

ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
SCHOOL OF INFORMATION SCIENCE

EVALUATION OF KNOWLEDGE SHARING PRACTICE IN COMMERCIAL BANK OF ETHIOPIA

HABTAMU MOHAMMED

JUNE 2011

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EVALUATION OF KNOWLEDGE SHARING PRACTICE IN COMMERCIAL BANK OF ETHIOPIA

A Thesis Submitted to the School of Graduate Studies of Addis Ababa University in Partial Fulfillment of the Requirements for the Degree of Master of Science in Information Science

By

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Ato Getachew Jemaneh	Examiner,	_____	_____

Dedicated

To

My beloved father and mother.

ACKNOWLEDGEMENT

First I would like to express my heartfelt thank to my Advisor Dr. Million Meshesha for his continuous support, friendly approach and invaluable comments. He spent his precious time in commenting my work and showing me the right directions that I found very important for the accomplishment of my thesis.

My greatest gratitude is extended to the community of School of Information Science, Addis Ababa University, whose contribution is involved in one way or the other. I would also like to thank my employer Wollo University for allotting budget to cover all the cost of my MSc study.

I also would like to thank the staffs of CBE especially Ato Kolchoc Mega and others who helps me in distributing and collecting questionnaires. I would also thank those CBE staffs who are willing for the interview.

Finally, I would like to express my sincere thanks to Ato Mohammed Birhanie and W/o Tshehay Ali for encouraging and supporting me in every way. I also thank my friends, Birhanu Jibril, Yenus Mohammed, Ebrahim Seyfu, Seid Yessuf and my classmates for being with me whenever in need and for their continuous motivation and encouragement during my stay in the university. Finally, I am grateful for those who are not mentioned in name but who helped me much.

Habtamu Mohammed

June 20011

TABLE OF CONTENTS

Page

ACKNOWLEDGEMENT i

TABLE OF CONTENTS ii

LIST OF FIGURE vi

LIST OF ABBREVIATION viii

CHAPTER ONE 1

INTRODUCTION 1

1.1 Background 1

1.2 Statement of the Problem and Justification 3

1.3 Objective of the Study 5

1.3.1 General Objective 5

1.3.2 Specific Objectives 5

1.4 Scope and Limitation of the Study 5

1.5 Significance of the Study 6

1.6 Organization of the Thesis 6

CHAPTER TWO 8

LITERATURE REVIEW 8

2.1 An Overview of Knowledge 8

2.1.1 Types of knowledge 9

2.1.1.1 Explicit and tacit knowledge 9

2.1.1.2 Individual, group and organization knowledge 10

2.1.1.3 Shallow and deep knowledge 11

2.2 Knowledge Management 11

2.3 Knowledge Management Process 14

2.3.1 Knowledge creation 14

2.3.2 Knowledge acquisition 15

2.3.3 Knowledge codification 15

2.3.4 Knowledge sharing 16

2.3.5 Knowledge application 17

2.4 Enablers of Knowledge Management 17

2.4.1 Organisational enablers 17

2.4.2 Corporate culture 18

2.4.3 Process enablers 18

2.4.4 Technology enablers 18

2.5 Knowledge Creation and Sharing Models 19

2.5.1 Nonaka SECI model 19

2.5.2 Ba model 22

2.5.3 Hedlund and Nonaka's Model 24

2.6 Knowledge Sharing Barriers 26

2.6.1 Culture 26

2.6.2 Belief on knowledge power 27

2.6.3 Trust 28

2.6.4 Misinterpretation of shared knowledge 28

2.7 Commercial Bank of Ethiopia 29
2.8 Knowledge Management in Banks 31
CHAPTER THREE 37
RESEARCH DESIGN AND METHODOLOGY 37
3.1 Review of Related Literature 37
3.2 Research Design 38
3.3 Research Population 40
3.4 Sample Design Process 40
3.4.1 Sampling size 41
3.4.2 Sampling method 41
3.5 Data Collection Methods 42
3.5.1 Primary data 42
3.5.1.1 Questionnaires 43
3.5.1.2 Interview 44
3.5.1.3 Observation 45
3.5.2 Secondary data 46
3.6 Data Processing 46
3.6.1 Procedures on data analysis 47
3.7 Reliability and Validity 47
3.8 Dissemination of the Research 48

CHAPTER FOUR 49

DATA ANALYSIS AND DISCUSSION 49

4.1 Demographic Analysis 50

4.2 Knowledge Sharing in CBE 54

4.2.1 Knowledge sharing at socialization phase 55

4.2.2 Knowledge sharing at externalization phase 59

4.2.3 Knowledge sharing at combination phase 64

4.2.4 Knowledge sharing at internalization phase 66

4.3 Knowledge Sharing Trend of CBE 69

4.4 Knowledge Flow Mechanisms 72

4.5 Discussion of the Findings 75

CHAPTER FIVE 79

CONCLUSION AND RECOMMENDATION 79

5.1 Conclusion 79

5.2 Recommendation 80

Reference 82

Appendix III 95

LIST OF FIGURE

Figure 2.1 SECI model of knowledge conversion 20
Figure 2.2 Ba Model 23
Figure 2.3 Hedlund and Nonaka's Knowledge Management Model 25
Figure 3.1 Research design for this study 39
Figure 4.1 Respondents years of experience in the Bank 52
Figure 4.2 Respondents by their level of education 53
Figure 4.3 Mean value of socialization phase 58
Figure 4.4 Mean value of externalization phase 63
Figure 4.5 Mean value of combination phase 66
Figure 4.6 Mean value of internalization phase 68
Figure 4.7 Mean values for the KS in CBE 71

LIST OF TABLES

Table 4.1 Number of distributed and collected questionnaire 49
Table 4.2 Profile of respondents 51
Table 4.3 Work position vis-à-vis level of Education 54
Table 4. 4 Knowledge sharing at socialization phase 55
Table 4.5 Externalization phase of SECI model 60
Table 4.6 Combination Phase of SECI model 64
Table 4.7 Knowledge sharing at the Internalization phase of SECI model 67
Table 4.8 Knowledge sharing in CBE 70
Table 4.9 The top three knowledge flow mechanisms in CBE 72
Table 4.10 Framework of the SECI model 75

LIST OF ABBREVIATION

ADB –Asian Development Bank

CRM - Customer Relationship Management

DBE – Development Bank of Ethiopia

HR – Human Resource

ICT – Information Communication Technology

IS – Information Science

IT – Information Technology

KC – Knowledge Creation

KM - Knowledge Management

KMS – Knowledge Management System

KS – Knowledge Sharing

NBE – National Bank of Ethiopia

SECI - Socialization, Externalization, Combination and Internalization

UAE – United Arab Emirates

ABSTRACT

These days the banking sector is operating in a highly dynamic and competitive environment. Thus, with these driving forces banks are starting to understand the relevance and importance of financial knowledge sharing. They are beginning to appreciate knowledge as the most significant and valued assets that lead to organizational excellence for competitive advantage.

Therefore, the main aim of this study is to evaluate the practice of knowledge sharing at Commercial Bank of Ethiopia using Nonaka's SECI model of knowledge creation and sharing. Nonaka's SECI model consists of Socialization, Externalization, Combination and Internalization, which is crucial to assess individual, group and organizational knowledge flow from tacit-to-tacit, tacit-to-explicit, explicit-to-explicit and explicit-to-tacit, respectively.

To this end, the necessary data is collected using questionnaire from Commercial Bank of Ethiopia southern Addis Ababa district and the departments of Human Resource, Information Technology, Procurement and Outsourcing to get the overall picture of the knowledge flow in the banking sector. The result of the study revealed that Combination phase is with low standard deviation value of 1.01, followed by Socialization with standard deviation of 1.17 and Externalization and Internalization have a similar standard deviation of 1.22. From this, we can understand that the bank has relatively in a good position in synthesizing explicit knowledge from the existing explicit knowledge to come up with organizational knowledge. However, the culture of tacit-to-explicit and explicit-to-tacit knowledge sharing is minimal. The major barrier to share knowledge among employees of the Bank is lack of time for externalizing existing knowledge and internalizing new knowledge. As a result, the Bank needs to arrange appropriate time for enabling knowledge sharing practice among employees. Further research directions are recommended to enhance knowledge sharing in Commercial Bank of Ethiopia.

CHAPTER ONE

INTRODUCTION

1.1 Background

In the twenty first century, the world economy is being reshapes in a fundamental manner than in any other time in human history through the application of information and communication technology (ICT). The heart of these changes places into managing the intellectual capital, knowledge, of the organizations. This new set of economic activities, industry structures and movement of employees create greater competition among different organizations and industries (Yang, 2011). Like any other industries, there is also a great competition in the banking industry.

Knowledge is essential in everyday work. Everyone knows how to carry out his work and this knowledge can be reuses later in similar tasks in a similar fashion by implementing that knowledge for new situations (Brown et al., 1998). In other words, we share knowledge in our work so that we will be capable of to create new knowledge and new way of doing tasks.

Knowledge has become a powerful tool for corporate competition. Guthrie (2001) suggested that successful companies do not gain benefits with only tangible assets. They also give focus on access to intangible information and knowledge creation as their major resources for their success and competitive advantage in such complex and dynamic environment.

Knowledge is becoming a driving force for organizational change and wealth creation. It is also important for sustaining a competitive advantage and by strategically managing the knowledge creation and sharing process. Organizations can understand what knowledge is and how to create, share and use it effectively to develop and sustain a competitive advantage (Richard, 2004). Hence, such things are essential for every organizations including financial institution, like banks. Therefore, banks should design

appropriate methodologies to manage knowledge to become competitive and profitable for sustainable organizational development.

Tiwana (2002) define knowledge management as the management of organizational knowledge for creating business value, generating a competitive advantage. Knowledge management enables the creation, sharing and application of knowledge in the organization. Hence, knowledge creation and sharing plays a crucial role for companies to stay competitive in this rapidly changing business world. When we communicate knowledge, it is the process of sharing (Hafizi and Nor, 2006a). Employees can share both explicit and tacit knowledge. However, explicit knowledge can be shared more easily because it exists in documented form. On the contrary, tacit knowledge, which is hard to articulate, is the challenging part in knowledge sharing.

Effective knowledge management is considers to play an increasingly important role in creating competitive advantage as part of a rival firm (Nonaka, 1994). In addition, knowledge management is useful when organizations have a problem of high employee turnover and rapid technological change. As a result, currently organizations are at varying stages of planning and implementing knowledge management in an effort to improve their competitiveness, productivity, organizational effectiveness and customer service.

Accordingly, banks should also create new knowledge and share their knowledge to satisfy their customer, to acquire new customers and to get competitive advantage over the others. A firm has sustained competitive advantage when it implements a knowledge creating and sharing strategy (Brown et al., 1998). Like other organizations, banks also have to be a knowledge-sharing organization, which enable them to increase their internal employees' efficiency and enhance partnerships with customers, stakeholders and other external role-players. In this regard, banks must be a learning organization, which create, share, accumulate and apply knowledge into their services and processes.

Applying knowledge management helps the organizations to maintain their competitiveness in the market place. However, the application of knowledge management may face obstacles from different directions within the organization or from the outside

environment. For instance, organizational culture, employees' turnover, lack of knowledge sharing among employees, financial constraints and fear of downsizing are some of the major challenges, which make knowledge management implementation very difficult.

Furthermore, the application of knowledge management in the banking industry does not really differ from other industries. However, as Hafizi and Nor (2006a) states the increasing complexity of the bank environment makes knowledge management implementation more difficult than other sectors. These days, banks have realized the crucial role of knowledge management in gaining greater benefit in their future survival. Banks, which understand the benefit of KM, were developed knowledge management strategy. Development Bank of Southern Africa (DBSA) developed a knowledge strategy in 2003 (Blackburn et al, 2003). Like DBSA, World Bank (WB) is one of the pioneer institutions that implements KM and creates knowledge sharing organization.

However, there is lateness in commercial banks in the adoption of knowledge management usually due to wait and see attitude of what will be the true benefits and difficulty from early adopters (Hafiz and Nor. 2006). Knowledge sharing is the basic component of knowledge management and hence there is a need to evaluate the knowledge sharing practice in the banking sector.

1.2 Statement of the Problem and Justification

Knowledge is essential in the modern business world and hence knowledge management is a determining factor for the survival of almost all businesses. According to Hayati and Nor (2006a), up to 80% of the knowledge is in the mind of individuals or employees; only about 20% of the knowledge is available in the form of explicit knowledge. Therefore, in any organizations around eighty percent of any organization's knowledge exists in tacit form. Undoubtedly, it needs good and sound ways to capture and share the tacit knowledge of the employees. Knowledge sharing could facilitate the knowledge creation process (Nonaka, 1994) and help an organization to retain its competitive advantage over others (Nonaka, 1994 and Richard, 2004).

As noted by Hayati and Nor (2006a), knowledge sharing has benefits of cost effectiveness, time saving, quality, innovation, and motivation. According to Quinn et al. (1996) "knowledge is one of the few assets that grows – also usually exponentially – when shared". Even though KS has those benefits, implementing KS practices faces different obstacles; like organizational culture, loss of knowledge power, motivation factors which can be intrinsic or extrinsic, avoidance of exposure because of insufficient confidence in the knowledge, high respect for hierarchy and formal power and other (Huang and Davison, 2008).

Understanding different factors that influence knowledge sharing in the organisational context is essential. There are studies that explore the knowledge sharing behavior to implement successful KM initiatives in the banking sector. Most of these studies are concerned with the manufacturing industry and service industry. However, banking sector in particular, has not obtained much attention (Kubo et al., 2001) and there are limited studies. Chatzoglou and Vraimaki (2009) studied about the knowledge sharing behavior of bank employees in Greece with the aims to develop an understanding of the factors that influence knowledge-sharing behavior within the organization. Knowledge sharing is influenced by different factors especially in the case of sharing tacit knowledge. In this aspect, Nya et al. (2010) studied about motivational factors influencing knowledge sharing among banks in Malaysia.

However, as per the knowledge of the researcher, there is no research undertaken on knowledge creation and sharing practice in banking sector of Ethiopia, specifically in Commercial Bank of Ethiopia. Hence, this study aims to examine the continuous flow of tacit and/or explicit knowledge that happens at individual, group and organizational level.

To this end, this study attempts to answer the following research questions:

- Is there any tacit and/or explicit knowledge flow mechanism within the organization?
- What kind of knowledge do employees of the Bank mostly share?
- How smooth was the knowledge sharing process in the organization?
- What are the challenges and barriers of knowledge sharing in CBE?

1.3 Objective of the Study

1.3.1 General Objective

The general objective of this study is to investigate the practice and identify challenges of knowledge creation and sharing in Commercial Bank of Ethiopia to suggest better way of managing knowledge for organizational success, innovation and sustainable growth.

1.3.2 Specific Objectives

In order to achieve the general objective of this study, the following specific objectives are attempte:

- To review previous works related with knowledge management in general and knowledge sharing process in particular;
- To investigate the key practices of knowledge sharing activities through collecting data from the primary and secondary sources identified;
- To identify the barriers that may prevent knowledge sharing activities, as well as ways to overcome them;
- To evaluate the extent of sharing tacit knowledge by groups and individuals in CBE;
- To evaluate and describe knowledge sharing in CBE using SECI model; based on which to forward recommendations for future research.

1.4 Scope and Limitation of the Study

In every organization, knowledge exists in tacit and explicit format at individual, group and organizational levels. As a result, knowledge management should takes place at different levels within the organizations. Knowledge lifecycle management has different phases: creation, acquisition, storage, sharing and updating. This study investigates the knowledge-sharing phase of knowledge management process. Collecting and sharing the

tacit and explicit knowledge from the employees is very essential for the success and competitive advantage of the organization.

In addition, the main purpose of knowledge sharing (KS) is to help organizations as a whole to meet their business objectives. Nevertheless, there are different barriers of knowledge sharing, among others belief on knowledge, culture, motivation, IT, trust and misinterpretation of knowledge, management's commitment and reward system are the main once. Due to time constraint, this research concentrates on the culture, incentive and motivational barriers of knowledge sharing practice of CBE.

This research is also constrained and limited by the following conditions. Initially the researcher planned to distribute questionnaires to the branches of CBE found in four of the districts of Addis Ababa city. Because of time constraints, the necessary information is collected from the southern Addis Ababa city district only. This is done in consultation with Bank officials that the knowledge sharing practice is similar across the branches.

1.5 Significance of the Study

This study endeavored to evaluate and examine the knowledge sharing process and practices of the CBE. Hence, the CBE administrator and employees can make use of this research output. The output of the study is also be used as a benchmark for the CBE officials as well as a source of methodological approach for studies dealing on knowledge management in general and knowledge sharing process in particular.

The researcher also believes that this study contributes to the process of knowledge creation and sharing in the banking sector of Ethiopia at large and specifically for CBE. That is to say, this research is a contributory research in this field. The findings and recommendations of the study will contribute towards the ongoing efforts of developing a knowledge sharing culture in CBE.

1.6 Organization of the Thesis

This thesis is organized into five chapters. The first chapter briefly introduces the research, justification and statement of the problem and objective of the study. The

second chapter is devoted to literature review about knowledge management and knowledge creation and sharing models. It also presents related works done to evaluate knowledge management lifecycle in the banking sector.

The third chapter explains methodology of the research; why and how the research includes both quantitative and qualitative aspects also explained.

The fourth chapter deals the data analysis and finding of the results. The fifth chapter comprises the conclusion and recommendation for future studies.

CHAPTER TWO

LITERATURE REVIEW

In recent years, the tangible assets like land, labor and capital are no longer sufficient to evaluate the real value of an organization's effectiveness and efficiency rather the efficiency of using the intangible assets of the organization that is knowledge are reinforced to identify the value of an organization (Yang, 2011). Knowledge management has several benefits in enhancing the capabilities of an organization. On the other hand, implementing KM is not an easy task. It faces many challenges from inside and outside the organization. The issue of knowledge management, barriers of knowledge creation and sharing, knowledge creation and sharing models are discuses in this chapter including related works done in the banking sector.

2.1 An Overview of Knowledge

When mentioning knowledge management, the interpretation of knowledge itself must first explain. There are researchers who define knowledge in the context of know - why, know - what, know - how, know - who, know - where and know - when, in order to relate it with knowledge management concepts (Hafizi and Nor, 2006b).

Some authors, most notably in IT literature, address the question of defining knowledge by distinguishing among knowledge, information and data (Alavi and Leidner, 1999). Data are facts, and information is an interpreted data. Knowledge is an organized flow of information, shaped and organized by their holders (Serrat, 2008).

Knowledge exists in different locations: in people's mind, in organizational processes, embedded into different artifacts, procedures and stored into different media such as print, disks and optical media (Omur et al., 2009). Therefore, the extents of knowledge management systems such as capturing, codifying and storing of knowledge are the most challenging characteristics of knowledge management.

