ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
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KNOWLEDGE MANAGEMENT STRATEGIC FRAMWORK FOR COMMERCIAL BANK OF ETHIOPIA

Kine Elias

July 2017

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July, 2017

DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of Dr. Getachew Hailemariam. All sources of materials used for the thesis have been duly acknowledged. I confirm that the thesis has not been submitted in part or in full to any other higher learning institution for the purpose of earning any degree.

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14 July, 2017

ENDORSEMENT

This thesis has been submitted to Addis Ababa University, School of Information Science for examination with my approval as a university advisor.

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Acronyms

CBE	Commercial Bank of Ethiopia
G-KMMM	General-Knowledge Management Maturity Model
HR	Human Resource
IS	Information Systems
KMMM	Knowledge Management Maturity Model
KM	Knowledge Management
KMS	Knowledge Management Systems
SECI	Socialization, externalization, Combination and Internalization

Abstract

To survive and prosper in today's highly competitive environment, organizations need to develop sustainable competitive advantages. Organizations highly rely on their resources to gain a competitive advantage in the environment they operate. Knowledge has been considered by most organizations as an important resource for sustaining competitive advantage. These days, banks are operating in a highly dynamic and competitive environment. Thus banks are expected to duly recognize the importance of knowledge and the way it should be managed. The Commercial Bank of Ethiopia, as the biggest and oldest bank in Ethiopia, should be able to manage its knowledge resources and become a world class commercial bank, as stated in its vision statement. Therefore the main purpose of this study is to evaluate the knowledge management (KM) practice of CBE to understand the current position of the bank in relation to KM, and develop a KM strategic framework that is aligned with the organizational strategy. To this end, the study adopts a qualitative approach and uses a case study method. For the purpose of assessing the banks' KM position, different KM maturity models were reviewed and General Knowledge Management Maturity Model (G-KMMM), developed by Pee & Kankanhalli (2009), has been selected. Based on the model, data was collected using close-ended interviews, developed by the same researchers who developed the maturity model, from 10 (ten) branch managers of ten selected CBE branches in Addis Ababa. The findings of the study showed that the CBE is at the first level of the G-KMMM, which is 'initial' maturity level and that there is little or no intention to formally manage knowledge in the bank. Based on the results, the proposed KM strategic framework is developed using a theoretical framework for KM strategy developed by Sunassee and Sewry (2002), as a foundation. And the proposed KM strategy framework can be used by the bank to strengthen the generation, sharing and application of knowledge; to equip itself with a more supportive knowledge-sharing and learning infrastructure; foster leverage of knowledge through partnerships; and promote a supportive KM culture.

Chapter One

Introduction

The background of this chapter highlights the core themes of the research, i.e. developing a Knowledge management strategic framework for the Commercial Bank of Ethiopia. The chapter indicates the problem that necessitated this research, the significance, objectives, research questions and the research methodology used.

1.1 Background

If an organization is to survive and prosper in today's highly competitive and rapidly changing environment, it must develop sustainable competitive advantages. The resource-based view suggests that an organization can only achieve a competitive advantage through strategic resources (Mostert and Snyman 2007). Traditional resources like land and labor alone are no more determinants of the competitiveness advantage and effectiveness of the firm, unless due focus is given to knowledge which resides in the organization that ascertains its being and success. In such competitive and rapidly changing environment, survival and prosperity can be achieved only through developing a sustainable competitive advantage. And it is very important to consider organizational knowledge as a most important strategic resource for the achievement of objectives and goals of an organization (Mostert & Snyman, 2007).

As Zack (1999) put it, business organizations are beginning to consider knowledge as their most valuable strategic resource. The current knowledge-based world economy has forced organizations to focus on knowledge management practices for their authentic and steady success. Since the world is becoming such a small place due to globalization firms have to determine their fate in order to assure their survival in this era where it is impossible to exist without being a strong competitor. Therefore, it is a necessity for companies to be engaged in knowledge management practices. But the success of these practices depends upon the development of knowledge management strategy in alignment with the overall strategic plan of the organization.

Accordging to Krogh et al. (2001), Knowledge Strategy, refers to the employment of knowledge process to the current or new knowledge sphere in order to achieve the organization's strategic goals. Having a knowledge management strategy is not just about outlining high-level goals as becoming a knowledge-based organization; instead, it should be about identifying the needs and issues within the organization and provide a framework for addressing these (Shannak et al., 2013). A framework helps to support, analyze, design, develop and deploy organizational activities by guiding the analysis of knowledge flows and construction of a usefully comprehensive picture (Newman & Conard 2000). The most important step in the development of the integrated framework for knowledge management and measuring its performance is the organization of key principles and objectives (Brizga & Geraghty 2011).

As business organizations view knowledge as an important resource to avoid threats and take advantage of opportunities as their most important capability Zack (1998), the critical role that knowledge, as a resource, plays in the success of the operation of the firm is easily recognized by the Commercial Bank of Ethiopia. Institutions, communities and individuals are highly empowered by knowledge in planning and implementing the development process. The Commercial Bank of Ethiopia is a financial institution that should generate, mobilize, share and apply knowledge. The ability to do so gives the bank a competitive advantage over its competitors by assisting development. Knowledge and expertise also strengthens the bank by providing intellectual leadership on key issues such as mobilizing resources to other institutions.

Although it is not an easy task and demands hard work with lots of challenges, related to culture, trust, IT and incentive to create a smooth flow of tacit and/or explicit knowledge, huge business opportunities can be seized by sharing knowledge by transforming knowledge into business value (Habtamu Mohammed 2011). Being the biggest and oldest bank in the country knowledge management is integral to the bank's mission and mandate.

Sources of knowledge for CBE refer to strategic and applied research, statistic and data, operational experiences, and networking and partnerships. Accordingly it embraces bank activities that generate and share information and expertise within and outside the firm, and can be tacit or explicit. As knowledge is originated and applied by knowledge workers, who are involved in a particular task, it should be used in making decisions as well as many other actions (Abdullah et al., 2005). Most knowledge generated through experience, from operational

activities for example, inclined to be tacit, the big job for the bank is to make sure that such tacit (unrecorded) knowledge, mostly resided in the minds of employees, is recorded, analyzed and shared.

This paper proposes a knowledge management strategy framework and attempts to achieve the bank's knowledge vision. The strategy proposed in this study institutionalizes a knowledge culture within the bank, and can (a) build the Bank's internal knowledge capacity to enhance its effectiveness (b) strengthen the Bank's presence and effectiveness as a voice in the development discourse and (c) enhance the mobilization, sharing and application of knowledge to empower the bank's workers and partners.

1.2 Statement of the Research problem

The success of an organization does not merely depend on the presence of knowledge, but on the ability to explicitly manage it to maximize the benefits that it can provide (Mostert & Snyman 2007). According to job observation and preliminary interviews, even if there is an interest in the bank to establish knowledge management practices, the current situation is far from creating an effective knowledge management environment. In today's knowledge economy, most organizations continue to waste their greatest assets; experiences, ideas and insights that are scattered everywhere in the organization and resided into the minds of employees (DiGiacomo 2003). Just because of the traditional human resource management and business management practices the presence of some knowledge management activities are witnessed in the bank, through preliminary interviews, on-observations and document analysis.

There are some explicit knowledge resources in CBE like, research documents, guidelines, policies and strategy documents but they are not well organized to support best knowledge sharing, accessing and retrieval. According to Filemon & Uriarte (2008), using different mediums, like, memos, instructions, group discussions, internal meetings, seminars and workshops, knowledge sharing can happen between the organization and its employees, among employees of the firm as well as with people outside the organization. The organizational culture in CBE is not also suitable for knowledge sharing and capturing because most employees feel that it is not their job to be engaged in knowledge management practices. Habtamu Mohammed (2011) found out that employees in the CBE are not involved in KM activities but are interested

in job rotations. In the same research, it is also noted that knowledge sharing and collaboration with other organizations are not much used in the bank.

Since technology is multifaceted, it is a must for organizations to invest in a comprehensive IT infrastructure that supports the various types of knowledge and communication that are so vital (Gold et al., 2001). Although the Commercial Bank of Ethiopia has an intranet, that can be so useful for facilitating knowledge management activities, and library services, which serves the employees for referring some technical and business knowledge, it has not been utilized properly by the workers actively to widen the knowledge management practices. According to Temtim Assefa (2014), there are different ICT tools in CBE but they are not used in such a way that they promote knowledge sharing among employees.

CBE has been in business for decades and has acquired a lot of experience in a long time. However, the accessibility of the knowledge resources does not match up with the rich experience of the bank, because the knowledge that is found in the minds of technical employees and specialists are of high quality and essential, but it cannot be easily accessed since it is not captured and codified to be shared within the bank. The knowledge found in the documents which are produced and distributed to different departments are well prepared but they are not well organized in a manner to be easily accessed by those who seek it. Habte Reji (2014) argued that commercial banks in Ethiopia do not have any formal way of managing their knowledge, they do not have full-fledged computerized system for managing knowledge and employees cannot easily access the existing knowledge.

1.3 Research Question

Preliminary assessment, via interview and document analysis, was made to learn whether there is a KM strategy in the CBE or not, and it was found that the bank has no strategy to manage its knowledge. Therefore, the research question of the study focused on issues relevant to the development of KM strategy framework for CBE. This study deals with the following research question:

- How will Knowledge Management strategic framework be developed to CBE?

1.4 General and Specific Objectives of the Study:

1.4.1 General Objectives

The general objective of the study is to come up with knowledge management strategy framework that guides and fosters the establishment and implementation of appropriate knowledge management systems.

1.4.2 Specific Objectives

The specific objectives of the study are the following:

a) To investigate the current KM practices of CBE
b) To decide the measurement tool to be used for assessing the current KM practices of CBE.
c) To decide which theoretical KM strategy framework to use as a foundation for developing a KM strategy framework for CBE.
d) To develop a KM strategy framework for CBE based on the theoretical framework, to enhance the overall KM environment of the bank.

1.5 Significance of the Study

The study is important to transform the bank into an institution where the production, sharing and retention of knowledge are effective and effectively used to improve service quality and achieve organizational goals. It will encourage the CBE staff to make use of the available information technology to mainstream knowledge management and development, such as using web-based knowledge portals and the intranet to capture and share tacit knowledge.

It strengthens the operation of the bank by enhancing and implementing a management framework that can improve quality of service, and which can enable it to measure results to make sure that, bank policies, strategies and development programs are effective and informed by timely and reliable data. The study can contribute toward building the bank's capacity to ensure improved project and program implementation.

Knowledge is an asset that grows exponentially when it is shared through partnerships and networks, and, in effect, it helps the bank in discovering and incorporating new ideas and

practices. Therefore, the Bank will support internal networks and strengthen partnerships with external organizations based on shared vision and value addition. The strategy expects existing partnerships to result in the production of an increased number of joint documents and events. The Bank will catalogue existing partnerships, develop a framework for assessing partnerships and create a database of external networks and partnerships.

1.6 Limitations of the Study

This study is limited in that, due to time constraints and the busy environment of the surveyed bank, only managers of the selected 10 branches of the CBE were participated in the interviews and close-ended questions were used instead of in-depth interviews.

Since it is not a norm for the CBE as well as for most other organizations in Ethiopia to have a formal KM activities or strategies, and KM is not a much studied area in the country, there was a limitation of getting enough literatures and documents for the study. There was also a gap between the participants' knowledge about KM and the information this study tried to gather about KM activities of the bank.

1.7 Organization of the Thesis

This study has six chapters. *Chapter One* contains the introductory part and elaborates important issues that this study deals with including the background, statement of the research problem, the research questions, objective of the study, significance of the study, and limitations of the study. The *second* chapter summarizes prior researches conducted in the relevant field. The literature review contains different issues of Knowledge Management and its importance for organizations, and banks in particular. This chapter builds the foundation of this research based on theories and concepts found in related literature.

Chapter *Three* focuses on the theoretical framework of KM used as a foundation to develop the proposed KM strategy for the CBE. Chapter *Four* discuses the techniques and methods employed for conducting the research work. It includes the review of literature, research approach, research strategy and data collection methods and instruments used. Chapter *Five* deals with the way the data collected via interview was analyzed, the results and discussions. Chapter *Six* discusses the most important part of the study, that is, the proposed knowledge

management strategic framework. This chapter goes deep into the developed strategy to clarify its objectives, challenges, expected outputs, measurements and the action plan. And finally Chapter *Seven* forwards what has been concluded in the study and the recommendations given.

Chapter Two

Review of Related Literature

2.1. Introduction

The only way an organization can survive in today's world is highly dependent on its intelligent use of the knowledge resources it has. The global economy is pushing companies to become fierce competitors. Therefore, knowledge is the only asset they can rely on if they have to be different and unique to survive in this competitive situation. The knowledge-based economy has created a setting where, acquisition, sharing and storing of knowledge become very important to make strategic changes in the business environment in which they function, so that they can increase the rich information services, advanced technologies, and use the human mind as abundant knowledge source (Haggie and Kingston, 2003).

According to Battams (2002), the fundamental elements of knowledge economy include strong social structure, the presence of knowledge makers and workers, broadband connectivity, rich internet access, and a learning culture. Knowledge of individuals is the organization's most useful resource. Therefore, the performance of an organization depends on how effectively its employees produce new knowledge, share them around the organization and make use of the available knowledge to help the business perform best. Basically, managing knowledge is about guiding the collective knowledge of the entire workforce into a direction of achieving specific organizational goals. Organizations should aim to manage knowledge that is most important to the organization instead of trying to manage all knowledge. KM is about making sure people are equipped with the right knowledge, where and when they need it (Bontis, 2003).

Managing knowledge is not an easy task since it resides in people's heads. It facilitates the process by which knowledge is created, shared and used in organizations (Zack, 1999). Instead of forming new divisions and departments or installing a sophisticated computer system, it applies some small changes to the way every employee works in the organization. Different KM approaches are available to be adopted by different organizations based on their different ways of

looking at knowledge. Generally, for organizations to create a good knowledge environment, they need to change organizational values and culture, work patterns and behaviors, and they should create a situation where people can access people as well as important information resources.

There are varieties of KM processes based on how they are done. As Grover and Davenport (2001) put it, KM is a new concept for most organizations and there is no one conventional way of handling knowledge that can be taken as a standard. Therefore organizations are trying to get a KM process that fits their situations by trial and error. Since different organizations have different challenges concerning managing their knowledge, they cannot adopt a strategy from other organizations, as it is. It is impossible to imagine KM without people creating, sharing and using knowledge, therefore how the people in an organization think and behave should be taken into consideration for the KM to work.

There have been different KM techniques that are characterized by simple and straight forward, old techniques such as giving induction to new employees; interviewing resigning employees to preserve some knowledge in their mind, making databases for the staff to access; helping people update their knowledge, creating networks so people can communicate with each other, creating computerized filing systems for an easy search, redesigning offices in a way that they can be open so employees and managers are together for an easy communication, creating tacit knowledge maps so finding out who does what would be easier, and minimizing the time and energy that takes employees to access the organizational information and knowledge (Choi and Lee, 2003).

2.2. Knowledge

According to Yang and Yeh (2009), assets like land, labor and capital, which used to be considered elements by which the organization's effectiveness and efficiency is evaluated, cannot continue to do so alone, without efficiently using the intangible asset of the organization that is knowledge. Many organizations are starting to give enough attention to their intangible asset, i.e., knowledge, which they thought was left unexplored and unmanaged (Vorbeck et al., 2001).

In today's business world, if an organization is to preserve its valuable heritages, learn new things, solve problems, be competent and create new situations for people and organizations, it must manage its knowledge by taking it as the most important resource (Liao et al., 2004). That is why it is becoming a commonplace for many organizations to move from capital intensive to knowledge incentive by using knowledge both as strategic asset and the main source of organizational competitive advantage (Adenfelt and Lagerstrom, 2005).

If an individual or an organization has to survive and be competitive in today's world they must possess enough knowledge about how things are done. Having knowledge is about having a justified belief about something. People justify the truthfulness of their knowledge by the way they interact with the world (Nonaka et al., 2000). In a situation where any action should be taken, an individual as well as organization takes a skillful one or permit a skillful action to take place (Stehr, 1994). When there is a task or problem at hand, people equipped with knowledge can better understand, define, prepare, shape and learn to solve them (von Krogh et al. 2000).

Two major types of knowledge are mentioned almost in every literature about knowledge: tacit knowledge and explicit knowledge. Since tacit knowledge resides in people's minds, it is difficult to trace or put into words, text or drawings. In contrast, knowledge that has already been captured in different tangible forms like, words, audio, or images is called explicit knowledge (Dalkir, 2005).

2.2.1 Definitions of Knowledge

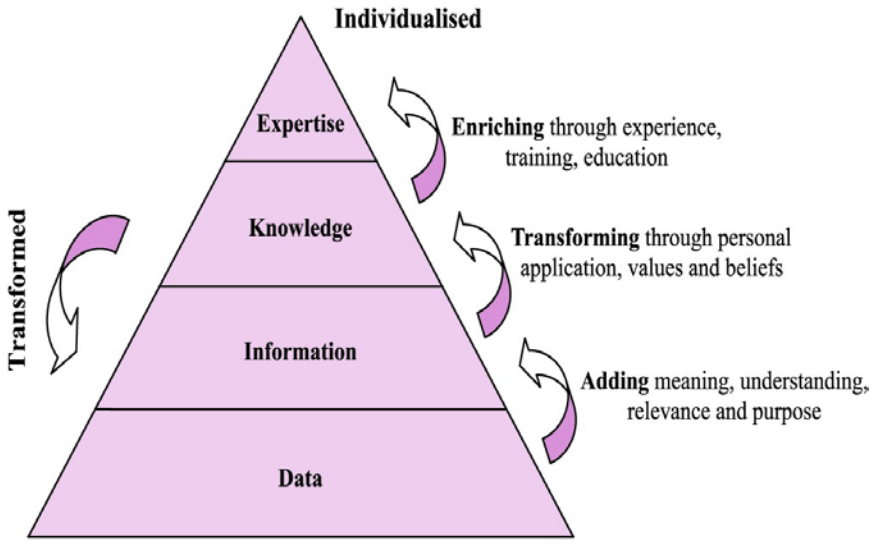
Before raising the issue of KM, the meaning of knowledge demands an explanation. There are several definitions of knowledge. Knowledge constitutes experiences, values, contextual information, and expert insight to evaluate new experiences and information (Davenport and Prusak, 1998). Different researchers, when trying to connect knowledge and its management, define it in the context of why is it managed, what is managed, how it is managed, who manages it, where to manage it and when to manage it (Hafizi and Nor, 2006).

Reality gives birth to knowledge. It is about viewing reality from a certain perspective. Knowledge is produced by synthesizing contradictions and paradoxes in the real world, rather than just getting optimal balance between contradictions (Nonaka & Toyama, 2003). When experiences, skills and insights are added to information, it becomes knowledge. Day-to-day

interactions are responsible for the creation of knowledge (Huysman & Wit, 2002). A collective knowledge found in an organization derived from its employees, past and present, is called organizational knowledge. Therefore, the organization is the owner of this knowledge and it can codify and preserve it within the organization itself even after the employees has been resigned (Bali, 2005).

Two kinds of knowledge, tacit and explicit, (which will be discussed in the next section), are widely accepted. Even if different terms are used in different disciplines, the terms tacit and explicit are very common terms in KM (Akehurst et al., 2011). Explicit knowledge is relatively easy to understand, codify and execute formally in books, archives, databases and libraries, whereas tacit knowledge is difficult to be formally stored and transferred since it resides in people's minds, supported by intuition, values and viewpoints developed through experiences (Lahti &Beyerlein, 2000). Organizations integrate tacit knowledge in organizational routines because it is personal and contextual that depends on knowledge, beliefs, emotions and personal skills (Nonaka and Takeuchi 1995). The sustainable competitive advantage of an organization is founded upon its tacit knowledge that is hard to formalize and be imitated (Ackerman et al., 2003). The interactions between tacit and explicit knowledge lead to the creation and sharing of new knowledge.

Many literatures try to define knowledge by clarifying the confusion people make among knowledge, information and data (Alavi and Leidner, 1999). Data are just raw facts when integrated and interpreted become information. When information is shaped and organized into something that can be used as a tool for some real life application it becomes knowledge (Serrat, 2008). Using a hierarchy of data, information and knowledge to depict the characteristics of knowledge is a commonly held view (Alavi and Leidner, 2001). This approach draws a clear distinction between data, information and knowledge by adding elements at each level of the hierarchy (Davenport and Prusak, 1998). According to this hierarchy, validation and authentication is applied on information to get knowledge, for the application of decisions and actions, including skills, principles, insights, instincts, ideas, rules and procedures for decision making behavior and actions (Alavi and Liedner, 2001).



Source: Bender and fish (2000)

Figure: 2.1: Hierarchy of data, information and knowledge,

In knowledge hierarchy indicated in Fig. 2.1, above, the difference between information and knowledge, as discussed by Alavi and Leidner (2001), does not lie in the content, structure, accuracy or utility of the information or knowledge but knowledge simply is information that exists in people's mind. It is information taken subjectively connected to facts, procedures, concepts, interpretations, ideas, observations, and judgments. Knowledge does not need to necessarily and invariably be new or unique. It may also be inaccurate that can be examined and rectified. It is argued when information is processed by human mind it transforms to knowledge, and when knowledge is articulated and structured in the form of texts, graphics, words and other symbolic forms it becomes information.

Knowledge can be found in different places. These include people's mind, organizational processes, artifacts, procedures and knowledge stored into different Medias. This makes capturing, codifying and storing of knowledge an uneasy task, and characterizes knowledge as something difficult to manage (Omur et al., 2009).

2.2.2 Types s of Knowledge

For today's economy, an economy highly dependent on knowledge, land, labor and capital resources are taking a lesser place than they used to (Dubois and Wilkerson, 2008). Knowledge

in an organization is perceived as know how to do something, how to apply information with judgment or the ability to take action effectively.

Knowledge can be classified based on the category it fits into. In organizations, different kinds of knowledge need different ways of creation and sharing. Knowledge classification depends on why it is investigated and described. Knowledge can be divided into *tacit* and *explicit* (Nonaka and Knonno, 1998). It can also be divided into *individual*, *group* and *organizational* knowledge (Nonaka, 1994).

2.2.2.1 Tacit and Explicit Knowledge

Tacit knowledge is so much personal and subjective that is stored in the minds of people (Filemon and Uriarte, 2008). Learning and experience of people through time accumulates knowledge. People learn through trial and error as well as success and failure, as a result knowledge grows. It is interpenetrated with people's experiences, principles, values, emotions, insights and intuitions. The intangibility of knowledge makes it difficult to share it with others (Nonaka, 1991). But there are different activities by which knowledge can be shared and communicated, mechanisms like; conversations, workshops, training, and the like. There are also mechanisms like the use of information technology tools such as email, Social Medias, instant messaging, web portal and other related technologies.

To the contrary, *explicit* knowledge can easily be transferred into formal and systematic languages to be recorded to libraries, archives and databases. They can be described in words or numbers, in the form of data, scientific formulas, specifications and manuals. It is the kind of knowledge that people can easily communicate to each other formally and systematically (Polanyi, 1966). They are the result of accumulated organizational experiences stored in a manner that can be accessed by interested parties and replicated if desired. Computers and information technologies are the mechanisms used by many organizations to store explicit knowledge. The tangibility of explicit knowledge makes it a lot easier to be captured, codified, and communicated. It is relatively easily processed, transmitted and stored (Filemon and Uriarte, 2008).

Generally, most of the new knowledge in an organization and the ones used by individuals in day to day activities is a tacit knowledge and conceived in people. Then it is changed to explicit

knowledge to be used in the organization and changed into tacit knowledge again in a circular way. It is common practice for many organizations to be merely concerned with the management of their explicit knowledge, and this is not a good practice for the business because tacit and explicit knowledge are inseparable in their utility as sources of knowledge.

2.2.2.2 Interplay between Tacit and Explicit knowledge

In the course of interactions among individuals, knowledge creation and transfer is achieved and as a result different kinds of knowledge conversion take place (Filemon and Uriarte, 2008). The knowledge creation process is a circular one between tacit and explicit knowledge. When tacit and explicit knowledge dynamically interact, individual knowledge becomes organizational knowledge (Filemon and Uriarte, 2008). This active process of conversion is the essential part of knowledge creation process in an organization. The interaction between tacit and explicit knowledge creates the four models of knowledge conversion known as; Socialization, Externalization, Combination and Internalization.

a) ***Socialization (Tacit to Tacit)*:** Through socialization common knowledge is created in the organization by sharing experiences. When employees are motivated to socialize with each other an interaction setting is built where space and experience is shared simultaneously (Filemon and Uriarte, 2008). The socialization process develops common skills and beliefs among employees. This process helps the tacit knowledge of one person to be transmitted to another person to become part of his/her tacit knowledge. Experiences are shared informally through stories, analogies, drawings, and personal experiences. <http://www.careacademy.org/learningresources/ks.asp>.

   Socialization is experiential, active and alive, and involves having direct interaction with all participants of the market, both inside and outside the organization. This process depends on having shared experiences and acquiring skills and common mental models. Socialization is basically a social interaction process between individuals or a focus group (Nonaka and Takeuchi, 1995).

b) ***Externalization (Tacit to Explicit)***: After socialization, the shared knowledge is converted into explicit knowledge through articles, books, audio-visual materials and the like. In the

externalization process the tacit knowledge that is embedded the minds of individuals is converted and expressed as concepts, texts or drawings, and becomes explicit knowledge ready for usage, further study and refinement (Filemon and Uriarte, 2008).

