

# “Operationalization of knowledge management in knowledge-intensive Pakistani banks: a qualitative case study”

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## Operationalization of knowledge management in knowledge-intensive Pakistani banks: a qualitative case study

### Abstract

This exploratory study deals with the core issues related to the operationalization of knowledge management in knowledge-intensive Pakistani banks. In terms of scientific relevance, this study is important, because it contributes to the body of literature on knowledge management issues in the context of banks in Pakistan. A qualitative research approach involving semi-structured interviews with senior managers and HR heads was adopted for the study. A total of sixteen interviews were conducted with senior managers and HR heads. All the interviews were carried out face to face amongst purposively selected participants from four commercial banks. The research findings were derived from the rigorous analytical process based on the qualitative content analysis method for making replicable and valid inferences from data in their context. The findings indicate that the present knowledge management system of the banks in Pakistan has helped members to meet the information needs through capture and to share explicit knowledge.

**Keywords:** knowledge creation, knowledge sharing, knowledge management, qualitative method, content analysis, Pakistani banks.

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### Introduction

The advent of the knowledge economy has doubled the knowledge need of workers to accomplish their work. The digitization and IT infrastructure development have been consumed recently to meet the knowledge needs through capturing and sharing explicit knowledge resources of several knowledge intensive organization (Becerra-Fernandez et al., 2004). In other words, knowledge accessibility and flow through shared common access to information is one of the important requirements of knowledge creation. It requires that the members of all cadres and ranks must have a free access to corporate information (or databases) via information technology. However, technology is merely an enabler or tool because, the knowledge creating company of modern knowledge economy usually constrained to utilize technology in routine operations for gaining sleek access to the information (Anantatmula & Stankosky, 2008; Nickols, 2000). More specifically, the human-technology interface facilitates individual knowledge creation (cognitive system) and organizational knowledge creation (social system)

mechanism through an integrative mechanism of both processes (Kimmerle et al., 2010). This also supports the basic system theory paradigm that reiterates the use of social interaction and digital technologies by which individual learning knowledge creation can be undertaken. It is argued here that, the social interaction may be the main source in deploying tacit knowledge in the workplace using advanced knowledge management systems, information technology, knowledge base and other expert systems for the continuous process of sharing and observing life or work experiences through social interaction and replicating these interactions with learning by doing may be the source of creating new knowledge (Anantatmula and Stankosky, 2008). Likewise, an accurate, accessible, and useful knowledge flow requires sophisticated information system that must be responsive and approachable for every employee working in the organization. In case of banking and financial institutions, the digitization of banking operations and implementation of management information system not only enable employees, customers, and other stakeholders to collect routine information, but also permit them to solve all knowledge related issues and problems through a systematized and customized process.

This particular research is an endeavor to encompass knowledge as an important factor of production that capitalizes on the developmental benefits of resources and to promote not only the knowledge culture in financial business and operations, but to encourage knowledge sharing and creation and to build readiness to implement knowledge based organizational system (Al-Ali,

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2003; Arner & Schou-Zibell, 2011). Henceforth, an exploratory study has been designed to contextualize the knowledge management implementation in a banking context and to understand the organizational dynamics in the changed scenario of the knowledge economy. In this regard, various empirical studies have validated this correlation and other attempts are still in the process of understanding this phenomenon. However, it can be prolific if the practice of a different methodology and strenuous analysis are kept up, with close consideration to the specific definitions of the numerous concepts and theoretical models involved.

### 1. Problem statement

Organizational learning and organizational growth are directly proportional. The most common reason behind the banking failure during the crises was due to core learning errors and lack of concentration on the development of knowledge management systems. In other words, knowledge accessibility and flow in the organization is also one of the important requirements of knowledge creation. It requires that the members of all cadres and ranks must have a free access to corporate information (or databases) via information technology. As a result, digitization and IT infrastructure development to meet the knowledge needs through capturing and sharing explicit knowledge of an organization by providing shared common access to information. Therefore, this qualitative case study aims to address the policy issues related to the operationalization of knowledge management systems in Pakistani banks.

### 2. Research aim and objectives

**2.1. Aim.** The fundamental aim of underlying qualitative case study is to address the core issues related to the operationalization of knowledge management in knowledge-intensive Pakistani banks.