2.1.1 Types of knowledge

Knowledge is distinguished in different types. In this context, it is very important to realize that there are various types of knowledge, which needs different methods for creation and sharing in organizations. The division of knowledge depends on the purpose of an investigation and / or a description. Knowledge can be exists in different ways, which can be divided into tacit and explicit knowledge (Nonaka and Knonno, 1998), as well as into individual, group and organizational knowledge (Nonaka, 1994; Nezafati et al., 2009) and shallow and deep knowledge (David and Alex, 2008).

2.1.1.1 Explicit and tacit knowledge

Tacit knowledge is highly personal and hard to formalize that makes it difficult to communicate and share with others. It is deeply rooted in individuals' action and experience as well as in the principles, values or emotions he/she embraces, subjective insights and intuitions. Personal quality makes tacit knowledge hard to formalize and communicate (Nonaka, 1991; Nonaka, 1994; Nonaka et al., 2000 and Bhatt, 2000).

On the other hand, explicit knowledge is codified knowledge that can be transmitted into formal and systematic language. It is discrete or 'digital'. It is captured in records of past such as libraries, archives and databases. It can be expresses in words or numbers and shared in the form of data, scientific formulas, specifications and manuals. This is the kind of knowledge readily transmitted between individuals formally and systematically in the organizations (Polanyi, 1966; Nonaka, 1999; Serrat, 2008; Mcinerney, 2002 and Bhatt, 2000).

In general, Nonaka (1991) argue that most of the knowledge applied by individuals in the organizations is tacit knowledge and new knowledge starts from individuals in tacit form. Then it transforms into organizational explicit knowledge valuable to the company as a whole which in turn changed into tacit knowledge in a spiral way. Traditionally, organizations have been concerned with management of explicit knowledge, which is of less importance to the business at any point in time. However, tacit and explicit knowledge are dependent on each other to be complete sources of knowledge.

2.1.1.2 Individual, group and organization knowledge

Depending on the type of knowledge that exists in an organization, knowledge can also be individual, group and organizational knowledge. Knowledge is a critical factor affecting an organization's ability to remain competitive in the new global marketplace (Bollinger and Smith, 2001). Therefore, organizations need to recognize knowledge as a valuable resource and develop different mechanisms for organizing the collective intelligence and skills of employees for creating greater organizational knowledge.

Knowledge is not merely considered as know how that exists with individuals mind instead it also exists at group and organizational levels (Nonaka and Knonno, 1998; Nezafati et al., 2009; and Nonaka, 1994). Individual knowledge is a knowledge embedded in the mind of individual and an explicit knowledge private to individuals themselves. The knowledge of individual members need to be shared and legitimized through integrating interactions and information technology before it becomes group knowledge (Bontis, 2001). Group knowledge is not a mere gathering of individual knowledge, rather it is the knowledge held in groups but not shared with the rest of the organization members.

According to Nonaka (1994), organizational knowledge is created through continues dialogue (on spiral form) between tacit and explicit knowledge. Organizational knowledge is a knowledge that scattered throughout the organization members. Knowledge creation process enables firms to amplify knowledge embedded internally and transfer knowledge into operational activities to improve efficiency and create value of the organization (Omur et al., 2009). Thus, organizational knowledge is an accumulated and collected knowledge from individuals, subunits or groups. Hence, organizational knowledge was combined and used to share/create/ new knowledge over time. Organizational knowledge enables firms to attain deeper levels of understanding and perception that lead to business intelligence and insight.

Instead of the constant initiatives to extract knowledge from the employees to create new explicit knowledge and artifacts, it might be more productive for organizations to invest

on the effort for creating a knowledge sharing culture in the organization. Knowledge sharing culture means an organization that offers opportunities to create knowledge and one that encourages learning and knowledge sharing in the organization. Initiative can start in the form of establishing small group meeting rooms, conducting on-site seminars, rewarding those who pursue learning and who teach others what they know. Creating a knowledge sharing culture ensures the continual creation and sharing of knowledge through an environment of trust and dialogue in organizations (Mcinerney, 2002).

Thus, learning in organizations takes place at individual, group and organizational levels, so that they all stores stocks of knowledge which are moved and developed through dynamic knowledge flows between the different levels of the organization (Nonaka, 1994). Additionally, learning in organizations can be aims to generate knowledge variation within the organizations and acquire knowledge about knowledge that exists within organizations.

2.1.1.3 Shallow and deep knowledge

According to David and Alex (2008), knowledge also categorized as shallow or deep knowledge. Shallow knowledge is the knowledge when there is information plus some understanding, meaning and sense of making. To understand is to give some level of meaning for a given context, situation or an event, with this meaning typically relating to an individual or organization and implying some level of action. On the other hand, in deep knowledge you have to develop understanding and meaning, integrate it, and be able to shift your frame of reference as the context and situation shift.

In general, shallow knowledge is a knowledge that is task dependent, fragile, additive and effective reasoning. Whereas deep knowledge is task independent, describes causal relationship, complete at a certain abstraction level and effective reasoning,

2.2 Knowledge Management

In today's global competitive environment, an organization's competitive edge is almost wholly depends on how well it can manage and set up its corporate assets. These assets

can be tangible and intangible assets. Traditionally, tangible assets like buildings, equipment, inventory and financial capital was considered as most the fundamental corporate assets. These days, the most important intangible asset of every organizations is knowledge (Khamseh and Jolly, 2008; Hafizi and Nor, 2006a). In this sense, the capability to learn or the ability to create and apply new knowledge considered as one of the main sources of competitive advantage of organizations (Nonaka and Knonno, 1998; Nonaka, 1994; and Bontis, 2001). Currently, organizations start to learn on how to manage their intangible assets, knowledge. Knowledge management is the practice of managing the intangible assets of an organization. Knowledge management is being started since human awareness of knowledge, however, it emerged as a professional discipline at the end of 1980s (Matin et al., 2010).

Sagsan (2006) defines knowledge management as the processes of storing, collecting, structuring, sharing, controlling, creating, disseminating, codifying, using and exploiting knowledge in organizations. Omur et al. (2009) defines knowledge management as an approach/discipline/ used to develop a systematic set of processes for the creation, organization and dissemination of knowledge, using different technologies supported by a knowledge-creating and sharing culture of the organizations.

According to Bollinger and Smith (2001), knowledge management is the identification and communication of explicit and tacit knowledge residing within processes, people, products and services of the organizations'. Firestone and McElroy (2005) also define knowledge management as the set of processes that seeks to change the organization's present pattern of knowledge processing to enhance it and its outcomes. Even though scholars give different meaning for KM, their main argument is that KM is important to the extent that it enhances an organization's ability and capacity on leveraging knowledge to improve organizational performance and results.

KM is not an end in itself but it is a means to an end for organizational success. The following definition is relates to the exploitation of experts' knowledge and the importance of knowledge sharing among employees of organizations:

> *"Knowledge management is about more than the management of hardware and software and solving problems of user friendliness. It is also concerned with making the best possible use of the creativity and expertise of people and the effective management of dynamic social processes which generate and exploit a wide range of differing types of knowledge" (Carlisle, 2002).*

Thus, different scholars define KM in different way with a different context. However, still now there is no agreed-up on definition for knowledge management.

Application of knowledge management can generate several benefits (Payne and Tony, 1994; Alavi and Leidner, 1999; Kridan and Goulding, 2006; Hafizi and Nor, 2006a). Employees will spend less time looking for information and expertise that in turn improve efficiency of people and improve the speed and effectiveness of innovation in the organizations. Knowledge management improves the competitive position by operating more intelligently for enhancing the financial performance of the organization. Moreover, KM optimizes the interaction between all the departments of the organization and increases the individual competencies within the organization. Finally, improving the customer service is a primary motivation behind many KM implementation initiatives.

For effective KM to take place, organizations should create conducive knowledge management environment. In addition, organizations are required to improve the organizational culture that enhance collaborative teamwork culture; network and virtual organization; learning, research and discovery culture. Moreover, organizations should give encouragement and promotion for creativity rather than mere adaptation and emphasis on leadership roles rather than administrative position (Alavi and Leidner, 1999). However, studies reveal that ICT is not critical factor for effective KM implementation. KM requires organizational process and human factor (Alavi and Leidner, 1999). Whereas managing knowledge means to create an environment within an organization that facilitates the creation, transfer and sharing of knowledge throughout the organization.

2.3 Knowledge Management Process

Having broadly defining knowledge management and its organizational applications it is important to take into consideration the process of knowledge management in organizations. While there is argument as to whether knowledge itself is a process, an object, a cognitive state etc., knowledge management mostly considered as a process (Alavi and Leidner, 1999). However, inconsistency was observed in the literature with regard to the explanation of the knowledge management processes.

Serrat (2008) notes that there are five basic activities of knowledge management processes: identify, create, store, share and use knowledge. Gold (2001) on his part grouped KM process into four broad dimensions of process capability – acquiring knowledge, converting it into useful form, applying or using it, and protecting it. Further, Leila et al. (2008) said that KM process is about creation, transport, storage, distribution and knowledge sharing. In practice, KM process has major common tasks namely *knowledge creation, acquisition, codification, sharing* and *application*.

2.3.1 Knowledge creation

Knowledge creation is the initial task performed in implementing KM in any organization. Thus, organizational participants create knowledge through their intuition, ability, skills, behaviors, work experiments and problems faced. When a company creates knowledge, it has to concern about interactive team working process. This process involves different backgrounds, cutting across organizational boundaries, combing skills, artifacts, knowledge and experiences in new ways. It involves the collection and organization of raw information, which is stored in tacit and explicit format and will achieved primarily by creating a repository of relevant information and creating a repository of learning which can be converted into knowledge (Paween, 2006).

Knowledge is created by applying tacit knowledge into the problems faced. Because, tacit knowledge exists in people mind, the tools and techniques that support knowledge creation are ways of managing people and the way in which they interact makes the individuals to create new knowledge (Payne and Tony, 1994). Two forms of knowledge

exist while creating knowledge: tacit and explicit knowledge. According to Nonaka (1994), knowledge creation is not a onetime phenomenon rather knowledge is creates through a continuous dialogue between tacit and explicit knowledge continuously.

2.3.2 Knowledge acquisition

Knowledge acquisition refers to the knowledge that a firm can try to obtain from external and internal sources (Alan, 2011). The external sources include suppliers, competitors, partners, alliances, customers and external experts. Whereas as internal sources includes experts and other employees of the organization.

Hence, eliciting the knowledge exists at the internal and external sources are essential. However, the knowledge engineers should consider the following issues; most of the knowledge is in the heads of experts. Experts are very busy and valuable people and each expert does not know everything. Because of these issues, techniques are required to elicit the knowledge of experts: interview, concept mapping, commenting, observation, audio/video recording and teach-back are some of the techniques used to elicit the knowledge of the experts (Alan, 2011). Thus, choosing the appropriate technique by considering the real situation is essential to acquire the required knowledge.

2.3.3 Knowledge codification

After the acquiring the knowledge from different sources and experts, it should be codified or recorded for making easily accessible for whoever wants to use. This process will transform knowledge into a coded form to make knowledge structured, explicit, transferable and easy to understand as possible (Paween, 2006). Knowledge codification involves conversion of tacit knowledge into explicit knowledge in usable form. 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. The aim of information retrieval is to access retrospective knowledge of the organization and to share for all users who need the knowledge (Sagsan, 2006).

2.3.4 Knowledge sharing

The process of organizational knowledge creation is initiates by the enlargement of an individual knowledge to group knowledge then into organizational knowledge. To ensure that the created knowledge is available for applying in the organization, individual and teams must have to share what they know with other co-workers. This can be carries out through some kind of knowledge base (technical) or through the direct exchange of people (Payne and Tony, 1994).

According to Payne and Tony (1994) knowledge sharing is undertake when best practices can be share through organisational processes and standard procedures. People can share their knowledge by telling stories about their experiences. Knowledge sharing is also takes place at formal or informal social communication network. In addition, knowledge can be shared through questioning, mentoring and coaching. In addition, good workplace design can encourage people to create, share and use knowledge to the benefit of the organization.

Tacit or explicit knowledge is communicated to other organizational participants' /employees/ in this step; three important clarifications are in order (Sagsan, 2006). First, knowledge sharing means effective transfer, so that the recipient can understand it well enough to act on it. Second, what shared is knowledge instead of recommendations based on the knowledge. Third, knowledge sharing may take place across individuals as well as across groups, departments or organizations.

To transfer tacit knowledge it requires strong personal contact between employees of the organization. While explicit knowledge should be stored in procedures or presented in papers and databases so that it could transfer accurately. There are many reasons why knowledge sharing is important: intangible products - ideas, processes and information - are growing in the share of global trade from the traditional, tangible goods of the world economy. It is also important when there is an increasing in turnover of staff in the organization. In addition, knowledge sharing is important for organizations geographically dispersed and that cannot understand what they know as a whole picture.

2.3.5 Knowledge application

Naturally, knowledge is acquires from all works of every occupation; even from a simple work, knowledge is found in tacit or explicit manner. As a result, employees are required to use their knowledge for making decisions and performing task perfectly for the organizational success. Knowledge has no value unless it consistently used or applied, in the right way, at the right place and at the right time (Payne and Tony, 1994).

2.4 Enablers of Knowledge Management

The success of KM implementation will not take place without the collective work of various enablers in the organizations. According to Yang et al. (2006), knowledge management enabler refers to the key factors that determine the effectiveness of executing KM within the organization. KM enablers among others include the extent that the management believes in KM effects, information technology used, human resource management and the culture of the organization (Al-Mabrouk, 2006). In fact, any KM system will include these variables to make knowledge related organizational functions practical. In order to ensure the success of knowledge management implementation, it is crucial to acquire the key enablers. In order to make it possible for effectively utilizing an organization's limited resources, reduce the use of work force, material, time and still be able to achieve the expected results.

2.4.1 Organisational enablers

The first phase of implementing knowledge management is working to gain the support of the senior managers and to reach a common understanding about the concept of knowledge management. An organizational structure reflects the organization's policy in discussing with its employees and in absorbing new ideas and experience within and outside its capacity (Alrawi and Elkhatib, 2009). Organizations have to maintain a balance between intrinsic and explicit rewards in order to encourage employees' behavior of knowledge sharing. The most effective use of explicit rewards has been to encourage sharing at the onset of a KM initiative (Hasanali, 2002). Adequate training in KM implementation enabled by adequate technology and people who knows how to use it.

Organizational enablers include human resources and financial measurements of success should support knowledge management. Financial support, human resources and time are significant resources for successful KM adoption. Financial support is undoubtedly required if an investment in technological capabilities is made. Human resources are required to coordinate and manage the adoption of KM process, as well as to take up knowledge related roles (Al-Mabrouk, 2006).

2.4.2 Corporate culture

In the process of carrying out knowledge management, enterprises have to face the varying conditions of corporate culture, workflow processes and the integration of group members' knowledge (Yeh, 2006). According to Yeh (2006), corporate culture is the combination of value, core belief, behavioral model and symbol. It represents the value system of the company and will become the employees' behavior and norm. Corporate culture is the important part in forming a culture of knowledge sharing. It might need to be supplement by IT. Thus, management should promote the corporate attitude that focuses on co-operation and knowledge sharing across the organization.

2.4.3 Process enablers

Here are several processes and activities that characterize the KM discipline and the literature highlighted a number of processes associated with KM (Al-Mabrouk, 2006). Many authors have suggested a number of activities or processes associated with KM implementation in the organization (Serrat, 2008; Gold, 2001; Leila et al., 2008; Alavi and Leidner, 1999). Thus, it is important that organizations to adopt a process-based view to KM based on the structure and infrastructure of the organization context.

2.4.4 Technology enablers

Technology is a basis for effective KM progress and implementation in organizations (Hasanali, 2002). Again, information technology is a vital factor to support the process of storing and distributing knowledge for sharing among employees. Technology provides tools and techniques to capture, create structure, communicate and effectively exploit

knowledge. The main role of technology is seen as an enabling and facilitating interaction among people for the purpose of knowledge sharing (Handzic et al., 2004). When we say technology, it includes e-mail, bulletin boards, chat rooms and whiteboards, audio and video-conferencing. It also covers various specialized groupware applications: CRM (Customer Relationship Management), data mining, integrated portals, e learning, intranets and extranets (Handzic et al., 2004; Malhotra, 2005). Hence, such things are an enabler for successful implementation of knowledge management in organizations.

In addition, deploying computing (ICT) tools to link people enterprise-wide; support collaboration, including navigation, search engines and data storage technologies; and link to the global resources of the organization (Wong, 2005). Hence, IT can enable rapid search, access and retrieval of information and support collaboration among employees.

2.5 Knowledge Creation and Sharing Models

Organizational knowledge creation is the process of making available and enlarges knowledge created by individuals as well as crystallizing and connecting it with an organization's knowledge system (Nonaka, 2006). In other words, individuals come to know their work life that benefits their colleagues and eventually the larger organization. It is not only individual's experience that creates knowledge it is the networks of people who meet and work with each other that often cause knowledge to transfer and created (Mcinerney, 2002).

Knowledge, as it defined above, exists in organizations in two dimensions: in tacit and explicit form. Nonaka (1991) proposed SECI model that shows the interaction between tacit and explicit knowledge to create and/or share the knowledge.

2.5.1 Nonaka SECI model

The SECI model, developed by Nonaka (1991), helps us to understand the spiral process of knowledge creation and sharing. KC is a spiraling process of interaction between explicit and tacit knowledge. According to Nonaka and Konno (1998), the interaction between explicit and tacit knowledge lead to the creation of new knowledge that is

'knowledge Conversion'. Through the conversion process, tacit and explicit knowledge expands in both quality and quantity. Figure 2.1 presented the SECI model.

i= individual g= group and o= organization

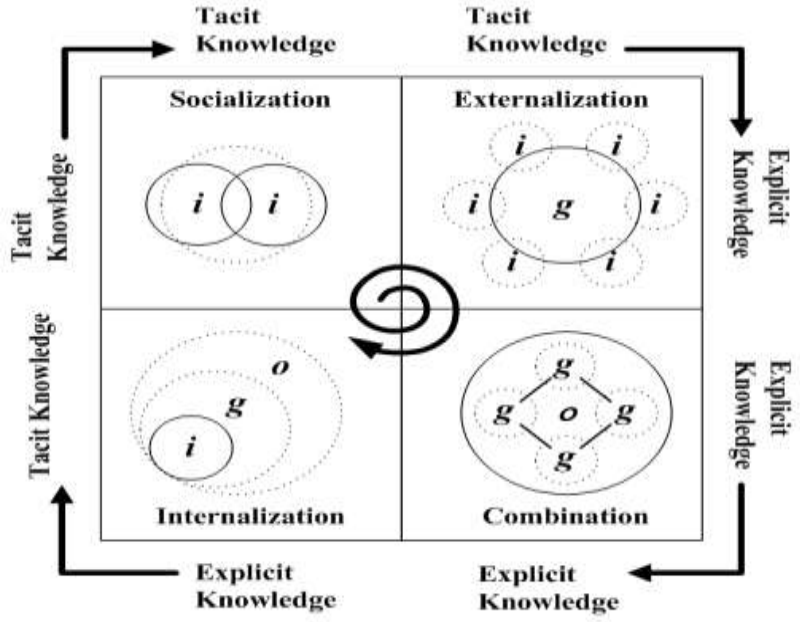


Figure 2.1 SECI model of knowledge conversion

Nonaka's (1991) SECI model describes organisational knowledge creation as a dynamic process involving a continual interplay between explicit and tacit dimensions of knowledge through the processes of Socialization, Externalization, Combination and Internalization. This process is simple when it begins dynamically from the individual level but once it moves into people interactions, it expands dramatically in incorporating people inside and outside the organization.