According to Nonaka and Takeuchi (1995**)**, externalization happens when tacit knowledge embedded in people's mind made visible and changed to explicit knowledge in the form of metaphors, analogies and models. This process conceptualizes images individuals have and represent them in language, where at this point, information is used to combine different analogies and metaphors to create new knowledge. These researchers claim that there are three ways of externalizing the tacit knowledge. The first one is, articulating one's ideas or images in words, metaphors and analogies. The second one is extracting and translating the tacit knowledge of customers and experts into an understandable explicit knowledge. The third one is having dialogues, like face-to-face communication where people share beliefs and learn how to better articulate their thinking.

c) ***Combination (Explicit to Explicit):*** New and existing explicit knowledge is assembled into a systemic knowledge by the process of combination (Filemon and Uriarte, 2008). In this process explicit knowledge is combined with other explicit knowledge to develop a new explicit knowledge. Since explicit knowledge is scattered everywhere, in documents, email, databases, as well as through meetings and briefings, information technology is very important to combine those explicit knowledge spread everywhere. The key steps of the process are collecting relevant knowledge, dissemination, and editing to make it more usable. Combination helps to transfer knowledge among groups across organizations (Nonaka and Takeuchi, 1995**)**. Various bodies of explicit knowledge are involved in the process of combination to pave the way for the creation of new explicit knowledge (Alkhaldi, 2003).

d) ***Internalization (Explicit to Tacit):*** It is natural for people to continue to use what they have learned, and in the process they internalize the knowledge they acquired <http://www.careacademy.org/learningresources/ks.asp>. The new internalized knowledge becomes part of the employee's beliefs and expertise, and as a result their new behavior is guided by them. In other words, people learn by doing or using (Filemon and Uriarte, 2008). Internalization process is facilitated by the explicit knowledge found in Medias such as,

audio, image and video. By using operating manuals in organizations employees learn instructions and what they have learned becomes part of their tacit knowledge.

In the internalization process, people understand and take the explicit knowledge in then absorb and embody it into tacit knowledge. When internalization occurs, concepts and methods need to be actualized through actual doing or simulations, action learning and on job experiences. Internalization transforms explicit knowledge owned by the organization and a group to individual knowledge. Information sharing facilitates the process of internalizing explicit knowledge into tacit. The conversion does not just occur within individuals but between individuals within an organization (Nonaka and Takeuchi, 1995**)**.

Table 2.1: Summary of SECI (Nonaka and Takeuchi, 1995)

	Process	Knowledge Sharing
1	Tacit to tacit (Socialization)	Knowledge is shared during social interaction such as story telling that enable transfer of complex tacit knowledge from one person to another.
2	Tacit to explicit (Externalization)	Knowledge sharing happens when an individual tries to communicate his/her tacit knowledge with others through for example, writing ideas and thoughts in the form of theory.
3	Explicit to explicit (Combination)	When knowledge is written in the form of documents, it is shared with other people. If they combine their knowledge, it will create new ideas that are written on papers.
4	Explicit to tacit (Internalization)	Human can get knowledge when rational behind a document is informed by other individuals.

2.2.2.3 Individual, group and organizational knowledge

Depending on its nature, organizational knowledge may belong to the individual, group or organization. If an organization is to stay competitive in the market it should take its knowledge as an important tool (Bollinger and Smith, 2001). Hence, knowledge becomes invincible for organizations as a valuable resource, they should develop different mechanisms to organize the intelligence and skills resided in the minds of employees for creating a larger organizational knowledge.

Individuals in an organization are not the only knowledge source available, knowledge can also be found in groups and organizational levels (Nonaka and Knonno, 1998). Individual knowledge is embedded in the individual's mind and can be an explicit knowledge for the individuals

themselves. It is possible for the individual knowledge to be transformed to group knowledge if they are shared through different means of interactions and information technology (Bontis, 2001). Group knowledge is held in groups without being shared with the rest of the organization members.

A subsequent interaction between tacit and explicit knowledge creates organizational knowledge (Nonaka, 1994). Organizational knowledge is found everywhere in the organization, randomly scattered throughout people. The process of knowledge creation helps organizations to shed light on tacit knowledge in the minds of people and transfer them into different operations in order to create organizational values (Omur et al., 2009). Thus individual and group knowledge is accumulated through time to create organizational knowledge. Organizational knowledge is combined and used to create and share new knowledge over a period of time. Through organizational knowledge, organizations will be able to understand the level at which they understand and perceive knowledge to enhance business intelligence and insight.

In addition to efforts made to create more explicit knowledge by extracting knowledge from the employees, it is more important for organizations to create an atmosphere where knowledge sharing culture is a norm. Pursuits toward knowledge sharing culture refer to facilitating knowledge creation and encouraging learning and knowledge sharing in the organization. This knowledge sharing culture can be started by establishing meetings, seminars, as well as rewarding employees who are active participants of the process. Once the culture is created, continual knowledge creation and sharing will come naturally sponsored by trust and positive dialogue (Mcinerney, 2002).

Therefore, learning in organizations occurs at all levels, individuals, group and the organization, and they are all filled with knowledge which are moved and developed through dynamic knowledge flows between different levels (Nonaka, 1994). In addition to this, organizational learning generates variety of knowledge within organizations and helps to acquire knowledge about knowledge found within organizations.

2.3 Knowledge Management

Although the term *Knowledge Management* has been practiced and thought of for a long time, it started to be widely practiced in the mid 1990's. When the concept KM came in 1980s, it was related with encouraging people to share knowledge and ideas to add value to products and services (Chase, 1997). Basically, KM transforms intellectual property and research outcomes into organizational capabilities to secure long-term success (Wiig, 1997). Organizationally speaking KM covers customer-based knowledge, intellectual asset management, knowledge creation and the usage of research to clarify the processes and practices for the creation, discovering, assimilation and distribution of knowledge. And those investigations help organizations to use knowledge and skills to learn about market treats and opportunities as well as satisfy customers (Shariq, 1997). An organization adopting a KM approach will increase its opportunity to become more profitable, efficient and competitive (Beijerse, 1999).

Wiig (1997) defines KM as the process of systematically and deliberately developing, renewing and applying knowledge to effectively maximize an organization's knowledge related activities to take advantage of its knowledge assets. For Hibbard (1997), KM is a procedure by which organizations capture knowledge from different places like people's minds, papers or databases, and passes it on to wherever it might help gain profit. According to NASA (2008) knowledge management is the process of transferring accurate information to the right people at the right time by making individuals participate in knowledge creation and sharing activities to use information for boosting organizational performance. Likewise, Chawla & Joshi (2010) noted that KM identifies and analyzes obtainable and important information to subsequently plan and control activities for the growth of intangible knowledge assets. Jones (2005) also described it as building an organizational culture where there is transparency and accountability with a smooth flow of knowledge throughout the firm by recording, managing, storing and organizing the available information.

According to Stonehouse *et al*. (2001), different researches on organizational learning helped the concept of KM to evolve. They say KM is the next stage of an evolutionary process of strategic frameworks for organizations to be superior to the competitors in the market. Earlier KM approaches focused on the competitive position of an organization within its industry. Then the

importance of the creativity of an organization's became mastery of competencies in order to achieve competitive advantage. Now the focus is on managing knowledge effectively to see the results of its fiscal gain, as considered in the financial statements and stock price of the organization. Senge (1994) asserts that the only possible way an organization can produce lasting and sustainable advantage is through usable knowledge produced from voluntary and well organized learning by all employees within the organization. The organization's effort towards openness to learning and new ideas brings a culture of creativity, which creates a learning organization formed by the efforts of individual employees dedicated to the principle.

Most inquiry into KM has been focused on capturing the tacit knowledge embedded inside the minds of employees (Nidumolu et al., 2001). Although this approach is very important to start the challenge of developing a flourishing knowledge base, it is weak in seeing the bigger picture in its endeavour. The wider perspective of knowledge outside the traditional limits of the organization may prove to be functional (Gold et al., 2001). Yet in the presence of vast information, capturing functional knowledge remains a tough job (Oder, 2001). An organization with a true learning spirit will develop structures and processes which creates a balanced effort toward combining knowledge acquisition from inside and outside of the firm (Senge, 1994).

2.3.1 Approaches to knowledge management

Two approaches of KM, process approach and practice approach, are drawn by Leidner & Kayworthe (2006). According to the researchers, the process approach is concerned with IT systems and the practice approach focuses on organizational and human relations. The process approach is about developing information technologies for the betterment of knowledge creation and distribution. Alavi and Leidner (2001) also viewed the process approach as an object that can be codified, stored, and accessed by processes and technologies, or as a process that provides access to information, where information is organized, codified, and made retrievable. When organizations adopt the process approach, they formally collect and disseminate knowledge throughout the organization. On the other hand, Leidner & Kayworthe (2006) said, since organizations with a practice approach take most of organizational knowledge as tacit and impossible to codify, collect, store, and distribute by formal processes and technology, they focus on building social settings to make knowledge sharing easy through social interaction.

Accordingly, Ludvigsen (2008) classified KM into the technical, socio-technical, and socio-cultural perspective, where the first two are connected to the process and practice approach. Morch (2008) also differentiates KM into first and second generation. According to this researcher, the first generation focused in managing the existing knowledge and skills of organizations, and the second generation is concerned with new knowledge creation, and the technique and processes to facilitate it. Just like the process approach, the technical perspective is concerned with capturing, storing, utilizing, and distributing knowledge using technologies like databases and information systems. The aim of the system is to enhance work performance and skills. The socio-technical perspective focuses more on the human factor than the technologies. The aim of this perspective is to create an environment where people are connected and knowledge sharing is enabled. Interactive systems are the best tools used in this view for social networking and information exchange.

The technical and socio-technical perspectives are still incomplete to fill the gap between the context of information design and the context of employee's information usage, and due to this gap, the KM system may not be as successful as it is expected to be. The socio-cultural perspective focuses on knowledge and learning where socializing and participating activities are taken as important. In this perspective, KM is about creating techniques that can be used as a bridge between these activities and how new knowledge can be constructed in the collective practices of organizations.

DePaula and Fischer (2005) propose an approach called design perspective. They take knowledge as something designed and constructed collaboratively, and that emphasizes on innovation, continuous learning, and collaboration as an ongoing process. The design perspective connotes that participants create new knowledge in the process of carrying out their duties. The target is to increase innovation in people by supporting them to collaborate and communicate. Knowledge is found in people and artifacts, and is built and accepted during the work process. People learn directly when they are involved in problem-solving activities. Problems are not defined beforehand, but they are located and must be solved. So what distinguishes the perspective of DePaula and Fischer (2005) from others is that, participants are knowledge creators, not specialists, and knowledge is a product of a collaborative group work.

2.3.2 Factors affecting the success of Knowledge Management

2.3.2.1 Culture

Employees of an organization share common values, beliefs and norms which form organizational culture (Huener, 2001). How affairs are taken care of in an organization by its employees is highly influenced by organizational culture. Every organization has its own organizational culture shared by its members and that helps to distinguish the organization from other organizations. In other words, the identity of a group in an organization is specified by its organizational culture (Robbins, 1996).

When an organization aims to change and modify itself, the key factor that should be taken into consideration is an organizational culture (Robbins, 1996). Business performance and change of an organization are determined by the human factor which exists in the culture. When the success of KM of an organization is evaluated, organizational culture is the basic measurement. Behind an organization with a successful KM practice there is a valuable organizational culture (Davenport and PrusaK, 2000). Positive elements needed by organizations like, trust, participation, encouragements, participation leadership and potential to develop organizational goals are highly related to organizational culture (Forcadell and Guadamillas, 2002).

Components like individuals, strategy, process and structures, are important in forming and supporting organizational culture (Sanchez, 2004). Different literatures of KM show the importance of organizational culture for the success of KM or knowledge sharing. An organization with a good KM practice can have a good knowledge based culture. Individuals in an organization are challenged to distribute the knowledge in such a knowledge based culture (Davenport and PrusaK, 2000). If an organization is to achieve a knowledge culture and have a competitive advantage, it needs to make the preparation, manage knowledge properties, and apply its knowledge (Abelland and Oxbrow, 2001).

Before an organization enables knowledge distribution it should first develop the essence and culture of distributing knowledge. In the presence of a knowledge storing culture, an organization should be able to avoid consequences of knowledge distribution. When people participate in knowledge sharing, they want to share their knowledge and they want to know the knowledge ability of others. Therefore, the essential tools and environment must be offered for

those who are willing to share knowledge, while there should be some procedures to support knowledge creation and sharing attempts (Hasanali, 2002). As a result, managers should make management rules and procedures in organizations as norms (Soliman and Spooner, 2000).

2.3.2.2 Structure

In this era of high competition and technological advancement it is essential for organizations to work on knowledge transfer tasks (Walczak, 2005). Structure can be defined as a set of possibilities in which people are arranged in different tasks. It also specifies the way things are coordinated among variety of tasks (Andersson and Westterlind, 1999). The decision making process in an organization is determined by the organizational structure as well as the responsibilities for materials, resources and human processes. Likewise, organizations must be knowledge creative and make the structure flexible enough to increase knowledge dispersion (Walczak, 2005). On the other hand, too formal and too centralized organizational structures negatively affect the coordination and cooperation of the firm's knowledge creation and distribution (Adenfelt and Lagerstro, 2005). A distributed structure helps the organization to have a smooth flow of communications between units and richness of idea distribution; it also creates time saving communication channels (Lee and Choi, 2003).

Communication channels in organizations should be as smooth as possible to guarantee right distribution of knowledge (Gupta, Lyer and Aronson, 2000). Organizational structure is the most important factor for the successful implementation of KM. Organizations with a horizontal structure are more suitable for the flow of information in the information era. Such organizations are flexible in relation to the environment with prompt and competitive changes of business (Ruikar, Anumba and Carrillo, 2006). Managers should make the organizational structures as flexible as possible and should also eliminate the conventional control systems for implementation of KM to be a success (Forcadell and Guadamillas, 2002). A management, with a policy that creates flat organizational structure, motivates important decisions to come from all levels by tolerating faults (Brand, 1998).

2.3.2.3 Human Resource

Knowledge is created and distributed in organizations due to individuals, referred as social enablers of KM (Adenfelt and Lagerstro, 2005). Employees are the building blocks of any

organization and vital for its success. Since individuals are the end users of any system and technology, they must have the proper skills, task expertise, attitude, positive thought and culture to be accepted for the task. If any change is to take place or new technology is to be introduced in organizations, individuals are very important since it affects labor anyway (Ruikar, Anumba and Carillo, 2006).

McDermott (1999) underlines the importance of individuals in the process of knowledge sharing activity. The knowledge sharing process needs to be given time and individuals involving may feel that they might risk losing power and position by sharing their knowledge. Therefore, there must be organizational culture where employees are well prepared to be involved in knowledge sharing and accept new technologies (Ruikar, Anumba and Carillo, 2006). Generally speaking, individuals with skill and knowledge, motivation, support and learning, are regarded as personal contributors for the process (Moffett et al., 2003). Knowledge within organizations is created by individuals and most of it is saved in their minds as a tacit knowledge, thus minor change in their task affects the overall performance. Because of the discussed issues, the market has witnessed a major shift from worker-based industries to knowledge-based industries and brings learning opportunities (Swan et al., 1999).

Although the importance of knowledgeable workers in organizations is known for a long time, only few organizations are able to define the role (Davenport et al. 1998). McDermott (1999) argues 50% of individuals' time and budget must be spent on KM. Individuals must adapt themselves with the organizational culture they work in. Whenever there is change in organizational culture, individuals must change their old attitudes. Therefore, in an effort to change organizational cultures for the best, human affairs must be taken as the most important factor. In this regard, the concept of knowledge workers is gaining attention organizations. It is to be noted that for KM to be effective and efficient, KM team must be formed, to execute KM activities and enhance its plan.

2.3.2.4 Information Technology

In this information era, information technology is the most important factor affecting the implementation of KM in any organization. It includes all communication aspects, hardware, software and the way they are accessed. This can be seen from the perspective of the technical

ability of IT in receiving data, information and knowledge, which has a far greater capacity of storing and analyzing data compared to humans (Shenk, 1997). No matter how important information technology is in relation to its performance, in the absence of sufficient infrastructure technology, it cannot be functional for the job it is meant to be used for (Ruikar et al., 2006). Activities of KM are no just practical software, but rather an infrastructure to enhance the process of information distribution and communication (Hasanali, 2002).

According to Ruggles (1998), technology takes 25% of the total time and budget of the organization. Organizations should take information technology as a fundamental enabler and helper in the implementation of KM (Davenport et al. 1998). In managing knowledge, the task of information technology is to support knowledge repositories, increase access and transmission of knowledge and facilities of knowledge environment. Individual, group and organizational interactions can also be facilitated by the help of information technology (Holt et al. 2007). Besides, in scientific environments, information technology helps in creating knowledge (Tian et al. 2009).

In developing a structured knowledge, information technology and KM together play an important role (Alavi and Leidner, 2001). It is the goal of many organizations to use sophisticated information technologies for the proper implementation of KM (Alavi and Leidner, 2001). Besides enabling KM, information technology must also serve individuals, by being simple and user-friendly so that individuals can use it without the help of IT experts every now and then (Hasanali, 2002). Information technology should ease the process of searching, accessing and recovering information, as well as facilitate communication within members of the organization. Indeed, it has multiple roles for backing up KM processes.

2.3.2.5 Leadership and Strategy

Numerous challenges are faced by organizations when they first start activities of organizational KM. To overcome obstacles and achieve their goals, organizations should relay on real and clear strategy or plan. Therefore, the key to success is to develop a formal strategy of KM throughout the organization as well as to learn from the best practices and develop a reliable KM. From a strategy point of view, organizational strategy and KM should not be seen separately; instead, they should be aligned (Sunassee and Sewry, 2003).

The role of leaders has also been taken by organizations as the key role to the success of KM activities (Chong and Choi, 2005). Business strategies are executed by leaders for the organization to survive and succeed in today's dynamic environment. Leaders determine organizational visions and adopt KM in such a way that they are aligned with business strategies to take advantage of what KM has to offer (Mathi, 2004). Managers should support procedures and projects of KM and make sure that time, labor and money resources are allocated for projects and operations (Ruikar et al. 2006).

Leaders should promote the behavior among their employees to get the maximum benefit from the knowledge strategy (Hasanali, 2002). The style that managers use and the strategic roles they play, can help improve the basic process and bring ideas for improvement and backup (Forcadell and Guadamillas, 2002). Commitment of a leader is very important in promoting concepts and offer guides, instructions and supports (Hasanali, 2002). The World Bank has developed an infrastructure to promote and support growth of practical communities of knowledge throughout the entire organization (Hasanali, 2002). The World Bank leadership can thus be taken as an example in the successful implementation of KM.

2.3.3 Knowledge Management Process

After broadly defining KM and discussing its applications in organizations, it is important to focus on the process of KM in organizations. Even if there is no consensus about knowledge being a process by itself, and the inconsistency observed in literature regarding the explanation of KM process, KM generally is considered as a process (Alavi and Leidner, 1999).

According to Sarrat (2008), there are five core activities of KM processes: identify, create, store, share and use knowledge. Gold *et al.* (2001) classified KM process into four dimensions: knowledge acquisition, knowledge conversion (into usable form), knowledge application and knowledge protection. Further Leila *et al.* (2008) classified it as: creation, transport, storage, distribution and sharing. In practical applications, major common tasks of KM process are knowledge creation, acquisition, codification, sharing and application. Since many organizations are starting to adopt KM, processes such as knowledge creation, sharing and application are becoming, the core organizational activities and the means by which knowledge workers perform their job efficiently and effectively (Dalkir, 2005).

For the banking sector, KM process has become so important that it is not even possible to stay competitive in the market without it. In this context, banks compete to know their customers better, to find solutions for customer needs and to give quality services. Above all these, managing knowledge properly, becomes so important and the only mechanism by which banks can make a difference and become operational (Özlem, et al., 2013).

2.3.3.1 Knowledge Creation

Knowledge creation is the first phase of any KM process in any organization. Due to employee's intuition, ability, skill, behavior and experience, knowledge is inevitably created. In creating knowledge, organizations must be concerned about individuals working together as a team. This process involves, combining different individual skills, artifacts, knowledge and experiences in new ways. It is the process of collecting and organizing unprocessed information that is stored in the form of tacit or explicit form (Paween, 2006).

When individuals face problems in day to day business activities they apply their tacit knowledge to solve them and in the process knowledge is created. Because tacit knowledge resides in people's mind, different tools and techniques are needed to manage individuals so they can interact and help the organization create new knowledge (Payne and Tony, 1994). In the process of knowledge creation, the two forms of knowledge, tacit and explicit, are involved. According to Nonaka (1994), knowledge creation is not a one time job rather knowledge is created in a continuous interaction between tacit and explicit knowledge.

2.3.3.2 Knowledge Acquisition

Knowledge acquisition is the KM process, by which organizations try to get knowledge form external sources like, suppliers, competitors, partners, alliances, customers and external experts, as well as from internal sources like, experts and employees of the organization (Alan, 2011).

Before an organization is able to manage knowledge well for the betterment of the business, it should be able to gather knowledge both from within the organization and outside of it. It is believed that such harvesting leads to the formation of competitive advantage. At this stage of knowledge acquisition, the distinction between knowledge and information gets thinner and thinner (Jacob & Ebrahimpur, 2001). When an organization is engaged in searching for knowledge resources out of the firm, it gathers both information and knowledge for core

competency. However, knowledge is more valuable than information in that it not only has the information but also the reason why they are useful to the strategic initiatives of the organization.

Extraction of knowledge both from inside and outside sources of the organization is important. However, knowledge engineers should bear in mind that most of the knowledge is found in the minds of experts in the area. An expert does not know everything; rather different experts possess different kinds of knowledge. Therefore, techniques like; interview, concept mapping, commenting, observation and audio/video recording, are required to extract knowledge from experts (Alan, 2011). In general, the right techniques should be applied and the real situations should be considered to acquire the demanded knowledge.

2.3.3.3 Knowledge Codification

After knowledge is acquired from different sources, it should be recorded or codified in such a way that it can easily be accessed and used by those who need it. The knowledge codification process transforms knowledge into a form which is, formal, structured, explicit, transferable and understandable (Paween, 2006). The process, that converts tacit knowledge to explicit knowledge, is knowledge codification. Knowledge codification is stored and retrieved via information retrieval systems such as Decision tree, Decision table, Boolean logic, fuzzy logic, Vector query and Extended Boolean logic.

Organizational knowledge can be accessed and shared by all users, according to their needs, via information retrieval (Sagsan, 2006). Such formal accumulation of knowledge is important because both knowledge resources from within and outside the firm will be conceived in a strategic sense, even if it is not acted upon in the near future. According to Parikh (2001), knowledge codification is logical because it deals important business matters in the present, or may already be engaged in other promising initiatives farther along in the developmental process. This author argues that such codification of knowledge can increase the knowledge exchange, assisting autonomous and sometimes systemic innovations in the future.

2.3.3.4 Knowledge Sharing

When individual knowledge grows it leads to the growth of group knowledge then into organizational knowledge. Once knowledge is created and ready for application, employees must

share what they know with each other. The knowledge sharing can take place formally or informally (Payne and Tony, 2011).

Knowledge is of limited organizational value if it is not shared. A firm will be able to create and sustain competitive advantage, by integrating and applying specialized knowledge of its members. Knowledge sharing takes place when best practices can be shared through organizational processes and standard procedures. People can talk to each other about their experiences to share their knowledge. Formal or informal social communication can enhance the knowledge sharing process. In addition, knowledge sharing can be done through questioning, mentoring and coaching. And when an organization creates a good working environment, its employees will be motivated to be engaged in knowledge creation, sharing and application activities, which benefit the organization (Payne and Tony, 2011).

According to Sagsan (2006), the communication of tacit and explicit knowledge among organizational participants; first, should be effective so that the recipient understands it well to act on it. Second, should be shared instead of recommendations based on the knowledge. Third, may take place across individuals as well as across groups, departments or organizations.

Employees of the organization need to have strong ties between them in order to transfer tacit knowledge between themselves. Explicit knowledge should be stored formally in procedures or presented in papers and databases so it could be accurately transferred. The other reason why knowledge sharing is becoming so important is that intangible assets such as, ideas, processes and information, are growing more than the traditional tangible goods of the world economy. High turnover of employees in organizations is also the reason why knowledge sharing has become very important. In addition, knowledge sharing is very important for organizations with many branches geographically dispersed and cannot see the whole picture about what they know.

2.3.3.5 Knowledge application

Naturally knowledge is acquired from all operations of an organization, in tacit or explicit form. As a result, employees use their knowledge to make decisions and perform tasks for organizational success. For knowledge to be valuable, it should be applied in the right way, at the right place and at the right time (Payne and Tony, 2011).

According to Pfeffer & Sutton (2000), it is not firms with a lot of knowledge that assure a competitive advantage but those who know how to make use of them the best way they can. They argue, if the final step, that is, knowledge application, is not well achieved on the ground, all the previous steps become useless. It is argued that application of knowledge to technologies and processes helps produce a competitive advantage.

Pfeffer & Sutton (2000) suggest that, there is a gap between 'knowing' and 'doing', in modern businesses, where briefings, discussions, and planning sessions all seem to take the place of action in many organizations. This can create a culture where talking smart is rewarded more than real applied results. Such arrangements create managers, who are more interested in knowledge in place than in knowledge at work, and they also weaken the most important, learning by doing, process, which, Parikh (2001) said, involves applying knowledge to a new scenario and gaining contextual learning from that application.

After knowledge is applied, the organization can learn through post-analysis and critical process evaluation. Such evaluations help managers learn about which knowledge initiatives have actually created tangible results (Parikh, 2001). This process of knowledge application and critical review helps to narrow the gap between knowledge in theory and in practice. In this sense, speculation about what impact knowledge might have on the operation is empirically tested in the real world (Parikh, 2001).

2.3.4 Benefits of Knowledge Management in Organizations

In an organization, benefits can occur both at an individual and organizational level (Cong & Pandya, 2003). At the individual level, KM gives opportunity for employees to enhance their skills and experiences, by working together, sharing experiences and learn from one another, by that means, they improve their personal performance, which leads to advanced carrier.

At the organizational level, KM helps an organization to improve its efficiency, productivity, quality and innovation. It also increases its financial values by treating people's knowledge as an asset. If an organization has to cope with radical changes and take timely corrective measures, knowledge is the only input for the job. Knowledge alone can accelerate product innovation and boost revenues. Knowledge provides effective decision support. Effective knowledge sharing of past successes, failures, projects, initiatives enables better decisions creating more economic

value for the organization. KM saves cost, time and process cycle, and increases flexibility, sales and responsiveness for an organization. It also improves decision making, efficiency of people and operations, and innovation (Tanaji, 2012).