#### 2.2. Objectives.

- ◆ To investigate the core issues related to the policy framework of Pakistani banks, from the knowledge management strategy perspective.
- ◆ To suggest practical implications for the managers in knowledge-intensive Pakistani banks to develop and improve their knowledge management systems in the banks.

### 3. The role of banking knowledge management system

The role of banking knowledge management system within the context of changing patterns of the global knowledge economy and the prevailing threat of the

financial crisis is multifaceted. Undeniably, the materialization of banking knowledge offered a sustainable solution to the pre and post financial crisis issues as it sped up the financial arbitration and risk management process (Holland, 2010). According to the finding, the bank-centred financial meltdown of 2007–2009 was caused due the lack of banking knowledge and the failure of the top management in timely address the knowledge gaps (Turner, 2009).

In addition, most of the insolvent banks during financial meltdown either overlooked the value of existing knowledge in banking operations or ignored the impetus of knowledge creation, sharing and management which can be consumed to deal with the problems aroused by the financial crisis (Holland, 2010). In other words, only considering the financial grounds for finding the reason of the banking sector meltdown, while neglecting knowledge capital from this crisis was not only unwarranted, but also an inadvertence from the likelihood of future events (Turner, 2009). Furthermore, financial analysts are strongly convinced that the banking failure was informational, rather than financial because top management failed to figure out the knowledge gap in terms of their business strategies. In this connection, a causal comparison during the crisis showed that the rate of survival was relatively high in knowledge-intensive banks compared to non-knowledge-intensive banks (Holland, 2010). For example, Holland (2010) developed a theoretical framework to investigate how knowledge can formally create, manage and penetrate into banks during a time when more organizational arbitration is needed for suitable risk management. It can be advocated that the continuous processes of learning and organizational knowledge management alone trickles down the chances of bank failure (Turner, 2009). Thus, it seems indispensable to establish a framework to understand how financial institutions, especially banks, robustly create new knowledge in order to sustain financial shocks and attain a competitive advantage (Holland, 2010).

For instance, HSBC (a renowned British bank) opted to implement a knowledge management system by reconstituting policies and developing knowledge based solution for employees working in all echelons. Holland (2010) advocated that the survival of HSBC was credited to their more heedful approaches to the development of such a framework. However, Swedbank (a renowned Scandinavian bank) implemented a refined economic model based on human capital (e.g. intangible asset) that provides a knowledge-based solution especially in times of the economic downturn (Holland, 2010).

Empirically, organizational learning and organizational growth are directly proportional. The most common reason behind the banking failure during the crises was core learning errors and lack of concentration on the development of intellectual capital (e.g. intangible resource) (Holland, 2010). It not only spoiled the organizational learning, but also decelerated the risk management process. Therefore, continuous learning from experience more than, or at least half of the rate of change in the environment could be an adjunct to sustainable competitive advantage (Revans, 2011). In spite of the less concentration on environmental threats and bank learning, some failing banks, e.g. the Bank of America, utilized sophisticated learning and knowledge management capabilities. Also, most of the banks in Western Europe now adopted the system in order to attain a sustainable competitive advantage (Blesio & Molignani, 2000).

Unquestionably, a dynamic learning system plays a decisive role in knowledge creation capabilities (or intellectual capital) of banking organizations. Therefore, knowledge can only be revived through new 'experiences and cognitive skills of bankers' and information of all internal and external stakeholders' such as, workers, clients and suppliers (Holland, 2010). The implementation of the knowledge management system in the banking industry is still a hard nut to crack. Likewise, the complexity of the banking environment and dealing with the intense flow of information at one point of time makes it unusable in the banking operation (Ali & Ahmad, 2006). In addition, organizations underwent through unintended problems such as, misplaced focus and top management unwillingness regarding learning, knowledge creation, knowledge sharing and knowledge use.

In case of banks, the massive inflow and outflow of knowledge at any point of time will not only be difficult to manage but sometimes it may lead to the diminishing of associated benefits of this information. Knowledge management as a process sets a new dimension for banks as 'it drives innovation by capitalizing on organizational intellect and experience' (Duffy, 2001, p. 3). Therefore, it is intended to encourage and sustain the new knowledge creation and sharing mechanism as an indispensable element in banking success (Ali and Ahmad, 2006).