Socialization: it is the first step in knowledge conversion process in which tacit knowledge is shared with team members of the organization through joint activity, observation, imitation and practice shared (Muiña et al., 2002; Shih et al., 2010; Nonaka and Konno, 1998). Socialization also occurs beyond organisational boundaries by interacting with customers and suppliers (Nonaka et al., 2000). In practice, socialization

involves capturing knowledge through physical proximity of the individuals. Hence, in this stage there is no need to go through written words.

Externalization: it requires the expression of tacit knowledge and its transition into comprehensible and documented form of knowledge, which might easily understood by other members of the organization (Nonaka and Konno, 1998). Thus, in this phase tacit knowledge was converting into explicit knowledge. This phase takes place at a group level developing a body of shared explicit knowledge owned by the group (Muiña et al., 2002). Individuals places to the group so, the sum of individuals intention becomes integrated with the groups mental world (Nonaka and Konno, 1998).

The conversion of tacit knowledge was into explicit knowledge is undertaken with the support of two main factors. The first one is the articulation of tacit knowledge which is the conversion of tacit knowledge into explicit knowledge that involves techniques that aids to express one's ideas, understandings and imaginations as words, images, concepts, rich pictures and dialogues. The other factor entails translating the tacit knowledge of group members, customers and experts into readily understandable format (Nonaka and Konno, 1998).

Combination: it involves the conversion of explicit knowledge into more complex sets of explicit knowledge through storage, combination and classification to make the explicit knowledge systematic (Shih et al., 2010). This phase depends on three main processes. Capturing and integrating new explicit knowledge is essential which involves collecting externalized knowledge (e.g. public data) from inside or outside of the organization and then combining, editing or processing to form new knowledge. The other is distributing the explicit knowledge based on the process of transferring this form of knowledge directly by using presentation or meeting. The last one is editing explicit knowledge to make it more usable. The main issue in this phase is the combination of explicit knowledge through formal reasoning, logic and dialogue confers to the group (Muiña et al., 2002).

Internalization: it is the phase where explicit knowledge of the organization and the group knowledge are changes into the organization's tacit knowledge mainly via

inspections and applications. This requires the individuals to identify the knowledge relevant for oneself within the organizational knowledge (Nonaka and Konno, 1998). This process socializes, externalizes and combines the explicit languages, texts, pictures and then internalizes it into personal knowledge (Shih et al., 2010). According to Nonaka et al. (2000), internalization is closely relates to `learning by doing'. In other words, when the whole organization is able to share the new explicit knowledge, employees can start to develop, extend and redefine their implicit knowledge, which in turn helps to develops new organizational knowledge.

2.5.2 Ba model

To explain the interactions involved in knowledge creation the concept of ba model introduced to the knowledge management field by Nonaka and Konno (1998). Nonaka and Konno (1998) define 'Ba' as "a shared context in which knowledge is created, shared and utilized". Ba describes the "linkage points" of interactions and "where" they taken place, as well as "when" and "how" (relationships) exists. As such, 'Ba' is interpreting as a type of connected group of people. Nevertheless, Ba is much more than a simple group. Ba provides a shared context in which individuals can interact with each other to create new meaning (Nonaka and Konno, 1998).

Nonaka et al. (2000), by strengthening the idea of Nonaka and Konno (1998), notes that the Japanese word `Ba' means not only just a physical space, but also shared context in a specific time and space. Ba is a time and space connection. Ba can be physical (e.g., office), virtual (e.g., teleconference), mental (e.g., shared experiences, ideas, or ideals), or any combination of them.

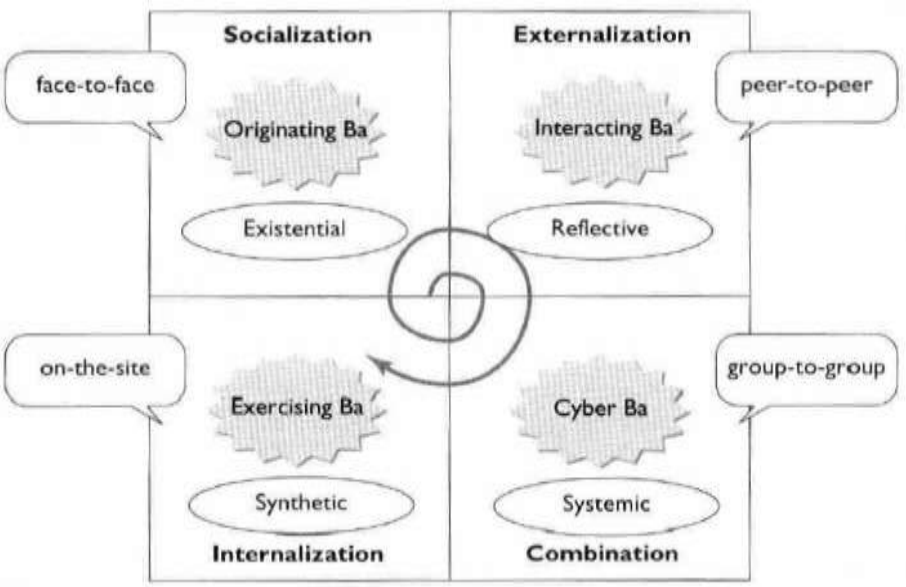


Figure 2.2 Ba Model

As depicted in figure 2.2 there are four phase of Ba model. That corresponds to each of the four knowledge conversion modes of SECI model. Nonaka et al., 2000 presented these four types of Ba as Originating Ba, Dialoguing Ba, Systemizing Ba and Exercising Ba. Whereas, Nonaka and Konno (1998), presented as originating Ba, interacting Ba, cyber Ba and exercising Ba. Even though, their naming seems different the meaning and explanation given is the same. These four squares of Ba define using two dimension of interaction. The first dimension is the type of interaction, that is, whether the interaction takes place individually or collectively. The other dimension is the media used in such interactions.

There are four type of Ba, which corresponds to the four stage of the SECI model proposed by Nonaka's (1991) which is Originating Ba, Interacting Ba, Cyber Ba and Exercising Ba. Hence, each Ba speeds up the process of KC in the organizations.

Originating Ba: this is the stage where the knowledge creation process begins. It represents the Socialization phase of SECI model. It is the phase where individuals share their feelings, emotions, mental models and their experiences. Physical and face-to-face experiences are the key to the transfer of tacit knowledge. The basic organizational issue

required is preparing knowledge vision and developing knowledge culture in the organization (Nonaka and Konno, 1998; Nonaka et al., 2000). According to Nonaka et al. (2000), from originating Ba care, love, trust and commitment emerge, which form the basis for knowledge conversion among individuals within the organization.

Interacting Ba: During this phase, tacit knowledge becomes explicit by forming groups in the organizations. Thus, it represents Externalization phase of SECI model. It is the place where individuals gathered, shared and expresses their knowledge to convert into common term, articulation and concept. Hence, selecting people with the right mix of specific knowledge and capability for a project team or taskforce is critical. Through dialogue, it is the key for conversion, where individual's mental models and skills converted into common terms and concepts (Nonaka and Konno, 1998).

Cyber Ba: it is the place of interaction in a virtual world instead of real space and time; and it represents the Combination phase of SECI model (Nonaka and Konno, 1998). At this phase, the combination of new explicit knowledge with the existing information and knowledge generates and systematizes explicit knowledge throughout the organization. Using online networks, group-ware, documentation and database has been growing rapidly over the last decade, enhancing this conversion process.

Exercising Ba: in this phase, explicit knowledge is converting into tacit knowledge, which represents the Internalization phase of the SECI model. In addition, it places in the final phase of Ba model. It facilitates the conversion of explicit knowledge to tacit knowledge. Focused training with senior mentors and colleagues consists primarily of continued exercises that stress certain patterns and working out of such patterns. Thus, Exercising Ba of knowledge is continuously enhances by the use of formal knowledge in real life or simulated applications (Nonaka and Konno, 1998).

2.5.3 Hedlund and Nonaka's Model

Knowledge sharing can be very complicated and complex hence, a more elaborate version of Nonaka's model was developed to describe the four levels of carriers or agents of knowledge in the organizations. They are individual, group, organization and

interorganizational domains. Hedlund and Nonaka's (1993) improved Nonaka's model of KM. The knowledge management model of Hedlund and Nonaka's (1993) categorized knowledge from four domains: individual, group, organization and inter-organizational domains. They believe that a great deal of knowledge within the organizations resides in the mind of its employees. To capitalize on individual knowledge, organizations need to turn it into organizational knowledge. According to Hedlund and Nonaka's (1993), knowledge transfer can be very complicated and complex. Hence, a more elaborated version of Nonaka's model is developed to describe the four levels of carriers or agents of knowledge in organizations. They are individual, the group, the organization and the interorganizational domains (Haslinda and Sarinah, 2009).

	Individual	Group	Organization	Inter-organizational Domain
Articulated knowledge	Knowing calculus	Quality Circle's documented analysis of its performance	Organization chart	Supplier's patents and documented practices
Tacit knowledge	Cross-cultural Negotiation Skills	Team coordination in complex work	Corporate Culture	Customer's attitudes to products and expectations

Figure 2.3 Hedlund and Nonaka's Knowledge Management Model

This four levels assumes that knowledge is catagorized into the individual, group, organizational and inter-organizational domains. In this apsect, interorganizational source of knowledge includes other individuals or organizations in the outside environment like customers, compititors and government etc.

2.6 Knowledge Sharing Barriers

In any organizations, in the implementation of knowledge management system emphasis is gives for knowledge-sharing behavior of the employees. Since the success of KM initiatives largely depends on the willingness of organisational members to share their tacit knowledge (Chatzoglou and Vraimaki, 2009). Organization to be a knowledge creation organization it should focuses on KS activities. As a result, understanding the factors that influence individuals' behavior toward knowledge sharing in the organisational context is essential.

On this regard, World Bank (WB) is an outstanding bank that creates a knowledge sharing culture throughout the organization, launched a knowledge sharing initiative in 1996 (Guanyu and Guocan, 2010). Researchers are undertaken a lot of studies with the aim of knowledge-sharing behavior of bank employees in different part of the world. In Greece, Chatzoglou and Vraimaki (2009), studies about KS behavior of bank employees. Huang and Davison (2008) studied in China and Nya et al. (2010) studied about the motivational factor influencing KS among banks in Malaysia.

The breadth and depth of a knowledge management system (KMS) depends on the magnitude of knowledge contributed to the system and shared with colleagues. Thus, knowledge contribution (sharing) is a critical KM process. Therefore, examining the factors that affect the individual knowledge sharing behavior is essential to the success in the deployment of organizational KMS (Al-Busaidi et al., 2010).

Generally, implementing knowledge sharing practice in the work environment is limited by a number of factors such as culture, polices, strategies, technologies and even the personality of workers (Al- Busaidi et al., 2010; Chatzoglou and Vraimaki, 2009)

2.6.1 Culture

Organizational culture plays a vital role in the success of KS process in banks. KS process will not occur unless it supported by the culture of the banking institution itself

(Nya et al., 2010; Chatzoglou and Vraimaki, 2009). Organizational culture reward system also have great factor in improving the KS culture of the organization.

Introducing KM involves changes to the worker's interconnectivity. First, the worker's set of meetings is alters, on how meetings are conducted, information is exchanges; the range of information that is exchanged and the frequency of information are exchanged. Second, the worker's set of attitudes also affected that sharing information is a good thing to happen.

Again, to use KM successfully, there are necessary attitude regarding the propriety of relying upon information technology, having sufficient skills that this technology is not threatening, information sharing, teamwork and informational efficiency. Culture is a sort of glue that bonds the social structure of an organization together (Tuggle and Shaw, 2000).

2.6.2 Belief on knowledge power

People believe that knowledge is 'power' and hoarding of knowledge leads to gaining control over power (Alrawi and Elkhatib, 2009). In other words, individuals feel that they lose their power when they share their expertise knowledge with others. They also feel that knowledge sharing will cost them a lot of time that they would rather spend on personal work (Al-Busaidi et al., 2010). Loss of knowledge power regarded as a critical barrier to knowledge sharing. Employees might choose to keep knowledge to themselves and refuse to share if they think knowledge hoarding could benefit them.

Knowledge needs to be shared to be created and exploited it is important for leaders to create an atmosphere in which organization members feel safe on sharing their knowledge. It is also important for leaders to cultivate commitment amongst organization members to motivate the sharing and creation of knowledge, preferably based on a corporate knowledge vision (Nonaka et al., 2000).

2.6.3 Trust

Trust is the most important explicitly stated value essential for knowledge sharing. The existence of mutual trust in an organization facilitates open, essential and an influential knowledge exchange person that is associated with professional relationships rather than individual relationships. Trust encourages the work environment that promotes knowledge creation as it reduces the fear of risk. According to Guan (2006), organisational size does affect the level of mutual trust experienced in organizations. Trust among employees from different department increase the openness of communication among staffs of the organizations. According to Holste and Fields (2010), trust among organizations employee was develop through face-to-face communication, working within teams and chat between employees will be the beginning for the development of trust and foundation of vital creative work.

2.6.4 Misinterpretation of shared knowledge

Individuals also feel that knowledge sharing will cost them a lot of time that they would rather spend on personal work. Additionally, individuals may fear that their peers who might utilize their knowledge may misinterpret the shared knowledge and that may cause bad work consequences (Al-Busaidi et al., 2010).

In addition to the above, other knowledge sharing barriers consists of learning, reward system, information technology and staff persuasion to share knowledge. Therefore, it is necessary to understand barriers of knowledge creation and sharing in order to propose the necessary solutions to control and smooth knowledge flow within the organization.

2.7 Commercial Bank of Ethiopia

CBE is the leading Commercial Bank in Ethiopia, established in 1942. CBE break new ground in introducing modern banking to the country. Today, more than ever before, the CBE has largely expanded its presence in all directions of the country. Despite the flourishing of private commercial banks, the CBE has remained in the lead in terms of assets, deposits, capital, customer base, branch network and branch sizes. Currently, it has over 358 branches, spanning the entire breadth and width of the country. As on June 30 total deposits reach at 56.1 billion Birr while total asset and capital of the bank reached birr 73.7 billion and 5.5 billion respectively. Moreover, the Bank has a strong bilateral relationship with more than 50 foreign banks and a SWIFT bilateral arrangement with other 500 foreign banks (http://www.combanketh.com).

CBE is pioneer to introduce Western Union Money Transfer Services in Ethiopia. CBE introduce ATM service for local users in Ethiopia. In addition, CBE has reliable and long-standing relationships with many internationally highly praised Banks throughout the world. Currently CBE has about 2 million account holders and combines a wide capital base with more than 9,000 talented and committed employees (http://www.combanketh.com).

According to proclamation No. 184 (1980), the following are the main objectives of CBE, the first is, extend commercial banking services throughout the country. The second is to encourage the mobilization of savings. Further, CBE aims to extend loans, credits and other banking facilities to any person for specific purpose and periods. It also aims to spread widely banking habits among people.

In addition to the above, the management of the Bank sets an objective to secure business growth and maintain market share in Ethiopian financial markets though improving the profitability of the Bank in providing high quality financial products or services. The other is to maintain leadership in introducing new product and service development. Additionally, establish credibility and create favorable image with correspondent banks all over the world. Finally, assume technological leadership.

As part of reestablishment process of public enterprise by the new government, CBE was re-established as public enterprise as per regulation No. 202/1994. The purposes of CBE are:

- To accept savings, demand and time deposits;
- To draw, accept, discount, buy and sell bills of exchange, drafts and promissory notes payable within and outside Ethiopia;
- To issue letter of credit
- To provide short and medium-term loans and within a limited ceiling, long term loans;
- To buy and sell negotiable instruments and securities issued by the government, private organizations or any other person;
- To accept and keep safes securities, jewels and other valuables;

As can be noted, the current objectives of CBE reflect the direction of the financial sector of the country and the government's intention as to what it intends to do with its Bank. The current profitability principle of public enterprises in Ethiopia is also reflected in the objective of CBE.

The existing products/services of CBE are savings, fixed or term deposit, current, overdraft and foreign currency accounts. In the loan category, there are short term, agricultural, medium term, personal, special and merchandise loans. Money transfer domestic and international, Documentary Letters of Credit, Foreign Exchange and Equity Financing. Inward and outward Bills of Collections are also services offered by CBE. The Bank extends loans for short term financing in the areas of domestic tread, export/import, industry, services and agriculture. The other major and new categories of loan classification are project-financing loans are mainly extended to new establishments and privatization efforts of the Ethiopian Government for short, medium and long terms. CBE is also involved in co-financing of long-term loans with the Development of Bank of Ethiopia (DBE).

2.8 Knowledge Management in Banks

Since we are in the knowledge era, this forces the banking institution to view knowledge management as one of the competitive advantage. Over the last 20 years, banks have been actively automating their manual processes. This results the creation of many information systems (IS) even within one bank (Hafizi and Nor, 2006b). While these information systems are able to help banks better, manage their processes and resources it also slow down their service delivery. One major slow down of information system in the past was that it resulted in the creation of huge volumes of data, information and resulting information explosion or information overload (Hafizi and Nor, 2006b).

This phenomenon occurs when the banks face with massive amount of information and it takes time to go through the bulk of information to use. When there was heavy load of information, it results slower response rate and if this happened frequently, inefficiency occurred (Hafizi and Nor, 2006b). Large organizations because they have scattered or virtual units they lack unification and duplicates efforts exists. In such cases large amount of knowledge will be generating however, it will not put to proper use due to lack of connectivity (Goswami, 2008). To solve such difficulties efforts are underway to implement knowledge management practices in business, firms and corporate fields sector. In this regard, understanding the experience of the banks that implement KM is critical. Different researches are undertakes to investigate KM practice in different regions of the world and there are several examples of KM application that is successfully implemented in the banking sector.