According to Omotayo (2015), some elements responsible for making KM so important for an organization are organizational survival, competitive differentiation, globalization effects and aging workforce. In today's dynamic environment the concern of KM should be to focus on information. It is becoming clear that organizations compete based on the knowledge they have, since the complexity of products and services is steadily increasing. Hence, the importance of continual learning has become an unavoidable reality and KM has become very vital in this highly competitive environment as the rate of innovation is rising. The high turnover of staff also leads organizations to work on retaining the informal knowledge found in people's mind through formal methods. Early retirements, high mobility of staff and changes in strategic directions are also the reasons behind the loss of knowledge thereby making KM even more important.

In today's competitive marketplace, not only profit and non-profit organizations, but also public agencies are concerned about managing their knowledge and realized the value of KM. Desouza (2011) discusses that, in the absence of a good KM practices, organizations cannot operate optimally and this will result in the ineffective and inefficient creation and delivery of products and services leading to the dissatisfaction of customers, which finally leads to the collapse of the organization.

From the point of view of an organization, differentiating itself from competitors, KM offers a great help for organizations to enhance their capacity to innovate. Organizations that are unable to innovate will not attract new customers, which in turn will lead to their decline. But organizations with the ability of innovating will secure their competitive positions in the marketplace (Desouza, 2011).

In today's globalized world, organizations find KM to be a very important tool for acquiring and sharing knowledge over many structural and cultural barriers. Another need for KM is that employees age and retire, and due to this much knowledge is lost. Therefore capturing this intellectual capital is so important that it helps future generations not to repeat mistakes and reinvent knowledge Omotayo (2015).

Epetimehin and Ekundayo (2011) state that KM helps organizations share valuable organizational insights, reduce redundant work, avoid reinventing the wheel, reduce training time for employees, retain intellectual capital as employees' turnover in an organization and adapt to changing environments and markets. Therefore organizations that understand the importance of KM should effectively apply it.

2.3.5 Knowledge Management in Banks

According to Drucker (1988), to stay in the competition, organizations need to transform themselves into knowledge specialists. Since banks totally rely on their customers, they should acquire and utilize customer knowledge and develop their products and services to meet customer expectations (Ping and Kebao, 2010). Operations in banks are more of analytical rather than routine. They involve things like, complex tasks, problem-solving, learning new things and computer and internet use (Miles, 2011). Therefore, banks should always work hard to increase this knowledge in their operations (Mizintseva and Gerbina, 2009). The national and global economies also strongly rely on the banking industry, since economic borders between different countries are becoming illusive. In today's globalized financial market, banks should efficiently preserve and leverage their knowledge, as well as create and disseminate new knowledge and innovations.

Automation of banks has been a common phenomenon in the banking sector for the last 20 years, which creates many information systems within banks. While these information systems help banks manage their processes and resources, they also create huge volumes of data and information, resulting information overload. However, this scenario has changed when more efforts and resources are utilized to make the best use of the overloaded information in today's modern banking, where information and knowledge are valued assets (Tanaji, 2012).

Other than the presence of large volumes of knowledge, the use of information technology in managing knowledge has given KM a new dimension. It is important that technology and social process are in harmony (DeSanctis & Poole, 1994). By using the right strategy, banks can use information technology to carryout and maximize the benefits of many of the management initiatives, including KM. Therefore, it can be said that KM is not a technology. Instead, technology is very important for the success of KM.

2.3.6 The Relevance of Knowledge Management in Banks

Banks, being a financial institution, are very important in supporting the economy of any nation. In today's highly volatile business environment, it is very important for banks to take advantage of their own experience and intellectual assets. In addition to enhancing intellectual reuse, KM plays a great role in renewing knowledge in banks found in employees. Therefore, banks should motivate their employees to share their knowledge in order to leverage their intellectual capital. Now a days, researchers and scholars are focusing on the importance of creating a knowledge sharing culture in organizations which is aligned with the business strategy (Gupta et al., 2009).

There is no question whether KM is an important business practice in modern banks. Knowledge is recognized as power by banks, insurance companies, and other financial institutions (Cross and Weller, 2001). The way KM is applied in the banking industry is almost the same as it is applied in other industries, except that, as the banking environment becomes more complex, KM implementation gets more difficult. It has been a while since banks have realized the importance of KM for competitive advantage, but many of them have been too late to adopt it, because they prefer to wait for early adopters to try it, to see if it is something worth trying. According to (Alrawi & Elkhatib, 2009), practices of KMs are still at an infant stage and are not effectively operational. The authors also observed barriers that exist in banks that should be overcome by the management.

In the global economy, the banking sector is very important and dynamic that bank managers need to efficiently manage knowledge in banking operations. They should be aware of what the needs of customers are and what is required by the market, which requires the constant exchange and analysis of information from various sources, branches, and countries. Just like it is the case with other organizations, creating competitive advantage for banks depends on the ability to leverage knowledge (Lamb, 2001).

Banking management should capture information and add it to organizational knowledge to improve the quality of its operations, to sustain its profitability and accordingly enhance the rules for banking institutions in the economy (Alrawi and Elkhatib, 2009). In particular, KM is very important in supporting customer relation management, human capabilities and risk management (Yamagata, 2002). For banks to be profitable, they need to manage customer relationships to

strengthen trust and confidence which enhance customers' loyalty and experience (Mizintseva and Gerbina, 2009). This is especially important for banks having a strong relationship with customers and a huge customer base in their extensive branch networks.

If banks intend to offer customers with the appropriate products and services, they need to collect knowledge about customers and make those offerings based on the needs of customers. Knowledge acquisition from customers can be done through employees who directly contact customers and information technology products (Yamagata, 2002). Calabrese and Remshard (2006) also say that internet banking is necessary to share customer specific knowledge and other valuable knowledge stored in e-mail records and databases and to understand and capture customer requests and complaints.

It is essential for employees to have sufficient knowledge to acquire and utilize knowledge to make strategic decisions. The utilization of employees' knowledge is the force behind the organization's ability to produce customer value and core results (Shih et al., 2010). Yamagata (2002) states that employees, organizational structures and branches, are the things that banks depend on to communicate with customers. Therefore, if a bank is able to manage the employees' knowledge, it will strengthen its professional capabilities. Simultaneously, as the complexity of financial products increase, employees will find it difficult to be completely familiar with every product. Therefore, training their employees is a very important job for banks to be able to offer the appropriate services to customers (Ping and Kebao, 2010).

2.3.7 Implementation of Knowledge Management in Banks

In order to apply KM successfully, organizations must first create a knowledge sharing culture where employees are willing to share knowledge and trust each other, and explain the importance of knowledge sharing. People may not be willing to involve themselves in knowledge sharing activities due to a belief that the knowledge they possess is what makes them powerful and if they share what they know with others they might lose their power, and also because of a lack of thrust, lack of preexisting relationships, and lack of motivation (Goman, 2004). The quality of knowledge provided is directly proportional to the willingness to be involved in the knowledge sharing activities (Barachini, 2009). To make a knowledge sharing

culture a commonplace, an organization should focus on fostering teamwork, training and development, technology and motivation (Barachini, 2009).

A bank that aims at practicing an effective transfer of knowledge, as well as retaining and applying acquired experience and knowledge should focus both on its human and technology resources (Ali and Ahmed, 2006). In the popular SECI model, the socialization and internalization can be conceived as human-oriented processes, based on improving communication, training of newly recruited staff, improving knowledge sharing and enhancing personnel development (Maier and Remus, 2003). Knowledge sharing events like, trainings, seminars, and meetings are important to equip the organization with a KM based culture (Ali and Ahmed, 2006). Therefore, the human resource management's job is to make sure there is a successful implementation of KM through team learning, coaching, mentoring, communities of practice, face-to-face conversations, internal promotion, job rotation, job autonomy, in-house training, fluid job descriptions, social networking, and monetary incentives (Cohen and Laporte, 2004).

On the other hand, banks are stormed with a lot of data and information about clients and financial institutions, so it is impossible to manage and transfer this bulk of information without the use of information technology systems (Mizintseva and Gerbina, 2009). Basically, what technology-oriented KM does is turn implicit knowledge into explicit through documentation and retention of knowledge and acquisition of external knowledge via knowledge codification (Maier and Remus, 2003). In the SECI model, the externalization and combination processes largely use technology to transform tacit knowledge into explicit, as well as, explicit to explicit and then edit it and store it, and this is an example of the KM technology-oriented approach. Several technologies such as, mobile technology, portable hardware and software, networks, emails, teleconferencing and intranets, can be used to facilitate knowledge sharing (Alrawi and Elkhatib, 2009).

2.4 A Knowledge Management Framework

Knowledge Management can be understood as a successive framework of activities, developed to build tangible management decisions and organizational activities, with the ultimate purpose of maximizing profit and market share. Knowledge management is a strategic process with the

aim of differentiating the organization from its competitors in such a way that sustainable competitive advantage is formed. According to Gupta & McDaniel (2002), five components are essential to build effective KM: harvesting, filtering, configuration, dissemination, and, application. For an organization to achieve competitive advantage, all these activities should be applied together to create an ideal model for KM. In reality the components do not occur sequentially like they occur in the theoretical framework. For one component to be a functional and usable knowledge product, and to be used as an appropriate tool for supporting decisions and business actions, it may need other phases as an input. In addition to that, the methods included in each stage are presented in the framework as distinct activities unique to that step, but in reality overlap between different phases happen often. In that respect, there may be a similarity between different stages of the process, depending on the way the organization operates.

2.4.1 Strategic Framework for Mapping Knowledge

In order to evaluate the knowledge position of an organization it is essential to list its existing intellectual resources by creating what is usually called a knowledge map. Knowledge can be described in different ways. The common classifications distinguish between tacit and explicit knowledge, general and specific knowledge, and individual and collective knowledge. Knowledge can also be classified as, declarative, procedural, causal, conditional, and relational. Once knowledge strategy is formulated, and is at the process level, these differentiations are important for mapping and managing knowledge, but knowledge taxonomy oriented strategy that reflects the competitive uniqueness of each organization is essential (Spender, 1996).

It is not an easy task to categorize or describe what the organization knows and should know about its industry or competitive position. Even for organizations found in the same industry, having similar competitive positions, using the same technologies and share common knowledge, there are no simple answers concerning what the organization must know to be competitive. And if there were simple and common solutions for such organizations, there would be no such a thing called sustainable advantage. In fact the way organizations link knowledge with strategy is somehow unique and presents a competitive advantage. Regardless of the way knowledge is classified, strategic knowledge of every organization can be categorized by its ability to support a competitive position (Zack, 1998).

Knowledge in an organization may be core, advanced or innovative. Core knowledge is the minimum knowledge an organization should have in order just to survive. But having just core knowledge does not guarantee organizations to have a long-term competitive advantage, even if it does give basic industry knowledge barrier to entry. Core knowledge is so ordinary that it is possessed by all organizations in the same industry and provides little competitive advantage (Zack, 1998).

Advanced knowledge helps organizations to be competitive. The organization may be on the same level with its competitors but the specific knowledge content makes the difference. Firms in the same strategic position may compete face-to-face on knowledge, hoping to know more than a competitor or they may choose to compete for that position by differentiating their knowledge (Zack, 1998).

Innovative knowledge is a knowledge that helps the organization to be leader in an industry and to differentiate itself substantially from its competitors. Innovative knowledge helps an organization to be a play maker in the industry (Markides, 1998).

Knowledge is so dynamic that an innovative knowledge in time will be core knowledge. Therefore an organization should consistently learn and acquire knowledge in order to keep its competitive position. Beyond what an organization basically does, delivering its products or services, it should learn and accumulate knowledge from its experiences and apply that knowledge again, and this by itself is a skill and competence that provides strategic advantage (Zack, 1998).

2.4.2 Gap analysis

An organization, after mapping its competitive knowledge position, it can analyze the gap between what it actually is doing about its knowledge and what is must do, to be a good competitor or the best in the industry. And this procedure represents a strategic gap. This gap analysis is part of the traditional strategic management. According to Tiwana's (2000) recommendation, by using a SWOT framework an organization can identify its knowledge gap and define its knowledge strategy to achieve a clear business strategy. The SWOT framework suggests that, what the firm can do is represented by its strengths and weaknesses, and opportunities and threats reflect what it must do Zack (1999). Strategy, then, represents the

organization's action to make balance between what it can do and must do, to protect and protect its strategic place.

According to Sunassee and Sewry (2002), the two common forms of knowledge, tacit and explicit, are very important to identify knowledge gaps. The authors argue that, the tacit knowledge is more important for the firm, which really gives it its competitive border. Hence, if the organization is successful in filling these knowledge gaps, it will be in a position where it can compete in an innovative way.

Just like the gap between what the organization can do and must do to compete, there may also be the gap between what the firm knows and must know to execute its strategy. By mapping its strategic knowledge and capabilities, the organization can discover the degree to which its different classes of existing knowledge are aligned with its strategic requirements. And this results a set of potential knowledge gaps. Sometimes it may even be the case that an organization knows more than needed to support its competitive position. No matter the case, this analysis paves the way for developing a knowledge strategy to solve the problem of misalignments. The greater the gap, and the more volatile the knowledge base due to the dynamic nature of the competitive environment, the more aggressive and fast-growing knowledge strategy is required. An organization unable to execute the required strategy must align strategy with capabilities, or develop capabilities to execute its strategy (Zack, 1998).

After evaluating its knowledge based resources and capabilities, an organization can decide the kind of knowledge it should develop or acquire. To strategically focus on KM, the organization should work hard to close the strategic knowledge gap. The issue that should be taken seriously is that knowledge gap must be directly derived from or aligned with the strategic gap. The coexistence of strategy and knowledge is very important for the organization's knowledge strategy. Many organizations do not align their KM efforts with strategic planning and execution. However, getting the right strategy in place is so vital for organizations, to make sure that KM efforts are guided by the firm's competitive strategy (Zack, 1998).

'Gap analysis' can be used at any of the scales described above to compare the knowledge used in the decision-making process with the knowledge required to make a good decision (**Figure: 2.1**)

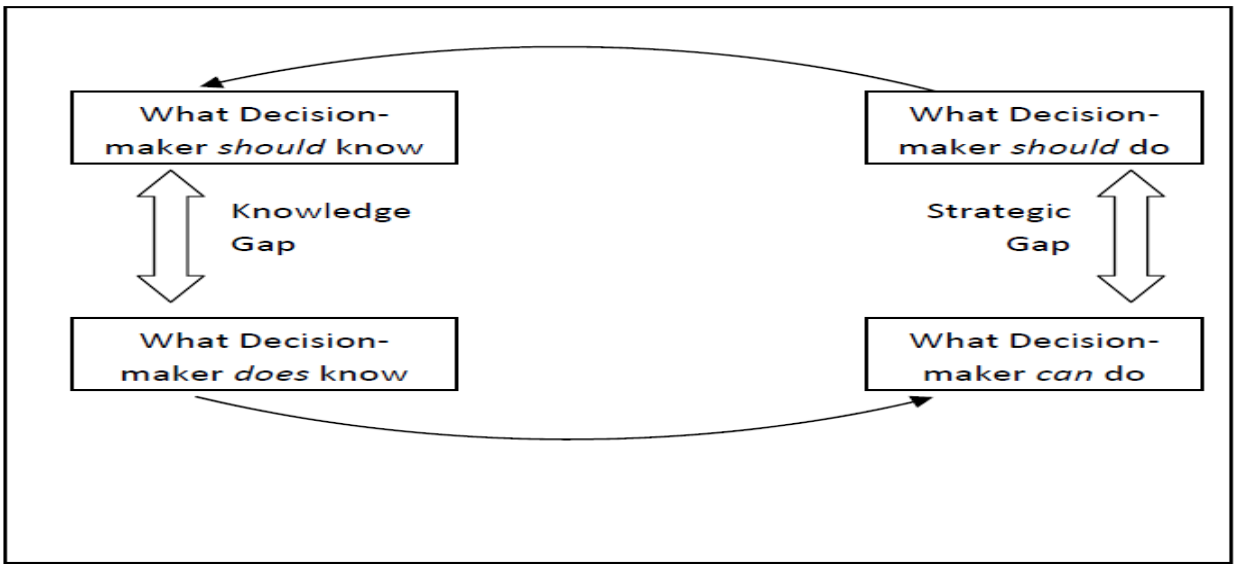


Figure: 2.2: Gap analysis of knowledge management in relation to decision-making

2.4.3 Strategic Framework for Knowledge Management

Nonaka et al., (2000) developed a knowledge framework for knowledge creation and sharing based on four knowledge strategies. The framework provides an insight about structuring a company before implementing the knowledge strategy. A knowledge domain is introduced and defined as any type of explicit and tacit knowledge already existing in the organization, like, data, handbooks, manuals, presentations, and key people. Knowledge workshops can be held to facilitate the meeting between people inside the organization and experts from inside and outside the organization to define the appropriate knowledge domains. Common vocabulary and terminology, and community of practice are expected from the workshop to identify knowledge gaps, in order to nurture the sharing and creation of new knowledge and practices inside an organization. The community of practice effect depends on the value it adds on business operations and values of an organization. Research should be conducted to make sure KM is tied to the organization structure to motivate employees to create and share knowledge. But most importantly, it helps to make organizational knowledge visible to promote and benefit from this knowledge sharing (Galve, 2009).

2.4.4 The importance of Knowledge Management Framework

The KM framework is very important for organizations having the intention of implementing the KM system. Developing a framework helps to guide and avoid errors as well as saves time, energy and cost. Different KM frameworks have been proposed by different researchers, of which, most are prescriptive and procedural, saying not much about specific details on how those procedures should be accomplished. For example, according to Wiig's (1997), KM stands on three pillars, based on a broad understanding of knowledge creation, manifestation, use, and transfer. A framework from Leonard-Barton (1995) highlights a framework that includes four capabilities and four knowledge building activities. Arthur (1996) developed a model with seven processes operating on an organization's knowledge: create, identify, collect, adapt, organize, apply, and share. Spijkervet (1997) advanced four KM stages: conceptualize, reflect, act, and retrospect. Chih-Ping et al., (2002) suggested another framework by combining previous models, concentrating on three areas, knowledge resources, KM activities, and knowledge influences.

Table 2.2: A Review of Knowledge Management Frameworks

Frameworks	**Descriptions**
Leonard-Barton,1995	1. Shared and creative problem solving 2. Importing and absorbing technological knowledge from the outside of firm 3. Experimenting and prototyping 4. Implementing and integrating new methodologies and tools.
Arthur Anderson and APQC, 1996	1. Share 2.Create 3.Identify 4.Collect 5.Adapt 6.Organize 7.Apply
Wiig, 1997	1. Creation 2. Manifestation 3. Use 4. Transfer
Choo, 1996	1. Sense making (includes "information interpretation") 2. Knowledge creation (includes "information transformation") 3. Decision making (includes "information processing")

Van der spek and Spijkervet, 1997	In the Act process 1. Develop 2. Distribute 3.Combine 4. Hold
Nonaka, 1995	1. Socialization (conversion from tacit knowledge to tacit knowledge) 2. Internalization (conversion from explicit knowledge to tacit knowledge) 3. Combination (conversion from explicit knowledge to explicit knowledge) 4. Externalization (conversion from tacit knowledge to explicit knowledge)
Alavi, 1997	1. Acquisition (knowledge creation and content development) 2. Indexing 3.Filtering 4.Linking 5. Distributing 6. Application
Szulanski, 1996	1. Initiation (recognize knowledge need and satisfy that need) 2. Implementation (knowledge transfer take place) 3. Ramp-up (use the transferred knowledge) 4. Integration (internalize the knowledge)

2.5 Organizational Strategy

What is called the SWOT, Strength, Weakness, Opportunities, and Threats, is the most popular approach in defining strategy, both in organizations practicing it and researchers, for so many years (Andrews, 1971). SWOT is known to analyze the organization's capabilities, its strengths and weaknesses, in relation to the opportunities and threats of its competitive environment. It is a good practice for organizations to take strategic actions to preserve their strengths, counterbalance their weaknesses, avoid threats, and take advantage of opportunities. Strategy can be taken as a means by which organizations can keep the balance between the external

environment where opportunities and threats are found, and the internal environment where there are strengths and weaknesses.

The famous “five-force” model by Porter has for so long been used in the application of the SWOT framework (Porter, 1980). This model centers on the external side of the strategy, to which organizations must give due attention and analyze the forces in an industry which give rise to opportunities and threats. Industries are structured in a way as to enable organizations deal fair terms to suppliers and customers, and be competitive in quality, standards and price offers. Strategy then becomes organization’s affair to choose the right industry and position itself within that industry based on the firm’s marketing essence.

Even though Porter’s model gained much popularity in an attempt it made to apply solid economic thinking to strategic management in a practical and understandable way, it still is not immune to criticism (Teece, 1984). According to (Connor, 1991), one argument against the SWOT model is that, it focuses on the profitability of industries rather than individual firms in it, and therefore far from helping organizations identify and leverage what is unique in them and take sustainable advantage in the market. The basic theory of this model does not take the characteristics of a particular organization into consideration with reference to its profit performance. To the contrary, the model revolves around the relationships among organizations in the industry. Therefore according to this model, if the industry is structured properly, then all firms should be profitable.

It happens, however, that organizations can take advantage of their uniqueness to make a difference in terms of profit performance (Nelson, 1991). To get back to the issue of business strategy, in the area of strategic management, recent works are focusing on the inside of organization’s resources and capabilities. This new resource-based view focuses on the resource of the organization (Barney, 1996). Most traditional strategic management models define organizational strategy in terms of market positioning. However, the resource-based approach indicates that organizations should be in a position to strategically use their unique, valuable and inimitable resources and capabilities instead of products and services derived from those capabilities. Resources and capabilities should be the foundations from which organizations derive different products or services to the market (Kogut and Kulatilaka, 1994).

2.5.1 Organizational Strategy Implementation

According to Mandasari et al. (2015), strategy implementation is a method by which several strategies and policies transformed into action through the development of programs, budgets and procedures. Implementation, which is the key to the success of KM, is considered after the strategy is formulated.

According to Hariadi (2005), business strategy is an organizational plan to build and strength the competitive position of its products or services within a particular industry or market. For the implementation of corporate strategy, short-term activities are implemented by each functional area. Functional strategy supports corporate strategy implementation by identifying specific activities which will be implemented in each functional area. Therefore, the functional strategy guides where the activity will be done now or soon.

2.5.2 Functions of Organizational Strategy

Organizations inevitably need strategy for their success, as it helps them to be proactive rather than reactive in molding their own fate. Strategy helps organizations to initiate and control different activities to control their own destiny. Strategy boosts employee's commitment to achieve objectives, implement strategies and work hard, and a well implemented strategy increases sales, profitability and productivity. In addition, it helps organizations understand strategies of their competitors. A good SWOT analysis helps an organization to realize what makes it different from its competitors, to be aware of the possible threats, to reduce resistance to change, and to define management problems. Strategy sets a basic structure for an organization to coordinate and control its activities and increases communication among the employees and managers (Fadeyi et al., 2015).

2.5.3 Organizational Strategy Statements

Collis and Rukstad (2008) suggest that managers should be able to specify the strategy of their organization with a strategy statement. They state that strategic statement should carry three main elements: goals to be achieved by the organization based on its mission, vision and objectives; the scope of the organization's activities; and the particular advantages or capabilities it has. They explained strategic statements as follows:

- **Mission:** it is all about organizational goals, and refers to the main purpose of the organization. It tries to clarify the kind of business the organization is involved in. The mission statement helps managers to focus on what is important in the strategy.
- **Vision:** it is concerned with goals, and refers to the desired future state of the organization. It aspires and mobilizes the energy and passion of employees. It specifies what the organization wants to achieve.
- **Objectives:** these are the most accurate and quantifiable statements of the organizational goals over a period of time. Objectives might refer to maximizing profit and market share for profit-oriented organizations. Objectives attach discipline to strategy. By drawing objectives the management seeks to clearly state what to accomplish in the coming year.
- **Scope:** scope can be stated in three perspectives: clients; geographical location; and internal activities.
- **Advantage:** this part of the strategy statement describes how the organization can achieve the objective it has set in its chosen domain. It is about how an organization intends to achieve its goals by competing with other organizations. In order to achieve its goal, an organization should put itself in better place than others aiming the same goal.

2.6 Knowledge as a Strategic Resource

Even if an organization can uniquely access its valuable resources to create competitive advantage, it may not be possible to do so; or competitors may even have the same resources which inhibit the firm from being unique. On the other hand, an organization with a superior knowledge can organize and combine its resources and capabilities in fresh and different ways, to offer greater values for customers than its competitors can come up with (Penrose, 1980). That is, an organization with superior intellectual resources, knows how to make use of its traditional resources better than others, even if those resources are not unique. Hence, knowledge can be considered as the most important strategic resource, and the potential to acquire, integrate, store, share and apply it, is the most important organizational capability to build and sustain a competitive advantage (Grant, 1996).

A competitive advantage based on knowledge is also sustainable, the more an organization is knowledgeable, the more it will be able to learn (Cohen and Leventhal, 1990). Learning opportunities are more valuable for organizations that already have knowledge advantage than for competitors with lesser knowledge advantage (Goldstein and Zack, 1989). Knowing about some things better than competitors helps organizations to have a sustainable knowledge advantage. Even if they invest more, to catch up and acquire similar knowledge, it will be difficult for competitors to do so, due to time constraints and other factors. Unlike the depreciation of physical goods, consumed as they are used, and decrease their returns over time, knowledge increases its returns as it is used. The more it is used the more valuable it becomes by creating a cycle. When an organization understands the areas where its knowledge leads the competition, it can apply the unique knowledge to be profitable in the market and can possess a powerful and sustainable competitive advantage (Teece, 1998).

2.6.1 The link between Knowledge and Strategy

The long standing SWOT framework should be up-to-date to embrace today's environment that is highly dependent on knowledge to provide a base for describing a knowledge strategy. Essentially, firms should analyze the SWOT based on knowledge, by discovering their knowledge resources and capabilities against their strategic opportunities and threats to understand where their strengths and weaknesses are. They can use this discovery to direct their KM efforts strategically, and boost their knowledge advantages and minimize their weaknesses. KM then can be perceived as a mechanism by which Knowledge-based resources and capabilities to the required knowledge can be balanced for meeting customer's needs more than what competitors do. Identifying the most vital, unique and inimitable knowledge-based resources and capabilities, and knowing how those resources and capabilities can help the organization achieve its goals are the most important elements of a knowledge strategy (Utterback, 1994). To explain the relationship between strategy and knowledge, an organization must formulate its strategic goal, identify the right knowledge needed to carry out the strategy and compare the required knowledge with the actual, to expose its strategic knowledge gap (Hamel and Prahalad, 1989).