#### **4. Banking knowledge management process and implementation**

The knowledge creation, sharing and its management is a dynamic process that might not be accomplished until some societal and organizational

conditions are not satisfied (Andreeva & Ikhilchik, 2011). Similarly, knowledge management cannot be undertaken in a vacuum (Nisbett et al., 2001) as it requires effective knowledge management strategy, a clear methodology and processes (Ellis, 2005). In this regard, prior work has given undue importance to knowledge management frameworks. In the literature, very few researchers have discussed the underlying factors that are likely to facilitate the knowledge creation process in the organization (Arling & Chun, 2011). In terms of societal and organizational conditions, the knowledge management researchers have discussed the effects of managerial support on the successful knowledge management application. For example, the top management's willingness and knowledge vision is likely to support knowledge management strategy in the organization (Mizintseva & Gerbina, 2009). Hoffman et al. (2005) found top managers while Lee and Choi (2003) and Nonaka and Takeuchi (1996) found middle managers to support the successful knowledge management implementation. The timely funding for knowledge application (Wong & Aspinwall, 2006) and knowledge-oriented culture (Davenport & Pruzak, 2000) played a vital role in the efficacy of knowledge-based decisions.

Although, there are equal growth opportunities to employees during the knowledge management process implementation, it also provides a sense of ownership between employees and enhances the level of trust that positively impacts on knowledge creation, sharing and use (Brockman & Morgan, 2003). The ability of knowledge employees in capturing and utilizing knowledge to make strategic decisions is also crucial for routine banking functions. For example, dealing with customers in the routine banking operations requires an organizational structure that supports knowledge management activities in the banks. In the same way, banks are also required to provide the necessary training to their staff in order to handle complex banking jobs (Ping & Kebao, 2010).

In response to the changing environment, banks are required to implement a thorough knowledge management system for managing knowledge in banking operations. In order to get the most value from their intellectual assets, senior management showed willingness on knowledge sharing and transfer and increased their access to knowledge databases. The process of managing knowledge in the banking can be attained with the process improvement and amplification of knowledge (e.g. tacit + explicit) management system. Therefore, the focus has been shifted towards quality of the operations through the process improvement in view

of the changing pattern of economy, industry and sector (Alrawi & Elkhatib, 2009; Kridan & Goulding, 2006;).

In addition, learning and innovation in the knowledge-intensive organizations are a social phenomenon that requires an informational environment for knowledge to be shared, transferred and contrasted (Nonaka, 1994) through an effective communication across individual and organizational boundaries that facilitates the capture and share of the codified knowledge (Slepian, 2013). Hence, it is argued here that the knowledge management infrastructure in the knowledge-intensive organizations in general and banks in particular must be capable of substantiating the informational needs of the knowledge management process. In other words, a typical banking knowledge management system composed of competitive knowledge management technologies, as the continuous interface between human and technology permits banks to manage its intangible assets and ensures the perfection of planning which will increase the efficacy of banking operations and support risk management issues (Mizintseva & Gerbina, 2009).

According to the findings of empirical research conducted in the banking industry, it was revealed that the performance of knowledge creation is directly proportional to the human capital, and 'cognitivists' and 'connectivists' are the foremost knowledge creation enablers (Shih et al., 2010). In response to the global recession and financial sector internationalization and liberalization, the banking industry was constrained to transform its internal and external business mechanisms by providing knowledge-based services other than conventional borrowing and lending business (Shih et al., 2010). Therefore, in a changing environment, knowledge management appeared to be an indispensable factor and there is an ever increasing need to understand intellectual capital and the knowledge creation correlation especially in a complex and changing scenario of banking operations (Lin et al., 2008; Shih et al., 2010).