India: one of the major bank that implements KM is ICICI bank (found in India) begins by implementing portal called “Wise Guy”. Because the bank understood that building, a learning organization is critical for being competitive in products, services and meeting customer expectations. Learning organization becomes real when organization cerate electronic KS culture across the organization on mechanism of using portal. The ICICI bank uses portal because they felt to create and generate the culture of knowledge sharing. To introduce the portal in ICICI first awareness was generated by sending e-mails to all employees and by putting banners on the Intranet site. In order to maintain

the interest of participants in the website top contributors selected on the bases of their contribution and given award. The award is cash prize and posting the photo of winner for a week in the banks website (Goswami, 2008).

The wise guy portal gives an access only if one has a login-id and password within the banks' intranet. It has confidential sections, which are not for public view, are restricted by the administrator which is essential for sections containing client information. The site also provides links to other useful databases aimed at empowering the employee to make a rational strategic decision. At the initial stage, the wise guy project face challenge arises in getting people genuinely contribute their knowledge and in getting people to utilize information on the site that can be solved with a very high level of constant motivation to get the entire employees acceptance. By facing these and other challenges ICICI gets a lot of benefits because of knowledge sharing culture, using wise guy, in the organization.

United Arab Emirates (UAE): Alrawi and Elkhatib (2009) assess the present practice and the future state of KM in the banking sector of UAE. The researcher develop a model to examine the application of KM that shows the distinctions between knowledge creation, knowledge sharing and acquisition by the organization with the concept of Knowledge management as a means of connecting whose employees, sharing ideas collectively or individually and using technology to facilitate the achievement of such purposes. As a concluding remark, they said that, "knowledge sharing individually or collectively by the banking sector adds value when new KM is practiced in a knowledge-intensive organization".

Malaysia: On the other hand, Hafizi and Nor (2006b) recognized the effort and resource employed to make KM successful since in today's modern banking, information and knowledge are treasured assets that generates revenue. Hafizi and Nor (2006b) understood that the application of knowledge management in the banking industry does not really differ from other industries but the increasing complexity of banking environment makes its implementation more difficult. In order to simplify the application of KM they introduce a new knowledge management model called Banking Knowledge Management Model (BKMM) by conducting case study in two local commercial banks

found in Malaysia with the aim to integrate KM in the operation of banking sector. BKMM helps those banks to motivate and empower their employees at different level to use their knowledge in delivering efficient and effective banking services. Moreover, to reorganize and restructure human resources to improve the interfaces for knowledge sharing by using web pages, e-mail and discussion forums.

Asian Development Bank: The other institution in the banking sector that implements KM is Asian Development Bank (Boom, 2005). Asian Development Bank (ADB) recognizes the growing role of KM and incorporates in the strategic framework for 2010-2015 to become a learning institution and a primary knowledge intensive bank in Asia and Pacific. Accordingly, a knowledge management framework has been prepared to guide ADB's transition to a knowledge-based organization (ADB, 2004). ADB's knowledge management process incorporates four stages: (i) knowledge creation and capture, (ii) knowledge sharing and enrichment, (iii) knowledge storage and retrieval and (iv) knowledge dissemination.

In the first stage of KM in ADB, it creates and captures knowledge throughout its operational processes. Explicit knowledge is a knowledge captured in the form of documented outputs from outside ADB through publications, web sites and seminars. On the other hand, tacit knowledge can be created /captured/ in discussions with stakeholders, partners and consultants.

For sharing and enriching knowledge, at the second stage, the new sector and thematic committees and networks provide a forum. Forum is a virtual place where new ideas on development issues are exchanged /debated/ to make more relevant before its dissemination within and outside ADB. Clients and other development partners are seize meetings, workshops, Seminars with the bank for sharing and enriching knowledge in ADB.

In the third stage, to ensure that the acquired knowledge becomes accessible to others, ADB stores knowledge in a centralized location accessible for retrieval in electronic databases. The fourth stage of knowledge management process of ADB was knowledge dissemination that is dispatching the knowledge they got to different organization using

publications, presentations, web sites, ADB library, learning center and other mechanisms.

In this way, KM is implementation in ADB with the following benefits: first, it helps the institution for improving its processes in capturing and storing knowledge. Second, KM leads to operational efficiencies in finding relevant knowledge when needed. Third, it enables faster access to crosscutting knowledge and lastly it leads to improve project quality.

Greece: Chatzoglou and Vraimaki (2009) conducted a study on the knowledge sharing behavior of bank employees in Greece. Their study aimed to develop an understanding of the factors that influence knowledge-sharing behavior of bank employees by using an aggregate model, which is based on the theory of planned behavior. Their research findings indicate that an individual's attitude toward knowledge sharing is the primary factor in influencing intentions to share knowledge. The intention to share knowledge was found to be influenced by subjective norms, that is by the perceived social pressure to perform or not knowledge sharing.

Libya: Kridan and Goulding (2006), on the other hand, conducted a study to find out if the banking sector in Libya is ready to implement KM. Three banks are selected for their study. Kridan and Goulding (2006) had undertaken a case study with the aim to provide information relating to the importance of KMS in the context of the Libyan banking environment. To achieve the objective of their study, face-to-face interview with the selected bank officials was conduct. It is known that KM could allow Libyan banks to meet the national and international requirements. They also recognized that Libyan banks are still at the beginning of the long journey towards the implementation of KM.

Through the implementation of KMS, organizations can get results in services, process improvement and the creation of a centralized communication system for the banking industry. In their assessment they found that there is a significant role that a KMS might play in all Libyan banks was acknowledged by most of the interviewees, it also appreciated that the present environment and circumstances. In any KM initiatives since more support is required from the banks in terms of their structure, people, technology,

goals /objectives/, internal and external environment. According to Kridan and Goulding (2006), it seems that the current situation at the Libyan public banks is that they are ready to deal separately with each regulatory system that can benefit the banks and they can recognize its strategic importance.

Egypt: Easa (2011) had undertaken a study about the knowledge creation process & innovation in Egyptian banking sector. The research is undertaken with the aim to discuss the use of SECI, a model of knowledge creation and sharing process by Egyptian banks and its effect on innovation. The researcher employed both quantitative (face-to-face interview) and qualitative (questionnaire) methods to achieve the objective of the research. Their study were targeted on three commercial public banks and nine private banks found in Egypt. Easa (2011) reaches with the conclusion that internalization has highly important in the process of innovation using SECI model. Following with internalization, combination were the second most important processes of SECI and it had higher effect on innovation. Externalization process is the third rank in terms of the lowest important process of SECI and accordingly in terms of the lowest influence on innovation. Finally, socialization process had the lowest effect on innovation in Egyptian banks.

The finding of their study showed that the SECI processes, whether they are separate or as a whole positively influenced the innovation process within Egyptian banks. The study also recognized that the effect of SECI model on innovation is reflected in the process of generating ideas related to services, products and processes. At the end, the researcher recommended that top management is the body in charge of implementing those new ideas after conducting further analysis for the success and improvement of their organization.

Ethiopia: However, in case of Ethiopia, as per the knowledge of the researcher there is no study undertaken in the implementation of KM in the banking sector. Every organization, especially organizations like CBE which provide services for a number of decades, have the long serving employees who serves over many years, have built up a vast wealth of knowledge about the company, its clients, its products and the service it

provides. Those employees are experienced about their work. They know how to sort out problems? Like which way do you turn? In this cases knowledge sharing among those employees are essential.

However, as per the knowledge of the researcher there is no research was undertaken in the organization to evaluate the knowledge sharing among the employees of CBE. In this regard, this study has large contribution for the organization and for the country as a whole for understanding the level of knowledge sharing activities for the creation of new knowledge.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

In order to achieve the objectives of this research, the researcher uses the SECI model of knowledge creation and sharing process to evaluate the knowledge flow environment of CBE. The SECI model were proposed by Nonaka (1991) to show Socialization, Externalization, Combination and Internalization activities in organizations knowledge creation and sharing process. The main theme of this model is that organizational knowledge is created through continuous dialogues between tacit and explicit knowledge in a spiral form.

The reason for choosing the SECI model was the fact that this model has been widely applied in other industries including knowledge creation and sharing studies in Japanese and European organizations. It is also helpful to evaluate social, technological and human factors of knowledge sharing in Commercial Bank of Ethiopia. In this chapter the research approach and sample used to achieve the researches' aim and data collection methods was covered.

3.1 Review of Related Literature

Every ongoing research needs to be connecting with the work already done before, to attain an overall relevance and purpose of the research. The review of literature thus becomes a link between the research proposed and the studies already done. It tells the reader about the aspects that have been already established or concluded by other authors and gives a chance to the reader to appreciate the evidence that is already been collected by previous research and thus plans the current research work in the proper perspective (Kumar, 2009). Hence, in the present research literature review is conducted to assess knowledge creation and sharing process (both concepts and models) of the previous works done. Various books, journals, articles, proceeding papers, manuals and Internet is consulted to understand the practice of knowledge creation and sharing practice in the banking sector.

3.2 Research Design

Research designs are the plans and procedure that cover the decision from broad assumption to detailed methods of data collection (Creswell, 2009). According to Creswell (2009), there are different types of research designs: qualitative, quantitative and mixed research. Qualitative research approach is one of the main approaches of research methodology. It studies about experiences, behaviors and attitudes from the respondents. Qualitative methods include interview, participant observation, case study and content analysis. As compared to quantitative research approach, it does not use mathematical and statistical methods.

However, qualitative research method uses logic to interpret gathered data. Quantitative research approach uses survey and questionnaire. Information dealing with numbers and anything that is measurable, statistics, tables and graphs are used to present the results of this study. The qualitative methods is based on smaller sample sizes and are often not representative of the population, which makes it difficult to achieve reliability and validity (Marshall, 2006).

Mixed research design is a research design that combines both qualitative and quantitative research approach. Hence, to achieve the aims of this research both quantitative and qualitative methods of research design were used such type of research is called mixed research design (Kumar, 1996). In this term, the self-administered questionnaires were concerned to investigate to what extent the Ethiopian banking sector performs as per the SECI model for knowledge creation and knowledge sharing activities in the bank. The semi-structured face-to-face interview was concerned to provide more details about how the Ethiopian banks perform their activities. The interview data aims to add further interpretation and meaning to the quantitative findings by discussing issues mentioned in the questionnaire in more detail. To understand the topic by studying it simultaneously (triangulation) or concurrently with both methods (through mixing quantitative and qualitative methods at the same time or in cycles, depending on the problem) provides better and acceptable result.

Figure 3.1 illustrates the whole sketch of the research methodology; starting from design and development of instrument then sample selection followed by data collection methods, analysis of the data and presenting the result of the research.

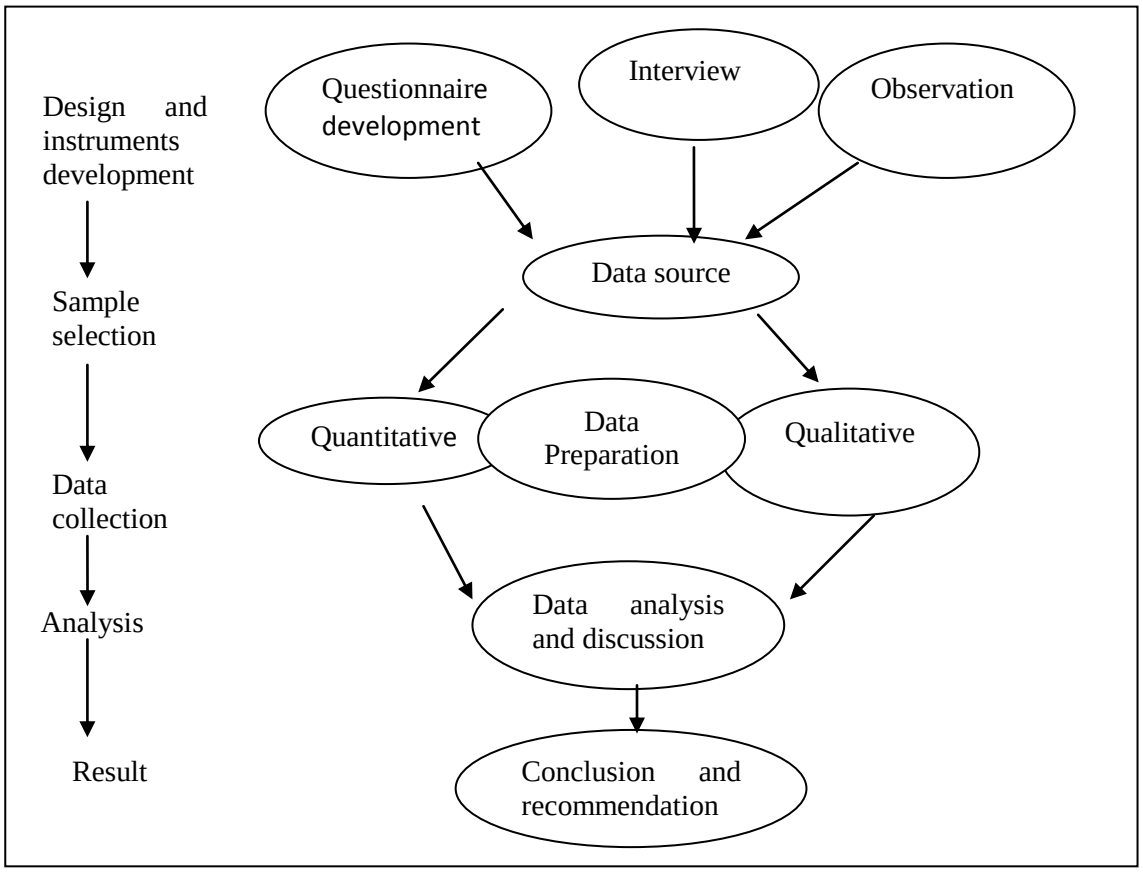


Figure 3.1 Research design for this study

The use of questionnaires (quantitative), semi-structured interviews and observation (qualitative) are employed in this study for the collection of data from CBE. After the data gathered from the data sources, the data preparation for analysis and discussion was perform. Then data analysis and discussion followed. Finally, based on the discussion and the analysis conclusion and recommendation for future work was drawn.

3.3 Research Population

The aim of this study was examining knowledge sharing and creation in financial institutions of Ethiopia using the SECI model. Financial institution is an institution that provides financial services for its clients or members. Financial institutions encompass those private banks, public banks, insurances companies, credit unions and microfinance institutions. Thus, this study focuses on only in the banking sector of Ethiopia.

There are a number of private and public commercial banks in Ethiopia. Dashen Bank, Wegagen Bank, United Bank and Awash Bank are some of the private banks already start giving service. Addis Bank, ZamZam Banks, Hawassa Bank, Merkato City Bank is some of the private banks that are under formation and expected to start operation in the coming years. On the other hand, there are three state owned banks in Ethiopia: Commercial Bank of Ethiopia, Development Bank of Ethiopia (DBE) and Construction and Business Bank (CBE). Moreover, all the public and private banks are under the control of National Bank of Ethiopia (NBE). Thus, this research focuses on Commercial Bank of Ethiopia. All the necessary data for this study is collected from Commercial Bank of Ethiopia.

The organization selected for the purpose of this study was Commercial Bank of Ethiopia. Because CBE has been playing a prominent role in economic development of the country for 68 years now thus it is the leading bank in Ethiopia, established in 1942. The samples were selected from branch banks of CBE found only in southern Addis Ababa city district. Development Bank of Ethiopia, Construction and Business Bank and private commercial banks are not included in this study. The population includes all employees of Commercial Bank Ethiopia in the Southern Addis Ababa City Districts.

3.4 Sample Design Process

It is necessary to take sample from the population because the researcher does not investigate by taking the whole population. Due to cost associated with the inclusion of each unit of the study, cost of time, cost of equipment and material constraints the researcher to take sample. The other is the issue of quality; concentration of effort on a

sample can increase the quality of the research, which may then lead to results that are more accurate. The other is feasibility of the research and time (Greenfield, 2002). As a result, designing the sampling process of the research is essential to achieve the objective the research. Accordingly, the following sample design of the research is undertake.

3.4.1 Sampling size

The sample size is an important feature of any empirical study in which the goal is to make conclusion about a population from the sample. Larger sample sizes generally lead to increased precision when estimating unknown parameters (Kumar, 1996). Sample size calculation is concerned with how much data we require to make correct decision on particular research. If we have more data, then our decision will be more accurate and there will be less error of the parameter estimate. This does not necessarily mean that more is always best in sample size calculation.

A statistician with expertise in sample size calculation will need to apply statistical techniques and formulas in order to find the correct sample size calculation accurately (Bartlett et al., 2001). For this study, the samples are mainly select from banking organizations operating in the Ethiopian financial sector. Moreover, the sample size is determined through the table provided to select the sample size for a research problem based on three alpha levels and a set error rate (Bartlett et al., 2001). They present the formula to determine the sample size; the detail of the sample calculation is attached at the appendix.

3.4.2 Sampling method

Based on organizational structure and branch distribution a hybrid sampling of stratified, purposive and random sampling techniques is used. Stratified sampling technique is used to categorize branches of CBE. The advantage of stratified sampling in a case like these is clear. It ensures that the resulting sample would be distributes in the same way as the population in terms of the stratifying criteria. Considering the branches of the Bank in Addis Ababa City as one stratum and samples branch of CBE is selected with purposive sampling from the Southern Addis Ababa District. This is because the bank operation is

highly similar in each branch's even though they are in different districts. As a result, the result of the research also mapped to the other branch banks of CBE. Purposive sampling method helps the researcher to select the branches and departments that is conducive for collecting the required data. The sample individuals selected from the branches were by using simple random sampling to give equal chance of selection to the sample.

3.5 Data Collection Methods

There are different types of data collection methods used for research studies. The selection of the data collection methods will depend on the research objective and research design. Data collected from two or more sources will help to support and improve the quality of the research result (Kumar, 1996). The goal of data collection is to gain rich data that suits to achieve the research objective. Generally, there are two types of data sources: primary data sources that are the data collected by the researcher from original sources. On the other hand, secondary source of data that is the data collected and compiled by others.

In this regard, this study is intensively used primary data collection methods through questionnaire, interview and direct observation to gather information /collect data/ from the respondents. In addition, secondary data from publication annual reports, bulletins of CBE is consulted. Collecting data from different sources strengths the limitation of each methods and yields the data that are more valid for the output of the research (Marshall, 2006). The use of questionnaires (quantitative), semi-structured interviews and observation (qualitative) employed in this study allowed for the collection of data from large and varied groups of employees /managers/.

3.5.1 Primary data

Several methods are used to collect primary data from the respondents (Kumar, 1996). Primary data are first-hand information collected by the researcher from their original sources through various methods such as observation, interviewing, mailing, questionnaires, focus group etc (Alemayehu, 2009). Therefore, the primary data for this study is collected from employees, branch managers and supervisors of CBE using

questionnaire. Then, interview and direct observation was held to clarify whenever there are doubt and unclear situations face.

3.5.1.1 Questionnaires

Questionnaire is a written list of questions the answer to which is recorded by respondents (Kumar, 1996). Questionnaire is an appropriate method of data collection in case of large sample size, which can be prepared in close and open-ended format. Close-ended questions limit respondents answer by forcing them to choose from pre-existing set of answers, such as yes/no, true/false, multiple choice, ranking scale and Likert scale. The other format of questionnaire is open-ended format in which respondents are encouraged to explain their answers to the question by writing sentences or paragraphs.