2.6.2 Connecting Knowledge to Strategy

It is natural for firms operating within some industry to compete in different ways, to take a greater competitive position within that industry. An organization's competitive strategy may result from, a clear comprehensive decision, the conventional view of strategy, or from an accumulation of smaller decisions. It may even be revealed on actual behaviors and events in the past. But regardless of the strategy formation process, organizations must have a clear strategy that must first be articulated (Quinn, 1980).

Every strategic position of an organization is connected to some kind of intellectual resources and capabilities. There is what the organization believes what it must do to be competitive in today's business environment, but there are still things it should know and know how to do. The strategic choices of organizations concerning technologies, products, services, markets, processes, and their preferences on whether to compete through low cost or differentiation, have a great impact on the knowledge and skills required to compete and be the best in an industry (Mintzberg, 1994).

2.6.3 Building Knowledge into Strategy Development

There are different strategic tools used by organizations like, mission statements, competitive intelligence, environmental scanning, technology assessment, portfolio matrices, SWOT, core competencies, the value chain, scenario analysis and stakeholder mapping. In the presence of these wide varieties of strategy tools, managers who are responsible for the organizational strategy are advised to be creative in adopting tools that fits their purposes (Drew, 1999).

According to Drew (1999), vision or mission statements developed by many organizations are used as a means of communicating and exerting broad guidelines for strategic decision-making and control. When an organization's mission is well-crafted, it helps delineate the paths an organization wants to take or avoid.

Kaplan and Norton (1996) argue that the balanced scorecard is a tool used for organizational learning and improvement, and also for performance measurement. Balanced scorecard has four perspectives, financial, customer, internal business process, and growth and learning. The perspective of growth and learning focuses on strategic objectives for training and development,

technology and teamwork. The internal business perspective includes innovation and business process improvement. Therefore, Knowledge-related objectives can easily be suggested for these perspectives.

2.7 Knowledge Management Strategy

According to Oluikpe (2012), organizations are being strongly attracted to KM because of its capability to grant them strategic results associated with profitability, competitiveness and capacity enhancement. In the early days, when organizations started to claim that they have benefitted from KM, in their operations, it used to be very difficult to measure their claims in objective terms. But today, many maturity models and other KM processes are available to filter the knowledge strategies and how these create organizational values. Carrillo *et al*., (2003) is one of the researchers who linked KM to business performance and provides a very good reason for organizations to adopt a KM strategy. Du Plessis (2007) argues, a KM strategy should be able to let organizations, know their knowledge resources and where they reside, articulate the role of knowledge in value creation and comprise a number of integrated projects or activities phased over time including quick wins as well as long term benefits.

Literatures about strategic management have shifted their focus from a resource based to knowledge-based view, and see knowledge as an important resource enabling organizational capacity and leveraging competitive advantage (Kogut and Zander, 1992). In recent years, KM literatures concentrate on developing KM strategies that effectively identify key strategic assets that drive business results and making these knowledge targets (Du Plessis, 2007). But this view is not as simple as it seems. The complexity of the organization, knowledge factors, organizational context and institutional forces are some of the things that should be taken into consideration in the implementation of KM strategy in the organization (Jonsson and Kalling, 2007).

A strategy determines the mission, vision, major objectives, strategies and policies that govern the allocation of resources to achieve organizational goals (Yang and Yeh, 2009). In an effective strategic-planning, long-term strategic goals and both middle-term plans and operational plans are linked very well. A strategy is developed through a strategy map with a visual representation of relationship among the elements of an organization's strategy. This shows a logical

architecture of critical elements and their relationships in an organization's strategy and makes the strategy clear.

2.7.1 Knowledge Management and Organization Strategy

According to Oluikpe (2012), the success of KM highly depends on the alignment of KM strategy with organization strategy. Du Plessis (2007) argues that KM of an organization is supposed to help the firm understand its KM resources including their sources, articulate the role knowledge plays in value creation, and form a number of integrated projects or activities planned over time including a short-term wins as well as long term benefits, based on organizational needs. An organization's KM strategy is not something that stands on its own, but it depends on the way the company deals with its customers, the economics of its business and its employees (Tierney et al. 1999). Organizations should implement the KM strategy not just because it is a nice thing to have. The most important issue is no longer whether knowledge is taken as a critical resource of organizations or not, but the alignment of KM to corporate strategy, measurement of its impact and driving of business results (Greiner et al. 2007).

2.7.2 Methods Used to Build Knowledge Management Strategy

Many organizations have run KM projects by focusing on building new systems of information technology to support data collection, storage, retrieval, and dissemination of their explicit knowledge. However, some organizations consider that the most important knowledge owned by the firm is a tacit knowledge embedded in people's mind, which can be shared and improved through communication and social interaction. Organizations are investing to create an environment where socialization between people is high and continuing in order to develop their intellectual capital (Zack, 1999). Many organizations are testing the enhancement of social relationships, new organizational cultures, forms and reward systems (Nahapiet and Ghoshal, 1998).

Researchers found that the organization's strategy is the most important issue to guide KM. In order to enable KM support the organization's mission, strengthen its competitive position and create shareholder value, it should be helped by the organization's strategic context. Accordingly, the more the organization knows about its customers, products, technologies and

markets the more chance it will have to achieve its goals. But in reality the relationship between business strategy and KM has generally been unnoticed (Zack, 1999).

2.7.3 Aligning the Knowledge Management with the Organization Strategy

Sunassee and Sewry (2002) state that many literatures on KM strategy suggest that it is very important for organizations to make a link between business strategy and KM. According to Tiwana (2000), for organizations to make this linkage, they should look at the strategic gap and discover the difference in what they want to do and what they can do, and by discovering their knowledge gap they can determine the difference between what they know and what they need to know in order to carry out their strategy. It is very important for organizations to formulate the link between what they must know and what they can do, in order to align the KM strategy to the business strategy.

According to Sunassee and Sewry (2002), determining the gap between tacit and explicit knowledge is the most underlying component of the KM strategy of any organization to have a competitive advantage. Besides, in aligning a KM strategy to the business strategy, the organization must also consider its tangible and knowledge resources and clearly define how these resources can be used to achieve the goals of the KM effort. Sunassee and Sewry (2002) also observed that the KM strategy of an organization should take into account its organizational culture. The authors argue, many organizations have failed to succeed with their management initiatives, due to the incompatibility of their strategic approach with their organizational culture. Also, by putting KM effort and systems thinking together in a system, an organization can extend the knowledge strategy to the sub-systems of the organization.

2.7.4 Knowledge Management Strategy Challenges

Even if KM strategy is very important for the success of KM programs, it faces many challenges. One of the challenges of strategic planning is the distribution of vision, strategies and strategic objectives to the departments in order to connect individual efforts to organizational objectives (Kavindri, 2005). Another challenge is the difficulty of measuring the most important performance indicators (Clarke, 1997). This shows that organizations should find a way for strategic objectives to reach the lowest level units and job roles, and they should also be able to

measure their achievements. If they are able to do this, strategic planning can be aligned with business processes (Shaw and Edwards, 2005). Business processes are attached to organizational business strategies, and it is reasonable for KM strategy to concentrate on business processes. Linking knowledge to business processes involves knowledge classification activities like, core, support and strategic knowledge; core and ephemeral; and exploitative and exploratory. After knowledge classification, knowledge alignment should make core knowledge focus on core processes, support knowledge on support processes, and strategic knowledge on strategic processes (Shaw and Edwards, 2005). "Many organization executives would like to implement a suitable KM System for the proper utilization of knowledge and expertise available in their organization. However, most of them especially public organization face difficulties in choosing a strategy that suit their organizational context" (Muluken Amare, 2014).

Managing knowledge from the business process perspective is the most powerful way of designing KM strategy from the scratch. But factors such as, culture, strategy, people and technology are categorized as critical dimensions of KM whereas business process is the basic unit of KM implementation (Jashapara, 2003). It is at the strategic planning stage (where business process is the centre of strategic initiatives, implementation and measurement), that objectives of the organization are measured. Performance, in terms of competitive advantage, profit orientation, competency building, capability, and capacity can be inferred as end products at the business process level (Lam and Chua, 2009). Job evaluations and performance measurements encourage knowledge creation, sharing, harvesting and leveraging (Parlby and Taylor, 2000).

2.7.5 Classification of Knowledge Management Strategies

According to Oluikpe (2012), the two perspectives of KM strategy, codification and personalization strategies, substantially take the upper hand in KM discussions. The codification strategies of KM focus on capturing, codification, storage and dissemination of explicit knowledge and make them compatible with organizational objectives. The personalization strategy focuses on networks and social interactions to increase knowledge flow in the organization.

Even, Nonaka and Takeuchi's (1995) SECI model of socialization, externalization, combination and internalization, can be generalized into codification and personalization strategies. The externalization and combination focus more on codified knowledge whereas internalization and socialization are concerned with personalization. According to Haggie and Kingston (2003), knowledge resources can transform, from non-codified to codified, concrete to abstract, and from undiffused to diffused knowledge. These categorizations give themselves to codification and personalization of knowledge.

The KM spectrum of Binney (2001) associates two perspectives of KM, the community view of knowledge (knowledge as socially constructed); and the cognitive view of knowledge (knowledge as objective-expressed, captured and codified). These two perspectives are logically similar to the idea of codification and personalization. The author conceptualizes personalization strategy as a method that focuses on the social construction of knowledge and the codification approach as focusing on cognitive processes such as capturing and codification of knowledge.

Table 2.3: Summery of KM strategies

Strategy	**Classification**
Nonaka & Takeuchi's Matrix of Knowledge Types	-Socialization, Externalization, Combination, Internalization
A Second Knowledge Classification: Boisot's I-Space Model	-Scanning, Problem-solving, Abstraction, Diffusion, Absorption, Impacting
Classification by Business Process: APQC International Benchmarking Clearinghouse study	- Knowledge Strategy as Business Strategy - Intellectual Asset Management Strategy - Personal Knowledge Asset Responsibility Strategy - Knowledge Creation Strategy - Knowledge Transfer Strategy Customer-Focused Knowledge Strategy
Another Classification by Business Process: McKinsey & Company	- Developing and Transferring Best Practices - Creating a new industry from embedded knowledge - Shaping Corporate Strategy around knowledge - Fostering and Commercializing Innovation - Creating a standard by releasing proprietary knowledge
Classification by End Results: Treacy &	- Customer Intimacy

Wiersema's Value Disciplines	- Product Leadership - Operational Excellence
Linking Knowledge and End Results: Zack's Knowledge Strategy	- Exploration vs. Exploitation - Internal vs. External Knowledge

Chapter Three

A Theoretical Framework for Knowledge Management Strategy Development and implementation

3.1 Introduction

According to Sunassee and Sewry (2002), business strategy is defined as a high-level, flexible plan that examines the birth and development of a business initiative. For the accomplishment of the business objectives, any business development within the organization must be aimed at furthering the goals of the organization. The implementation of KM strategy must be a function of the business strategy, or else the KM initiative will be unable to accomplish goals that are tangible to the organization. A KM strategy can thus be defined as a high-level design that aims at supplying the organization with the knowledge resources that it needs to carry out its vision and goals. As a result there should be a close alignment between the KM strategy and overall business strategy, and the coexistence of the two strategies must produce a tangible result to the organization as a whole. Zack (1999) states that a knowledge management strategy expresses the overall approach a company intends to take to align its knowledge resources and capabilities to the intellectual requirements of its strategy.

Mcgraw *et al* (2000) recommend that a knowledge management framework should support the following:

- Be both prescriptive and descriptive
- Be consistent with systems thinking
- The organizational goals and strategies must be linked to knowledge management
- Planning should take place before any knowledge management activities
- The cultural aspects of the organization must be acknowledged and the knowledge management practices must be compatible with that culture.

- Knowledge management must be directed by learning and feedback loops, both single and double.

3.2 KM Strategy Development Model

Based on the literature survey, a KM model constructed by Sunassee and Sewry (2002), has been found to be ideal and used in this research as a road map to develop a KM strategy framework for CBE. This framework consists of three main interlinked components: *Knowledge Management of the organization*, *Knowledge Management of the People*, and *Knowledge Management of the Infrastructure and Processes*. The organization should keep the balance between these three subsystems in order to achieve a successful knowledge management effort.

The emphasis in this model is on the importance of aligning the knowledge management strategy of the organization to the overall business strategy of the organization. The culture and managing the culture change when implementing knowledge management are also considered to be very important. This model also includes some external factors in the process of managing knowledge. Organizational learning is also an important concept in this framework.

The framework focuses on the importance of the employees of the organization, and their contribution towards a successful knowledge management effort. There should also be an effort to make people feel part of the change when implementing knowledge management. The organization should also encourage individual learning, and innovative thinking with employees, and reward those that do produce such results. The infrastructure and business processes of the organization also cannot be neglected when implementing knowledge management. This model highlights the importance of hardware and software that helps employees to share and disseminate knowledge throughout the organization. The business processes are also mentioned as they need to allow for formal as well as informal sharing and use of knowledge within the workplace.

3.3 KM Strategy Development of the Organization

The Knowledge Management of the Organization component deals with the overall activities that need to be performed in the organization during the knowledge management effort.

Knowledge management is very important for business organizations in the creation of sustainable competitive advantage. But building effective KM in an organization is not a one time job rather progresses gradually through stages of growth (Seble Abera, 2015).

3.3.1 Perform Organizational KM activities assessment

In this research, the KMMM (Knowledge Management Maturity Model) is adopted for the purpose of assessing the current practice of the CBE knowledge management practices. This assessment model is adopted instead of the SWOT analysis used in the framework. According to Gallager and Hazlett (2004), KM maturity is a mechanism by which organizations assess their current KM capability, thus facilitating effective measurement of the impact of KM upon business performance. The researchers also state that organizations use this General-Knowledge Management Maturity Model (KMMM) as an instrument to assess themselves, visualize their current position and plan for the future success of KM. Kuriakose et al. (2011) consider KMMM as application of structured approach to KM implementation and engineering of KM. Similarly, Weerdmeester et al. (2003) say, an organization's level of development and the stage of development it has to pass as part of its strategy are easily described using KMMM. Therefore, before developing a KM strategic framework for the Commercial Bank of Ethiopia, KM maturity assessment should be conducted and the current position of the bank should be understood.

3.3.1.1 Knowledge Management Maturity Models

Because of the complex nature of KM, different studies have discovered several requirements that should be fulfilled by an ideal KMMM. Ehms and Langen (2002), as well as other researchers suggested that KMMM should be applicable to different objects like, organization as a whole, organizational units and KM systems. Therefore, KMMM should focus on processes rather than specific objects.

As stated by Ehms and Langen (2002), KMMM should provide a systematic and structured procedure to make sure that the assessment is transparent and reliable. The characteristics of each maturity level should be objectively testable. In addition, the basic structure of KMMM should be intelligible to support continuous learning and improvement.

The Nolan's model has been criticized for being simplistic, focusing on technological aspects and overlooking other organizational aspects. Alavi and Leidner (2001) suggested that KMMM should embrace a wider socio-technical view of organizations by considering not only technology but also its people and processes.

3.3.1.2 General Knowledge Management Maturity Model (G-KMMM)

After reviewing different KMM models like, Capability Maturity Models, Infosis KM Maturity Model and CoP Maturity Models, the G-KMMM is selected for this study. The G-KMM is developed by Pee & Kankanhalli (2009) that follows a staged-structure and has two main components: maturity level and key process areas. The researchers developed this model by synthesizing different KMMMs so the best elements of previous models are included in such a way that this model can be applied for all organizations. Each maturity level is characterized in terms of people, process, and technology, and each KPA is described by a set of characteristics. When employed together, these characteristics specify the key practices of organizations that help them to accomplish the goals of the particular maturity level.

3.3.1.3 Maturity Levels in G-KMMM

G-KMMM is comprised of five levels of maturity: initial, aware, defined, managed, and optimizing (see Table 3.1). At the **'initial level'**, organizations have little or no intention of managing their knowledge formally and their intellectual capital is not recognized to be used for their long-term success. At the **'aware level'**, organizations have recognized the importance of knowledge and have the intention of managing it formally, but lack the knowledge to do so. At this level, organizations run pilot projects to explore the potential of KM.

At the **'defined level'**, organizations have the basic infrastructures to support KM, with management actively promoting KM by articulating KM strategy and providing training and incentives. In organizations at the defined level, formal processes for creating, capturing, sharing, and applying both formal and informal knowledge are specified. At the **'managed level'**, KM is strongly connected to organizational strategy and is supported by KM technology. KM models and standards such as those integrating knowledge flows with workflows are also adopted. In addition, effectiveness of KM is assessed quantitatively. At the **'optimizing level'**, organizations have KM systems that closely support key business activities. With an

institutionalized knowledge-sharing culture, organizational members, while not expected to share every single piece of their knowledge, are willing to contribute unique and valuable knowledge that is central to the activities of the organization.

Table 3.1. G-KMMM- Source (Pee & Kankanhalli 2009)

Maturity Level		**General Description**	**Key Process Areas**		
			People	**Process**	**Technology**
1	**Initial**	Little or no intention to formally manage organizational knowledge	Organization and its people are not aware of the need to formally manage its knowledge resources	No formal processes to capture, share and reuse organizational knowledge	No specific KM technology or infrastructure in place
2	**Aware**	Organization is aware of and has the intention to manage its organizational knowledge, but it might not know how to do so	Management is aware of the need for formal KM	Knowledge indispensable for performing routine task is documented	Pilot KM projects are initiated (not necessarily by management)
3	**Defined**	Organization has put in place a basic infrastructure to support KM	- Management is aware of its role in encouraging KM - Basic training on KM are provided (e.g., awareness courses) - Basic KM strategy is put in place - Individual KM roles are defined - Incentive systems are inPlace	- Processes for content and information management is formalized - Metrics are used to measure the increase in productivity due to KM	- Basic KM Infrastructure in place (e.g., single point of access) - Some enterprise level KM projects are put in place
4	**Managed**	KM initiatives are well established in the organization	- Common strategy and standardized approaches towards KM - KM is incorporated into the overall organizational strategy - More advanced KM training - Organizational standards	Quantitative measurement of KM processes (i.e., use of metrics)	- Enterprise-wide KM systems are fully in place - Usage of KM systems is at a reasonable level - Seamless integration of technology with content architecture

5	**Optimizing**	- KM is deeply integrated into the organization and is continually improved upon - It is an automatic component in any organizational processes	Culture of sharing is Institutionalized	- KM processes are constantly reviewed and improved upon - Existing KM processes can be easily adapted to meet new business requirements - KM procedures are an integral part of the Organization	Existing KM infrastructure is continually improved upon

3.3.2 Create a KM Vision

According to the model, a vision is a statement that leads the knowledge management initiative of an organization and provides the scope within which the organization grows by encompassing its core beliefs and values. A very important aspect of the vision is a working definition of knowledge and knowledge management for the organization.

3.3.3 Align the KM with the Business Strategy

It is important that the KM is not a project that is undertaken on its own without any link to the overall business strategy. What literatures say about aligning KM strategy with business strategy is described in the last chapter under (2.6.3)

3.3.4 Plan and Design the KM Project

Once the implementation method is selected, the KM project should be planned and designed. In this model it is proposed that a pilot project should be implemented as any other project, with deadlines, budget considerations and reward incentives. This will ensure that the employees take this project seriously, and participate fully towards the goals of the project. It is very important that reasonable and attainable goals are set so employees participating in the project will not be disillusioned with knowledge management and the advertised benefits of sharing knowledge.

3.3.5 Manage organizational Culture and Change

It is an important task to manage the change in organizational culture due to the implementation of KM. A change in organizational culture is not something that happens so soon. The aim of the change is not to change the organizational culture rapidly, but to make modifications on people's behavior the way that suits the demands of knowledge management in the organization's context, in the same way that the KM strategy needs to be compatible with the organizational culture.

3.3.6 Manage with a Holistic Approach

The organization should not only focus on itself in its KM effort. The framework proposes four environmental factors which the organization should consider within the context of managing knowledge. These factors are stakeholders, competitors, business environment and overall environment.

3.3.7 Create and Manage Organizational learning

The model proposes a knowledge life cycle in order to create and maintain individual and organizational learning in the organization:

- Knowledge creation
- Relevant knowledge discovery
- Knowledge verification
- Knowledge capturing and organizing
- Knowledge dissemination

3.4 Knowledge Management of People

At the Knowledge Management of the People level, the focus is on managing people, their behavior, their expectations, and their potential to contribute to the success of the knowledge management effort. There should also be a concerted effort to encourage employees to share and use knowledge in the workplace, and to reward people who do so.

3.4.1 Manage People as Individuals

Management should recognize that individual learning is the only way through which organizational learning can happen. Hence it is important that the employees in the organization are treated as individuals and that management considers each person’s opinion and input. This will create the feeling of importance in employees and will increase their willingness to accept change as they are part of it. Furthermore, this boosts innovative thinking in employees.

3.4.2 Encourage Sharing and Use of Knowledge

The appropriate structures and processes should be put into place to motivate people share and use knowledge in the work place. The organization should make sure that knowledge sharing is a direct part of the business strategy and part of the normal operation. At this point, the two forms of knowledge, tacit and explicit, should be seen separately and managed differently. Tacit knowledge embedded in employee's mind should be shared with the rest of the organization.

3.4.3 Encourage Individual Learning and innovative thinking

Individual learning should be encouraged in the organization. It should be demonstrated that employee's knowledge sharing and learning can result in improved products and services and time and cost reduction. There should also be formal activities aimed at creating the environment necessary to share and learn. By making individuals and groups learn and contribute to the overall effectiveness of the organization, it is possible to participate, the employees in the change process of knowledge management.

3.4.4 Implement Reward Plans and Incentives

Another important part of managing employees in a KM activity is the reward plan and the incentives. It is recommended that awards and monetary rewards are both given to employees who contribute to the success of the KM implementation. By giving recognition to individuals or teams abilities and performance, the organization can encourage other employees of the organization to follow the same knowledge-based performance and abilities.

3.5 Knowledge Management of infrastructures and processes

The third component in the model consists of managing the infrastructure and the processes of the organization which will support the overall knowledge management effort. The organization should also re-evaluate its business processes in order to align them with the paradigm of knowledge sharing and people-oriented processes.

3.5.1 Managing the Technology

The organization should plan the type of technologies and their implementations needed for the success of KM. it is very important to manage collaborative technologies which will allow easy communication between employees. It is also important that the IT infrastructure of the organization be able to link easily with that of customers and suppliers, in order to allow a flow of information between the business and its partners. This allows the organization to collect knowledge about its business partners and vice-versa.

3.5.2 Managing the Processes

Processes should be in place to facilitate the creation of organizational learning. The business processes should be modified in a way employees can create, identify, verify, capture, organize, disseminate and use knowledge easily throughout the organization. The organization should make use of the existing informal networks to the best of their potential, by making them official, giving them more resources and rewarding them. However, sometimes the workplace processes will need to be modified to suit the knowledge paradigm.

It is important that the business processes should be regularly re-evaluated to gauge whether they are creating an environment where knowledge can flow freely. Another very important aspect of managing the process is that there should be a metrics to measure the effectiveness of the KM in the organization. The success indicators suggested by the model are:

- Growth in the resources due to the project
- Growth in the volume of knowledge content and usage
- Survival of the project
- Financial return

Chapter Four

Research Design and Methodology

In this section the main research approach used for gathering empirical data is outlined. The data collection methods are presented and, detailed descriptions of the interview guide and the analysis process are provided. The chapter describes the research approach, research design and the methods that are used in this study. The main emphasis of this chapter is to discuss the rational explanation behind the methodological choices and considerations. This methodological chapter mainly clarifies the what, why how aspects of the research.

4.1 Review of Relevant Literature Presented in Chapter 2

Classification of research methods can come in various ways, of which the most known methods are qualitative and quantitative approaches, based on; the type of data to be used, the way it is employed, the type of investigation, the way it is analyzed, the way it is explained, and the presumed underlying paradigm (Myers, 1997). Creswell (2007) argues when the problem at hand needs a depth study, when complex understanding is needed or when a quantitative method is unable to provide sufficient information, it is very necessary to perform a qualitative research.

As research and enquiry are connected, the aim of a research is to add up something new to the existing knowledge. Basically there are three main purposes of research; to explain the way a new problem can be structured and identified, to describe how a solution to a problem is developed, or to assess how realistic a solution is to a given problem through empirical evidence. These three purposes are called exploratory, descriptive and explanatory research (Robson, 1993).

Every research, if it is to be relevant and purposeful, should be connected with works already done on related areas. Therefore the review of literature presented in the previous chapter is a link between the research being conducted and studies already done. It gives perspectives and conclusions of different authors, and a chance to see evidences collected by previous researchers, to make plans for the current research work in a proper manner (Kumar, 2009). Hence, in this

research, literature review has been conducted to assess concepts and models of previous researches about KM. Books, journals, articles, proceeding papers, manuals and internet are used to get a better understanding of the practice of KM in banks and other organizations.

Most of the literatures used to develop the theoretical framework consist of scientific articles. The Google Scholar has provided the majority of literatures. The thesis papers found in the Addis Ababa University digital library database were also used. The keywords used to search for the appropriate literatures consisted: KM, KM framework, KM strategy, KM in banks and so on. To make a decision about what articles should be included in this research, the titles and abstracts of the articles were red and scanned in the order they appeared in the search. The articles were examined until works that fit the purpose are selected.

4.2 Qualitative Research Approach

Qualitative research focuses on observation and description of events as they occur, with the aim of capturing the everyday behavior (Stangor, 2011). Qualitative research is conducted in a natural setting of activities to be studied (Ngulube, 2009). In a quantitative research questionnaire is a tool that is usually used, where as in the case of a qualitative approach interviews, document analysis and observation are used to collect data. Researchers, use their senses, wits and relational skills rather than instruments to understand a situation. In a qualitative research field notes, audio or video recordings can be taken and is presented in a narrative form to capture what goes on in the natural setting (Ngulube, 2009). A data with a qualitative nature is collected for a qualitative research through interviews and document observations to understand and explain social phenomena (Myers, 1997).