The typical banking knowledge management initiatives must be taken as an "integral part of the overall corporate strategy that aims to grow, explore and exploit the company's knowledge to increase shareholder value" (Dzinkowski, 2001, p. 3). This follows arguments from Tirgani and Nematizade (2012) that 'knowledge-oriented structure', 'knowledge-oriented technology', 'knowledge-oriented human resource' and 'knowledge-oriented culture' provide a special knowledge management

capacity. Thus, top management support (supporting and sharing culture), technology (digitization of documents and speedy search of information for its re-use) and organizational learning (training courses, employee incentive programs, mentoring, and communities of practice) are significant enablers for knowledge management (Yeh et al., 2006). This links strongly to the view that organizational learning is a product of three factors: organizational culture, structure and substructure. It further implies that organizational culture with a supporting corporate strategy promotes an environment of trust and confidence, in which individuals and organizations feel free to create, share and disseminate knowledge (Biloslavo & Prevodnik, 2012; David & Fahey, 2000;).

Apart from the knowledge management infrastructure, Ahmed et al. (2002) posit the significance of employee-employer trust, strong relationship, and intrinsic motivation for creating a knowledge sharing culture in the organization. Knowledge sharing culture in the organization encourages people to come closer and express their feelings, grievances, and other work-related issues. For this, few other factors such as organizational culture, technology, employee training, and teamwork usually promote knowledge sharing in the organization (Mizintseva & Gerbina, 2009). Becerra-Fernandez et al. (2004) knowledge management framework also contemplates the basic underlying aspects of knowledge management from the perspective of organizational culture, structure, information technology system, knowledge deposit, and physical environment.

## **5. Banking knowledge management system. Developing countries context**

The typical knowledge management system and process in the banks are different from other organizations as spacious data flows through many channels that make it more complex to implement (Bowen & Ford, 2002). Therefore, the banking knowledge management system provides supportive organizational conditions for the collection, sorting and transformation of knowledge which are to be subsequently replicated or formed (Mizintseva & Gerbina, 2009). In other words, knowledge creation and sharing in banks may be growing with a number of supported programs and management tools such as consultative decision making (Nonaka & Takeuchi, 1996), mentoring (Bryant, 2005), concept mapping and knowledge packets and free access to corporate information (Mizintseva & Gerbina, 2009). For this, organizational learning can be discussed as a source of the knowledge creation

process under a supportive organizational (system and technology) and societal (knowledge sharing culture) conditions for knowledge management initiatives in the banking firms.

In response to the changes in the global banking environment, most of the banks implemented knowledge management so that knowledge can be managed in routine banking operations (Dzinkowski, 2001; Li, 2013). However, the banking knowledge management system in different developing countries consisted of knowledge sharing and knowledge creation. The digitization of banking operations and implementation of an IT platform shifted conventional banking into modern banking based on more updated information and knowledge provider to their customers (Li, 2013). The banking knowledge management initiatives also used to support organizational cultural factors, such as employee empowerment, teamwork, cohesiveness, knowledge sharing and communication (Chatzoglou & Vraimaki, 2009; Li, 2013).

If we looked back in history, the World Bank was the first who implemented KM in 1996; up to the first quarter of the 2000, it was implemented in the countries of Europe (the United Kingdom, Germany, Portugal, Spain), the West (the United States of America (USA), Canada) and Japan. However, some of the banks in developing countries (e.g. Malaysia, United Arab Emirates, Libya, Tunisia, Mauritius, and Lebanon) adopted KM systems in the third and fourth quarter of the last decade. In terms of scholarly research, very limited research was carried out on KM in banks within developing countries. According to the published research in this area, a general perspective of knowledge management is more focused on knowledge creation, sharing and retention, quality of service, innovation, competitive advantage, and customer loyalty. For instance, the Central Bank of Malaysia implemented a banking knowledge management model (BKMM) based on knowledge creation, retention and sharing which enhances the quality of banking operations (Ali & Ahmad, 2006). The KM system in the Iranian banks is more customer-focused, which is normally used for managing customer knowledge (Azhdar et al., 2010). In the Lebanese bank, informal mentoring significantly had an impact on knowledge sharing and exchange during a performance job in the bank (Halawi and McCarthy, 2008). However, the KM system of the Central Bank of Bahrain used to increase the information accessibility and flow by using the appropriate technology and improving human skills (Mohammed & Jalal, 2011). The

Islamic Development Bank of Saudi Arabia recognized the power of information by replacing conventional means of banking with more innovative capabilities, organization information processes for managing knowledge and competitive business advantage (Bakar & Hashim, 2011)

In the case of South Asian countries, (e.g. Pakistan, India, Bangladesh), the researcher found only one related study carried out in the ICICI Bank of India, which highlighted the initiatives of KM in the bank with the help of senior management support but without any financial funding (Goswami, 2008). Therefore, this exploratory study, however, designed to investigate the knowledge management system implementation and use in Pakistani banks.