Questionnaire allow for the explorations of patterns and trends which help to describe what is happening in CBE work environment and provide a measure of respondents' opinions, attitudes, feelings and perceptions about issues of particular concern to the researcher. It also helps to identify patterns and trends that merit further exploration using qualitative methods (http://www.sheffield.ac.uk/lets-evaluate/general/methods-collection/questionnai re.html).

The questionnaire was mainly contains close-ended questions and some open ended questions. Questionnaires are prepared after extensive review of literatures in this field, those questions in the questionnaires focused on the research problems objective and questions rose in the statement of the problem

The questionnaire has two parts: part I contains the background of the respondents, gender, age, education levels, positions, experiences and departments. Part II contains questions requesting the respondents to state their agreement or disagreement on the issues of knowledge creation and sharing in their banks. In this study, the 5 point (1 = Strongly Agree, 2 = Agree, 3 = Undecided, 4 = Disagree, 5 = Strongly Disagree) Likert Scale that was developed by Rensis Likert had been chosen and applied.

Questionnaires was distributed to Supervisors, Customer Service Officers, Accountants, back office Checkers and other employees of the bank because questionnaire is the main instrument to collect information in case of large sample size.

Every response is given point value, the respondent's score is determined by adding the point value of every question in such a way that valid and reliable differences among individuals can be represented using SPSS version 16.0.

3.5.1.2 Interview

Interviewing is one of the major primary data collection methods form the people. According to Kumar (1996), any person-to-person interaction between two or more individuals with a specific purpose in mind is interview. It may be define as a two-way systematic conversation between an investigator and an informant, initiated for obtaining information relevant to a specific study.

In general, interview involves not only conversation, but also learning from the respondents' gestures, facial expressions, pauses and his environment (http://www.sheffield.ac.uk/lets-evaluate/general/methods-collection/questionnaire.html). Interview can be taken place face-to-face or via telephone. In some cases an interview becomes superior to other data-gathering methods (Kumar, 1996), because people are usually more willing to talk than to write. Once the connection is established, even confidential information may obtain from the interview (Alemayehu, 2009).

There are different types of interview formats such as structured, semi-structured or unstructured. In structured interview, the investigator asks a pre-determined set of questions, using the same wording and order of question as specified in the interview list of questions in open ended or close-ended format (Kumar, 1996). Unstructured interviews also known as in-depth interview taken place by developing framework or interview guide with in which the interview is conducted (Kumar, 1996). The more unstructured the interview, the more it is expected that the main issues will emerge from the interviewee, rather than being imposed by the structure of the interview (http://www.sheffield.ac.uk/lets-evaluate/general/methods-collection/questionnaire.html).

For this research, personal interviews with management officials, officers and ICT officers of the CBE is undertaken to support those data collection methods. The reason for the selection of interview is that it makes the respondents free to express their ideas freely.

3.5.1.3 Observation

The other primary data collection method is observation. Observation is purposeful, systematic and selective way of watching and listening to an interaction or an event as it takes place (Kumar, 1996). According to Marshall (2006), observation was defines as a systematic viewing of a specific phenomenon in its proper setting or the specific purpose of gathering data for a particular study.

According to Kumar (1996), there are two types of observation: participant observation and non-participant observation. Participant observation is an activity when the observers are participates in activity of the people being observed in the same manner as its member with or without their knowing that they are being observed. Whereas, non-participant observation is when the researcher does not get involved in the activities of the group but observes the activity of the respondents passively. Observational record are frequently referred as field notes—detailed, nonjudgmental, concrete descriptions of what has been observed (Marshall, 2006).

In this regard, non-participant observation is carries out at CBE to supplement the other data collection methods. In particular, direct observation helps the researcher to understand the customer service procedure and the bank operation. People go on observing something or other while we are conscious or unconscious. Most of such observations are just casual and have no specific purpose. However, observation as a method of data collection is different from such casual viewing. Observation as a method includes both 'seeing' and 'hearing'. It is also go along with by perceiving the activities well (Alemayehu, 2009).

3.5.2 Secondary data

Secondary data is the data or information that is already available (Kumar 1996). There are sources containing data that have been collected and compiled for another purpose. The secondary sources consist of readily available list of items that are already compiled statistical statements and reports. The data used by researchers for their study, such as annual reports and financial statements of companies, reports of government departments (Alemayehu, 2009). However, on this study the researcher collected those secondary data from CBE.

3.6 Data Processing

Data processing is an intermediary stage of work between data collection and data analysis. The completed data collected using the interview, questionnaires and observation notes contains vast amount of data. They cannot directly provide answers to research questions. They are like raw materials that need to be processed. Hence, data processing involves classification and summarization of data in order to make it ready for analysis (Alemayehu, 2009).

Data processing consists of a number of closely related operations: the first one is editing for checking the data collected to detect and/or correct errors /omissions/. In the same way after each interview is over the researcher scheduled to complete abbreviated responses, rewrite illegible response and correct omissions. Moreover, the collected questionnaires verified carefully for the completeness of the responses. After editing classification and coding taken place, those questions classified into six categories containing critical information required for analysis. Finally, the data summarized and arranged in a compact form for further analysis.

3.6.1 Procedures on data analysis

Data analysis involves critical thinking. The data analysis is done after collecting all the data from the respondents. Thus, the analysis of the study follows the objective of the research. Moreover, the data gathered through the above-mentioned methods were analyzed using statistical tools, such as graphs, tabulation and percentage using SPSS version 16.0 software. Whereas, the data from interviews and observations is presented qualitatively.

3.7 Reliability and Validity

Reliability means the consistency or repeatability of the measure (Marshall, 2006). Reliability is especially important if the measure used for an on-going basis to detect change. Purposive sampling such as timing of data collection, structure of interviews, data triangulation between on-site observations, the unstructured interviews and usage of official documents makes this research reliable. On the other hand, unstructured interview held by the researcher gives strength on the reliability of the information collected from the respondents than structured interview.

Validity means that we are measuring what we want to measure (Marshall, 2006). There are different types of validity measurements including, face validity - whether at face value, the questions appear to be measuring the objective of the study. The researcher had undertaken a pre-test on selected employee to check the validity of the questionnaire. The content validity also assured when the questionnaire was prepared based on extensive reading of literature review.

Reliability and validity are mostly raised in conducting quantitative research (Marshall, 2006). While preparing the questionnaire ambiguous or vague wording was avoided to ensure that respondents would read and answer the question consistently on different occasions in the same context (Greenfield, 2002).

Moreover, reliability and validity of the study is acquired through analyzing data from different sources. The data from different sources can help for crosschecking the information obtained. At the same time, the reliability was gained during the analysis part when those proved information would interpret in consistent manner. Internal consistency of this study checked with the Cronbach's alpha. This is a single correlation coefficient is an estimate of the average of all the correlation coefficients of the items within a test. If alpha is high (0.80 or higher), then this suggests that all of the items are reliable and the entire test is internally consistent (Robert, 2006). In this regard, the Cronbach's alpha for this study is 0.813 this shows the items are reliable and the entire test or questions are internally consistent.

3.8 Dissemination of the Research

After the thesis is finalized, the first draft of the thesis is submitted to the advisor. After the approval of the advisor, one copy of the final thesis was submitted to the Dean of School of Information Science for examination. Later on after the defense, four copy of the corrected version of the final thesis is submitted.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

To assess the existing knowledge sharing practice of CBE questionnaires are distributed to employees at different branch offices of the Bank. The responses obtained through questionnaires are supplemented with interview and physical observation. The analysis is done using SPSS version 16.0. Frequency, percentage, means and standard deviation value is used for discussion of the questionnaire collected from CBE.

Table 4.1 shows the total number questioners distributed and collected from branches and departments of CBE. Questionnaires are distributed across the branches that are found in Southern Addis Ababa District of the CBE. In addition, the questionnaires distributed to 7Human Resource, Procurement, Outsourcing, Acquired Asset and Customer Loan the departments of CBE. In addition, physical observation was undertaken to understand the banking service delivery and to see the employee's social interaction. Moreover, interview also held with the Bank officials to clear ambiguity during data analysis.

Table 4.1 Number of distributed and collected questionnaire

No.	Name of the Department	Number of Questioners		
		Distributed	**Collected**	**Percentage (%)**
1.	Corporate Human Resource	13	8	61.5%
2.	Out Sourcing	11	7	63.6%
3.	Consumer Loan	18	14	77.8%
4.	Nifas Silk branch	24	18	75%
5.	Kality branch	20	16	80%
6.	Gofa Sefer branch	20	17	85%
7.	Cherkos branch	24	18	75%
8.	Tmenjia Yazji	23	17	73.9%
9.	Procurement Office	14	10	71.4%
10.	Acquired Asset	9	5	55.6%
Total		176	130	73.9%

In general, the total number of questionnaires distributed was 176 and the returned questionnaires are 130 with a response rate of 73.9%. Initially the questionnaire response rate is 64.3% to increase this response rate redistribution of the questionnaire is undertaken which helps to improve the response rate by 9.6%.

4.1 Demographic Analysis

This portion of the survey is concerned with background of the respondents to understand the employees or respondents who participate in filling the questionnaire for this research. Respondents are requested to fill their sex, age, their level of education and their present work position in the Bank. The profile of respondents is presented in table 4.2.

When we look the respondents' gender wise, 64.6% of the respondents are males where as only 35.4% of the respondents are females. This shows that more of the respondents are male.

The majority of the respondents are comprised from customer service officers, which accounts 78.5%. Whereas 22% of the samples are from employees in other professions specialized in secretaries, help desk workers and back office checkers. Only 1.5% of the respondents are managers. This shows that most of the respondents are customer service officers.

When we see respondents' by age range 44.5% respondents are categorized in age range between 31 - 40 years, 36.2% in the age range 20 – 30 years and 13.1% respondent are in the age range of 41 – 50. Only 6.2% of the respondents are found in the age range of 51-60. This shows that more than 80% of the respondents are below the age range of 40 years.

Table 4.2 Profile of respondents

Measures		Frequency	Percentage (%)
Work position	Manager	2	1.5%
	Officer	102	78.5%
	Other	26	20.0%
	Subtotal	130	100.0%
Age	20 - 30	47	36.2%
	31 - 40	58	44.5%
	41 – 50	17	13.1%
	51 – 59	8	6.2%
	>60	0	0%
	Subtotal	130	100.0%
Gender	Female	46	35.4%
	Male	84	64.6%
	Not Given	0	0%
	Subtotal	130	100.0%
Level of education	2nd Degree	2	1.5%
	1st Degree	111	85.5%
	Diploma	15	11.5%
	Certificate	2	1.5%
	Subtotal	130	100.0%

Years of experience of respondents in the CBE that participate in this study is depicted in Figure 4.1.

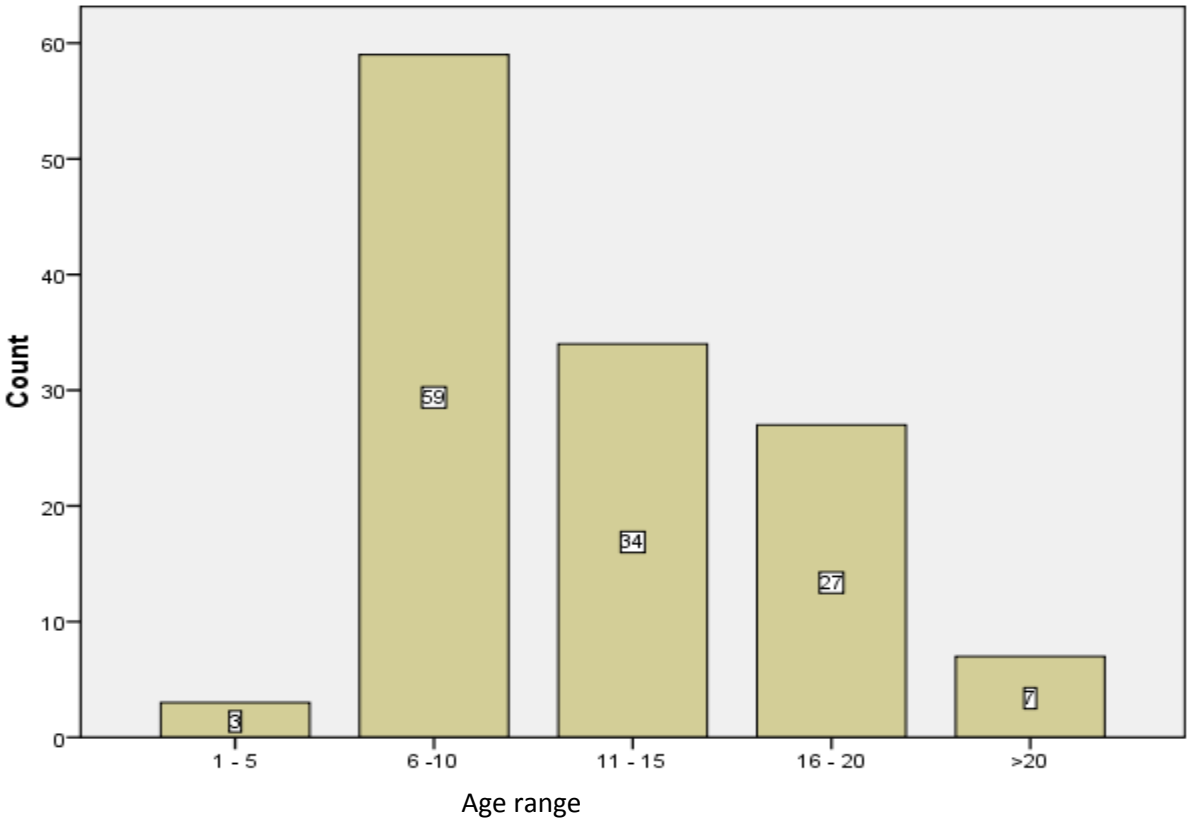


Figure 4.1 Respondents years of experience in the Bank

As it is depicted in figure 4.1, about 45.4% of the respondents are with 6-10 years of experience in CBE. Moreover, 26.2% of the respondents have work experience between 11-to-15 years and 20.8% have an experience of 16-to–20 years. Other respondents' accounts 8% of the respondents are with above 20 years and below 5 years of experiences. This shows that more than 97% of the respondents of this study are above 5 years experience in CBE, which shows further that participants of this study are experienced employees of CBE.

Respondents are also catagorized by their level of education into 2nd degree, 1st degree, diploma and certeficate holders. Figure 4.2 shows the details about respondents level of education.

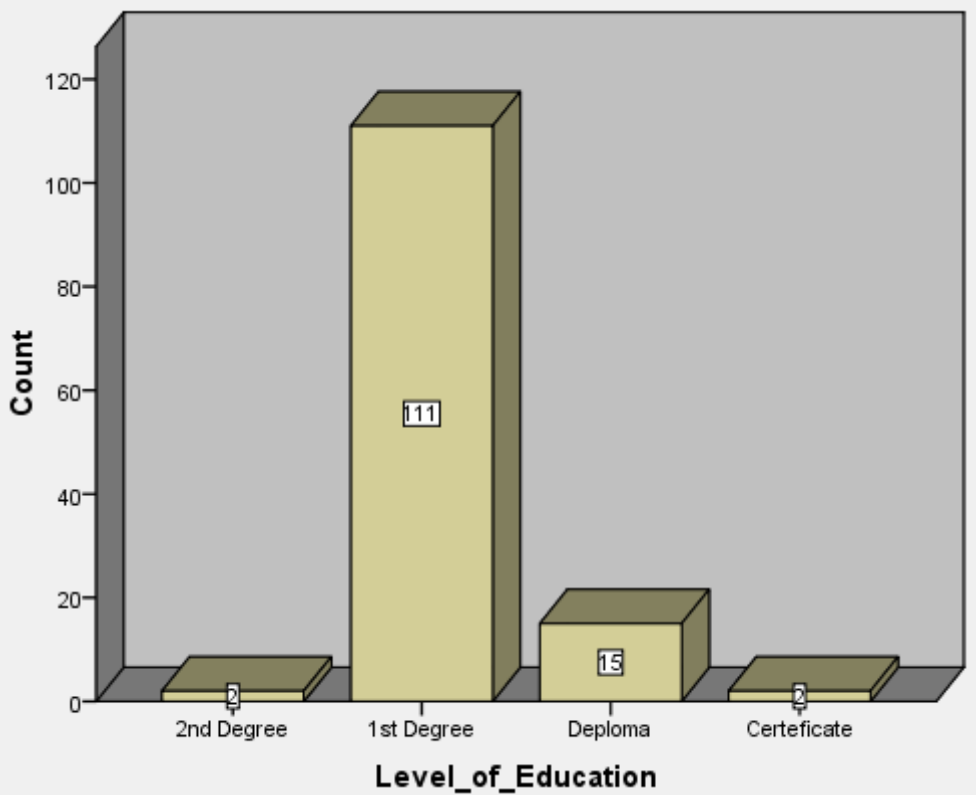


Figure 4.2 Respondents by their level of education

As it is depicted in, figure 4.1 the distribution of respondents by the level of education showed that 85.5% of the respondents are first-degree holders followed by 11.5% diploma holders. In addition, there are second-degree holder and certificate holders which accounts for 1.5% each. This shows that the majority of the staffs of CBE participated in this study are first-degree holders.

The respondents level of education vis-à-vis their work position in the Bank and branch offices are presented in table 4.3.

As depicted in table 4.3, from the total first-degree holders 81.1% are officer work positions in the Bank and 16.2% of the first-degree holders have other jobs in the Bank such as back office checkers. The rest 2.7% are with managerial position in the Bank. There are only 2-second degree holders, out of the total respondents one has managerial position and the other one is in other position in the Bank.

Table 4.3 Work position vis-à-vis level of Education

		Level of Education							
		2st Degree		1st Degree		Diploma		Certificate	
		No.	%	No.	%	No.	%	No.	%
Work position	Manager	1	50.0%	3	2.7%	0	0%	0	0%
	Supervisor	0	0%	0	0%	0	0%	0	0%
	Officer	0	0%	90	81.1%	9	60%	0	0%
	Other	1	50.0%	18	16.2%	6	40%	2	100.0%

There are 15 diploma holders, out of which 60% of the respondents are with officer position; the rest 40% of the respondent are assigned for other works in the Banks such as back office checkers and secretaries. Finally, there are only 2 certificate holders both of them are assigned in other tasks (secretaries) of the Bank. From this we can conclude that above 80% of the respondents are first-degree holders and whose work positions are officers in the Bank.