The collection and analysis of data in a qualitative research is expressed in words about people's feelings, values and attitudes (Babbie, 2010). Qualitative research is carried out by means of interviews. While conducting the interviews, adjusting to circumstances is possible because the retrieved data and information are of most importance. Qualitative data in such studies reveals the experience, efforts and perceptions of managers with regard to managing knowledge in their organizations. Dewah (2011) describes the main drawback of a qualitative research is that it is time taking and vulnerable to a researcher bias.

According to Myers (1997), a qualitative research tries to give interpretations for observed phenomena as it is being given meanings by individuals involved in specific incidents or situations. Thus, in this research approach, it is normal for researchers to spend plenty of time in the place where the research is conducted and work together with the participants in their natural surroundings. In a qualitative research, the researcher and the participants work together to document and develop interpretations of events or situations relative to a specific research question. It focuses on the way individuals interpret their environment and its behavior, and the data is presented the way it is understood by the participants (Bryman, 2006). The most important essence of qualitative research is to study the social reality (Bryman, 2006). A qualitative research approach is thus chosen for this research because in-depth information based on experience is collected rather than statistical information about the KM practices in CBE.

4.3 Research Approach

Since the main objective of this study is to understand the practices and experience in detail, with the associated problems and challenges, it uses a qualitative research approach, with an inductive approach and a social constructivist position. As Hancox and Hackney (2000) stated, qualitative research is the best approach when the research is concerned with understanding the situation at hand in detail rather than generating findings of statistical significance which proves or disproves causal relationships. It can also be used when the purpose of the study is to discover and understand the knowledge and experience possessed by experts (Kini, 2007). As the purpose of this study is to develop a KM strategic framework for the CBE by studying how the bank handles its knowledge resources and its KM activities, qualitative research approach is appropriate to undertake this study. According to Hancock and Algozzine (2006), when little is known about the situation at hand and the goal is to have a deeper understanding, qualitative approach is the best option.

Yin (2003) argues that a qualitative research is effective to collect data related to attitudes, motivations and opinions. On the other hand, quantitative research is preferable if the aim of a study is to test theories through statistical analysis. In this thesis a qualitative approach is followed because the expected responses are largely opinion based that require some explanation. Furthermore, interviews are undertaken since they are more personal, which help to

get more detailed responses and acquire an in-depth understanding. A researcher cannot generalize based on the results of qualitative case studies.

4.4 Research Strategy

A research strategy guides a researcher on how to collect, analyze and interpret the data and give meaning to it (Ngulube, 2009). According to Du Plooy (2001), a research strategy helps the researcher to plan the research, by indicating who or what is involved and where and when the study should take place. This study examines different cases (Branches) to deeply understand the current situation in the bank under the study, put the findings clearly and develop the proposed KM strategy. Herriot and Firestone (1983) argue the more cases are considered in a study, the more compelling and robust it will be. When multiple cases are studied, each case is explored, described and explained, to learn and get lessons about situations Herriot and Firestone (1983).

When a research design or procedure is chosen it is highly influenced by experiments, surveys or case studies. In all these classes, the questions to be answered differ. The type of questions a research tries to answer, the degree of control the researcher has over events, and the cross-sectional or historical nature of the study, has a great impact on the choice of a research design (Yin, 2003).

The chosen strategy for this research is an explanatory case study. According to Ngulube (2009), case study is taken as the central strategy for data collection when qualitative methodology is used. This researcher argues argue that the aim of a case study is to gather detailed information about a case or group of cases which are related to each other. In a case study, a case, a group of cases or a situation is chosen for the study. The interest comes from processes, and individual cases are studied in relation to the context in which they exist. Several methods like; reviewing documents, observation and interviews, can be used to gather data for case studies. Describing and understanding a phenomenon is the core of a case study. Du Plooy (2001) describes, a case study is basically practical and the results can be applied in practice.

Yin (2003) argues, when the objective of the research is to study current events, as they are, a case study is the best approach. Yin (2003) says, when an exploratory research is conducted, if the researcher has no intention or ability to control the environment that is to be studied or control certain variables during the data collection and manipulate the scene, a case study is

considered suitable as the chosen strategy for conducting the data. The employment of the case study design not only helps to explore the KM activities of the CBE in-depth, as a context specific case, but also helps shed light on similar issues found in other banks.

Yin (2003) describes, a study should follow an explanatory approach if it is concerned with questions, “who” and “why”. The aim of this study is to connect different factors to each other and such technique is defined by Yin (2003) as an explanatory study. Based on the nature of the research questions, this research tries to connect the organizational factors with the project process in the context of KM strategy development. This makes the arrangement of this study mainly explanatory.

4.5 Case Study

A case study is a type of qualitative research method where a single event is deeply examined, rather than relying on large examples and stick to a rigid protocol to examine a limited number of variables. In a case study, different methods are used to gather information from one or few units such as people or organizations. At the beginning of such researches borders between events are vague and experimental control or management is absent (Yin, 2003)

According to Myers and Avison (2003), some important characteristics of case studies are the following:

- Events are observed as they are in their natural setting.
- Different data collection methods are used.
- One or more parts are put into test.
- Complex units are studied seriously.
- Case studies are suitable for exploration, classification and hypothesis development.
- The researcher should have an open attitude for exploration.
- The researcher is not concerned with controlling or managing the experiment.
- The dependent and independent variables are not identified at the beginning of the research.
- The capacity of the researcher highly influences the outcome of the research.

- There is a flexibility of changing data collection methods when a new hypothesis is developed.
- Case study tries to answer questions like ‘how’ and ‘why’.
- Current situations get the attention of the researcher.

A case study focuses on subjects that are very important and representative. A case study design is chosen for this study and cases are examined in a thorough, holistic and in-depth manner. As respondents working at the CBE are the targets of the interview and our main focus, this study has focused on exploring their understandings and experiences of KM processes in the bank. This is also what Yin (1994) suggested, when examining the case through the why and how perspectives.

4.6 Data Collection

The research design has been discussed in the previous section. In this section, the population, sampling and the data collection tool, that is, the interview will be discussed.

4.6.1 Population

Every possible case that is to be included in the study defines a population (Lewis and Thornhill et al. 2007). A population is all the people that the researcher wants to learn about. A population consists of persons or objects with common characteristics, or a group who would be subject of the study, and about whom the researcher tries to say something about (Punch, 2005). Thornhill (2007) describes a population as a group the researcher is interested in and about whom results are to be generalized. The population of the Commercial Bank of Ethiopia consists of 30,000 employees working in the 1,160 branches all over the country. The population of the study is too large and it is impossible and unnecessary to include the whole population in the study.

4.6.2 Sampling

According to Babbie and Mouton (2001), sampling is the process of selecting observations. Kumar (1999) states that a small group is formed through sampling from the population which is similar as possible to the larger population, and can represent the whole. It is important that the little group should resemble and represent the bigger group so that concluding about the larger group by studying the sample is possible.

Powell (1997) argues the researcher should bear in mind taking a great care and have good selection criteria for setting the desired size and the parameters of the survey. Related to this, 10 branches of the Commercial Bank of Ethiopia, in the capital city Addis Ababa, are selected and believed to give a clear picture about the KM activities of the bank. The selected branches for the study are Addis Ababa branch, Finfine branch, Arada Giorgis branch, Arat Killo branch, Gullele branch, Mehal Ketema branch, Addis Ketema branch, Anwar Mesgid branch, Teklehaimanot branch and Addisu Gebeya branch. Branch managers, from each branches selected for the study, were picked for a close-ended interviews. Branch managers are selected since the purpose of this study is not just to assess the KM activities of the bank but goes beyond and aims to develop a KM strategy framework, and these are the people with enough knowledge about the bank's structure at the strategic level.

For this study, purposive sampling was used for qualitative data collection through close-ended interviews. Purposive sampling is a non-probability form of sampling. In this sampling technique, research participants are not chosen on a random basis. In this kind of research participants or cases relevant to the research questions are strategically chosen. The branch managers selected for the study were asked to give answers about the related policy and strategic issues. As Kumar (1999) put it, in purposive sampling, choosing the right participants who can provide the best information to achieve the objectives of the study relies on the judgment of the researcher.

4.6.3 Interviews

In any research interviews are considered to be very important as they give an opportunity and pave the way for the researcher to examine further, find solutions and gather data which could have been impossible to get through other means (Cunningham, 1993). One of the qualitative data gathering methods is interview, where the interaction is controlled by the interviewer and the enquiry may or may not come in a structured manner, depending on what it is going to be used for (Denzin and Lincoln, 1994). For the purpose of this study, interviews were conducted and the opinions and perceptions of the leadership of the selected branches of CBE were assessed, to capture their perceptions about the role of KM in the bank.

Creswell (1994) states, an interview should have a protocol, and should include heading, instructions, research questions, key questions, transition message for the interviewer, space and time for the interviewer's comments, and space for taking reflective notes. The structured interview protocol with open-ended questions was used in the study.

A total of ten interviews were conducted with managers and employees of the CBE. An interview guide was developed based on the assessment instrument proposed in Table 2.1. Each interview took about 20 minutes. Short notes were taken from the interviews for analysis. I was also provided with related documents to give me a better picture about what the interviewees were answering. Moreover, secondary data was collected from relevant documents and CBE website. The conformity of the results of the analysis with previous researches that assessed the KM activities of the CBE, in terms of people, process and technology using different assessment instruments, has been examined. This indicates that the assessment instrument used in this study, G-KMMM, possesses parallel validity.

4.7 KM Maturity Assessment Instrument

To assess the maturity level at which the CBE is found concerning KM, an instrument is used which was developed by Pee and Kankanhalli (2006). The extent to which an organization accomplishes the key practices characterizing a maturity level is indicated by its KM maturity. Close-ended interview questions were adopted based on the G-KMMM, developed by the same researchers, Pee and Kankanhalli (2006), and used as an assessment instrument (See Table 4.1). The interview questions were developed carefully by the researchers so that they cover all the issues raised in the G-KMMM, and the current status of the Bank under study would be clear to help develop a KM strategic Framework. According to Maier *et al* (2012), it is a very important task for companies to manage and improve their capabilities. The author describes performance assessments are commonly used to support management and enable improvement. And one way of assessing organizational capabilities is by means of maturity grids.

The G-KMMM is applicable to different objects of analysis including, the organization as a whole and individual organizational units. G-KMMM is comprehensible and allows systematic and structured assessment. From the literature review, researches with the purpose of just assessing KM activities or specific elements like knowledge sharing of an organization use both

questionnaires and interviews to collect data. But from preliminary assessment it is understood that there is no formal KM activity in the bank, aligned with the business strategy, and developing a new KM strategy framework from square one was considered to be the task of this study. Therefore, conducting close-ended interviews to branch managers has been found to be the best data collection instrument for this study.

Based on the G-KMMM, the following questions (indicated in Table 4.1) were used during the interviews to assess the KM position of the CBE.

Table 4.1: G-KMMM Assessment Instrument (Pee and Kankanhalli, 2006)

Level	Question
	Key Process Areas: **People**
2	**1.** Is organizational knowledge recognized as essential for the long-term success of the bank? **(People-2a)**
	1. Is KM recognized as a key organizational competence? **(people-2b)**
	2. Are employees of the bank ready and willing to give advice or help on request from anyone else within the company **(people-2c)**
3	▪ Is there any incentive system in the bank to encourage the knowledge sharing among employees? **(people-3a)** - Employee's KM contribution are taken into consideration - Rewards for team work, knowledge sharing/re-use
	▪ Are the incentive systems in the bank attractive enough to promote the use of KM in the organization? **(people-3b)**
	▪ Are the KM projects coordinated by the management of the bank? **(people-3c)**
	▪ Are there individual KM roles that are defined and given appropriate degree of authority? (like, CKO, Knowledge officers) **(people-3d)**
	▪ Is there a formal KM strategy in place? **(people-3e)**
	▪ Is there a clear vision for KM? **(people-3f)**
	▪ Are there any KM training programs or awareness campaigns? e.g. introductory/specific workshops for contributors, users, facilitators, champions **(people-3g)**
4	▪ Are there regular knowledge sharing sessions? **(people-4a)**
	▪ Is KM incorporated into the overall organizational strategy? **(people-4b)**
	▪ Is there a budget specially set aside for KM? **(people-4c)**
	▪ Is there any form of benchmarking, measure, or assessment of the state of KM in the organization? **(people-4d)** - Balanced scorecard approach - Having key performance indicators in place - Knowledge ROI
5	▪ Has the KM initiatives resulted in a knowledge sharing culture? **(people-5)**

	Key Process Areas: **Process**
2	▪ Is the knowledge that is indispensable for performing routine task documented? **(process-2)**
3	▪ Does the KMS improve the quality and efficiency of work? **(process-3a)**
	▪ Is the process for collecting and sharing information formalized? - Best practices and lessons learnt are documented **(process-3b)**
4	▪ Are the existing KM systems actively and effectively utilized? **(process-4a)**
	▪ Are the knowledge processes measured quantitatively? **(process-4b)**
5	▪ Can the existing KM processes be easily adapted to meet new business requirements? **(process-5)**
	Key Process Areas: **Technology**
2	▪ Are there pilot projects that support KM? **(technology-2a)**
	▪ Is there any technology and infrastructure in place that supports KM? - E.g. Intranet portal - E.g. Environments supporting virtual teamwork **(technology-2b)**
3	▪ Does the system support the business unit? **(technology-3)**
4	▪ Does the KMS support the entire organization? **(technology-4a)**
	▪ Is the KMS tightly integrated with the business processes? **(technology-4b)**
5	▪ Are the existing systems continually improved upon (e.g. continual investments)? **(technology-5)**

Chapter Five

Data Analysis and Findings

5.1 Introduction

The focus of this chapter is on the description and analysis of the data collected through close-ended interviews. It assesses the existing KM practices of the CBE. This research aims to develop a KM strategy framework for CBE based on the assessment made using the selected maturity model, G-KMMM. As already stated, the individuals chosen for the interview are persons at the managerial level, because they have deep understanding of the bank, on a strategic level. The interview was conducted with the managers of the selected branches of CBE. The data gathered using interviews were compiled, analyzed and presented.

An on-job observation has also given the research, an insight about the current KM practices of the CBE.

5.2 Findings from on-job observations

According to the job observation made, the current business environment in the CBE has been found to be in a poor condition concerning KM, even if there is an interest to establish a KM practices within the bank. Some activities similar to KM were observed but they are results of traditional human resource management and business management practices. In the CBE, some of the knowledge resources, stored in an explicit form, are job descriptions, manuals, research documents, guidelines, and policy and strategy documents. They are not well organized to support best practices of knowledge sharing, accessing and retrieval. The CBE has an intranet dedicated to the KM activities and library services, although it has not been actively utilized properly by the workers to widen the KM practices. The CBE has also a library which serves the employees for referring some technical and business knowledge. As an employee who had worked in the CBE for nine years and an observer for this research, this researcher can say that

the organizational culture in the bank is not suitable for knowledge sharing and capturing activities. Most employees feel that it is not their job to be engaged in KM practices.

5.3 Analysis of interviews

Based on the information collected through a close-ended interviews and secondary sources such as documents and websites, the KM maturity level of CBE was assessed by evaluating whether or not a particular practice is being carried out. To qualify for a maturity level in key process areas, a unit must carry out all key practices of that level. For example, a unit that carried out the practices described in items PEO2a to PEO4a but not item PEO4b can be said to have attained maturity level 3 in people KPA, since it has not implemented all practices characterizing level 4.

The following table summarizes the data gathered using interviews. Since close-ended interviews were conducted, it was easier to summarize the data in the form of 'Y' representing the 'YES 'and 'N' representing the 'NO'. Uniformity of the answers gathered from the participants made the analysis part easier, and finding out at what level the bank is found in the G-KMMM was also very clear and non-complicated. The non-existence of a formal KM practices in CBE contributed a lot for making the data analysis part simpler and helped to develop a detailed KM Strategic framework from the scratch, without having to work too hard to differentiate what has already been done and not.

Table 5.1 Participants' response via close-ended interviews

People Maturity										
	Participants' response									
Pe-2a	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Pe-2b	N	N	N	Y	Y	N	N	N	N	N
Pe-2c	N	N	Y	N	N	Y	N	N	N	Y
Pe-3a	N	N	N	N	N	Y	N	Y	N	N
Pe-3b	N	N	N	N	N	N	N	N	N	N
Pe-3c	N	N	N	Y	N	N	N	Y	N	N
Pe-3d	N	N	N	N	N	N	N	N	N	N
Pe-3e	N	N	N	N	N	N	N	N	N	N
Pe-3f	N	N	N	N	N	N	N	N	N	N
Pe-3g	N	N	N	N	N	N	N	N	N	N
Pe-4a	N	N	N	N	N	N	N	N	N	N
Pe-4b	N	N	N	N	N	N	N	N	N	N
Pe-4c	N	N	N	N	N	N	N	N	N	N
Pe-4d	N	N	N	N	N	N	N	N	N	N

Pe-5	N	N	N	N	N	N	N	N	N	N
Process Maturity										
Pr-2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Pr-3a	N	N	N	N	Y	N	Y	N	N	N
Pr-3b	N	N	N	N	N	N	N	N	N	N
Pr-4a	N	N	N	N	N	N	N	N	N	N
Pr-4b	N	N	N	N	N	N	N	N	N	N
Pr-5	N	N	N	Y	N	Y	N	N	N	N
Technology Maturity										
Tech-2a	N	N	N	N	N	N	N	N	N	N
Tech-2b	Y	Y	N	Y	N	Y	N	Y	Y	Y
Tech-3	N	N	N	Y	N	Y	N	N	N	Y
Tech-4a	N	N	N	N	N	N	N	N	N	N
Tech-4b	N	N	Y	N	N	N	N	Y	N	N
Tech-5	N	N	N	N	N	Y	N	N	N	Y

Table 5.2 Summary of participants' responses to interviews in the G-KMMM

Maturity Level		General Description	Key Process Areas		
			People	**Process**	**Technology**
1	**Initial**	Little or no intention to formally manage organizational knowledge	Organization and its people are not aware of the need to formally manage its knowledge resources	No formal processes to capture, share and reuse organizational knowledge	No specific KM technology or infrastructure in place
2	**Aware**	Organization is aware of and has the intention to manage its organizational knowledge, but it might not know how to do so	Management is aware of the need for formal KM PE-2A YES PE-2B NO PE-2C NO	Knowledge indispensable for performing routine task is documented PR-2 YES	Pilot KM projects are initiated (not necessarily by management) TECH-2A NO TECH-2B YES
3	**Defined**	Organization has put in place a basic infrastructure to support KM	- Management is aware of its role in encouraging KM - Basic training on KM are provided (e.g., awareness courses) - Basic KM strategy is put in place - Individual KM roles are defined - Incentive systems are inPlace PE-3A NO PE-3B NO PE-3C NO PE-3D NO PE-3E NO PE-3F NO PE-3G NO	- Processes for content and information management is formalized - Metrics are used to measure the increase in productivity due to KM PR-3A NO PR-3B NO	- Basic KM Infrastructure in place (e.g., single point of access) - Some enterprise level KM projects are put in place TECH-3 NO

4	**Managed**	KM initiatives are well established in the organization	- Common strategy and standardized approaches towards KM - KM is incorporated into the overall organizational strategy - More advanced KM training - Organizational standards PE-4A NO PE-4B NO PE-4C NO PE-4D NO	Quantitative measurement of KM processes (i.e., use of metrics) PR-4A NO PR-4B NO	- Enterprise-wide KM systems are fully in place - Usage of KM systems is at a reasonable level - Seamless integration of technology with content architecture TECH-4A NO TECH-4B NO
5	**Optimizing**	- KM is deeply integrated into the organization and is continually improved upon - It is an automatic component in any organizational processes	Culture of sharing is Institutionalized PE-5 NO	- KM processes are constantly reviewed and improved upon - Existing KM processes can be easily adapted to meet new business requirements - KM procedures are an integral part of the Organization PR-5 NO	Existing KM infrastructure is continually improved upon TECH-5 NO

5.4 Results

5.4.1 *'People' Key Process Area*

It was observed that, in the assessment of **level-2**, '**Aware level'**, responses to questions **People-2a** and **People-2b**, showed that organizational knowledge is recognized as an important tool for the long term success of the bank but KM is not recognized as a key organizational competence. For question **people-2c,** of **level-2** it is observed that, the willingness of employees within the bank to give advice or help on request from anyone else is poor. So it can be said that, the management of the bank is not aware of the need for formal KM.

For questions **people-3a, people-3b, people-3c, people-3d, people-3e, people-3f and people-3g** of **level-3**, all the managers response were negative and from the responses it can be inferred that the bank management is not aware of its role in encouraging KM, basic trainings on KM are not

provided, Basic KM strategy and incentive systems are not in place, and Individual KM roles are not defined.

For questions **people-4a, people-4b, people-4c** and **people-4d** of **level-4** as well, negative responses were given by the respondents. And it is conceived that, there is no Common strategy and standardized approaches towards KM in the bank, no KM is incorporated into the overall organizational strategy, and no advanced KM trainings are given and no organizational standards for KM are set.

For **people-5, level-5** question about Institutionalizing culture of knowledge sharing, the managers responded that there are no KM initiatives to promote knowledge sharing culture.

In relation to the ***people*** KPA, the bank recognizes knowledge as an important resource that should be managed. There are no schedules for formal knowledge sharing sessions to facilitate knowledge transfer among employees. Staff members are not aware of the benefits of knowledge sharing and their willingness to give advice or help their colleagues was found to be poor. No KM vision is articulated and no KM training workshops are articulated by the bank management. Therefore it was concluded that the bank is at maturity level 1 for the people KPA (See table 4.1)

5.4.2 *'Process' Key Process Area*

For the question **process-2** of **level-2**, the managers responded that important Knowledge indispensable for performing routine task in the bank is documented. In their response to questions **process-3a** and **process-3b** of **level-3**, the managers say there are no formal processes for content and information management, and no Metrics are used to measure the increase in productivity due to KM.

For questions **process-4a** and **process-4b** of **level-4** as well, the respondents said that the bank uses no metrics to measure KM processes.

For question **process-5** of **level 5**, it is inferred from the manager's response that KM processes are not constantly reviewed and improved, existing KM processes cannot be easily adapted to meet new business requirements and KM procedures are not an integral part of the bank.

Pertaining to the ***process*** KPA, the bank has some processes for capturing, sharing, and reusing important routine documents but technologies for the specific purpose of KM are not used in the bank to support these processes formally. Therefore, it is suggested that the bank is at maturity level 1 for the process KPA (See table 4.1)

5.4.3 *'Technology' Key Process Area*

The responses for questions **Tech-2a** and **Tech-2b** of **level-2** showed that no Pilot KM projects are initiated by anyone in the bank.

For question **Tech-3** of **level-3** the response of participants helped to understand that there are no basic KM Infrastructures and enterprise level KM projects in place.

Answers for **Tech-4a** and **Tech-4b** of **level-4** questions showed that Enterprise-wide KM systems are not fully in place, Usage of KM systems are not at a reasonable level and there is no integration of technology with content architecture.

For the final question **Tech-5** of **level-5,** they responded that the existing systems are not continually improved upon continual investments.

With respect to the technology KPA, there is no KM system implemented to support KM activities, therefore administrative staff members and managers are not supported with such systems. Considering this, the bank deemed to be at maturity level 1 for the technology KPA (See table 4.1)

5.5 Discussion

Generally, according to the assessments made about the KM maturity level of CBE, using the G-KMMM, it has been found that the bank is at the first level, that is, **'initial'** maturity level. And from the G-KMMM, proposed by Pee & Kankanhalli (2009), it can be concluded that there is little or no intention of formally managing organizational knowledge in CBE.

Results of the close-ended interviews are discussed based on *people*, *process* and *technology* as suggested by the G-KMMM (see Table 3.1)

- In key process area of ***People***, organizational knowledge is recognized by the people as essential for the long-term success of the bank, but the awareness to manage the bank's knowledge resources was found to be weak.
- In key process area of ***Process***, knowledge indispensable for performing routine task in CBE is documented, but there is no formal process to capture, share and reuse the bank's knowledge.
- In the process area of ***Technology,*** there are technologies and infrastructures, like intranet portal and environments supporting virtual teamwork, that can be used to support KM, but there are no pilot projects that support KM.

Chapter Six

The Proposed Knowledge Management Strategy Framework

In *Chapter two*, literature review was conducted to get a general idea about Knowledge, Knowledge management, Knowledge management framework and Knowledge Management Strategy. Then in *Chapter Three*, a Theoretical Framework for Knowledge Management, developed by Sunassee and Sewry (2002), was used as a foundation, to develop a Knowledge Management strategy framework for the CBE. Two already developed KM strategies, *Revised Bank Knowledge Management and Development Strategy 2008–2012 by African development bank* and *Knowledge Management Strategy by (IFAD) International Fund of Agricultural Development*, were also used in the development of the proposed framework which is discussed in this chapter.

6.1 Introduction

Knowledge management has great importance for every organization. It can help the organization to make better decision making, better customer handling, faster response to key business issues, skill improvement, improve productivity, improve profit, improve innovation, improve cost reduction, new way of working, increased market share, additional business opportunities, improve new product development, and staff attraction.

Knowledge management is very important to the Commercial Bank of Ethiopia's mission and vision as it is the oldest and biggest bank in the country. The Bank should recognize the importance of generating, mobilizing, sharing and applying knowledge. This is even more important, given the unique position where the Bank can combine knowledge and financial resources towards developing innovative solutions to complex development challenges.

This strategy has been developed based up on mainly two sources which initiated it as a solution for the CBE to attain its objectives in this knowledge based world. These two sources are on job observation and interviews in the CBE management.

The CBE has some significant knowledge management activities which could be enhanced to a more reliable and convincing ones. These practices include giving training for new employees, periodic training for staffs as capacity building, putting into practice mentorship and preparing manuals for the work procedures. There is also a website where the CBE posts its information, a library and an Intranet portal dedicated for knowledge management services. These good practices could be enhanced by mainly by two main actions enabling the CBE website to supports knowledge in addition to its current service and strengthening the Intranet for serving knowledge management techniques. There are some obstacles identified in the organization for progress with knowledge management practices. These include the organizational structure and organizational cultures.