## 6. Methods

**6.1. Research setting: Pakistani bank.** The current study took place in the knowledge-intensive commercial banks of Pakistan. In recent years, privatization has transformed Pakistan's banking industry into one of the fastest growing service sectors. The privatization helped banking sector to improve the IT platform for handling the manual processing of spacious volume of data that usually makes a data and information management laborious (Cole-Gomolski, 1997). In addition, the work-related values of this sector has changed substantially due to the knowledge influx, particularly following the privatization. The digitization of banking operations shifted the conventional banking into modern banking based on more updated information and knowledge provider to their customers. Although, the banking industry in Pakistan is comparatively more knowledge-intensive sector than other sectors, the sensitivity of the procedural driven banking operation restrains Pakistani banks to capitalize knowledge as a factor of production that can be unsurpassed, formal, and used by all members (Akhtar, 2001). In this study, semi-structured interviews were conducted in one Pakistani city (Karachi) in order to unfold whether or not knowledge creation, sharing and management is a factor in developing countries and to what extent people involved in the policy-making of the banks are willing to promote knowledge creation, sharing and management strategy in the Pakistani banks. Karachi is a metropolitan city, encompasses an estimated population of 15 to 19 million occupants. It is the financial hub of Pakistan and conceded as an epicenter of trade and the banking industry.

**6.2. Sample.** This study sought to select a set of senior managers and HR heads. A total of sixteen interviews were conducted with senior managers

and HR heads. All the interviews were carried out face to face at the location of the selected banks. The participants were selected from five privatized and three private banks. Of the participants, 11 were male and 5 were female. In case of this study, only senior managers and HR heads purposely considered for interviews who were involved in the formulation of banking organization policy and possess an extensive banking industry experience. In the course of selecting respondents, the researcher identified 7 senior vice-presidents, 4 HR heads and 5 regional operation managers as potential respondents for face to face interviews. For

scheduling interviews, the researcher formally contacted the HR heads of each bank through formal request of participation including a letter from the Director of Studies in an attached file. The researcher provided all necessary information deemed indispensable to obtain consent from respondents. For example, it included the complete explanation of the research, its aim and objectives, possible implications of the findings and an option to refuse or to participate in the research. It also explained the main interview questions, the potential benefits associated with this research, and a guarantee of confidentiality.

Table 1. Codification used in the process of obtaining qualitative data

Code	Interview Location	Interviewee Designation	Interview Type	Schedule
Commercial Bank 1				
NBPHRAD1	Karachi	Executive Vice- President	Face to Face	06.12.15 (12:00-1.00)
NBPRM2	Karachi	Regional Head	Face to Face	21.12.15 (1:00-2.50)
NBPHR3	Karachi	HR Manager	Face to Face	05.01.16 (10:00-12.15)
NBPSVP4	Karachi	Senior Vice President	Face to Face	17.01.16 (12:00-1.20)
NBPRH5	Karachi	Regional Head	Face to Face	26.01.16 (9.30-11.00)
Commercial Bank 2				
HBLDGM1	Karachi	Deputy General Manager	Face to Face	11.02.16 (1:00-2:15)
HBLHR2	Karachi	Senior HR (Central)	Face to Face	11.02.16 (10:00-11:40)
HBLVP3	Karachi	Vice President	Face to Face	23.02.16 (9:45-11:30)
Commercial Bank 3				
MCBSM1	Karachi	Senior Manager	Face to Face	05.03.16 (10:00-11:15)
MCBSHR2	Karachi	Senior HR Manager	Face to Face	09.03.16 (11:00-12:40)
MCBDGM3	Karachi	Deputy General Manager	Face to Face	12.03.16 (10:00-11:40)
MCBRM4	Karachi	Regional Manager	Face to Face	12.03.16 (2.50:3:40)
Commercial Bank 4				
ABLHRE1	Karachi	HR Executive	Face to Face	13.03.16 (9.50:10:40)
ABLOPM2	Karachi	Operational Manager	Face to Face	16.03.16 (9:00-10:20)
ABLRM3	Karachi	Regional Manager	Face to Face	19.03.16 (10:00-11:00)
ABLGM4	Karachi	General Manager	Face to Face	20.03.16 (1:00-2.45)