4.2 Knowledge Sharing in CBE

Knowledge sharing practice of CBE is examined based on Nonaka's SECI (Socialization, Externalization, Combination and Internalization) model. SECI model is the most frequently used model to evaluate the knowledge sharing and creation of organizations throughout the world. This SECI model is widely used in Japan, Europe and in some African countries like Egypt and Tunisia. The questions are presented in categorical form to answer those four phases of the SECI model and to evaluate the KS environment of CBE.

4.2.1 Knowledge sharing at socialization phase

One of the mechanisms to examine knowledge sharing trend of the CBE is examining the extent of involvement of employees in different knowledge management activities. There are different questions and issues raised to know employees socialization such as staff involvement in KS activities, job rotation, willingness for knowledge sharing. Summary of the response of the employees of the Bank is presented in table 4.4.

Table 4. 4 Knowledge sharing at socialization phase

Question Items		Strongly Disagree	Disagree	Moderate	Agree	Strongly Agree	Missing	Mean	Std Deviation
Staff involvement in KM activities	No.	33	50	27	12	3	5	2.36	1.239
	%	25.4	38.5%	20.8%	9.2%	2.3%	3.8%		
Job rotation is interesting for me.	No.	2	5	32	43	48	0	4.00	0.956
	%	1.5%	3.8%	24.6%	33.1%	36.9%	0%		
I am willing to share knowledge.	No.	5	6	36	33	50	0	3.90	1.092
	%	3.8%	4.6%	27.7%	25.4%	38.5%	0%		
Colleague's is willing to share knowledge with me.	No.	2	13	45	26	44	0	3.75	1.081
	%	1.5%	10.0%	34.6%	20.0%	33.8%	0%		
Employees kept their best ideas for themselves.	No.	13	23	37	41	14	2	3.20	1.197
	%	10.0%	17.7%	28.5%	31.5%	10.8%	1.5%		
Staffs share knowledge before and after regular working hours.	No.	16	51	37	10	15	1	2.98	1.181
	%	12.3%	39.2%	28.5%	7.7%	11.5%	0.8%		
Experts are willing to help others.	No.	9	24	28	46	23	0	3.38	1.177
	%	6.9%	18.5%	21.5%	35.4%	17.7%	0%		
Informal discussion is not allowed in our Bank	No.	43	50	18	16	3	0	2.21	1.159
	%	33.1%	38.5%	13.8%	12.3%	2.3%	0%		
Knowledge sharing at socialization									
Socialization								2.86	1.17

The first question is concerning staffs involvement in KM activities. The response shows that 63.9% of the respondents replied that they are disagree and strongly disagree with this idea. In addition, 20.8% of the respondents are with moderate attitude. Other 11.5% of the respondent are agree and strongly agree. From this, we can say that most of the staffs did not involve in knowledge management activities in the Bank.

Regarding job rotation of employees, about 70% of the respondents replied that they are strongly agree and agree with job rotation practice in the Bank. 24.6% of the respondents are moderate attitude with job rotation. Only 5.3% of the respondent are replied their disagreement with the activity of job rotation. From the physical observation, the researcher has understood that those employees especially at customer service officers (CSO) exchange their place. From this, we can conclude that job rotation is practiced within the Bank, which can help employees to have broad knowledge about Bank activities.

For the question regarding the willingness of individuals in sharing their knowledge about 63.9% of individuals are argued that they are strongly agree and agree with the attitude to share their knowledge. About 27.7% of them replied that they are moderate attitude on sharing their knowledge. Whereas, 8.4% of them reported that they are not willing to share their knowledge with their colleagues. This shows most of the respondents are willing to share their knowledge's with their colleagues. This helps the Bank in the process of creating a knowledge-sharing environment.

Regarding the question to evaluate their colleagues' readiness to share their knowledge, 53.8% of the respondents are agree and strongly agree for their willingness to share their knowledge. In addition, 34.6% of them are an average value for their willingness to share knowledge. Whereas, 11.5% of them are disagrees and with strongly disagree with the staffs' readiness to share knowledge with their colleagues. From this we can we can say that most of the employees are willing to share knowledge with each other's.

The survey also revealed that even though staffs are willing to share their knowledge about 42.3% of the respondents agree and strongly agree that employees are keep their

best ideas from their colleagues. In addition, 28.5% of them have a moderate value in sharing their knowledge with their colleagues. Whereas, 27.7% are disagree and strongly disagree in this question and they believed that staffs are not kept their best ideas rather they shares their ideas with staffs. From this, we can understand that there is knowledge hording problem in the Bank.

Respondents are asked whether they share their knowledge with staff members before and after regular working hours. About 28.5% of the respondents are moderate response and about 51.5% of them are agree and strongly agree. However, 19.2% of the respondent are disagree and strongly disagree with this idea. From this, we can conclude that staffs are sharing their knowledge with their colleagues.

Regarding the experts' willingness to help other staffs members in the Bank, about 53.1% of them agreed and strongly agreed with experts' willingness in sharing their knowledge with others. However, 25.5% respondents are replied that they are disagreeing and strongly disagree with this idea. Whereas, 21.5% of them are neutral attitude concerning the experts willingness in sharing their knowledge for other staff members. From this, we can say that one fourth of the staffs members believes that experts who have expertise knowledge hordes their knowledge.

For the question whether they are not allowed to discuss informally in the Bank, 71.6% of them are strongly disagree and disagree. Whereas 14.6% of them respondents are agree and strongly agree, they says there is a restriction to discuss informally in the Bank. However, 13.8% of the respondents replied that neutral attitude with this issue. From this, we can conclude that most of the time informal discussions are tolerable in the Bank. As one of the officer disclosed in the interview that most of the time, employees in the Bank share their knowledge with their colleagues' thorough informal discussion with their staff members.

Additionally, the standard deviation and mean value is calculated for each of the questions in this socialization phase. Figure 4.3 depicts the mean values of the questions

at socialization phase. Moreover, the standard deviation value for the socialization phase is present in table 4.4.

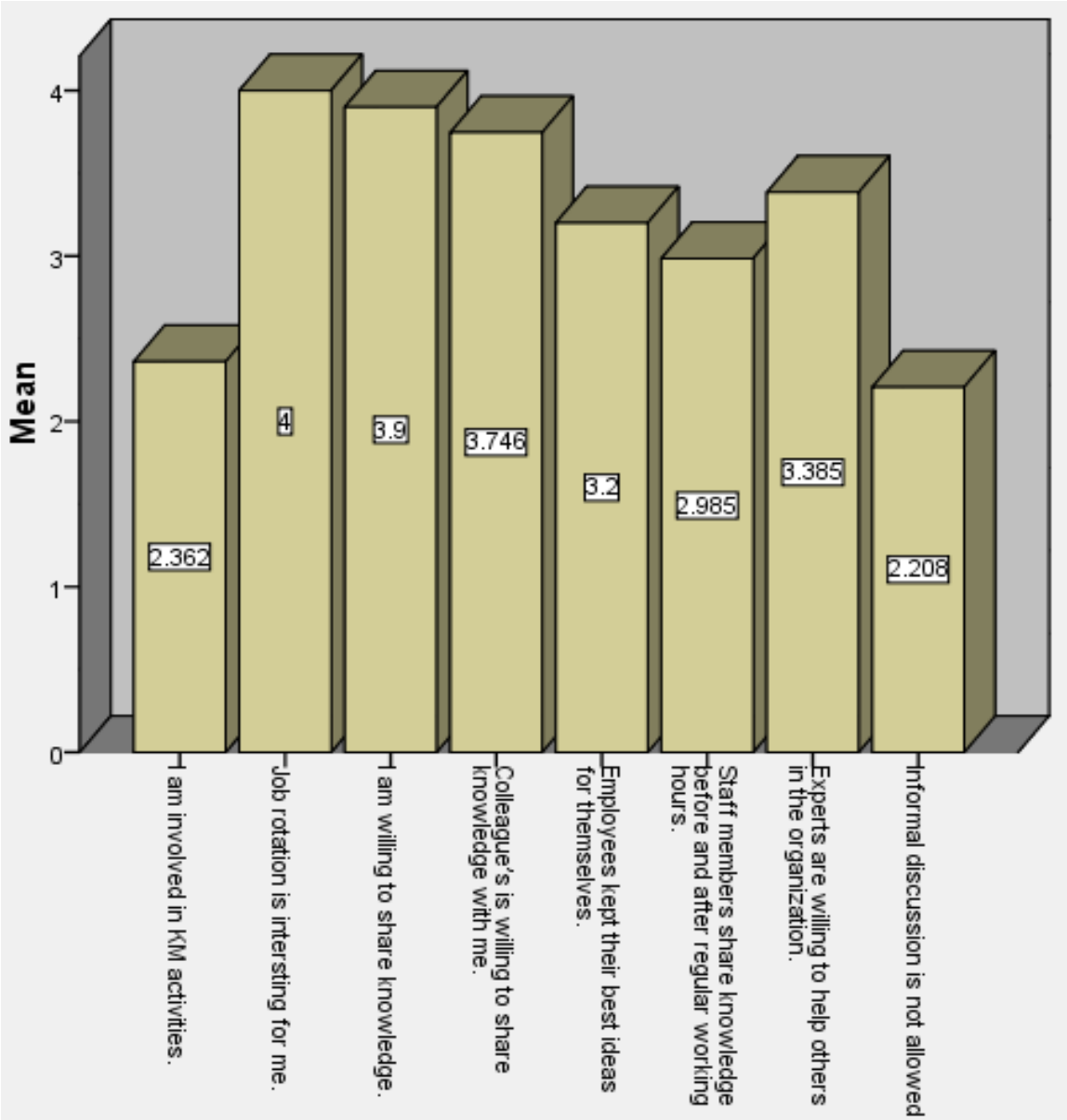


Figure 4.3 Mean value of socialization phase

From the figure 4.3 depicted and table 4.4,we can see that the highest mean value from the socialization phase is 4.00, which is for the question of *job rotation* with the standard deviation value of 0.956. This shows that the deviation from the mean value is relatively small, from this we can understand that most of the employees of CBE are interested with

job rotation. Whereas, the lowest mean value is 2.21 for the question *informal discussion is not allowed in the Bank* with the standard deviation value of 1.159 that is the lowest mean value for this question gives an understanding that informal discussion is allowed in the Bank. The highest standard deviation score was registered for the question about the involvement of employees in KM activities, which is 1.239. This show, employees are a variation in answering for the question. From this, we can understand that most of the staffs are not involved in knowledge management activities in the Bank.

4.2.2 Knowledge sharing at externalization phase

The other mechanism to understand the knowledge sharing practice of CBE is examining the knowledge conversion from tacit knowledge into explicit knowledge, which represents the externalization phase of Nonaka's SECI model. In this phase, respondents are asked questions regarding their participation in external trainings, their habit of knowledge sharing, expressing their ideas in discussions, usage of charts and pictures to express their ideas and the extent of using IT in sharing their tacit knowledge with their colleagues. The summary of the responses for those questions are presented in table 4.5.

To express their tacit knowledge into explicit knowledge external or internal training programs are essential. Regarding this, respondents are asked about whether they got the chance to meet employees of other Banks for sharing their experiences. 55.7% of the respondents replied that they are strongly disagree and disagree with this question. 31.5% of the respondents are agreeing and strongly agree with regards the chance given to meet others. However, 22.3% of the respondents are moderate attitude with this question. As one of the employees from the human resource department noted that, in recent times the Bank sends high-level managers to India and Egypt to share knowledge. Upon their return, the Bank prepared knowledge sharing program for the other staffs. The researcher also observed these programs. From this, we can conclude that the Bank does not give the chance to share experience with employees in other Banks.

Table 4.5 Externalization phase of SECI model

Question Items		Strongly Disagree	Disagree	Moderate	Agree	Strongly Agree	Missing	Mean	Std. Deviation
Employees get the chance to share experience.	No.	44	36	29	12	8	1	2.22	1.253
	%	33.8%	27.7%	22.3%	9.2%	6.5%	0.8%		
I am frequently recorded my knowledge.	No.	29	46	27	18	7	3	2.52	1.259
	%	22.3%	35.4%	20.8%	13.8%	5.4%	2.3%		
Sharing knowledge is like any other daily habits in my Bank.	No.	11	15	28	35	25	3	3.43	1.282
	%	8.5%	11.5%	26.2%	26.9%	19.2%	2.3%		
I raise my ideas on discussion and workshops.	No.	7	19	25	61	16	2	3.50	1.136
	%	5.4%	14.6%	19.2%	46.9%	12.3%	1.5%		
I use chart and pictures on written form to share my knowledge.	No.	31	40	29	19	11	0	2.62	1.247
	%	23.8%	30.8%	22.3%	14.6%	8.5%	0.0%		
I use IT to share my knowledge.	No.	22	29	29	37	12	1	2.93	1.277
	%	16.9%	22.3%	22.3%	28.5%	8.5%	0.8%		
Externalization phase of SECI model									
Externalization								3.02	1.22

Recording the knowledge acquired through the day-to-day activities is essential for the employees to share knowledge with other employees. Regarding this, respondents are asked how they frequently recorded their knowledge acquired. 57.7% of them are disagree and strongly disagree with the trend in recording their knowledge as a day-to-day basis. However, 20.8% of the respondents are moderate and 18.2% of them are agree and strongly agree in recording their knowledge. From this, we can conclude that recording knowledge, as a part of their day-to-day activity in the Bank is very low.

For the question whether employees share their knowledge is like any daily habits of the Bank, about 46.2% of the respondent replied they agree and strongly agree with this idea. More over 26.2 % of them are a moderate attitude regarding this question. However, 20% of the respondents are disagreeing and strongly disagree with regard to taking knowledge sharing as a daily habit of the Bank. This shows that employees share their knowledge in their daily works.

Expressing their ideas in discussion and trainings sessions gives the chance to externalize employees' tacit knowledge and to makes easy for converting into explicit knowledge. In this regard, the respondents are asked whether they express their ideas in discussion and workshops arranged by the Bank. The majority of the respondents are agreed and strongly agree regarding expressing their ideas in training session which constitutes 59.2% meaning they are free to express what they feel in those discussions and workshops. Moreover, 19.2% of the respondents are moderate attitude in expressing their ideas in workshops and training programs. However, 20% of the respondents are disagreeing and strongly disagree concerning the question in expressing their ideas in these discussions and workshops. From this, we can understand that most of the time staffs got the chance in expressing their ideas in discussions and workshops held in the Bank.

Regarding the trend of expressing their ideas on written forms using charts and diagrams, more than 54% of the respondents are disagree and strongly disagree concerning the trend of using written form communication among staff members in sharing their knowledge. Above 22% are moderate attitude in sharing knowledge using diagrams and charts. 23.1% of the respondent are agree and strongly agree in using charts and diagrams for sharing knowledge in the Banking activities. From this, we can conclude that most of the employees did not use charts and diagrams to share knowledge with their staffs. From the observation, the researcher understands that most of the staffs share their knowledge with oral communication; this shows mainly tacit-to-tacit knowledge sharing is high in the Bank.

The use of information technology is very important in sharing tacit knowledge by converting into explicit knowledge. Regarding this, respondents are asked a question whether they use information technology to share their knowledge with their staffs, 37% of the respondents are agree and strongly agree on the usage of IT for sharing their knowledge. In addition, 22.3% of the respondents are moderate attitude in using IT for sharing knowledge. However, 40.2% of the respondents are disagreeing and strongly disagree in using IT for sharing their tacit knowledge. From this, we can conclude that the extent of using IT for knowledge sharing purpose is very low in the Bank.

From the interview and the observation that the researcher undertaken in the IT department of CBE, the Bank has an Information System Support Tracking System (ISSTS), which have a username and password to give only access for those authorized persons. This system helps the staffs on the branches to communicate to IT department for any problem they faces during their work. ISSTS is like a forum, individuals who have any problem can post it in the ISSTS page and the respected body from IT department gives an immediate response. The problem management and change management are an authorized body to track those posts in the ISSTS page to check the validity of the answers given for the questions. The main limitation of this program is it works only to link the staffs to the IT department; it does not create a link among the staffs.

The ISSTS holds dynamic and static posts. The dynamic posts are questions or any request and responses whereas the static posts are like books and other materials. From the dynamic posts, best questions and responses are selected and transferred to Knowledge Data Base (KDB). This KDB holds the selected dynamic posts from ISSTS. The main challenge they face to use this system is the employees' culture of posting question and replaying for those posted questions. However, there is no CKO who dedicatedly assigned to control the functionality of the system this was done the staffs of the help desk department.

Moreover, the mean value of the question in externalization phase is computed and depicted in figure 4.4. In addition, the standard deviation value also presented in table 4.5.

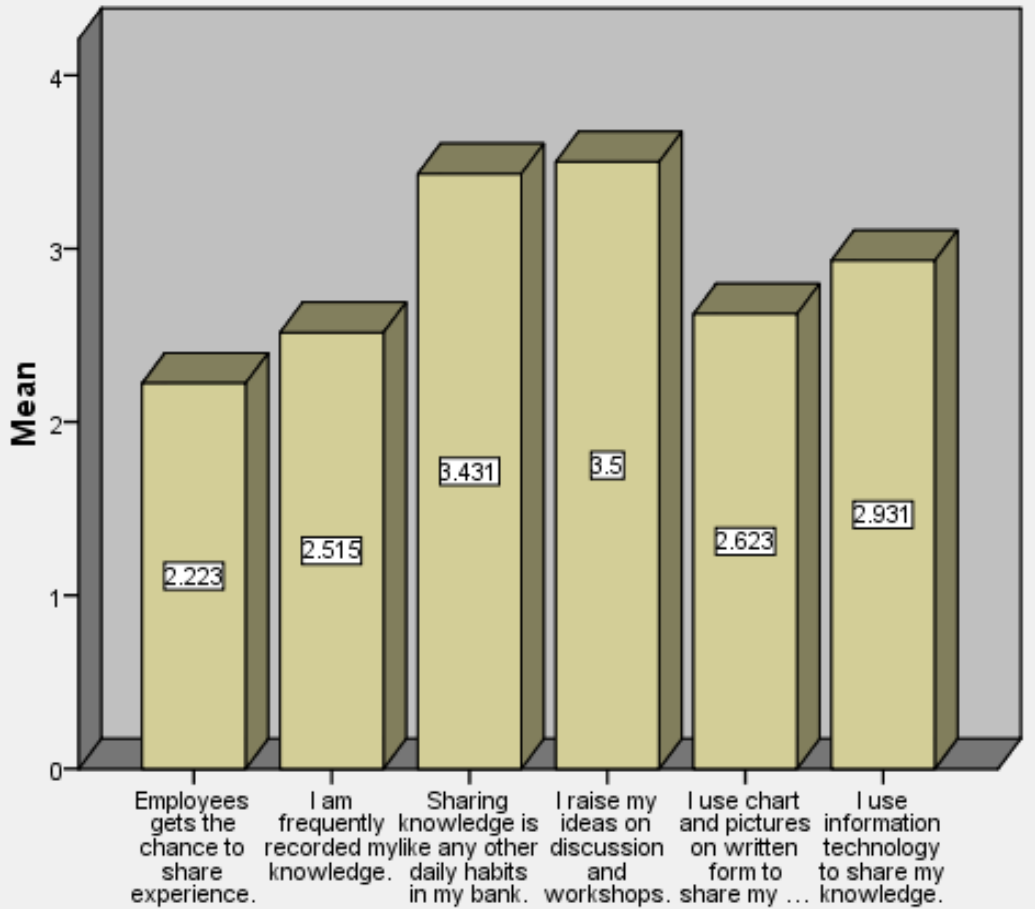


Figure 4.4 Mean value of externalization phase

The highest mean value from the externalization phase is 3.50, which is for the question about raising *the ideas /opinions/ on workshops and discussions* with minimum standard deviation value of 1.136. This shows that most of the workshops and discussions held in CBE are open and widely participatory of the employees. Whereas, the lowest mean value are 2.22 for the question towards getting the chance of sharing experience among employees with the standard deviation of 1.253. This shows most of the employees are not involved in sharing their knowledge for their colleagues. In general, the average mean

value in externalization phase is 3.02 with a standard deviation value of 1.22. Externalization phase has greater mean value than socialization phase.