The CBE has some challenges in communication with its stakeholders, customers and other relevant organizations and institutions. The main knowledge needs of CBE encompass knowledge about the business, financial institutes, customers, about the developmental organizations and governmental sectors. Most of the knowledge resources in CBE are difficult to access because of lack of well established strategic knowledge organization and sharing mechanism.

The knowledge management, having a vision to be a timely and continuing solution for the best achievements of the CBE objectives, strives for the attainment of its objectives like to identify critical sources of knowledge, organize and make ease access to the knowledge resources, facilitate the smooth and fast knowledge transfer, acquire, capture and store knowledge, enhance knowledge creation and innovation in CBE for emergence of new business opportunities and solving of business challenges.

A KM strategy should have the following, elements knowledge management tools & techniques, people and cultural aspects, KM skills development, technology, leadership and governance, and promotion and measurement. Tools that assist with that innovation, creation of insights, and making sense of information include intranet (LAN & VPN), video conferencing, groupware and

Integrated Library Systems (ILSs) for their traditional type of library and collaborative technologies. Various creativity training options are available, or aspects of creativity are integrated like in the form of Brainstorming, annual meeting, After action review, case studies and review, recruitment, on the job training, communities of practice.

Imagining the situation if the CBE is not approving and adapting a knowledge management strategy for the best knowledge management practice in the bank, the CBE will be incapable of achieving its goals in today's highly competitive environment. It will be also difficult to see the CBE in this knowledge based economy of the world mainly because of the extremely high global and local market competitions.

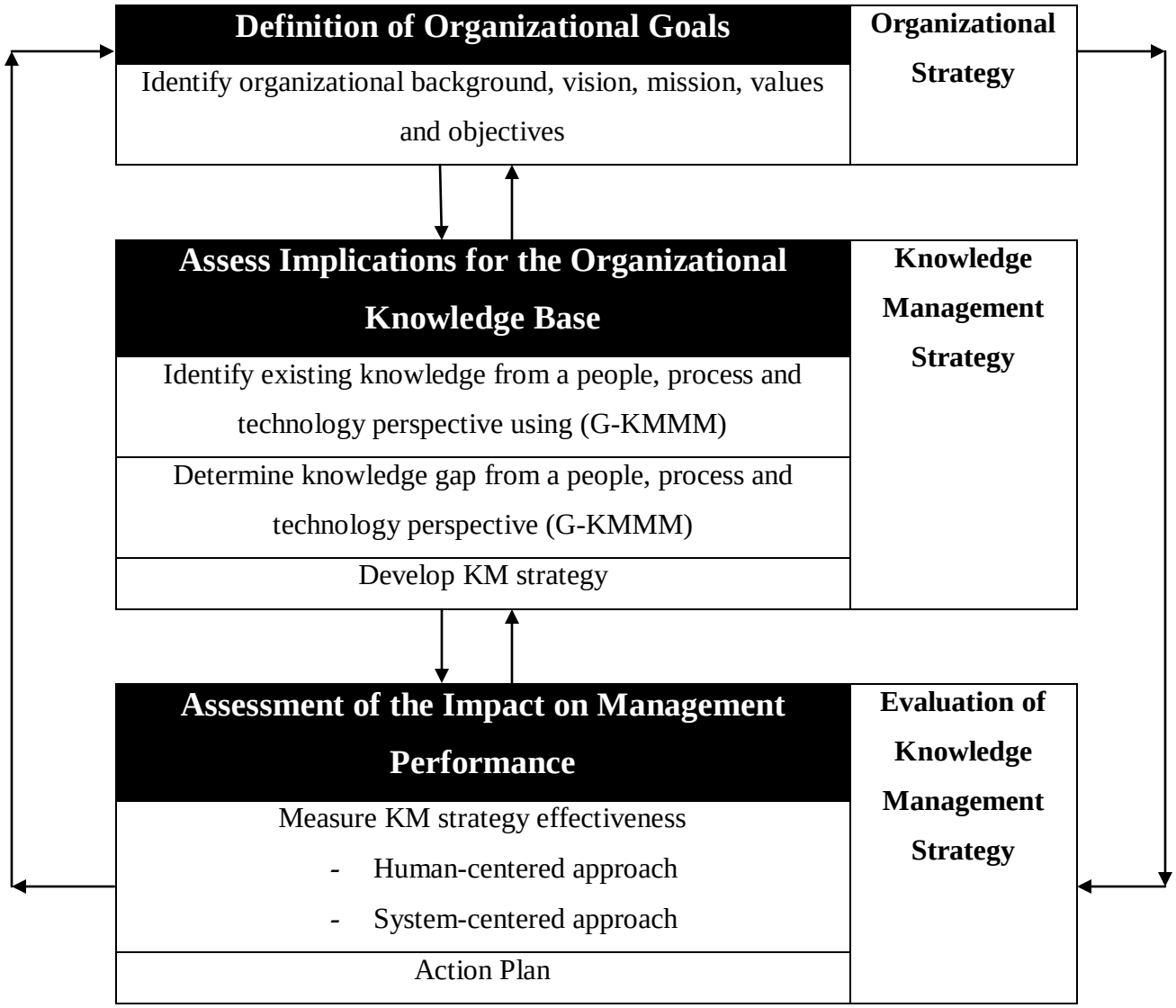


Figure: 6.1: The knowledge strategy framework

6.2 Company Profile

The Commercial Bank of Ethiopia was established in 1942 and legally began operation as a share company in 1963. In 1974, CBE merged with the privately owned Addis Ababa bank and since then it has been playing significant roles in the development of the country. The CBE, being a pioneer to introduce modern banking to Ethiopia, has now more than 1,160 branches stretched across the country. It is the leading African bank with asset of 384.6 billion birr as on June 30th 2016 and playing a significant role in the economic progress and development of the country. CBE is the first bank in Ethiopia to introduce ATM service for local users. Currently CBE has more than 13.3 million account holders and the number of mobile and internet banking users also reached more than 1,352,000 as of September 30th 2016. Active ATM card holders reached more than 3million. It has strong correspondent relationship with more than 50 renowned foreign banks and a SWIFT bilateral arrangement with more than 700 other banks around the world. It has a wide and rich capital base with more than 30,000 employees. CBE is the first bank to introduce Western Union Money Transfer Services in Ethiopia early 1990s and currently working with other 20 money transfer agents. The bank has opened four branches in southern Sudan and has been in business since June 2009 and has reliable and long-standing relationships with many internationally renowned banks throughout the world.

The vision statement of the bank is clearly red as “to become a world-class commercial bank by the year 2015”. And the bank’s mission is stated as “We are committed to best realize stakeholders' needs through enhanced financial intermediation globally and supporting national development priorities, by deploying highly motivated, skilled and disciplined employees as well as state-of-the-art technology. We strongly believe that winning the public confidence is the basis of our success”.

There are also core values used as operating principles by the bank to guide its conduct and relationship with its customers, partners, and shareholders. These core values with the voice of the bank are integrity, customer satisfaction, employees’ satisfaction, learning organization, teamwork and collaboration, public Trust, value for money, decentralization and corporate citizenship.

6.3 The Proposed KM Strategy seeks to achieve the following:

Establish and entrench a knowledge culture within the Bank

Steps will be taken to transform the Bank into an institution in which knowledge can be effectively produced and used to improve quality and achieve results on the ground. The Bank will encourage staff to use information technology to mainstream KM and development, such as creating web-based knowledge portals and using the intranet to capture and share tacit knowledge.

Enhance Operational Effectiveness

Bank operations will be strengthened by enhancing and implementing best management frame work that: (i) improves quality of service; (ii) measures results to ensure that Bank and financial policies, strategies and development programs are effective and informed by timely and reliable data; and (iii) improves project and program implementation. The KM Team of the Bank will work with each Bank Director's representatives teams to identify and define further relevant indicators for assessing Bank interventions during and after implementation and provide baseline data to inform the design, implementation, monitoring and evaluation of future operations.

Rationalize and expand external networks and partnerships through knowledge sharing.

Knowledge is the kind of asset that grows too fast when shared. Through partnerships and networks, the Bank will discover and incorporate new ideas and practices. Therefore, the Bank will support internal networks and strengthen partnerships with external organizations based on shared vision and value addition. The strategy expects existing partnerships to result in the production of an increased number of joint documents and events. The Bank will catalogue existing partnerships, develop a framework for assessing partnerships and create a database of external networks and partnerships.

6.4 Principles that guide the Bank's Knowledge Activities (Adopted from *Revised Bank Knowledge Management and Development Strategy by African development bank)*

Selectivity: Knowledge must give support for the Bank's strategic operational priorities and the development challenges facing its stakeholders. Selectivity ensures that knowledge activities serve the priorities of the Bank and the stakeholders.

Relevance: Knowledge must be responsive, policy-oriented and relevant, and inform decision making in financial institutions and Bank operations. Relevance ensures that knowledge activities focus on issues and challenges faced by the financial institutions.

Value addition: Knowledge must show innovation and add value to the Bank's work. Value addition ensures that research; statistical data and training are relevant for the Bank and enhance its operational effectiveness.

Partnerships and cost-effectiveness: Knowledge generation and dissemination must explore opportunities for synergy and partnerships; be cost-effective and useful; be shared and disseminated through existing institutions and frameworks; and facilitate monitoring, evaluation, and assessment of development impacts.

6.5 The Current KM Practice in CBE

According to preliminary interviews, document analysis, on-job observation and results from G-KMMM, there are some practices in the bank which are similar to KM practices. Most of these practices are KM activities that are weak and emerged from the traditional business management practices. The practice of preparation and creation of operational rules and regulations related to the business could be taken as knowledge discovery and it is the practice that has to be appreciated and enhanced. Though not well organized and not suitable for access or retrieval, Knowledge preserving or storing for reuse in the form of documents of rules and regulations of the organization, job description, mission, vision and objectives are prepared. There is a library for storing books for reuse and reference.

With regard to organizational learning or improving employee's knowledge in the bank, there is a practice of giving training for new employees. And experienced employees give formal training for inexperienced individuals.

The use of KM tools such as Internet for updating the employees' knowledge and for delivering of some documents to employees and concerned bodies and the exchange of outlook is in use. There are KM practices like, meetings, discussions and interviews in the bank during recruitments, but they are not well structured to capture and organize the knowledge acquired. These techniques are not practiced in such a way that they could have been had there been good KM practices in the bank to improve organizational success and make decisions better. The current trend simply follows the traditional business approach.

The above mentioned practices of the bank are promising though. They play a great role in knowledge capturing, storing and sharing which in turn contributes to the achievement of the organization objectives. These include taking the opportunity of the intranet, making it organized in a suitable format to support knowledge sharing and capturing by enabling like instant communication among staffs and different directorates. Again digitizing the library and making it accessible to the users highly enhances the knowledge resource sharing.

There are also barriers in performing and enhancing KM practices of the current system, including the way individuals consider knowledge, they take it as power and feel that it is not their obligation to be involved in KM practices and accordingly they restrict from sharing their knowledge to their colleagues. There is no organizational culture to reward or appreciate employees that are good KM practitioners. Another obstacle is the organizational structure, which is all about division of business activities and managements. There is an information system division but which is far from managing the knowledge and it is trying just on the management of information produced in the organization and automation of the records.

6.6 Stakeholders' Challenges and Knowledge Needs

The CBE cannot maintain and enhance its competitiveness without the cooperation of stakeholders like government, non-government and private sectors. It is not a commonplace in Ethiopia for organizations to work together to solve common problems and challenges in their operations so that it will enhance KM activities for better achievement of organizational goals.

Communication with research institutions, universities and other agents is also an issue of concern. The CBE has no well established communication with these authorities except that they get data and information from them for the sake of generating final reports, and in some cases, contribution on research output review that is unintentionally practiced to manage knowledge just to get their job done. Although this needs strong and continuous communication and collaboration, the bank usually engages in just on the spot communication. Therefore, there should be a continuous partnership with stakeholders to manage knowledge during every activity the bank is involved in.

Even if the most important knowledge for the bank comes from users, relevant authorities and technical know-how, depending on the type of work, employees also need knowledge about the business, the cases, the rules, the procedures and manuals, the government mission and directives, about external environment, the international monitory information, international banking standards and so on. The employees also need knowledge about how to perform their duties and responsibilities and how to create a good relationship with users and stakeholders so as to create, organize, preserve and build easy way of accessing or retrieving documents for better management of knowledge. Knowledge is essential for all directors and team leaders in their departments for minimizing uncertainties and introduces new practices, about the central management situations and decisions to align it with their judgments. They also need technical knowledge on how to increase the bank's performance and achieve its goals, as well as to give best service for users and how to create good relationships with stakeholders. The top and central managers need knowledge about international, national and regional business situations, stake holders and relevant authorities.

According to the assessment made regarding the quality and accessibility of knowledge resources within the CBE, it is identified that the knowledge in the minds of the technical workers or specialists are high quality and crucial but the accessibility is very low since it is not captured and codified to be shared within the bank. The knowledge in the documents, which are produced and distributed through different departments, are well prepared but not well organized to be easily accessed or retrieved by the knowledge seeker. Regarding knowledge sharing, employees have started using intranet but they do not usually use it for knowledge sharing among themselves. The reason is that, they are busy or do not think that it is their responsibility;

they think that KM is not important, but mostly it is lack of sufficient knowledge about the benefit of KM.

The library in the central office is accessible to the user, which facilitates knowledge distribution, but it is not supported by ICT tools so that it is difficult to preserve knowledge and also users cannot be able to access it online. Though it is not dynamic to support two way communications, the mission, visions, and objectives of the bank, annual reports and other electronic documents are accessible to all of the stakeholders through their website on the internet.

6.7 Overview of Knowledge Management Vision and Strategy

This KM strategy framework will help CBE implement KM practices and also has a vision to be a timely and continuing solution for the best achievements of the bank's objectives. The KM in CBE has a mission of:

- Identifying and discovering valuable knowledge in CBE.
- Organizing this knowledge for the best access and retrieval.
- Facilitating the knowledge sharing and transfer with in CBE.
- Storing knowledge for the reuse.
- Enhancing knowledge creation and innovation in the bank.
- Acquiring knowledge from different sources.

These missions are implemented by the proper and cost effective use of the different KM and IT tools. It is also by formal and coordinated adoption of the KM techniques. The KM in CBE has the following objectives:

- To identify critical sources of knowledge.
- To organize and make ease access to the knowledge resources.
- To facilitate the smooth and fast knowledge transfer within the CBE, and improve organizational learning.
- To acquire, capture and store knowledge for sustainable and continuous use.
- To enhance knowledge creation and innovation in the bank for emergence of new business opportunities in the country and solving of business challenges.

- To retain the experience and knowledge of employees who leave the bank due to different reasons.

6.8 Details of the Strategy

Any KM program must first lay out a strategy and objectives as to what the program is designed to do. The first step in setting a strategy is to define the problem that the program is to solve and address. The role KM process plays in banks is very important. The centrality of knowledge systems to development effectiveness comprised the theme of the World Bank's World Development Report of 1998/99. The main argument in that report was that the development of poorer countries necessitated assigning the highest priority to building "knowledge-based economies". The report recommended that developing countries should assign high priority to "knowledge strategies".

6.8.1 Why does Commercial Bank of Ethiopia need a knowledge management strategy?

The changing global context requires new approaches and new learning. Dramatic changes in the global economy present both new opportunities and new threats. Commercial Bank of Ethiopia deals with many types of knowledge. It should obtain and generate new knowledge in order to respond effectively to the rapid and often dramatic changes in the global economy.

This means that Commercial Bank of Ethiopia must become more agile and must improve its systems and institutional readiness for more continuous learning and knowledge sharing. Therefore, it is in the sense of improving its learning from development practice that Commercial Bank of Ethiopia will increasingly become a knowledge-based organization.
To achieve these objectives and to be able to track and measure its progress towards them, Commercial Bank of Ethiopia needs an overall guiding framework. That is the aim of this KM strategy.

6.8.2 General KM Strategic Goals and Objectives

The most important goal of the KM strategy is to enhance the development effectiveness of the Bank's operations and to establish the Bank as the world class commercial bank, just as stated in its vision.

6.8.2.1 Specific Knowledge management strategy objectives

Specific KM objectives include the following:

a) Enhancing the knowledge environment in the Bank;
b) Raising staff and management awareness of the role of KM in development;
c) Enhancing Bank staff information searching skills;
d) Developing a coherent system to access the Bank's knowledge and information sources;
e) Implementing collaborative networking applications as KM Solutions, such as communities of practice and an expertise-location knowledge base;
f) Coordinating Bank-wide production and dissemination of knowledge products;
g) Enhancing the capacity of the Knowledge & Virtual Resources Centre (KVRC);
h) Setting up and empowering knowledge centers in the regional and field offices;
i) Nominating KM focal persons in the operations departments;
j) Recruiting regional knowledge coordinators at the Regional branches of the Bank.

6.8.3 Knowledge Management Process

Once a general idea is developed about KM, a clearer approach and strategy can be developed. KM strategies, policies, standards, and tools will guide the Organization's efforts in developing, targeting, and providing information and creating knowledge with the end-user in mind. A KM strategy should have the following elements; KM tools & techniques, people and cultural aspects, KM skills development, technology, leadership and governance, communication, promoting and measurement.

Since technology is advancing and communication costs are dropping, knowledge transfer is getting cheaper every day. Due to this fact, the knowledge gap is narrower than ever. KM technologies are tools that assist people to create, find, share, and make sense of knowledge.

These tools include intranet, video conferencing, groupware and Integrated Library Systems (ILSs) for their traditional type of library and collaborative technologies.

People and culture are also important factors the knowledge framework should start with. It is the people who are responsible for identifying and implementing business initiatives. Whatever the nature of particular environment under consideration, a knowledge environment in general comprised of a range of enablers that affects KM processes.
This includes:

- ***People- behavior, attitudes, and skills***: people react instinctively to situations. They think through every decision faced in their daily lives. People skills also affect the company's capacity to undertake knowledge process.
- ***Culture- values, beliefs, and way of doing things****:* an organizational culture consists of the behavior and norms that flow from the shared attitudes, assumptions, values, and beliefs of the people in it. Culture influenced by leadership style, organizational history, incentives, attitudes, beliefs, dialogue and even dressing style that occurs in all parts of the organization.
- ***Incentives, motivation:*** applying effective incentive in many cases motivate people to act. The incentive and motivation can be in terms of payment or promotion.
- ***Organizational structure:*** the structure of an organization affects the flow of knowledge. Rigid hierarchical structures can hinder knowledge flows in the organization both horizontally and vertically. A well defined organizational structure can improve people's understanding about their own personal roles and objectives.

KM technologies include any tool that enables the company to create, store, disseminate, and reuse knowledge for their effectiveness. KM environment is significantly affected by the leadership style and behavior of leaders. The final and structured document of KM strategy of the bank needs to be advertised and promoted to be used by all directorates and sections of organization. The promotion and communication of KM strategy will be carried out through different types of mechanism like:

- Release on the organizations intranet/portal
- Workshop

- Publication like brochures and pamphlets

6.8.3.1 Knowledge Management Strategy Components

Key to success in KM is to ensure that all aspects of it are built on and tightly embedded in an organization's work processes and products.

These strategic components are presented as follows:

a) Strengthen the Generation of Knowledge
b) Strengthening Knowledge-Sharing and learning Processes
c) Equipping Commercial Bank of Ethiopia with a More Supportive Knowledge-Sharing and Learning Infrastructure
d) Fostering Leverage of Knowledge through Partnerships
e) Promoting a Supportive Knowledge Management Culture
f) Enhance the Application of Knowledge

a) Strengthen the Generation of Knowledge

Effective operations in the Bank depend upon the generation of research and data capture. To provide a comprehensive knowledge basis for development effectiveness, the KM strategy recommends the continued production of knowledge materials such as publications, policy and research studies, economic research papers and journals.

b) Strengthen Knowledge-Sharing and Learning Processes

Within the bank at the directorate level, three major processes will be strengthened or scaled up to improve impact through knowledge-sharing and learning:

i. The project cycle will be used to integrate KM throughout the bank
ii. A knowledge-based policy development process will be tested; and
iii. Specific local learning activities will be scaled up.

Processes include researches, workshops, field visits and study tours. It will also comprise Analysts, decision-makers, stakeholder organizations, researchers, consultants, the private sector and other agencies.

Commercial Bank of Ethiopia will also develop a coherent approach to publications, especially at corporate level. A simple typology of knowledge papers will be prepared outlining the various publication lines and their processing and dissemination status. Learning notes will also be regularly updated and published. There will be joint publications with knowledge centers and other partner organizations.

c) Equipping Commercial Bank of Ethiopia with a more supportive knowledge-sharing and learning infrastructure

The CBE should put in place a more supportive infrastructure to achieve its KM objectives in three areas:

i. A stronger information technology platform including a well managed Portal;

ii. Better information management;

iii. Specific KM tools for collaboration

iv. Recruit Knowledge management professionals.

Commercial Bank of Ethiopia will develop a stronger information technology platform to enable better information management, communication and knowledge-sharing. It will also build its existing Web-based information, communication and KM tools (Intranet, Internet).

This platform will consist of an integrated set of knowledge-sharing and collaboration tools coupled with open, standards-based, Web content management and portal technology. The platform's knowledge-sharing component will use individuals and shared repositories to create Web-enabled shared workspaces across Commercial Bank of Ethiopia's Intranet and make them available to the bank users irrespective of location. The collaboration component will allow for distributed editing and annotation, revision management, instant messaging, online discussion, Web conferencing and other collaboration services that effectively enable community work. The platform's content management component will allow the bank to deliver content across websites dynamically.

The Portal technology will permit controlled and dynamic access to source information maintained in operational databases and to documents and institutional records stored in shared corporate repositories. This stronger platform will provide the necessary foundation for the cost-

effective implementation of virtual workspaces and collaboration networks that bring internal and external communities together into a single virtual Commercial Bank of Ethiopia. The bank will also further develop and implement common information management standards, rules, procedures and tools for the collection, control, reuse and sharing of the data and information contained in the collective memory of the CBE. The aim will be to increase organizational efficiency and document business processes, provide evidence of activity and precedents for action, support program evaluations, inform policymaking and ensure accountability.

These processes will help the CBE to be equipped with specific KM tools for collaboration, knowledge-sharing and learning, and knowledge-capturing and storing.

d) Leverage knowledge through partnerships

Building on its many existing partnerships, the bank will adopt a much more focused and selective approach to partnerships in KM. With a view to systematic learning, CBE will begin by developing different strategic partnerships in KM with selected partners.

The partnerships will specify related areas under consideration, which should be aligned with the knowledge issues CBE gives priority to as derived from the strategic framework and corporate planning processes. They will be based on a clear results framework outlining the outcomes of the collaboration. Research activities and learning events will be jointly planned. The strategic partnerships should be carefully linked to and supportive of the other CBE KM processes. While the strategic partnerships will make use of CBE's knowledge assets, their outcomes should be shared and disseminated through the bank's other KM processes.

e) Promoting a Supportive knowledge-sharing and learning culture

CBE will upgrade its human resource management and policy instruments in order to establish a stronger knowledge-sharing and learning culture throughout the organization. A wider initiative promoting cultural change within CBE, soon to be launched under the Action Plan, will provide a coherent framework for addressing the bank's structural and organizational factors that are constraining knowledge-sharing and learning. Institutional culture change of this type can only occur with strong and visible commitment from the CBE's leadership to the values of mutual respect, transparency and accountability.

Accordingly, support for appropriate management training will be integral to CBE's KM strategy. This strategy will focus on the implementation of shorter-term, pragmatic and concrete measures that will contribute significantly to positive cultural change.

These include:

- Proper resourcing of initiatives breaks the attitude found in the CBE that departments or groups do not want to share information or knowledge with other individuals within the bank. The bank's leadership, as a visible sign of commitment, will ensure that the key knowledge-sharing and learning processes that foster collaborative action, such as the regional and thematic networks, are implemented and adequately resourced.
- The CBE job descriptions will include learning and knowledge-sharing objectives and activities. Its evaluation system will specify measures of innovation, learning and knowledge-sharing achievements.
- Human resource processes will be updated, to make contribution to knowledge-sharing and learning an integral part of them. Reform of the incentive system through the Balanced score card (BSC) will be carried out as a high priority to ensure that staff contributions to knowledge-sharing and learning are fully recognized. Collective incentive mechanisms will be explored to provide for teamwork and collaborative action. The recruitment process will also be reviewed to include learning and knowledge-sharing competencies, experience, awareness and commitment.
- CBE will provide training to ensure that staff at all levels are familiar with knowledge-sharing and learning processes and tools, and have the appropriate behaviors and attitudes. Examples of areas that will be addressed as a priority will be the specific knowledge-sharing and learning tools, and the use of the information technology platform.
- Implementing a set of visible "quick wins" to provide space for knowledge-sharing and learning. These may include: creating a rotational program among units and departments for staff to further their creativity and skills; improving communication of the bank's business to non-operational staff and expanding the staff field immersion program as a means to improving learning and knowledge-sharing; developing an induction curriculum, training and coaching program to be offered to newcomers systematically;

implementing an exit debriefing for staff to capture tacit knowledge; institutionalizing special awards or rewards for those who make a distinctive contribution to knowledge and innovation in CBE; launching a scholarship and sabbatical incentive scheme for staff to increase their knowledge on key development issues; and launching a visiting scholar or scientist program that would bring prominent figures in the development world to the bank.

f) Enhance the Application of Knowledge

Assessing the effectiveness of the Bank's development work requires measuring the results of that work. This results measurement system ensures that Bank interventions benefit from reliable and timely data. It will also streamline the reporting of development results within the context of Results Measurement Framework. CBE will establish the framework for a more systematic and pragmatic approach to assessing the likely or expected impact of Bank products.

6.8.4 Expected Outputs

Considering the expected output of this KM strategy, it is important to bear in mind that KM is a means by which CBE achieves its goal but not an end in itself. The objective, of course, is to equip CBE to make its vision, of becoming a world class commercial bank, a reality. The direct outputs of a successful knowledge strategy will be better systems, platforms, instruments and tools (knowledge) to achieve this. After implementing this KM strategy, the values and contributions of its outputs cannot be measured within a short period of time; instead, the incremental benefits in relevance, efficiency, effectiveness and sustainability will be apparent over an extended period of time.