The use of interviews seeks to ‘emphasise the rich, real-world context in which the phenomena occur’ (Eisenhardt & Graebner, 2007). Therefore, in order to accomplish the research objective and to address the qualitative strand, the researcher followed the footprints of previous researchers in the related area for employing semi-structured interviews for qualitative data collection in the banks (Stovel & Bontis, 2002). However, Table 1 summarizes the explanations for codifications used in the process of obtaining qualitative data and names of organizations, interview location, interviewee designations, interview type and schedule.

**6.3. Analysis and results.** The aim of this exploratory study was to investigate the core issues related to the present framework of Pakistani commercial banks from knowledge management implementation and use. The results derived from a hypothesis testing sometime exhibits unwanted

problems. Therefore, the qualitative data from the purposely-selected senior level managers looked to clarify knowledge management implementation and use in the Pakistani banks. The semi-structured interview questions particularly designed to consider the main themes highlighted by the literature and brought together in the theoretical framework. In view of that, the interview guide was categorized according to the key elements of knowledge management implementation and use mainly based on the work of Nonaka and Takeuchi (1996) and Jashapara (2005). In the interview guide, the researcher asked eighteen questions under three categories according to the key elements of knowledge management in the banks. For example, the knowledge creation requires ‘knowledge strategy’ i.e. the management policies that affect knowledge exploration and knowledge exploitation in the organization (Jashapara, 2005). Therefore, the researcher asked six questions under this category

mainly covers the identical ways through which new knowledge resources can be explored and existing knowledge resources can be leveraged.

In this study, findings derived from the content analysis of 16 semi-structured interviews taken from the senior management and HR heads of banks in Karachi. A qualitative analysis of this study involves rigorous analytical process based on the qualitative content analysis method for making replicable and valid inferences from data in their context. However, depending on the objective of this study, a conventional qualitative content analysis technique was used in which coding categories extracted from the data inductively (Elo & Kyngas, 2008). Following to the suggestions in the previous work of Patton (1990) and Berg (2004), the content analysis method employed to condense (reduce) the raw data into themes based on a valid inference and interpretation. In addition, the qualitative content analysis was used because it permits grounded theory process based on the 'epistemological relativist assumption' by allowing only what can be categorized from the raw data, inferences drawn from themes and generated theory (Elo & Kyngas, 2008; Hsieh & Shannon, 2005).

**6.4. Qualitative data analysis.** The findings suggest that an accurate, accessible and useful knowledge flow requires a sophisticated information system that must be responsive and approachable. In recent years, Pakistani banks have showed more concern in getting unique systems in order to fulfil the information needs of the employees of all cadres so that they think and act differently. The implementation of the banking knowledge management system increased employee accessibility to important information which enables them to connect with each other across the branch network within the country, thereby making data management fairly easy. The regional head of the bank quoted that:

*'...all the information is widely shared through our information system. Every employee has access to important information. The employee can easily receive and share information on any issue at any time. The human resource department also issues a weekly newsletter in which all the latest information is circulated within the wider context of the economy, industry and organization...'* (NBPRM2).

The aforesaid argument was also reinforced by a senior manager in this way:

*'...all the information is transferred and shared through a centralized intranet system. All branches are connected and information is communicated through this system...'* (NBPHRAD1).

The knowledge management system of the bank enables employees to meet the knowledge needs through capturing and to sharing explicit knowledge by providing shared common access to information. The qualitative interview findings indicated that a multifaceted information system of the banks in Pakistan enable employees to develop effective plans and make informed decisions. In this regard, the information system of the bank supports the activities of the management, employees, customers, and other stakeholders through effective data management system. However, every knowledge-intensive bank uses a different management information system according to their information needs. For example, a deputy general manager stated that:

*'...we are currently using five management information system applications such as decision support system, executive support system, management reporting system, intelligent information system and an office information system. All of these applications are integrated and are used to accomplish the organizational information management needs...'* (MCBDGM3).

