sectors in Jordan is the driving force behind the telecommunication markets' development (Grisanti, Santos, Hausmann, O'Brien, & Tapia, 2019). Numerous phases have been accepted in liberalizing the markets in Jordan for introducing fair competition; obviously Jordan is ripped for investment, offering opportunity for new investment and new advanced services. The policy of government on privatization saw to the emergence of Jordan Telecommunication Group JTG (Orange Jordan) which was strongly promoted by the government. The Government equity share of 30% ownership in JTG has contributed to the growth and coverage of Orange Jordan. The private investors also have shares and interest in the company; however, the government is protecting its interest through favorable deals and concessions in procurements and distributions. While compared with other competitors in the market, Orange Jordan is the most favored by the government since it retained highest government equity investment. This is a strong advantage for the company.

Since its inception in June 2005, Umniah that is majority owned (96%) by Batelco Group has showed a significant presence in the telecommunication market of Jordan, with its high-quality mobile, internet, and business solutions and its following of industry trends and maintenance of customer satisfaction. The company bought Batelco Jordan, a subsidiary of Batelco Group in 2008, and it proceeded to launch to transform its infrastructure and resources. Following the acquisition, Umniah's business solutions were introduced that diversified and enriched the offerings of the company to meet the telecommunication requirements of the country. By 2016, Umniah entered into partnership with payments solution providers to introduce "Mahfazati", a digital

mobile financial service that enables customers' transactions in rural areas. The company also entered into partnership with the Ministry of Education and the Special Communications Commission to interlink with government schools, military schools and ministry directorates in an integrated network that was established by Umniah. This represented a significant milestone for the public education sector in the country, with its adoption of communication solutions and IT in the process of educating students. The key priority held by Umniah is to proceed forward in developing its core innovation and customer-centered values to provide services to various segments of society. Its extensive choice of consumer services and business solutions indicates that the Umniah community welcomes every customer into its community (Batelco, 2018).

#### **IV. CONCEPT OF KNOWLEDGE**

There are many definitions provided for knowledge, and these concepts are summarized in that knowledge is information which can be used and applied. However, some definitions emphasize that knowledge is an integrated set of visions, experiences, facts, beliefs, approaches and techniques that guide individuals, organizations and societies. Knowledge at workplaces refers to the abilities of individuals and organizations to understand, act, and make good decisions (Wiig, 2000).

The process of assessing the knowledge situation of a company requires the indexing of the existing intellectual resources through creating a knowledge map which shows the types of knowledge and their relations as well as linking it to the strategy and vice versa in order to bridge the strategic and knowledge gap of the organization against the competitor. The strategic knowledge framework includes (Zack, 1999).

1. Core knowledge: It is a smaller size and level of knowledge. It should also be available in the organization in order to meet the competition and by which you can know the work rules in the sector. However, it is not given a competitive advantage in the long term (Baer, 2003).
2. Advanced knowledge: It is the knowledge that enables the organization to acquire competitive capabilities and when it chooses to compete on the basis of knowledge, its focus will be on acquiring further knowledge to achieve superiority over competitors and increasing the quality of knowledge in order to differentiate from its competitors (Maier & Hadrich, 2011).
3. Innovative knowledge: It is the knowledge that gives the organization the capability to lead the sector. In this case, the differentiation of organization clearly appears compared to competitors, which enables it to change the competition rules in the manner and timing it determines (Du Plessis, 2007).

#### **V. KNOWLEDGE MANAGEMENT**

Nonaka (1994), had defined knowledge as a dynamic human process through justification of personal principle towards the truth. They contended that knowledge was built via change between tacit and explicit knowledge via the procedure of socialization, externalization, internalization and combination. This knowledge phenomenon was abstract as well as comprised epistemological and ontological dimensions. It followed that knowledge within an organization resided in several diverse places like database, knowledge base, filing cabinets as well as people minds to be transferred and used for the organization to have a competitive advantage (Mohamad, Manning, & Tatnall, 2012). While knowledge was predicted as the only means of competitive advantage in the future that enabled the organizations to compete (Meier, 2011; Urbancova, 2013), knowledge management could then be thought of as a deliberate strategy of disseminating the right knowledge to the right people at the right time and helping members of an organization to share and put information in action in a manner that would advance processes, business decision-making and organizational competitiveness (Urbancova, 2013).

A critical review of past literatures further found knowledge management was complex without universally acceptable definitions because it had multiple interpretations comprising different forms of knowledge management (Ragab & Arisha, 2013; Turner & Minonne, 2010). Despite of having no consensus on what knowledge management was (Haggie & Kingston, 2003), knowledge management had been adopted and proliferated in business organizations and as such, knowledge management were a critical factor for organizational sustainability (Suresh, 2012). While knowledge embedded and retained in human capital had enabled business organizations to deliver distinctive capabilities for performance competitiveness (Budiarta, 2015; Urbancova, 2013), previous studies by Halawi, Aronson, and McCarthy (2005), Wang, Ahmed, and Rafiq (2008) as well as Mills and Smith (2011) however, had found that work on knowledge management was still empirically and theoretically underdeveloped.