Given enough time for its realization, these are the expected outputs of the KM strategy:

A. Through the implementation of the KM strategy, it is expected that a knowledge culture will be established and embedded within the Bank. Such a culture will result in operational effectiveness as knowledge is effectively applied. Moreover, the KM strategy supports Bank operations by enhancing and implementing the management framework. This includes measurement of results to ensure that the bank and its policies, strategies, and development programs are effective and informed by timely and reliable data; and capacity building to ensure improved project and program implementation.

B. Rationalize and expand external networks and partnerships through knowledge sharing. Knowledge is one of the few assets that grow almost exponentially when shared. Through partnerships and networks, the Bank will discover and incorporate new ideas on development policy and practice. Therefore, the Bank will support internal networks and strengthen partnerships with external organizations based on shared vision and value addition. The strategy expects existing partnerships to result in the production of an increased number of joint documents and events. The Bank will catalogue existing partnerships, develop a framework for assessing partnerships and create a database of external networks and partnerships.

6.8.5 The Expected Costs and Challenges

6.8.5.1 Cost and Financing Implications

Most of the above measures involve using existing resources in smarter and more strategic ways, or exploiting opportunities offered by investments that Commercial Bank of Ethiopia will have to make anyway, i.e. in upgrading its information technology platform or strengthening its information management systems. Therefore, the incremental administrative costs required for implementing this strategy will be modest.

There will, however, be additional costs for activities such as the cycle of seminars, training, and some investments highly likely to profit in the short term. In a purely illustrative figure, these costs, to be financed under the administrative budget, could amount to up to XXXXX birr over the 2018-2023 period. Decisions on what incremental costs will be incurred will depend on the success of initial investments, on the availability of resources within the overall Action Plan, and on administrative cost ceilings. This will apply particularly to the nature and pace of the evolution of country's economy.

6.8.5.2 Implementation Challenges of CBE KM Strategy

Commercial Bank of Ethiopia deals with different kinds of knowledge, from operations, customers, partner organizations and scholars, practitioners and international organizations involved in the country's development. For the most part, however, this knowledge remains 'tacit'. It is mainly held by individual members of Commercial Bank of Ethiopia staff. As a result, acquisition and exchange of knowledge are disintegrated. The CBE knowledge is

distributed among individuals, projects, regions; and among partner institutions and organizations and instruments that are not well connected to each other. This means that it is difficult for others, whether within or outside the organization, to locate and access CBE's learning in cost-effective ways.

6.8.6 Roles and Responsibilities

The implementation of the KM strategy will require strong and visible leadership from the Governor of CBE and the senior management team, and the alignment of incentives to ensure commitment and collaboration across the bank. It will also require strong partnerships with the government, finical organizations, the private sector, knowledge centers, and with regional and global partners. Many of the activities imagined will strengthen these partnerships. The question is whether a designated knowledge manager should be engaged to guide, coach, supervise, evaluate and report on implementation of this strategy.

According to James, D. et al. (2001), the position of KM officer is a recent phenomenon in companies. The authors argue that the effectiveness of chief knowledge officers may depend on their coming to the positions from within the organization or having an intimate knowledge of that organization. The same study also cautions that there is a risk that knowledge managers can become persuaders. It states: "KM can be interpreted as a religion. It has its well-known disciples and followers. It has recognized dogma not the least of which are the competing mantras of "KM as technology" versus "KM as people". Because of its newness, most knowledge managers are "spreading the gospel" and spending inordinate amounts of time and energy on the communication/education agendas. KM is a risk with a huge payoff – if it becomes widely accepted, early advocates will become legendary. If it becomes little more than a fad, these same advocates will be soon forgotten."

Based on the findings of James, D. et al. (2001), this study suggest a low probability of significant value added to CBE if it were to recruit a knowledge manager from outside. But it is suggested that clarity is needed with regard to who will be accountable for the functions listed above. The governor will therefore designate a member of his senior management team to have overall responsibility for monitoring and overseeing the implementation of this strategy.

6.8.7 Articulation between knowledge management and other key institutional processes innovation

KM and institutional process innovation are integrated and inseparable components of a well-functioning KM system. Knowledge-sharing processes are vehicles for replicating and scaling up innovative solutions and integrating solutions in policies and guidelines. Under this strategy, KM processes will contribute to making current knowledge about innovations available to innovators and disseminating essential new knowledge.

Corporate policies and guidance is needed to implement KM in the bank as a whole. Policy involves a higher level of knowledge distillation and use. Policymaking should unfold in a structured and collective process of knowledge development and exchange, identifying what is important and what works. This knowledge strategy aims to facilitate linkages between CBE's learning and knowledge-sharing processes and its policy development process.

6.8.8 How to measure KM strategy effectiveness

Finally, measurement of the KM strategy will be conducted by the following two approaches:

A. ***Human-centered approach:*** this type of measurement is applied mainly on the users (enablers) of the KM service. There are some basic measurement techniques for this approach like, Job satisfaction and feedback from system user/enablers.
B. ***System-centered approach:*** this approach mainly focuses on the system itself. For instance, handling of work load, response time for a given query and the like are measured.

6.9 Action Plan

Major Activities	Specific activities	Deliverables	Tools	Needed resources	Beneficiaries	Budget in Birr
1. create technology based knowledge sharing system	-identify knowledge sources -classify their expertise -collect users expectations -identify users need -select appropriate tools for knowledge sharing - Review and update the existing Website - Ontology mapping - Launch electronic discussion forum, blogs and information lists to encompass problems	-knowledge groups - technology advancements - easy flow of knowledge -organization of knowledge	-Intranet - group ware -digital repository	-Intranet -network devises -software s that support knowledge sharing tools	-staffs -users -stakeholders	XXXXXX
2. develop a central knowledgebase (knowledge preservation)	-identify knowledge needs -select expertise -collect knowledge from different experts - select appropriate knowledge representation tool -represent the knowledge -make available the knowledge base - conduct exit-interview	-knowledge base - fast decision making - user satisfaction -trend analysis -capture tacit knowledge	-appropriate knowledge representation tool -digitalization tools. Like GreenStone, ABCD -Expert system -blog, discussion forum	-server computer -knowledge management expert -knowledge database software	-stakeholders -staff -users	XXXXX
3. facilitate knowledge sharing	- prepare monthly workshops -conducting on the job	-smooth knowledge sharing system - common understanding	- communication tools like e-	- meeting rooms -visual aids	-Staff -users -stakeholders	

	training -introduce exit-interview -prepare weekly meetings - Identification of skilled individuals - creating partnership with other organizations - pre and post action review	- create good work environment	mail, groupware, discussion room and facility	-subject matter specialist		
4. organizing knowledge	- Identify business processes -identify key knowledge sources -establish guide lines - organize organizational explicit knowledge -create knowledge hierarchy - develop KM policy	-clear organizational knowledge map - Guidelines for capturing, acquiring, sharing and usage knowledge - KM policy	- KM policy	-knowledge management professional - Information Architect	- Staff -users -stakeholders	XXXXXX
5. recruitment of knowledge manager	-announcement -registration, screening and selection -recruitment	-planed and facilitated knowledge management process.	- interview -exam	-budget -office and office materials	-staff	

Chapter Seven

Conclusions and Recommendations

7.1 Conclusions

The basic premise of this research was to develop and implement KM strategy framework for CBE. And the first step in the process was to determine the bank's KM current status. For the purpose of assessment, this study uses the G-KMMM by Pee & Kankanhalli as a tool to measure the KM maturity level of the bank. By doing so it evaluates the KM activities already in place to improve their internal functions, processes, and operations as well as external strategic interventions. The findings shed light on how the proposed KM strategy framework should be developed to improve performance for better results in CBE by examining the synergies between people, processes and technology.

Having this in mind, the study combined the KM and KM maturity literature to have a clear concept about readiness, and according to literature KM readiness was found to be complex that it is influenced by individuals, the organization, the KM initiatives and the process.

G-KMMM depends on three key performance indicators, people, process and technology. Each pillar is described by a set of characteristics that explain specific practices that, when employed together, can help organizations achieve the goals of the particular maturity level they most likely resemble. The G-KMMM has five maturity levels that are measured against the key performance indicators namely, initial:- where little or no intention of KM is exhibited, aware:- Organization is aware of and has the intention to manage its organizational knowledge, but it might not know how to do so, defined:- basic infrastructure is put in place to support KM, managed:- KM initiatives are well established in the organization and optimized:- where KM is adequately integrated into organizational processes.

After the data collected using close-ended interviews were analyzed, the bank was found to be on the initial level of the G-KMMM. And that helped to develop the KM strategy framework from

the scratch. Besides that, by combining results from the G-KMMM, preliminary interviews, documents analysis and job observations, the following major findings are summarized about the present KM practices of the bank:

a) The bank and its employees are not aware of the importance of having a formal management of knowledge.
b) There is no formal process in the bank to create, capture, share and store organizational knowledge.
c) There is no technology or infrastructure specifically assigned to support KM.
d) No intentions were witnessed in the bank to formally manage knowledge.
e) There are some practices in the bank which are similar to KM practices but Most of these practices are KM activities that are weak and emerged from the traditional business management practices.
f) The practice of preparation and creation of operational rules and regulations related to the business could be taken as knowledge discovery and it is the practice that has to be appreciated and enhanced.
g) Though not well organized and not suitable for access or retrieval, Knowledge preserving or storing for reuse in the form of documents of rules and regulations of the organization, job description, mission, vision and objectives are prepared.
h) With regard to organizational learning or improving employee's knowledge in the bank, there is a practice of giving training for new employees.
i) There are KM practices like, meetings, discussions and interviews in the bank during recruitments, but they are not well structured to capture and organize the knowledge acquired.

7.2 Recommendations

To create knowledge intensive organization, CBE is recommended to give due attention to the following important points:

a) Careful attention and institutional leadership are required to ensure that KM initiatives are embedded in the organization's work processes and its main delivery instruments.

b) A carefully constructed and valued inventory of knowledge assets is essential for improving an institution's capabilities and performance in KM, and this must be the starting point for a KM strategy.
c) An institutional culture of learning and sharing knowledge requires appropriate human resource policies and practices, including incentives.
d) The roles, responsibilities, competencies and incentives to perform the KM processes and practices need clear, careful and consistent attention and institutional support.
e) The management should design a policy regarding the knowledge management practices.
f) The management should assess the organization's strategy and vision regarding KM.
g) The top management should allocate specific budget for knowledge management and prepare periodic plan to acquire, organize and share knowledge in the bank.
h) The bank leadership should commit itself to KM and ensure focus, sound management and adequate resources for it.
i) Mangers should regularly review progress and take remedial action.
j) A defined team should be assigned by senior management to create the policies for people practices within the organization.

It is clear from what has been discussed and developed that Commercial Bank of Ethiopia must improve its capabilities for learning and sharing knowledge in order to achieve its larger goal of development effectiveness.

7.3 Recommendation for Future Research

Since the only people participated in this study are branch managers for the purpose of developing a KM strategy framework, future studies can go deeper and participate employees and managers from different departments. They can also use in-depth interviews and questionnaires as a data collection instrument to make a comprehensive assessment of the KM practices and develop a tailored KM strategy that fits the KM situation of the organization under study.

Other researches in the future can use the knowledge management maturity model (KMMM), the KM assessment instrument used in this study, to measure the KM maturity level of the

organizations they study. Organizations can also use this instrument as a self assessment tool to know where they are in managing their knowledge.

REFERENCES

Abdullah, R., Mohd H. Selamat, Shamsul Sahibudin & Rose A. Alias. 2005. 'A framework for knowledge management system implementation in collaborative environment for higher learning institution'. *Journal of Knowledge Management Practice* 8, 1: 281

Abelland, A. and Oxbrow, N. (2001) 'Competing with Knowl- edge,' Library Association Publishing, London.

Ackerman, M. Pipek,V. and Wulf,V. (2003). 'Sharing Expertise: Beyond Knowledge Management', *England, London, Massachusetts, Cambridge, the MIT Press.*

Adenfelt, M. and Lagerstro, K. (2005) 'Enabling Knowledge Creation and Sharing in Transnational Projects', *Interna- tional Journal of Project Management*, Vol. 24, No. 3, 2005, pp. 191-198.

Adenfelt, M. and Lagerstro, K., (2005). 'Enabling Knowledge Creation and Sharing in Transnational Projects,' *Interna- tional Journal of Project Management*, Vol. 24, No. 3, pp. 191-198.

Akehurst, Rueda-Armengot, Vivas Lo´pez and Marque´s (2011). 'Ontological supports of knowledge: Knowledge Creation and Analytical Knowledge', *journal of Management Decision* Vol. 49 No. 2, pp. 183-194, Emerald Group Publishing Limited.

Alan, F., (2011). 'Knowledge Acquisition', *A Knowledge Management Resource Website.*

Alavi, M. & Leidner, D. E. (2001). 'Review: Knowledge management and knowledge management systems: Conceptual foundations and research issues'. *MIS Quarterly* 25(1), 107-136.

Alavi, M. and Dorothy E. Leidner. (1999). 'Knowledge management systems: Issues, challenges, and benefits'. *Communications of AIS* 1, 7:1-37.

Alavi, M. and Leidner, D. E., (2001). Review: Knowledge Man- agement and Knowledge Management Systems: Concep- tual Foundations and Research Issues,' *MIS Quarterly*, Vol. 25, No. 1, pp. 107-136.

Ali, H. & Ahmed, N. (2006). 'Knowledge management in Malaysian banks: A new paradigm', *Journal of Knowledge Management Practice,* vol. 7, no. 3.

Alkhaldi, F. M. (2003). 'An integration of information technology, culture of knowledge transfer and innovative work environment in support of organizational knowledge creation activities'. *Unpublished PhD, University of Huddersfield, UK.*

Alrawi and S. Elkhatib, (2009). 'Knowledge management practices in the banking industry: Present and future state - Case study,' *Journal of Knowledge Management Practice*, 10(4).

Andersson, T. and Westterlind, T. (1999). 'Sharing Knowledge over Company Borders Managing Knowledge in Key Customer Relations at ABB Sweden,' Master's Thesis, Linköpings University, Linköpings.

Andrews, K. R., (1971) 'The Concept of Corporate Strategy,' *(Homewood, IL: Dow-Jones Irwin*)

Arthur A., (1996) 'LLP. World Bank Knowledge Management Concept Paper: A Practical Approach'. *Circa*.

Babbie, E and Mouton, J. (2001). 'The practice of social research. *South African. Cape Town: Oxford University Press Southern Africa.*

Babbie, E. (2010). 'The practice of social research.' *12thEdition. Southbank, Victoria: Wadsworth/Thompson.*

Bali (2005). 'Clinical Knowledge management': *Opportunities and Challenges, Idea Group Publishing.* United Kingdom.

Barachini, F. (2009). 'Cultural and social issues for knowledge sharing', *Journal of Knowledge Management,* vol. 13, no. 1, pp. 98-110.

Barney, J. B., 'The Resource-based Theory of the Firm', *Organization Science,* Vol. 7, No. 5, September-October, 1996, pp. 469-476.

Battams, R. (2002), 'Knowledge management strategy', *Aston Business School. MBA Thesis.* Aston University, Birmingham.

Beijerse, R.P. (1999). 'Questions in knowledge management: defining and conceptualizing a phenomenon'. *Journal of Knowledge Management,* vol. 3, no. 2, 94-109.

Bender S. and A. Fish. (2000). 'The Transfer of Knowledge and the Retention of Expertise: The Continuing Need for Global Assignments'. *Journal of Knowledge Management,* 4 (2):125 137.

Binney, D. (2001), 'The knowledge management spectrum – understanding the KM landscape', *Journal of Knowledge Management, Vol*. 5 No. 1, pp. 33-42.

Bollinger, A. and Smith, R., (2001). 'Managing Organizational Knowledge as a Strategic Asset', *Journal of Knowledge Management*, Vol. 5, No. 1, 2001, pp. 8 – 18.

Bontis, N. (2003), 'The Knowledge Toolbox: A Review of the Tools Available To Measure and Manage Intangible Resources', *European Management Journal*, Vol. 17, No. 4.

Bontis, N., (2001). 'Managing Organizational Knowledge by Diagnosing Intellectual Capital: Framing and Advancing the State of the Field', *USA, IGI Publishing Hershey*, 2001, pp. 267-297.

Brand, A. (1998). 'Knowledge Management and Innovation at 3M,' *Journal of Knowledge Management*, Vol. 2, No. 1, pp. 17-22.

Bryman, A. (2006). 'Integrating quantitative and qualitative research: how is it done?' *Qualitative Research*, 6(1): 97-113.

Bryman, A., Bell, E., (2011). 'Business research Methods'. Oxford: Oxford Univ. Press, 2011.

Calabrese, F.A. & Remshard, J. (2006). 'Knowledge organization in the twenty-first century: A suggested systems approach to a KM solution for improving an internet bank's customer response', *The Journal of Information and Knowledge Management systems,* vol. 36, no. 2, pp. 125-135.

Carrillo, PM, Robinson, HS, Anumba, CJ & Al-Ghassani, AM (2003), 'IMPaKT: a framework for linking Knowledge Management to business performance', *Electronic Journal of Knowledge Management*, Vol. 1, Issue 1, pp. 1-12.

Chase, R., (1997). 'The knowledge based organization: an international survey'. *Journal of Knowledge Management*, 1(1).

Chawla, D., & Joshi, H. (2010). 'Knowledge management practices in Indian industries – a comparative study' *Journal of Knowledge Management*, 14(5), pp. 708-725

Chih-Ping, W., Jen-Hwa, H., and Hung-Huang, C.(2002). 'Design and evaluation of a knowledge management system', *Software Journal*, 19(3), 56-59.

Choi, B. & Lee, H. (2003), 'An empirical investigation of KM styles and their effect on corporate performance', *Information & Management*, vol. 40, pp. 403-417.

Chong, S. C. and Choi, Y. S. (2005). 'Critical Factors in the Suc- cessful Implementation of Knowledge Management,' www.tlainc.com

Clarke, P. (1997), 'The balanced scorecard', *Accountancy Ireland*, Vol. 29 No. 3, pp. 25-6.

Cohen, D. & Laporte, B. (2004). 'The evolution of the knowledge bank,' *KM magazine. www.kmmagazine.com.*

Cohen, W. and Leventhal, D., (1990). 'Absorptive Capacity: A New Perspective on Learning and Innovation,' *Administrative Science Quarterly, Vol. 35, pp 128-152.*

Collis, D. and Rukstad, M., (2008). 'Can you say what your strategy is?,' *Harvard Business Review, April edition, 63-73.*

Cong, X. & Pandya, K., (2003). 'Issues of KM in the public sector', *Electronic Journal of Knowledge Management 1(2), 25–33.*

Connor, K. R. (1991). 'A Historical Comparison of Resource-based Theory and Five Schools of Thought Within Industrial Organization Economics: Do we Have a New Theory of the Firm?', *Journal of Management*, Vol. 17, 1991, pp. 121-154.

Creswell, J.W. (1994). 'Research design: qualitative and quantitative approaches.' *Thousand Oaks, CA: Sage.*

Creswell, J.W. (2007). 'Qualitative inquiry and research design: choosing among five approaches', 3rd Edition, Thousand Oaks, CA: Sage.

Cross, R. and Weller, S., (2001) 'Winning through Knowledge (Knowledge Management in Banks),' Financial World, 19, UK

Cunningham, J.B. (1993). 'Action research and organizational development'. *London: Praeger.*

Dalkir, K. (2005) Knowledge management in theory and practice. Boston: Elsevier.

Davenport, T. De Long, D. and Beers, M. (1998). 'Successful Knowledge Management Projects,' *Sloan Management Review*, Vol. 39, No. 2, pp. 43-57.

Davenport, T. H. and Prusak, L. (1998). 'Working knowledge: How organizations manage what they know', Boston, MA: Harvard Business School Press.

Davenport, T. H. and Prusak, L. (2000). "Working Knowledge: How Organizations Manage What they Know," Harvard Business School Press.

Davenport, Thomas H. and Laurence Prusak. (1998). 'Working Knowledge: How Organizations Manage What They Know'**,** *Boston: Harvard Business School Press.*

Denzin, N.K., and Lincoln, Y.S. (1994). 'Handbook of qualitative research.' *London: Sage.*

DeSanctis G., Poole M.S. (1994). 'Capturing the Complexity in Advanced Technology Use: Adaptive Structure Theory', *Organizational Science*, 5(2); pp. 121-147.

Desouza, K. C. (2011). 'An introduction to knowledge management,' *Knowledge Management: An Introduction (pp. 3-34). New York: NY: Neal-Schuman Publishers, Inc.*

Dewah, P. (2011). 'Knowledge retention strategies in selected southern African public broadcasting corporations.' *University of Fort Hare.*

DiGiacomo, J., (2003). 'Implementing knowledge management as a strategic initiative'. Naval Postgraduate school, Master thesis.

Dr Brizga, S., & Geraghty., P., (2011). ' Strategic Framework for Integrated Natural Resource Knowledge Management'. *Victorian Catchment Management council*

Drew, S., (1999). 'Building Knowledge Management into Strategy: Making Sense of a New Perspective,' *Long Range Planning,* Vol. 32, No. 1, pp. 130 to 136.

Drucker, P. (1988). 'The coming of the New Organization,' *Harvard Business Review, 45–53.*

Du Plessis, M. (2007). 'Knowledge management and what makes complex implementation successful?' *Journal of Knowledge Management*, 11(2), 91-101.

Du Plooy, G.M. (2001.) 'Communication research: techniques, methods and applications, Lansdowne:' *Juta.*

Economic and Social For Western Asia, (2003). 'Knowledge Management Methodology: An Empirical Approach in Core Sectors in Escwa Member Countries, Economic and Social For Western Asia,' United Nations, New York.

Ehms, K. & Langen, M. (2002). 'Holistic development of knowledge management withKMMM.'*http://www.providersedge.com/docs/km_articles/Holistic_Development_of_KM_with_KMMM.pdf*

Epetimehin, F. M. and Ekundayo, O. (2011). 'Organisational knowledge management: survival strategy for Nigeria insurance industry,' *Interdisciplinary Review of Economics and Management, 1(2), 9-15.*

Fade, O., Adegbuyi, A., Oke, A. O., and Ajagbe, M. A., (2015). 'Review of Organizational Strategy and Structure', *International Conference of African Development Issues (CU-ICADI) 2015: Social and Economic Models for Development Track.*

Filemon A. and Uriarte Jr. (2008). 'Introduction to Knowledge Management.' *Jakarta, Indonesia: Published by the Asean Foundation.*

Filemon A. and Uriarte Jr. (2008). 'Introduction to Knowledge Management.' *Jakarta, Indonesia: Published by the Asian Foundation.*

Forcadell, F.J. and Guadamillas F., (2002) 'A Case Study on the Implementation of a Knowledge Management Strategy Oriented to Innovation,' *Knowledge and Process Man- agement*, Vol. 9, No. 3, pp. 162-171.

Gallager, S. & Hazlett, S. (2004). 'Using the knowledge management maturity model as an evaluation tool.' *http://s.gallagher@qub.ac.uk*

Galve, M. C., (2009). *'A systematic framework to improve knowledge management through information technology,' A Thesis presented to the Faculty of the Graduate School, University of Missouri-Columbia.*

Gerring, J. & McDermott, R. (2007) 'An Experimental Template for Case Study Research', *American Journal of Political Science, 51 (3) 688-701.*

Gold, A.H., A. Malhotra, & A.H. Segars, 'Knowledge Management: An Organizational Capabilities Perspective,'. *Journal of Management Information Systems*, Volume 18, Number 1, pp. 185-214, 2001.

Gold, A.H., Malhotra, A., & Segars, A.H. (2001). 'Knowledge management: An organizational capabilities perspective.' *Journal of Management Information Systems, 18* (1), 185-214.Gogan, J.L. (1998). What do you know? Information Week, 682, 208-209.

Goldstein, D. K. and Zack, M. H., (1989) 'The Impact of Marketing Information Supply on Product Managers: An Organizational Information Processing Perspective', *Office, Technology and People*, Vol. 4, No. 4, June, pp. 313-336.

Goman, C.K. (2004). 'Five reasons people do not share', *HR Magazine*, vol. 49, no. 5.

Grant, R. M., (1996). 'Prospering in Dynamically Competitive Environments: Organizational Capability as Knowledge Integration', *Organization Science*, Vol. 7, No. 4, pp. 375-387.

Greiner, M.E., Bo¨hmann, T and Krcmar, H. (2007). 'A strategy for knowledge management,' *Journal of Knowledge Management*, 11(6) 3-15.

Grover, V and Davenport, T. (2001) 'General perspectives on knowledge management: fostering a research agenda', *Journal of Management Information Systems* 18, pp. 5–21.

Gupta, A. and McDaniel, J. (2002), 'Creating competitive advantage by effectively managing knowledge management', *Journal of Knowledge Management Practice, Vol. 3 No. 2, pp. 40-9.*

Gupta, B. and Iyer, L. S. and Aronson, J. E., (2000) "Knowledge Management: Practices and Challenges, Industrial Man- agement and Data Systems," *Industrial Management & Data Systems*, Vol. 100, No. 1, pp. 17-21.

Gupta, N.K. Sharma, C. Ganesh., (2009). 'The influence of organisational cultural values, reward, time, self-esteem and job security on knowledge sharing intentions among managers,' International Journal of Indian Culture and Business Management – 2(2),125 – 143

Habtamu Mohammed (2011). 'evaluation of knowledge sharing practice in commercial bank of ethiopia'. *addis ababa university school of graduate studies school of information science.*

Habte Reji (2014). 'Knowledge Management Practices of Commercial Banks in Ethiopia,' *for degree of master of science in information science, Addis Ababa University.*

Hafizi, M. A., & Nor, H. A. (2006). 'Knowledge Management in Malaysian Banks'*: A New Paradigm. Journal of Knowledge Management Practice, 7.*

Haggie, K. and Kingston, J. (2003), 'Choosing your knowledge management strategy', *Journal of Knowledge Management Practice.*

Hamel, G. and Prahalad, C. K. (1989). 'Strategic Intent', *Harvard Business Review*, vol. 67, no. 3, pp. 63.