In addition, most of the newly established Pakistani banks have either not implemented the new information management systems or their existing information management systems do not have such capacity that is usually needed for sharing large amounts of data. Despite this, the information management system in Pakistani banks is almost functioning and that indicates the long-term management strategy for promoting knowledge capture and transfer in the organization. One of the senior human resource managers pointed out that:

*'...the main problem is that many new established banks have developed systems over time in individual business units or divisions but their system doesn't have the capacity to share large amounts of data to different branches. But, larger banks have good knowledge management systems through which the information can be processed very quickly...'* (ABLHRE1).

Information sharing and keeping employees updated with changing patterns influences their knowledge, skills and abilities that are required for performing

tasks or activities. In other words, technology has a direct positive impact on the employee knowledge creation, sharing, and use. During one of the interviews, regional head of the bank acknowledged that the more access to information from many sources increase workers' confidence and capability.

*'...employees are more informed, confident and capable today compared to ten or fifteen years ago. I think the only reason is that they have more access to information from different sources. The new generation that were appointed after privatization are more competitive than those who have decades of experience in the industry...'* (NBPHR3).

The aforesaid argument was also endorsed in such a way that the knowledge management system creates more learning avenues for workers during performing workplace tasks and activities through knowledge sharing and transfer. The interviewee mentioned that:

*'...people tend to learn from each other and after the implementation of the information system people have become more informed than before...'* (MCBSHR2).

Although, the banking knowledge management system has increased employee accessibility to important information, cultural placidity and a high power distance mindset, it has made it somehow impractical to utilize knowledge in routine banking activities. In spite of that, the findings suggest that the employees in Pakistani banks are allowed to share anything at any level and can also provide a feedback directly to the head office depending on the situation and problem. The senior human resource manager replied that:

*'...every employee receives and shares all routine information. There is no restriction from management. We also encourage a friendly environment in which people share and exchange ideas at any level and also communicate directly with the head office depending on the situation and problem. However, you know banks have a centralized structure with several reporting channels, therefore, in some branches there might be some problem...'* (ABLHRE1).

Information sharing is also attained through communicating important information through newsletters which is a routine activity in the case of this organization. According to the human resource manager:

*'...employees are also provided with a daily newsletter in which all main events and developments are reported. Before circulating any information, it is properly evaluated...'* (ABLGM4).

The aforesaid idea was also explained by the human resource manager in this way:

*'...I think the existing information system of this bank is sufficient for different knowledge management activities. However, this is not always possible. An organization that utilizes any information in any of the organizational activities on a routine basis in a banking organization is not so easy...'* (HBLVP3).

## Discussion

This study contributes to filling a gap in the knowledge management literature by exploring knowledge management implementation and use in the banking sector of Pakistan. It also examined how knowledge management implementation might contribute to managing routine banking knowledge. The findings above show that the present knowledge management system of the banks in Pakistan has helped members to meet the information needs through capture and to share explicit knowledge. Although, the members of all cadres and ranks have a free access to corporate information (databases) through the information system, the centralized structure and multiple span of controls restrains the continuous process of information sharing and transfer. In addition, the 'shared common access' to information will also smooth the progress of capturing and sharing routine information. Precisely, the use of technology in the Pakistani banking operations permits a systematized and customized solution to most of the knowledge-related issues and problems. It further implies, however, that the human technology interface within Pakistani banks reciprocates the individual knowledge creation (cognitive system) and organizational knowledge creation (social system) mechanisms through an integrative mechanism of both processes. This also supports the basic system theory paradigm that reiterates the use of social interaction and digital technologies by which individual learning and knowledge creation can be undertaken.

## Limitations

The main and one of the important limitations of the present exploratory research relates to the chance of generalizing the semi-structured interview findings to other research settings. Albeit that the open-ended interview questions do not produce generalizable

data but to attain deep insight of the knowledge management implementation and use in the banking sector of Pakistan. In order to obtain more

generalizable results in future research, large-scale empirical studies based on large-scale survey questionnaires may produce more valid results.

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