4.2.3 Knowledge sharing at combination phase

The other mechanism to evaluate the knowledge sharing practice of CBE is to examine the frequency of generation of explicit knowledge from the existing explicit knowledge; this represents the combination phase of the Nonaka's SECI model. In this regard, respondents are asked to evaluate the up to datedness of the documentations available in the Bank, the frequency new of manuals prepared in the Bank and how new manuals distributed to the staffs in the Bank. The summary of the responses for this phase is presented in table 4.6. This table comprises the mean and standard deviation value of each question.

Table 4.6 Combination Phase of SECI model

Question Items		Strongly Disagree	Disagree	Moderate	Agree	Strongly Agree	Missing	Mean	Std. Deviation
Documentations are up-to-date in my Bank.	No.	7	19	38	50	16	0	3.38	1.059
	%	5.4%	14.6%	29.2%	38.5%	12.3%	0.0%		
New manuals are prepared frequently in my Bank.	No.	2	29	55	33	10	1	3.28	0.974
	%	1.5%	22.3%	42.3%	25.4%	7.7%	0.8%		
In my Banks, new procedures and manuals distributed quickly.	No.	7	19	47	47	10	0	3.26	0.985
	%	5.4%	14.6%	36.2%	36.2%	7.7%	0.0%		
Combination Phase of SECI Model									
Combination								3.31	1.01

For the question regarding to the timely update of the documentation of the Bank, about 50.8% of the respondents are agree and strongly agree; 29.2% of the respondents are

moderate response with timely update of the documentations. However, 20% of the respondents are disagree and are strongly disagree about the timely update of the documentations. From this, we can conclude that that most of the employees believes that all the necessary documentation of the Bank is up-to-date.

Regarding the frequency on the preparation of new manuals and procedures prepared in the Bank, 42.3% are moderate, 33.1% of the respondent are agree and strongly agreed that new manuals and new way of doing tasks designed most frequently in the Bank. However, 23.8% of the respondents are disagreeing and highly disagree with the frequency of new manuals preparation in the Bank. From this, we can say that most of the respondents believes that new manuals and new way of doing tasks are prepared most frequently in the Bank.

For the question regarding the distribution of new procedures and manuals for the staff members, 43.9% of the respondents are agreeing and strongly agree. 36.2% of the respondents are moderate with the distribution of the manuals and procedures to the staffs quickly. However, 20% of the respondents are disagreeing and strongly disagree with the distribution of the manuals to the staffs of the Bank. From this, we can conclude that there is doubt in the distribution of manuals for the staffs. In this regard, an individual from the procurement department of the Bank noticed that materials is not fast as there is great problem on the distribution of new manuals and procedures.

The mean value for each of the combination phase questions are computed and depicted in the figure 4.5. In addition, the standard deviation value is present in table 4.6.

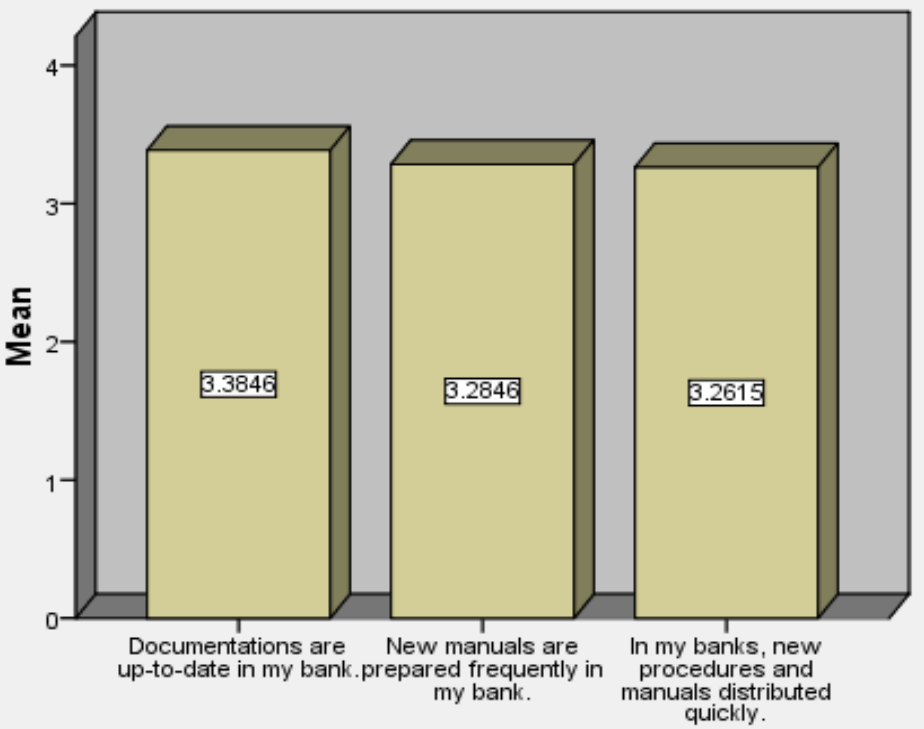


Figure 4.5 Mean value of combination phase

The highest mean value in the combination phase is 3.38, which is for the question of whether *the documentation is up-to-date or not* with standard deviation of 1.059 values. This shows that most of the employees believe that the documentations of CBE are up-to-date. Whereas, the lowest standard deviation value 0.974 was registered for the question towards evaluating the frequency of preparation of new manuals in CBE. This shows most of the employees believed that new documents are prepared frequently in the Bank. Generally, the average mean value in combination phase is 3.31 with a standard deviation value of 1.01. This shows that the combination phase has a minimum mean value and minimum standard deviation value as compared to the externalization and socialization phase.

4.2.4 Knowledge sharing at internalization phase

The other mechanism for evaluating the knowledge sharing mechanism is to evaluate the extent in which the employees understand and internalize the knowledge presented in explicit format, which represents the internalization phase of the Nonaka's SECI model.

In this regard, several questions are asked such as the training programs organized for the staffs, the chance given for further education and the application of knowledge acquired in training programs. The summaries of the responses for such questions are presented in table 4.7.

Table 4.7 Knowledge sharing at the Internalization phase of SECI model

Question Items		Strongly Disagree	Disagree	Moderate	Agree	Strongly Agree	Missing	Mean	Std. Deviation
Training programs is frequently organized for the staffs.	No.	3	35	17	49	26	0	3.40	1.159
	%	2.3%	26.9%	13.1%	37.7%	20.0%	0%		
The Bank frequently gives the chance for postgraduate study.	No.	27	10	16	39	28	10	3.38	1.581
	%	20.8 %	7.7%	12.3%	30.0%	21.5%	7.7%		
I use the knowledge acquired in training and workshop.	No.	3	6	27	63	31	0	3.87	0.910
	%	2.3%	4.6%	20.8%	48.5%	23.8%	0%		
Internalization									
Internalization								3.55	1.22

Trainings programs helps the staffs to internalize the knowledge they have. The survey also revealed that training programs are frequently prepared by the Bank about 57.7% of the respondents are agree and strongly agree hence most of the respondents proves that the Bank prepares frequent training for the staffs. However, 29.2% of the respondent are disagree and strongly disagree. In addition, 13.1% of the respondents responded a moderate value for the question. From this, we can conclude that the Bank organizes frequent training programs for its staffs.

One of the mechanisms to build the capacity of the employees is giving the chance to upgrade their level of education. On this regard, respondents are asked on the frequency of the chance given for postgraduate study in their fields; about 51.5% of the respondents are agree and strongly agreed that the Bank gives chances of education for the staffs.

However, 28.5% of respondents are strongly disagree and disagree and they claimed that the Bank does not give enough chance for the employees. About 12.3% of the respondents are moderate judgment about the question. From this, we can understand that the Bank gives the chance to upgrade their level of education for its staffs.

Regarding the application of knowledge acquired from the trainings, 72.3% of the respondents are agree and strongly agree for applying the knowledge acquired from the training. Moreover, 20.8% of the respondents are moderate response. However, 6.9% of the respondents are disagree and strongly disagree with the application of knowledge acquired from the training. From this we can conclude that the about the majority of the respondents are applies the knowledge they got from the training.

In addition, the mean value for each of the questions in internalization phase is computed and presented in figure 4.6. Whereas the standard deviation result is presented in table 4.7.

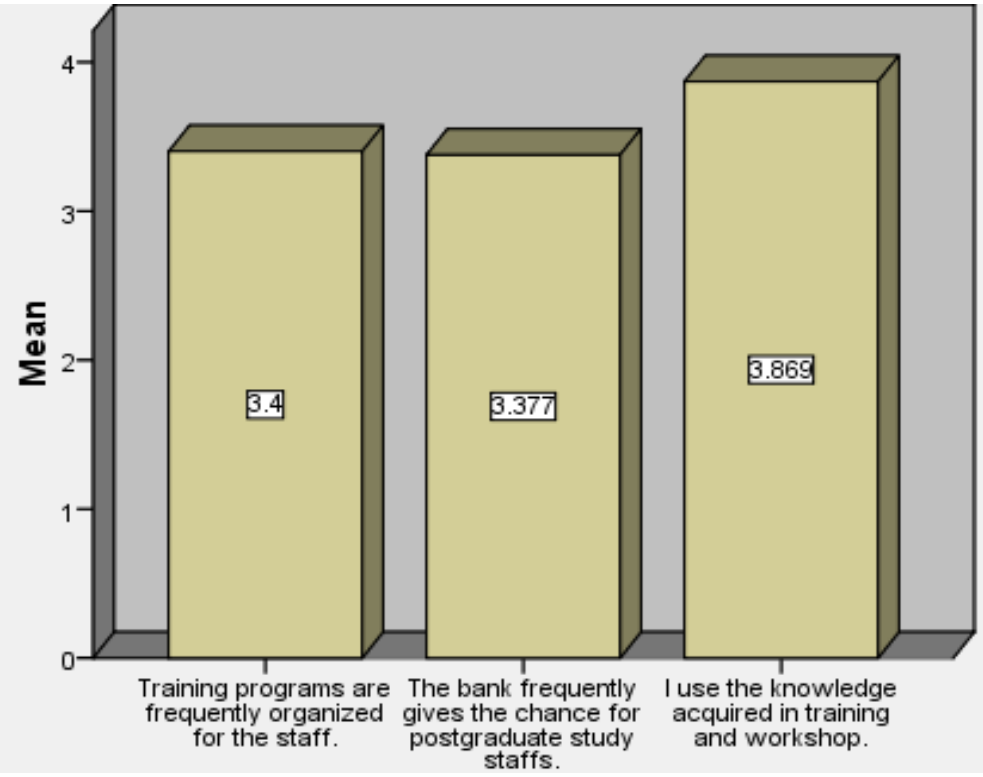


Figure 4.6 Mean value of internalization phase

The highest mean value from the internalization phase is 3.87, which is for the question about *using the knowledge acquired from trainings and workshops* with minimum standard deviation of 0.910 values. This shows that most of the employees directly use the knowledge acquired from those workshops and training programs organized by CBE. Whereas, the highest standard deviation value is 1.581 for the question towards evaluating the chance given for postgraduate study this shows most of the employees' response is inconsistent with this question. Generally, the average mean value in combination phase is 3.55 with a standard deviation value of 1.01. This shows the internalization phase has a minimum mean value with minimum standard deviation value as compared to the socialization, externalization and combination phase.

4.3 Knowledge Sharing Trend of CBE

To understand the development of knowledge sharing practice in the CBE, it is essential to evaluate the trend or the activities done in creating the KS environment in the Bank. There are different questions raised to know the Banks knowledge sharing status. In this regard, respondents are asked to evaluate whether there is an increase awareness on the benefit of KS in the Bank or not, public reward system for the staffs for their KS practice and whether the Bank develops a KS culture or not. Summaries of the respondents response is presented in table 4.8.

For any organizations to create knowledge sharing environment, first there should be an understanding on the benefit of KS among the organizational members. Regarding this respondents are asked to evaluate the growing awareness on knowledge sharing practice of the Bank, about 55.4% of the respondents are agree and strongly agree with the growing of awareness of knowledge sharing in the Bank. In addition, 22.3% of respondents are moderate response for the awareness created in the Bank. However, 22.3% of the respondents are disagreeing and strongly disagree with the increasing awareness on the benefit KS practice. As one of the HR employees noted that, currently the CBE understands the benefit of knowledge sharing in the Banks operation. From this, we can conclude that the culture of knowledge sharing is in a good status in the Bank.

Table 4.8 Knowledge sharing Trend in CBE

Question Items		Strongly Disagree	Disagree	Moderate	Agree	Strongly Agree	Missing	Mean	Std. Deviation
Awareness increases on the benefit of KS in my Bank.	No.	5	24	29	52	20	0	3.42	1.133
	%	3.8%	18.5%	22.3%	40%	15.4%	0%		
Publicly rewarded for their KS practice	No.	44	26	40	12	3	5	2.53	1.336
	%	33.8%	20%	30.8%	9.2%	2.3%	3.8%		
The Bank develops a culture that promotes KS	No.	15	14	36	47	18	0	3.28	1.196
	%	11.5%	10.8%	27.7%	36.2%	13.8%	0%		
knowledge sharing in CBE									
knowledge sharing								3.08	1.22

The other mechanism to in creating knowledge sharing environment in the Bank is giving an incentive for the employees of the Bank for their KS activities. Regarding this respondents are asked to evaluate the incentive or reward given for the staffs in response to their knowledge sharing activities in the Bank, 53.8% of respondents are strongly disagree and disagree with the trend of the Bank for giving rewards for those staffs in sharing their knowledge. Whereas, 30.8% of the respondents are moderate attitude with the Banks reward system. Only 11.5% of the respondents are agree and strongly agree with the Banks reward system given for the staffs for their KS activity. From this, we can say that the Bank does not give much attention for the staffs as a reward for sharing their knowledge with colleagues.

The respondents are also asked about the culture of promoting knowledge sharing activities in the Bank. About 50% of the respondents are agree and strongly agree with the Banks trend in creating a knowledge sharing culture. In addition, 27.7% of the respondents are a moderate insight about this idea. However, 22.3% of the respondents

are strongly disagree and disagree with the Banks trend in building a knowledge sharing culture. From the interview, employees' believes that the knowledge sharing culture of the Bank shows a great improvement starting from the sitting arrangement of the employees Form this we can conclude that most of the staff of CBE believes that their Bank are on a good way for building a knowledge sharing culture.

Moreover, mean value is computed for each of the questions and depicted in the figure 4.7. The standard deviation value is computed for each of the questions as it is shown in table 4.8.

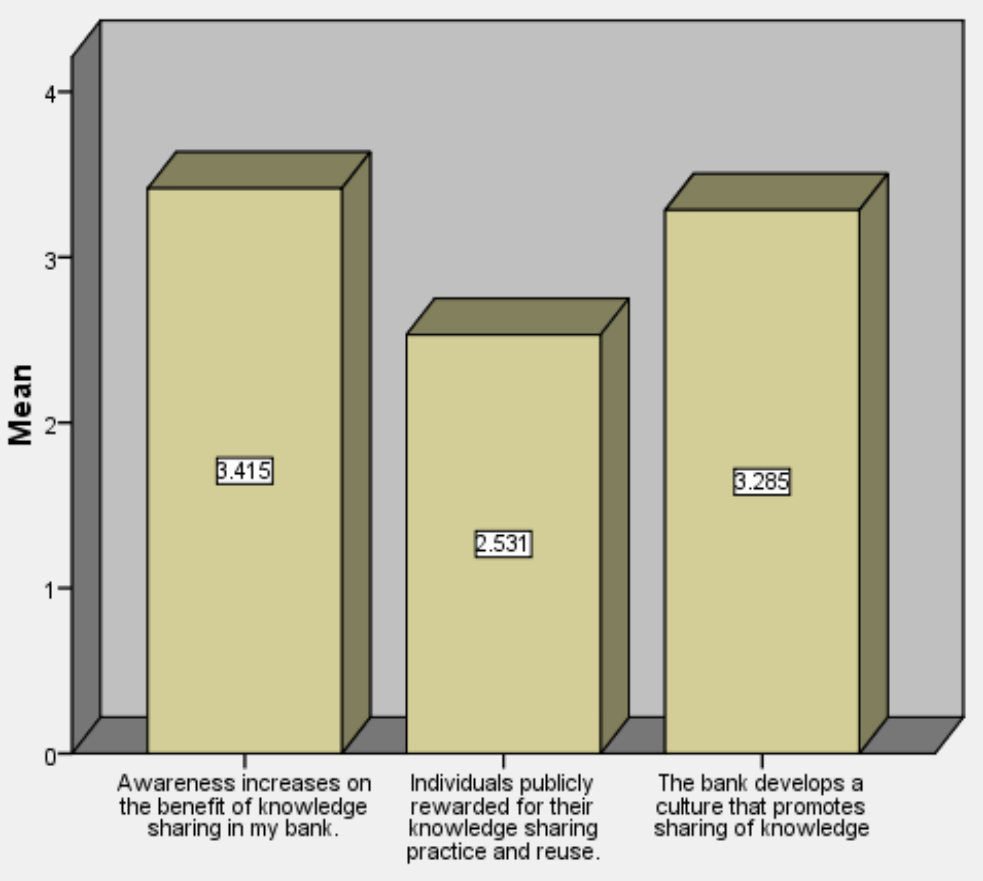


Figure 4.7 Mean values for the KS in CBE

As it is shown in the figure 4.7, the highest mean value is 3.42, which is for the question about the awareness increases on the benefit of knowledge sharing in CBE with minimum standard deviation of 1.133. This shows that most of the employees believes

that the awareness of knowledge sharing is becomes improved in the CBE. Whereas, the highest standard deviation value is 1.336 for the question towards the reward given for individuals for their knowledge sharing practice in the Bank this shows that the employees are not recognized for their knowledge sharing practice in CBE.