#### **VI. REVIEW OF LITERATURE**

##### **6.1 Organizational Performance**

The organizational performance of telecommunication companies in Jordan in this study was essentially one of the most important constructs to be focused on and yet subjective in evaluating the telecom business performance and their actions over time other than to compare the relative performance of the organization against its rivals within the same industry. To most researchers in the field of management study therefore, organizational performance was not only a critical component of empirical research in formulating a business policy but it also



had frequently been used as a final dependent variable in the study (Masa'deh, Shannak, Maqableh, & Tarhini, 2017; Mfinanga, 2018; Ragaisis, 2018).

It followed that a review of past studies on organizational performance had also found a lack of consensus about its precise definition, inconsistency in its measures as well as having problems of dimensionality with the performance construct (Crook, Ketchen Jr, Combs, & Todd, 2008; Richard, Devinney, Yip, & Johnson, 2009; Santos & Brito, 2012), all of which had limited the advances in theory and understanding of the concept. This was supported by the study of Winand, Vos, Claessens, Thibaut, and Scheerder (2014) that claimed little consensus on the conceptual consistency of organizational performance because the meanings of performance differed dependent upon how success was defined by the organization. Since mission and goals clearly varied among different types of organizations, this required different definitions with regards to performance. Owing to this, researchers should investigate and measure organizational performance in different ways. With this, our present study incorporated non-financial performance measures as this would enable individual employees of the organizations to accurately evaluate the success of their business unit's performance, and this best way to measure performance in Jordan according to (Alshatnawi & Ghani, 2018; Masa'deh et al., 2017).

For an organization to desire a high performance level moreover, according to Madella, Bayle, and Tome (2005), the organization had to input the necessary resources and transformed them efficiently during throughput to achieve the relevant and targeted outcomes. Researchers such as De Waal (2007) believed that the high performance of organizations invariably revolved around specific goals achievement, improved financial outcomes, customer satisfaction or productivity. This was further affirmed by other researchers such as Sheehan (2012), ALDamoe, Yazam, and Ahmid (2012) and Richman (2015) that the organization was to achieve a better performance outcome by managing and developing the organization's human asset that would have improved its competitiveness over a longer period of time in addition to being able to adapt well to changes and react to these quickly as compared to its peer groups in the industry. The organization which was being managed for the longer term through the setting up of an integrated and aligned management structure and to continuously improve its core capabilities by truly treating employees as its main asset. Towards this end, managing culture employees', climate, transformational leadership and knowledge well could translate into the betterment of the organizational performance of Jordanian telecommunication companies too.

## **6.2 Knowledge Management**

With the emergence of a knowledge-based economy, the growth of knowledge management became more important for organizations in achieving competitive advantage and so managing knowledge involved not only managing the knowledge of the people, but it also was managing an organization's proprietary technology, systems and its employees (Chowdhury, 2012). According to Zack and Singh (2010), corporate strategy aligned with knowledge management was vital for value-adding and achieving business results. Knowledge management grounded in knowledge-based view nevertheless, according to Chilton (2013) was primarily aimed at protecting organizational knowledge from the use by competitors in gaining a competitive advantage for the organizations.

Other scholars in the past such as Quinn (1992) Stewart (1997) and Williams (1991) had generally agreed that a sustainable competitive advantage for organizations would be accomplished through knowledge management in the new millennium. As such, the term knowledge management could be applied to a wide spectrum of activities designed to manage, exchange or enhance intellectual assets within an organization with the purpose of knowledge management was to retain and leverage an organization's knowledge asset in realizing its optimal value for overall success (Bollinger & Smith, 2001; Rastogi, 2000).

As the management of organizational knowledge was extended to knowledge-based institutions in identifying knowledge gaps for better performance outcomes, for instance in universities whereby knowledge management activities involved knowledge creation, transfer and utilization that were deeply ingrained in these academic institutions for their organizational performance (Fullwood, Rowley, & Delbridge, 2013; Siadat, Hoveida, Abbaszadeh, & Moghtadaie, 2012; Yaakub, Othman, & Yousif, 2014).

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Similar to many business corporations, knowledge management had also been encompassed within the Jordanian telecom organizations, as was highlighted in the studies by Obeidat, Tarhini, Masa'deh, and Aqqad (2017), Hajir, Obeidat, Al-dalameh, and Masa'deh (2015), and Kanaan and Gharibeh (2013) which focused on the role and practices of knowledge management in telecommunication sector for organizational success. Further still, a study by Akroush and Al-Mohammad (2010) indicated that while marketing knowledge management

served the primary purpose of the performance, organizational knowledge had been critical to the overall business success of the telecommunication organizations.