Hancock R. and Algozzine B. (2006). 'Doing case study: A practical guide for beginning researchers'. *New York, Teachers press college*.

Hancox M. and Hackney R., (2000). 'IT outsourcing: frameworks for conceptualizing practice and perception.' *Information systems journal, 10,* 217– 2372.

Hansen, M., Nohria, N., and Tierney, T. (1999). 'What's your strategy for managing knowledge?' *Harvard Business Review*, 77(2), 106.

Hariadi, B., (2005). 'Strategy Management,' *Banyumedia Publishing; Malang.*

Hasanali, F., (2002). 'Critical Success Factors of Knowledge Management,' www.infotoday.com

Herriott, R.E. and Firestone, W.A. (1983). 'Multi-site qualitative policy research: optimising description and generalisability.' *Educational Researcher,* 12:14-19..

Hibbard, J. (1997). 'Knowing What We Know' *Information Week*, 20 October 1997.

Holt, D. T., Bartczak, S. E., Clark, S. W. and Trent, M. R., (2007). 'The Development of an Instrument to Assess Readiness for Knowledge Management,' *Knowledge Management Research & Practice*, Vol. 5, No. 2, pp. 75-92.

Huener, L., (2001). 'Knowledge and Concept of Trust,' Sage, London.

Huysman, M., and DeWit, D. (2002). 'Knowledge sharing in practice'. *Dordrecht, Netherlands: Kluwer Academic Publishers.*

Jacob, M. & Ebrahimpur, G. (2001). 'Experience vs. expertise: The role of implicit understandings of knowledge in determining the nature of knowledge transfer in two companies,' *Journal of Intellectual Capital, 2* (1), 74-85.

James, D., McKeen and Sandy Staples, D., (2001). 'Knowledge Managers: Who They Are and What They Do', *Queen's School of Business, Queen's University, Kingston, Canada* K7L 3N6.

Jashapara, A. (2003), 'Knowledge management and culture', *Knowledge Management: An Integrated Approach, Prentice-Hall, London.*

Jones, H. (2005). 'Risking knowledge management: An information audit of risk management activities within the Hobart City Council' *Library Management*, 26(6/7), pp. 397-407

Jonsson, A. and T. Kalling (2007), 'Challenges to knowledge sharing across national and intra-organizational boundaries. Case studies of IKEA and SCA.' *Knowledge Management Research and Practice,* Volume 5, pp. 161-172.

Kaplan, R. S. and Norton D. P. (1996). 'Balance Scorecard,' *Harvard Business School Press.*

Kavindri, M. (2005), 'Key success factors for knowledge management', available at: www.knowledgeboard.com/cgi-bin.

Kini B. (2007). 'Vendor availability: A key factor for outsourcing in Chilean ICT sector'. *Information management & computer security, 15 (*5), 350361.

Kogut, B. and Kulatilaka, N., (1994). "Options Thinking and Platform Investments: Investing in Opportunity", *California Management Review*, Winter, 1994, pp. 52-71

Kogut, B. and Zander, U. (1992). 'Knowledge of the firm, combinative capabilities and the replication of technology,' *Organisation Science*, 3, 383-397.

Kumar, R. (1999). 'Research methodology: a step-by-step guide for beginners.' London:Sage.Paper',*http://www.helium.com/items/1591883-review-of-literatureliterature-research college-research-planning-research-research-planning.*

Kumar, V., (2009). 'The Importance of Review of Related Literature in a Research

Kuriakose, K. K., Baldev, R., Murty, S. A. V. & Swaminathan, P. (2011). 'Knowledge management maturity model: an engineering approach.' *Journal of Knowledge Management Practice,* 12(2).

Lahti, R. & Beyerlein, M., (2000). 'Knowledge transfer and management consulting: a look at The Firm'. *Business Horizons*, pp. 65-74.

Lamb, C.M., (2001). 'Creating a Collaborative Environment.' *Information Outlook* 5(5): 22–25.

Lee, H. and Choi, B., (2003). 'Knowledge Management Enablers, Processes, and Organizational Performance: An Integra-tive View and Empirical Examination,' *Journal of Man-agement Information Systems*, Vol. 20, No. 1, pp. 179-228.

Leidner, D. E., & Kayworth, T. (2006). 'Review: A review of culture in information systems research: Toward a theory of information technology culture conflict.' *MIS Quarterly*, *30*(2), 357-399.

Leonard – Barton, D., (1995). '*Wellsprings of Knowledge: Building and Sustaining the Sources of Innovation,' Boston: Harvard Business School Press.*

Liao, S.-H., Chang, J.-C., Cheng, S.-C., and Kuo, C.-M. (2004). 'Employee Relationship and Knowledge Sharing: A Case Study of a Taiwanese Finance and Securities Firm.' *Knowledge Management Research & Practice* 2(1): 24–34.

Maier, A. M., Moultrie, J. and Clarkson, P. J., (2012). 'Assessing Organizational Capabilities: Reviewing and Guiding the Development of Maturity Grids'. *IEEE transactions on engineering management,* VOL. 59, NO. 1.

Maier, R. & Remus, U. (2003). 'Implementing process-oriented knowledge management strategies', *Journal of Knowledge Management*, vol. 7, no. 4, pp. 62-74.

Mandasari, N. F., Kadir, A. R., & Laba, A. R., (2015). 'analysis of knowledge management and strategic leadership dimensions on dynamic capability for successful strategy implementation in regional bank of sulselbar,' *International Journal of Research In Social Sciences, Aug. 2015. Vol. 5, No.6.*

Markides, C., (1998). 'Strategic Innovation in Established Companies', *Sloan Management Review, vol. 39, no. 3,pp. 31-42*

Mathi, K., (2004). 'Key Success Factors for Knowledge Man- agement,' Master's Thesis, University of Applied Sci- ences/Fh Kempten, Kempten.

McDermott, R., (1999). 'Why Information Technology Inspired But Cannot Deliver Knowledge Management,' *California Management Review*, Vol. 41, No. 4, pp. 103-117.

Mcinerney, C., (2002). 'Knowledge Management and the Dynamic Nature of Knowledge', *Journal of the American Society for Information Science and Technology*, Vol. 53, No. 12, pp. 1009 – 1018.

Mintzberg, H., (1994). 'The Fall and Rise of Strategic Planning', *Harvard Business Review*, vol. 72, no.1, pp.107.

Mizintseva, M. & Gerbina, T. (2009). 'Knowledge management practice: Application in commercial banks (a review)', *Scientific and Technical Information Processing*, vol. 36, no. 6, pp. 309-318.

Moffett, S., McAdam, R., and Parkinson, S., (2003). 'An Empirical Analysis of Knowledge Management Applications,' *Jour- nal of Knowledge Management*, Vol. 7, No. 3, pp. 6-26.

Mostert, J.C., & Snyman, M.M.M. (2007). 'Knowledge management framework for the development of an effective knowledge management strategy'. *South African Journal*. Vol.9(2) June 2007

Muluken Amare (2014) 'formulating knowledge management strategy for public organizations: the case of the federal documents authentication and registration office' *addis ababa university school of graduate studies school of information science.*

Myers, D. M. & Avison D. (2003). 'Qualitative Research in Information Systems.' *Athenaeum Press Ltd, Great Britain.*

Myers, M.D. (1997). 'Qualitative research in information systems.' *Management Information System Quarterly*, 21 (2): 241-242.

Nahapiet, J., and Ghoshal, S. (1998). 'Social capital, intellectual capital, and the organizational advantage.' *Academy of Management Review, 23*(2): 242–266.

NASA. (2008). *Knowledge Management* [Online]. Available at: http://km.nasa.gov/whatis/index.html

Nelson, R., (1991). "Why Do Firms Differ and Does it Matter?", *Strategic Management Journal*, Winter Special Issue, Vol. 12, 1991, pp 61-74.

Newman, B.D., & Conrad, K.W., (2000). 'A Framework for Characterizing Knowledge Management Methods, Practices, and Technologies'. *Proc. of the Third Int. Conf. on Practical Aspects of Knowledge Management*

Ngulube, P. 2009. 'Research methods in information science.' *Pretoria: University of South Africa.*

Nidumolu, S.R., Subramani, M., & Aldrich, A. (2001). 'Situated learning and the situated knowledge web: Exploring the ground beneath knowledge management.' *Journal of Management Information Systems*, 18 (1), 115-150

Nonaka I., Takeuchi H., (1995) 'The knowledge – creating company: how Japanese companies create the dynamics of innovation'. *Oxford: Oxford University Press*, 284 str.

Nonaka, I. & Toyama, R. (2003), 'the knowledge –creation theory revisited: Knowledge creation as a synthesizing process', *Knowledge management Research & Practice,* vol. 1, pp. 2-10.

Nonaka, Ikujiro, (1991). 'The Knowledge Creating Company', *Harvard Business Review,* Nov/Dec 1991, pp. 96 – 104.

Nonaka, Ikujiro, (1994). 'A Dynamic Theory of Organizational Knowledge Creation', *Organization Science,* Vol. 5, No. 1, 1994, pp. 14-37.

Nonaka, Ikujiro, Konno Noboru, (1998). 'The Concept of 'Ba': Building a Foundation for Knowledge Creation', *California Management Review,* Vol. 40, No.3, 1998, pp. 40-54.

Nonaka, Ikujiro, Toyama Ryoko and Konno Noboru, (2000) 'SECI, Ba and Leadership: A Unified Model of Dynamic Knowledge Creation', *Long Range Planning,* Vol. 33, No. 1, 2000, pp. 5 – 34.

Oder, N. (2001). 'The competitive intelligence opportunity.' *Library Journal, 126* (4), 42-44.

Oluikpe, P. (2012). 'Developing a corporate knowledge management strategy,' *Journal of Knowledge Management,* 16(6), 862-878, doi: 10.1108/13673271211276164

Omotayo, F. O., (2015). 'Knowledge Management as an important tool in Organizational Management: A Review of Literature,' *University of Nebraska – Lincoln, Library Philosophy and Practice (e-journal).*

Omur, Yasar Saatcioglu, Omur, Neczan and Engin, Deniz Eris, (2009). 'A Study on Knowledge Management and Firm Performance in Turkish IT Sector', *European and Mediterranean Conference on Information Systems,* July 13-14, 2009, Crowne Plaza Hotel, Izmir.

Özlem, Y. U., & Duygu, K. (2013). A Comparative Analysis of Knowledge Management in Banking Sector: An Empirical Research. *European Journal of Business and Management,* 12-20.

Parikh, M. (2001). 'Knowledge management framework for high-tech research and development,' *Engineering Management, 13* (3), 27-33.

Parikh, M. (2001). 'Knowledge management framework for high-tech research and development,' *Engineering Management, 13* (3), 27-33.

Parlby, D. and Taylor, R. (2000), 'The power of knowledge: a business guide to knowledge management', available at: www.kpmgconsulting.com/index.html.

Paween, P. (2006). 'How does Knowledge Management improve the Service Industry?', *Jonkoping International Business School.*

Payne, Judy and Tony, Sheehan, (2011). 'Demystifying Knowledge Management'.

Pee, L.G. and Kankanhalli, A. (2009). 'A Model of Organisational Knowledge Management Maturity Based on People, Process, and Technology.' *Journal of Information & Knowledge Management, Vol. 8, No. 2, pp. 79-99.*

Penrose E. T., (1980). 'The Theory of The Growth of the Firm', *Basil Blackwell Publisher (U. S. edition, M. E. Sharpe, Inc., White Plains, NY) pp. 76-80.*

Pfeffer, J. & Sutton, R.I. (2000). 'The knowing-doing gap: How smart companies turn knowledge into action,' *Cambridge, MA: Harvard Business School Press.*

Ping, L. & Kebao, W. 2010, 'Knowledge management in banks', *The International Conference on E-Business and E-Government (ICEE), Guangzhou, China,* 7-9 May, pp. 1819-1822.

Polanyi, M., (1966). 'The Tacit Dimension'. *New York: Doubleday & Company, Inc. Garden City.*

Porter, M. E., (1980) 'Competitive Strategy: Techniques for Analyzing Industries and Competitors,*' New York: Free Press.*

Powell, R. (1997). 'Basic research for librarians', *3rd Edition, London: Ablex Publishing Corporation.*

Punch. F. K. (2005). 'Introduction to social research: Quantitative and Qualitative Approaches', *2nd Edition, Thousand Oaks, California: Sage Publications.*

Quinn, J B., (1980). 'Strategies for Change: Logical Incrementalism' *(Homewood, Ill.: Irwin).*

R. Cross, S. Weller, (2001). 'Winning through Knowledge (Knowledge Management in Banks),' *Financial World,* 19, UK

Robbins, S.P. (1996). 'Organizational Behavior: Concepts, Con- troversies, Applications,' Prentice Hall, Upper Saddle River.

Robson, C. (1993), 'Real world research: a resource for social scientists and practitioner researchers', *Blackwell, Oxford.*

Rubenstein-montano, R., liebowitz, J., buchwalter, J., and mcgraw, D. (2000). '*A Systems Thinking Framework for Knowledge Management.'*

Ruggles, R., (1998). 'The State of the Notion: Knowledge Man-agement in Practice,' *California Management Review,* Vol. 40, No. 3, pp. 80-89.

Ruikar, K., Anumba, C. and Carrillo, P., (2006) 'VERDICT—An E-Readiness Assessment Application for Construction Companies,' *Automation in Construction,* Vol. 15, No. 1, 98-110.

Sagsan, M., (2006) 'A New Life Cycle Model for Processing of Knowledge Management', *Second International Conference on Business, Management & Economics in İzmir,* Turkey, pp. 1-9.

Sanchez, R. (2004). 'Creating Modular Platforms for Strategic Flexibility,' *Design Management Review,* Vol. 15, No. 1, pp. 58-67.

Saunders, M., Lewis, P. and Thornhill, A. (2007). 'Research methods for business' *students, 4th Edition. Harlow: Prentice Hall.*

Scarborough, H. Swan, J. and Preston, J., (1999) 'Knowledge Management: A Literature Review,' Institute of Person- nel and Development, London.

Seble Abera (2015). 'Knowledge Management Maturity at Ethiopian Airlines' *addis ababa university school of graduate studies school of information science.*

Senge, P.M. (1994). 'The fifth discipline: The art and practice of the learning organization.' *New York: Currency Doubleday.*

Serrat, Olivier, (2008) 'Notion of Knowledge Management', *Asian Development Bank.*

Shannak, O., & Masadeh, M., (2013). 'knowledge management strategy building: literature review**'.** European Scientific Journal July edition vol. 8, No.15

Shariq, S. Z. (1997). 'Knowledge Management: An Emerging Discipline.' *The Journal of Knowledge Management* 1(1):75- 82.

Shaw, D. and Edwards, J. (2005), 'Manufacturing knowledge management strategy', *International Journal of Production Research*, Vol. 44 No. 10, pp. 1-18.

Shenk, D., (1997). 'Data Smog,' Harper & Collins, New York.

Shih, K., Chang, C. & Lin, B. (2010). 'Assessing knowledge creation and intellectual capital in banking industry', *Journal of Intellectual Capital*, vol. 11, no. 1, pp. 74-89.

Silva Karkoulian, Leila A. Halawi & Richard V. McCarthy (2008), 'Knowledge management formal and informal mentoring: An empirical investigation in Lebanese banks', *Learning Organization*, vol. 15, no. 5, pp. 409-420.

Soliman, F. and Spooner, K., (2000). 'Strategies for Implementing Knowledge Management: Role of Human Resources Management,' *Journal of Knowledge Management*, Vol. 4, No. 4, pp. 337-345.

Spender, J. C. (1996). 'Organizational Knowledge, Learning and Memory: Three Concepts in Search of a Theory,' *Journal of Organizational Change Management, vol. 9, no. 1, pp. 63-78*

Spijkervet, A., (1997). '*Knowledge management: dealing intelligently with knowledge,' New York ,CRC Press.*

Stangor, C. (2011). 'Research Methods for the Behavioral Sciences' *4th Edition, Belmont: Wadsworth, Cengage Learning.*

Stehr, N. (1994). Knowledge societies. Sage, Thousand Oaks, CA.

Stonehouse, G.H., Pemberton, J.D., & Barber, C.E. (2001). 'The role of knowledge facilitators and inhibitors: Lessons from airline reservations systems'. *Long Range Planning, 34* (2), 115-138

Sunassee, N & Sewry, DA (2002), 'A theoretical framework for knowledge management implementation', *Proceeding of 2002 annual research conference of the South African institute of computer scientists and information technologists on Enablement through technology, (SAICSIT), Port Elizabeth, South Africa*, pp. 235-245.

Sunassee, N. N. and Sewry, D. A., (2003). "An Investigation of Knowledge Management Implementation Strategies," *Pro- ceedings of the Annual Research Conference of the South African Institute of Computer Scientists and In- formation Technologists on Enablement through Tech- nology*, Tuinroete, pp. 24-36.

Sunassee, N., & Sewry, A. (2002). 'A Theoretical Framework for Knowledge Management Implementation'. Proceedings of SAICSIT 2002, Pages 235 – 245

Tanaji, B. S., (2012). 'Benefits of Knowledge Management System for Banking Sector,' *International Journal of Computer Science and Communication* Vol. 3, No. 1, January-June 2012, pp. 133-137

Teece, D. J., (1984) 'Economic Analysis and Strategic Management', *California Management Review,* Vol. 26, No. 3, Spring, pp. 87-110.

Teece, D. J., (1989). 'Capturing Value from Knowledge Assets: the New Economy, Markets for Know-how, and Intangible Assets', *California Management Review,* Vol. 40, No. 3, Spring, p. 55-79

Temtim Assefa (2014). 'Enabling Knowledge Sharing in the Workplace: the case of Commercial Bank of Ethiopia (CBE)', *a dissertation submitted to IT PhD program, A.A University*.

Tian, J., Yoshiteru, Y. N. and Andrzej, P. W., (2009). 'Knowledge Management and Knowledge Creation in Academia: A Study Based on Surveys in a Japanese Research Univer- sity,' *Journal of Knowledge Management,* Vol. 13, No. 2, pp. 76-92.

Tiwana, A. (2000). 'The knowledge management toolkit: orchestrating IT, strategy and knowledge management platforms,' *Upper Saddle River, NJ: Prentice Hall*

Uriarte Jr., F. A. (2008). **'**Introduction to Knowledge Management'. Jakarta*: ASEAN Foundation*.

Utterback, J. M., (1994). 'Mastering the Dynamics of Innovation: How Companies Can Seize Opportunities in the Face of Technological Change,' *Boston, Mass.: Harvard Business School Press.*

Von Krogh, G. et al. (2000). *Enabling Knowledge Creation*. New York: Oxford University Press.

Von Krogh, G., Nonaka, I. and Aben, M. (2001). 'Making the most of your company's knowledge: a strategic framework'. *Long Range Planning* 34(4):421-439.

Von Krogh, G., Nonaka, I., & Aben, M. (2001). 'Making the Most of Your Company's Knowledge: a Strategic Framework,' *Long Range Planning , 34*, 421-439.

Vorbeck, J., Heisig, P., Martin, A., Schutt, P. (2001), 'Knowledge Management in a global company – IBM global services, in Mertins, K., Heisig, P., Vorbeck, J. (Eds)', *Knowledge Management – Best practices in Europe*; pp. 174-185; Berlin: Springer-Verlag.

Walczak, S. (2005). 'Organizational Knowledge Management Structure', *Learning Organization*, Vol. 12, No. 4, pp. 330-339.

Weerdmeester, R., Pocaterra, C. & Hefke, M. (2003). 'VISION: Next generation knowledge management: Knowledge management maturity model.' *Information Societies Technology Programme.*

Wiig, K.M. (1997), 'Knowledge Management: where did it come from and where will it go?', *Expert System with Application*, Vol. 13, Issue 1, pp. 1-14

Yamagata, K. (2002). 'Knowledge Management in Banking Industry: Comparative Analysis between U.S. and Japan,' *Master edn, Massachusetts Institute of Technology, USA.*

Yang, C. and Yeh, T. (2009), 'An integrated implementation model of strategic planning, BSC and Hoshin management', *Total Quality Management*, Vol. 20 No. 9, pp. 989-1002.

Yang, C. and Yeh, T. (2009), 'An integrated implementation model of strategic planning, BSC and Hoshin management', *Total Quality Management*, Vol. 20 No. 9, pp. 989-1002.

Yin, R. K. (2003). ‘Case study research: design and methods.’ *3rd edition. London: Sage*.

Yin, R.K. (1994). ‘Case study Research. Design and Methods’. *Second edition. Thousand Oaks: Sage Publications, Inc.*

Zack, H., (1998). ‘Developing a Knowledge Strategy’. *California Management Review,* Vol. 41, No. 3, Spring, 1999, pp. 125-145

Zack, M. H. (1999a). ‘Developing a knowledge strategy’. *California Management Review*, 41(3), 125–145.

Zack, M. H., (1998). ‘Developing a Knowledge Strategy,’ *California Management Review,* Vol. 41, No. 3, Spring, pp. 125-145.

Zack, M.H. (1999). ‘Developing a knowledge strategy’. *California Management Review* 41 (3):125-145.

APPENDICES

Respondent's answers

These were the summarized responses collected from 10 (Ten) branch managers of the selected branches of the CBE:

Key Process Areas: People

(Question-1) Is organizational knowledge recognized as essential for the long-term success of the bank? (People-2a)

Answer: *all managers interviewed agree that, organizational knowledge generally is recognized as a long-term success of the bank.*

(Question-2) Is KM recognized as a key organizational competence? (People-2b)

Answer: *except two respondents, all the rest say that KN is not recognized as a key organizational competence.*

(Question-3) Are employees of the bank ready and willing to give advice or help on request from anyone else within the company? (People-2c)

Answer: *three managers responded that employees in their branches are willing to give advice or help on request from people in the company while the rest seven said the above culture does not exist in the bank.*

(Question-4) Is there any incentive system in the bank to encourage the knowledge sharing among employees? (People-3a)

Answer: *only two managers said that there is an incentive system in their branches to encourage knowledge sharing among employees, but all the other eight respondents said there is no incentive for such operations.*

(Question-5) Are the incentive systems in the bank attractive enough to promote the use of KM in the organization? (People-3b)

Answer: *all the managers agree that there are no incentive systems in the bank to promote the use of KM in the bank.*

(Question-6) Are the KM projects coordinated by the management of the bank? (People-3c)

Answer: *eight managers responded that there are no KM projects coordinated by the bank, while the two said there are.*

(Question-7) Are there individual KM roles that are defined and given appropriate degree of authority? (Like, CKO, Knowledge officers) (People-3d)

Answer: *all the managers responded that there are no individuals in the bank given any degree of authority for KM roles*

(Question-8) Is there a formal KM strategy in place? (People-3e)

Answer: *it is the responses of all the mangers that there is no any formal KM strategy in the bank.*

(Question-9) Is there a clear vision for KM? (People-3f)

Answer: *it is the responses of all managers that there is no clear vision of KM in the bank.*

(Question-10) Are there any KM training programs or awareness campaigns? e.g. introductory/specific workshops for contributors, users, facilitators, champions (people-3g)

Answer: *all the mangers say that there are no KM training programs or awareness campaigns in the bank.*

(Question-11) Are there regular knowledge sharing sessions? (People-4a)

Answer: *all respondent think that there is no regular knowledge sharing sessions in the bank.*

(Question-12) Is KM incorporated into the overall organizational strategy? (People-4b)

Answer: *according to all the managers there is no KM that is incorporated into the overall organizational strategy.*

(Question-13) Is there a budget specially set aside for KM? (People-4c)

Answer: *there is no budget, said all respondents, set aside for KM.*

(Question-14) Is there any form of benchmarking, measure, or assessment of the state of KM in the organization? (People-4d)

Answer: *all mangers say there is no benchmarking, measure or assessment for the state of KM in the bank.*

(Question-15) Has the KM initiatives resulted in a knowledge sharing culture? (People-5)

Answer: *all branch managers participated in the study say that there are no initiatives or knowledge sharing cultures resulted from them.*

Key Process Areas: process

(Question-16) Is the knowledge that is indispensable for performing routine task documented? (Process-2)

Answer: *all the managers agree that the most important knowledge used for performing routine tasks are documented.*

(Question-17) Does the KMS improve the quality and efficiency of work? (Process-3a)

Answer: *only two managers believe that the KMS improve the quality and efficiency of work while the rest eight believe otherwise.*

(Question-18) Is the process for collecting and sharing information formalized?

- Best practices and lessons learnt are documented (process-3b)

Answer: *all respondents say there are no processes in the bank for formally collecting and sharing information.*

(Question-19) Are the existing KM systems actively and effectively utilized? (Process-4a)

Answer: *the managers say there are no KM systems actively and effectively utilized.*

(Question-20) Are the knowledge processes measured quantitatively? (Process-4b)

Answer: *all the respondents say there is no procedure in the bank to measure knowledge processes quantitatively.*

(Question-21) Can the existing KM processes be easily adapted to meet new business requirements? (Process-5)

Answer: *among the participants, two of them believe that the existing KM processes can be easily adapted to meet new business requirements but the rest eight respondents say they cannot*

Key Process Areas: Technology

(Question-22) Are there pilot projects that support KM? (Technology-2a)

Answer: *all the branch managers claim that there are no pilot projects to support KM*

(Question-23) Is there any technology and infrastructure in place that supports KM?

- E.g. Intranet portal

- E.g. Environments supporting virtual teamwork (technology-2b)

Answer: *managers from seven branches believe that there are technologies and infrastructures to support KM while three of them argue there is no infrastructure in place to support it.*

(Question-24) Does the system support the business unit? (Technology-3)

Answer: *three of the managers believe that the system supports the business unit and the rest seven think that it does not support it*

(Question-25) Does the KMS support the entire organization? (Technology-4a)

Answer: *all the managers agree that the KMS does not support the entire organization.*

(Question-26) Is the KMS tightly integrated with the business processes? (Technology-4b)

Answer: *for this question two respondents believe that the KMS is tightly integrated with the business process. But the rest say it is not integrated.*

(Question-27) Are the existing systems continually improved upon (e.g. continual investments)? **(Technology-5)**

Answer: *two managers responded, there is a continuous improvement of the existing system while the other eight rejected it.*