4.4 Knowledge Flow Mechanisms

Moreover, the respondents are asked to rank three top communication ways they use most frequently in the Bank, which helps to identify the most frequent ways that the employees use to share their knowledge. Moreover, it helps to identify the knowledge sharing practice of the Bank is IT based or not. Summary of the result is presented in table 4.9

Table 4.9 The top three knowledge flow mechanisms in CBE

Question Items	knowledge flow mechanisms	No.	Percentage (%)
The three top communication channel used most frequently in the Bank	Face-to-face	37	34.6%
	Telephone	32	29.9%
	Documentation	18	16.8%
Source of knowledge you need during work	Face-to-face	37	34.6%
	Referencing documentation	37	34.6%
	Group discussion	26	24.3%
How manuals and instruction transmitted in the Bank	Tanning and meeting	38	35.5%
	Posting on the notice	32	29.5
	Periodic reports	29	21.7%
What are the top three barriers of knowledge sharing	Lack of time	32	29.9%
	No planned discussion	25	23.3%
	Shortage of spaces	25	23.6%
Participation in external trainings and workshops	Yes	16	12.3%
	No	114	87.7%

The respondent replayed that 34.6% of respondents uses mainly face-to-face communication as a primary choice to their colleagues. Followed by 29.9% of the respondents through telephone communication. Finally, 16.8% of the respondent replied that consulting documentation was their ways to find the information they require.

Respondents are asked regarding the source of knowledge during their work 34.6% of the respondent uses a face-to-face communication for the problem they face during their works and 34.6% of the respondent replied that their prime preference to get solution for their problem at their work is referencing documentation of the Bank. Whereas, 24.3% of the respondents prefer to discuss with their staffs members concerning their difficulties. This show that most of the time group is not used in the Bank to solve problem.

In addition, respondents are asked whether they are participated in external training or not. Only 12.1% of the respondents are participated in such trainings, the rest 87.1% of the respondents are not participated in external trainings. From those employees attended external training programs 57% are required to present a report about the tanning by their supervisor. The rest 43% of the respondent are required to come up with handout of the tanning. As the researcher communicated with some of the respondents, they said that we are advised to apply the knowledge acquired from the training.

Moreover, respondents are also required to choose the top three about how the new or updated instructions/manuals are distributed to the employees of CBE. 35.5% of the respondents replied that those manuals are delivered to the employees through training and meeting organized by the Bank officials and 29.5% of the respondents are replied that the new manuals are distributed to the employees by posting on the notice board. Finally, 21.7% of the respondent replied those updated manuals are distributed to the Bank employees through periodic reports.

Finally, respondents are asked to rank the top 3 knowledge sharing barriers in their Bank, 29.9% of the respondent takes lack of time is their primary factor which prevents them to share knowledge with colleagues. Followed by 23.3% of the respondents responded that the employees belief of taking knowledge as source of power creates an obstacle to share knowledge. Similarly, 23.6% of the respondents believe that shortage of formal and

informal spaces is an obstacle to share knowledge in CBE. As one of the staff of CBE commented in the questionnaire is that there is no planned discussion/sharing experience/ in the Bank. From this, we can understand that lack of time, no planned knowledge sharing program and the knowledge sharing culture of the employees is considered as a major barrier in CBE.

4.5 Discussion of the Findings

The evaluation of knowledge sharing practice of Commercial Bank of Ethiopia using Nonaka's SECI model reveals findings that are crucial to improve the knowledge sharing practice of CBE and to gain competitive advantage over others. This study comes up the following valid finding evaluated with the framework of SECI model as it is presented in table 4.10.

Table 4.10 Framework of the SECI model

Socialization	**Externalization**
➢ Apprentices, mentor and Job rotation ➢ Willingness to share knowledge ➢ There is knowledge sharing before and after regular working hours. ➢ Informal discussion	➢ Sharing experience ➢ Team collaboration tools(IT) ➢ Recording knowledge ➢ Training and workshops programs ➢ Discussion and workshops
Internalization	**Combination**
➢ Learning by doing ➢ On the job training ➢ I use the knowledge acquired in training	➢ Documentations are up-to-date ➢ New procedure distributed quickly ➢ New manuals are prepared frequently

Staff involvement in KM activities, job rotation, willingness to share knowledge, sharing knowledge before and after regular working hours, experts willingness to help others and informal discussion is examined in socialization phase of SECI model. The result revels that staff involvement is lowest mean value of 2.36 and job rotation is the highest mean value of 4.00 from the socialization phase. This shows that employees are not much involved in KM activates in the Bank. On the other hand, staffs are interesting in job rotation.

In externalization phase, employees get the chance to share knowledge, recording their knowledge, sharing like their daily habit, raising their ideas on workshops and discussions, usage of charts to express their ideas and using IT to share their knowledge's are examined. The result shows that raising ideas on discussions and trainings scores the highest mean value of 3.5 and employees get the chance to share experience from other organization employees have a minimum mean value of 2.22. From this, we can understand that knowledge sharing among the staffs in workshops and training sessions are in a good status. Whereas, knowledge sharing in collaboration with other organizations are not much used in the Bank.

The frequency on the preparation of new manuals, its distribution to the staffs and the timely of the documentations are evaluated in the combination phase of Nonaka's SECI model. The result revealed that 3.38 mean value for the timely of the documentations, with standard deviation of 1.059. This shows documentations are timely; however, respondents are some variation in its timely distribution of the documentation because standard deviation is the highest score in this phase.

On the final phase, internalization, the frequency of training programs organized by the Bank, the chance given for further education and the application of the knowledge acquired from the training is evaluated. The result shows that, the application of the knowledge acquired from the training and workshops is the highest mean value of 3.87 with low standard deviation. Form this we can say that most of the employees apply the knowledge they acquire from those trainings.

Knowledge Flow Mechanisms: most of the time employees share their knowledge in the Bank with informal discussion. One of the HR staff interviewed disclosed that: "*the staffs in each branch ordered to discuss for one hour to raise their ideas, problem and challenges they face during the week*". This discussion also creates the stage for the Bank to create new solution for those problems they face. Moreover, this discussion helps the Bank to share the knowledge of the experienced employees to the beginners and to capture tacit knowledge of the employees.

How smooth was the knowledge sharing process in the Bank: employees in the branches of the Banks involves in job rotation. This makes the employees to have the whole picture of the Bank. As a result, every employee has knowledge of every activity in the Bank. Therefore, every employee can share his or her knowledge easily. Thus, job rotation helps the employee to acquire knowledge in the banking activity.

Challenges and barriers of knowledge sharing environment of CBE: the biggest challenge of the knowledge sharing practice in CBE is lack of time to share their knowledge. The other challenge is how to change the mindset of the people and change the culture of knowledge hording into knowledge sharing such that the power of knowledge is used for organizational success and for the success of the Bank objective. To raise the motivation of the employees to share knowledge the Bank did not give any incentive for the employees.

Developing knowledge sharing culture: results showed that much of the staffs are willing to share their knowledge for their colleagues even though many staff members still believes that employees kept their best ideas for themselves. Therefore, the bank is in a good situation to create a knowledge-sharing environment by using the willingness of the employees. The best practice to design reward structure is to motivate employees to change their culture of knowledge hording to knowledge sharing in order to create a good knowledge flow environment.

Information technology: to allow knowledge sharing anytime anywhere, several types of technological tools are available. Mobile technology, portable hardware and software, networks, email, teleconferencing and intranets are some of the commonly used technologies for knowledge creation and sharing. Thus, CBE specifically in the IT department uses IT, as Information System Support Tracking System (ISSTS) in order to track the IT functionality of the Bank and to give an immediate support and maintenance in case of system failure. In CBE intranet was used for processing financial transaction and for communicating with IT department. Using the Intranet for knowledge-sharing purpose among the employees of one branch and employees in other branch is restricted only for financial purpose and they did not use for knowledge sharing purpose.

Training: availability of staff development training is one of the major organizational factors that improve the performance of the employees. In this regard, the Bank gives mainly an internal training. Currently, the Bank attempted to give external training for the staffs. Those staffs who took external training are required to prepare report, accordingly the Bank prepares training program to share what they observe and acquire in their visiting time. Meanwhile, one of the procurement staff interviewed disclosed that:

> "*Training is not given for us even when new manuals are prepared; the printed copy is not given. We found those new procedures and manuals from colleagues*."

On the contrary, the other employee commented in the questionnaire

> "*The training and development department of the Bank plays significant roles in organizing and conducting different training programs in relation to upgrading the knowledge of the employees, familiarizing with new systems and knowledge sharing programs with exposure and experience with other countries"*

This shows that there is a gap in providing and arranging an appropriate training concerning all departments of the Bank employees.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

Knowledge sharing benefits the Ethiopian public banks for effective implementation of KM mechanisms. In this dynamic world, the banks will not be able to compete in an open economy unless they have invested in such new programs to get most of the value from the banks' assets. In this context, an effective knowledge sharing (KS) programs was seen as an appropriate tool to control business focus.

In this study, we attempt to evaluate the knowledge sharing practice of CBE. To this end, primary and secondary sources are consulted to get the necessary information for the research. Questionnaire s are distributed to CBE branch offices. In addition, interview also held with appropriate departments and individuals. This study uses Nonaka's SECI model to evaluate the knowledge-sharing practice of CBE.

Knowledge sharing is very attractive and provides huge business opportunities. It is an engine to transform knowledge into business value. However, implementation of knowledge sharing is not an easy task. Because there are many challenges related to culture, trust, IT and incentive to create a smooth flow of tacit and/or explicit knowledge.

The result of this study shows that the combination phase is with the lowest standard deviation, where as internalization and externalization has the highest standard deviation. This shows combination phase is relatively in a good status in the Bank. Nevertheless, knowledge sharing is still in its infancy among employees. They are not sharing what they know for other employees. They prefer to hoard existing knowledge. In addition, employees are not open to accept new knowledge, which is greatly affecting knowledge creation and knowledge update within the company.

5.2 Recommendation

To improve the knowledge sharing practice of Commercial Bank of Ethiopia the following recommendations are forwarded.

- The main role of IT in knowledge management is not only just to support the digital capture, storage, retrieval and distribution of an organization to have explicitly documented knowledge, but also to supply the necessary collaboration, communication and networking capabilities needed for accelerating the speed of knowledge sharing and transfer among the employees of CBE. Therefore, CBE should develop the capacity to use Web Portals and Discussion Forums for KS.

- To make easy conversion of individual tacit knowledge into explicit knowledge and vice versa, knowledge base system is essential in the Bank. The knowledge base system helps the Bank to acquire individual and group tacit knowledge and to make it an organizational knowledge. Hence, there is a need to develop knowledge base system for the bank.

- There are many barriers of knowledge sharing implementation. In the present research IT, culture, motivation and incentive are investigated. Other factors like belief of learning, business strategy and top management support needs to be considered for future studies.

- This research focuses on the branches of CBE found in Southern Addis Ababa City district. However, assessing the branches in all districts may help to identify the degree of knowledge sharing in CBE. Further studies should consider all districts to have a big picture of KS in CBE.

- Lack of Time to share knowledge is a major problem for the practice of knowledge sharing in the Bank. Most of the employees do not have time to learn from their

colleagues or to document the knowledge they have. Therefore, the Bank should create suitable knowledge sharing environment and facilities.

- This study is undertaken in Commercial Bank Ethiopia. Therefore, further studies should be directed towards examining the knowledge sharing practice of other financial sectors in Ethiopia.

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Appendix I

QUESTIONNAIRE

It is recalled that sharing knowledge is essential for every organization to provide better service and to stay competitive in this dynamic business world. Therefore, this questionnaire is distributed for the employees of Commercial Bank of Ethiopia to examine the practice of knowledge flow in facilitating knowledge creation and sharing in the Bank. The researcher would like to thank you for taking your invaluable time in order to fill this questionnaire. Your response is confidential and is not given for any third party.

Part I: Personal Data.

Age: _____

Gender: Male- ☐ Female- ☐

Job classification: Part-time ☐ Full-time ☐

Level of education: _____

Year of experience in the Bank (Nearest year) _____

Your current position: _____

Part II: Circle the letter /number/ of your answer:

1. The communication channel that you use most *frequently* in the Bank (rank as 1st, 2nd and 3rd);

____ A. Face-to-face ____ B. Email/ Intranet ____ C. Telephone

____ D. Virtual meetings

____ E. Group Discussions

____ F. Documentation

G. Any other _____

2. Which way will you prefer to get the knowledge you need during work (rank as 1st, 2nd & 3rd)?

____ A. Face-to-face ____ B. Email/ Intranet ____ C. Telephone

____ D. Meetings ____ E. Group Discussions ____ F. Documentation

G. Any other _____

3. Do you participate in external training programs workshops and seminars arranged by other organizations /banks/?

A. Yes B. No

4. If your answer for question No. 3 is Yes; what is the expectation of your supervisor or manager- to come up with (rank as 1st, 2nd and 3rd):

____ A. Handout

____ B. Report about the workshop

C. Other _____

5. How the updated instructions & manuals are communicated and transmitted to the employees? (rank as 1st, 2nd and 3rd)

____ A. Through workshop and meeting, ____ B. Emails ____ C. Periodic reports

____ D. Web portal ____ E. Posting in notice board

F. Other_____

6. Which of the following are regarded as a barrier of knowledge sharing in your organization(rank as 1st, 2nd and 3rd):

____ A. Lack of time

____ B. Lack of trust among staff

____ C. Shortage of formal and informal spaces

____ D. Employees don't share knowledge because they think "knowledge is power"

____ E. Lack of infrastructure to support knowledge sharing practices in CBE.

____ F. Fear of job security

____G. Physical work environment and layout of work area.

1 = strongly disagree [SD], 2 = disagree [D], 3 = moderate [N], 4 = agree [A], 5 = strongly agree [SA].

No	Questions	SD	D	N	A	SA
1	I am involved in knowledge management activities, e.g. mentorship programs for new entrants and coaching.	1	2	3	4	5
2	Job rotation is interesting for me.	1	2	3	4	5
3	I am willing to share knowledge with my colleagues.	1	2	3	4	5
4	Colleague's /staffs/ is willing to share any knowledge with me.	1	2	3	4	5
5	Employees in the Bank kept their best ideas for themselves.	1	2	3	4	5
6	Staff members share our knowledge before and after regular working hours.	1	2	3	4	5
7	People with expert knowledge are willing to help others in the organization.	1	2	3	4	5
8	Informal discussion is not allowed in my Bank.	1	2	3	4	5
9	My Bank gives the chance to employees from other banks, to share experience.	1	2	3	4	5
10	I am frequently recorded my knowledge.	1	2	3	4	5
11	Training programs, workshops and seminars are frequently organized for the staff.	1	2	3	4	5
12	Recording and sharing knowledge is like any other daily habits in our Bank.	1	2	3	4	5
13	I raise my ideas on discussion and workshops.	1	2	3	4	5
14	I share my ideas and knowledge is with colleagues using chart and pictures on written form.	1	2	3	4	5
15	I use information technology to share my knowledge.	1	2	3	4	5
16	Documentations are up-to-date in my Bank.	1	2	3	4	5
17	New manuals are prepared frequently in my Bank.	1	2	3	4	5
18	In my Banks, new procedures and manuals distributed quickly.	1	2	3	4	5
19	The Bank frequently allows for postgraduate or other professional training for staff members.	1	2	3	4	5
20	I use the knowledge acquired in training and workshop.	1	2	3	4	5

21	There is growing awareness on the benefit of knowledge sharing in my Bank.	1	2	3	4	5
22	Individuals publicly rewarded for their knowledge sharing practice and reuse.	1	2	3	4	5
23	The Bank develops a culture that promotes sharing of knowledge	1	2	3	4	5

- Please comment on the knowledge sharing habit/culture of the Bank

_____

_____

_____

_____.

Thank you for your kindly co-operation!

Appendix II

Unstructured interview for IT department

1. Do you think staffs use computers for other purposes other than computing activities?
2. Is their knowledge repository or database in the Bank?
3. Does the CBE use the internet to transfer knowledge?
4. To what extent knowledge was transferred using the intranet.
5. Is there any knowledge management strategy in CBE?
6. What do you think about the barriers of knowledge?
7. Is their CKO?

Unstructured interview for HR department

1. Do employees involve in knowledge management activities?
2. What do you think about the barriers of knowledge sharing?
3. What measures do the Bank takes to retain the knowledge of experienced employees?
4. Is there any knowledge sharing strategy?
5. Is there any incentive given to motivate employees for their KS activity?
6. Does the evaluation form incorporates knowledge sharing activities

Unstructured interview for business and development department

1. Is there any study about knowledge management practice in CBE?
2. What is the focus of the research undertaken in this department?
3. How was best practices shared in your department?

Appendix III

Sample Size Calculation

The sample size is determined by three factors: the level of confidence the researcher wants to test the results; the degree of accuracy the researcher requires to estimate the population parameters; and the estimated level of variation with respect to the main variable being studied (Creswell, 2009). In this study, the use of a questionnaire required survey type sample size calculation meaning that a sample error formula was used.

The use of multiple methods research and triangulation is intends to enhance the accuracy of the research output. The 176 individuals constituted 33.6% of the total employee population of CBE. The employees included administrative and non- administrative categories. The differences in the size of samples used in collecting qualitative and quantitative data for the mixed methods research are based on the suggestion made by Creswell (2009) that "the size of the quantitative sample (preferably randomly selected) will not be the same size as the smaller (preferably purposefully selected) qualitative sample".

When the researcher has set the alpha level at .05, plans to use a proportional variable, has set the level of acceptable error at 5% and has estimated the standard deviation of the scale as 0.5. Cochran's sample size formula for categorical population is used.

$$n_o = \frac{(t)^2 * (p)(q)}{(d)^2} = \frac{(1.65)^2 (0.5)(0.5)}{(0.05)^2} = 272$$

Where:

- t = value for selected alpha level of .025 in each tail = 1.65. (The alpha level of 0.05 indicates the level of risk the researcher is willing to take that true margin of error may exceed the acceptable margin of error).
- Where (p) (q) = estimate of variance = 0.25. (Maximum possible proportion (0.5) * 1-maximum possible proportion (0.5) produces maximum possible sample size).
- d = acceptable margin of error for proportion being estimated = 0.05 (error researcher is willing to except).

Therefore, for a population of 524, the required sample size is 272. However, since this sample size exceeds 5% of the population (524*0.05=27), Cochran's (1977) correction formula should be used to calculate the final sample size. The calculation is as follow

$$n_1 = \frac{n_o}{(1 + n_o / \text{Population})} = \frac{272}{(1 + 272 / 524)} = \frac{272}{(1 + 0.519084)} = 179$$

Declaration

I declare that the thesis is my original work and has not been presented for a degree in any other university.

_____

June 2011

This thesis has been submitted for examination with my approval as a university advisor.

_____

Million Meshesha (PhD)

June 2011