### **6.3 The Relationship between Knowledge Management and Organizational Performance**

The role of knowledge management that was critical to the performance of business organizations had clearly been documented in numerous past research studies (Abualoush, Masa'deh, Batatineh, & Alrowwad, 2018; Abualoush, Obeidat, Tarhini, Masa'deh, & Al-Badi, 2018; Abubakar, Elrehail, Alatailat, & Elçi, 2017; Andreeva & Kianto, 2012; Boumarafi & Jabnoun, 2008; Ha, Lo, & Wang, 2016; Inkinen, Kianto, & Vanhala, 2015; Kasemsap, 2017; Liao, 2011; Naser, Al Shobaki, & Amuna, 2016; Perez-Arrau et al., 2014; Salami & Ogbeta, 2015; Turner & Minonne, 2010; Valmohammadi, Ahmadi, & Aliakbar, 2013). Better knowledge management system helped retain organizational knowledge by preventing information exodus which in turn provided a competitive advantage for long-term organizational success. This was also found consistent with other studies by Suresh (2012), Darvish, Mohammadi, and Afsharpour (2012) as well as Darvish and Nazari (2013) that knowledge management influenced business system not only by inculcating a harmonious atmosphere among employees, but also increasing profitability and ensuring organizational competitiveness and sustainability.

Knowledge management was further regarded as of utmost importance to create and add value to the business (Anand, Kant, Patel, & Singh, 2015). However, the extensive study of the impact of knowledge management on organization performance, several researchers argued that there was still lacking of empirical evidence on the relationship between knowledge management practices and organizational performance in the literature (Inkinen et al., 2015; Yaghoubi & Maleki, 2012). To other past researchers (Kianto, Ritala, Spender, & Vanhala, 2014; Whelan & Carcary, 2011), knowledge management was a business practice that still remained in development despite of it as being an effective tool to generate competitive advantage that benefits organizational performance.

## **V. RESEARCH GAPS**

It is commonly accepted that KM is critical to a firm's success (Alksasbeh, Al-Dala, & Alqaraleh, 2018), and evaluation of the impact of KM implementation on organizational performance has become more and more important (Inkinen, 2016; Masa'deh, 2016). Organizations recognized knowledge as a strategic resource and used it to gain competitive advantage and achieve superior performance (Meihami & Meihami, 2014). According to Manfredi Latilla, Frattini, Messeni Petruzzelli, and Berner (2018), to manage knowledge successfully, an organization had to be able to measure the impact of KM on organizational performance. Good data resulting from measuring KM performance could help business leaders implement KM initiatives more effectively (Andreeva & Kianto, 2012; Mahapa, 2013) and justify corporate expenditure on KM strategies (Qi & Chau, 2018). Successful evaluation of KM performance could provide the stakeholders of KM initiatives with measurable data demonstrating how KM practices impact the bottom-line of a firm (Lyu, Zhou, & Zhang, 2016). Recognizing the importance of knowledge management, researchers are interested in exploring knowledge sharing activities because such activities are the cornerstone of other knowledge management activities. It is argued that a fundamental purpose of managing knowledge is to establish a shared context in organizations. As such, what factors affect interpersonal knowledge sharing and how they affect interpersonal knowledge sharing in organizations are critical and worth noting. Therefore, Qi and Chau (2018) recommended that the group level and organizational factors may become future research agenda. Also further validation of the proposed theoretical model is required in the future (Mahapa, 2013). And previous studies like (Garcia-Morales, Martín-Rojas, & Lardón-López, 2018; Kim, Watkins, & Lu, 2017; Noor Azinuddin, 2015; Umrani, 2016; Wunderlich & Beck, 2017) recommended too use KM to performance.

Moreover, the assessment of the implementation of KM initiatives was critical not only for the purposes of evaluation but also for helping managers decide what should be done next: follow the current course or make any necessary adjustment for performance improvement (Tan & Wong, 2014). However, it is widely acknowledged in the KM literature that measuring KM performance was one of, if not the most challenging KM activities. As a result, it was a daunting task to evaluate the impact of KM implementation on organizational performance (Mia & Hasan, 2016; Torabi, Kyani, & Falakinia, 2016; Waribugo, Ofoegbu, & Akpan, 2016). More importantly, there was a lack of empirical studies showing the connection between KM and organizational performance (Andreeva & Kianto, 2012; Holsapple & Wu, 2011; Inkinen, 2016; Massingham & Massingham, 2014).

Hashmani, Ali, Naveed, and Khan (2016), argue that "the implementation of KM projects continues to be a challenge for many organizations". A major challenge facing organizations is the management of tacit knowledge through processes attempting to convince, coerce, and direct individuals within organizations to share their knowledge (Amir & Parvar, 2014). The complex and integrated nature of knowledge has led to a high failure rate of KM implementation (Alksasbeh et al., 2018) and many projects fail as well (Lin & Ha, 2015) due to a lack of knowledge of the critical success factors (CSFs) of KM implementation (Zieba, 2014). Also, poor planning of KM and its implementation has led to poor organizational knowledge. This in turn has resulted in poor management decisions, strategies and policies (Abubakar et al., 2017; Mohajan, 2017).

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