



NEAR EAST UNIVERSITY  
INSTITUTE OF GRADUATE STUDIES  
INNOVIATION KNOWLEDGE MANAGEMENT PROGRAM

**ROLE OF KNOWLEDGE MANAGEMENT IN ACHIEVING  
COMPETITIVE ADVANTAGE IN LIBYAN FOREIGN  
PARTICIPATION BANKS**

GHADA HASAN MOHAMED BEN OMAR

MASTER'S THESIS

NICOSIA  
2021

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THESIS SUPERVISOR

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2021

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We as the jury members certify the 'ROLE OF KNOWLEDGE MANAGEMENT IN ACHIEVING COMPETITIVE ADVANTAGE IN LIBYAN FOREIGN PARTICIPATION BANKS' prepared by GHADA HASAN MOHAMED BEN OMAR defended on 16/06/2021 has been found satisfactory for the award of degree of Master.

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## **ABSTRACT**

### **ROLE OF KNOWLEDGE MANAGEMENT IN ACHIEVING COMPETITIVE ADVANTAGE IN LIBYAN FOREIGN PARTICIPATION BANKS**

Knowledge management rises as a solution that can yield tools and means for benefit generation for the beneficiaries of the organization. Knowledge is not only the essential quality for economic activities but also the main player and element for survival and growth and continuation of business organizations or not. Knowledge management is a main challenge in the Libyan banking sector, which requires investment and trainings that enable its professional to create, process, and utilize knowledge for its competitive advantage. The main aim of the current research is to evaluate the current status of knowledge management in the Libyan banking sector through the case study of Libyan Foreign Bank (LFB), as well as study the relationship between knowledge management and competitive advantage in financial institutions. The Libyan Foreign Bank (LFB) has forty-five direct and indirect subsidiaries in different countries around the world. Questionnaires were sent to all subsidiaries to be filled by top managers with one questionnaire for each unit. Thirty-seven completed questionnaires were returned and analyzed using SPSS statistics. The questionnaire used scales for both variables showed high reliability. The findings of the research indicated strong positive correlations were found by knowledge creation and application, while strong and high moderate positive correlations were found between all of knowledge management dimensions. Correlations between knowledge management dimensions and competitive advantage also ranged between high moderate to strong positive coefficients. The descriptive statistics showed a moderate level of knowledge management practiced in LFB. The results suggest that there is a close relationship between knowledge management and competitive advantage in the banking sector.

**Keywords:** Knowledge management, competitive advantage, banking sector

## ÖZ

### ROLE OF KNOWLEDGE MANAGEMENT IN ACHIEVING COMPETITIVE ADVANTAGE IN LIBYAN FOREIGN PARTICIPATION BANKS

Bilgi yönetimi, kuruluşun yararlanıcıları için fayda yaratma araçları ve araçları sağlayabilen bir çözüm olarak yükselir. Bilgi, sadece ekonomik faaliyetler için gerekli nitelik değil, aynı zamanda ticari organizasyonların hayatta kalması, büyümesi ve devamı için ana oyuncu ve unsurdur. Bilgi yönetimi, profesyonelinin rekabet avantajı için bilgiyi yaratmasını, işlemlerini ve kullanmasını sağlayan yatırım ve eğitimler gerektiren Libya bankacılık sektöründe temel bir zorluktur. Mevcut araştırmanın temel amacı, Libya bankacılık sektöründeki bilgi yönetiminin mevcut durumunu Libyan Foreign Bank (LFB) vaka çalışması aracılığıyla değerlendirmek ve ayrıca finansal kurumlarda bilgi yönetimi ile rekabet avantajı arasındaki ilişkiyi incelemektir. Libyan Foreign Bank (LFB), dünyanın farklı ülkelerinde kırk beş doğrudan ve dolaylı iştirake sahiptir. Anketler, her birim için bir anket ile üst yöneticiler tarafından doldurulmak üzere tüm iştiraklere gönderilmiştir. Otuz yedi tamamlanmış anket geri döndü ve SPSS istatistikleri kullanılarak analiz edildi. Ankette kullanılan ölçekler her iki değişken için de yüksek düzeyde güvenilirlik göstermiştir. Araştırmanın bulguları, bilgi yaratma ve uygulama ile güçlü pozitif korelasyonlar bulunduğunu, tüm bilgi yönetimi boyutları arasında ise güçlü ve yüksek orta derecede pozitif korelasyonlar bulunduğunu göstermiştir. Bilgi yönetimi boyutları ile rekabet avantajı arasındaki korelasyonlar da yüksek orta ila güçlü pozitif katsayılar arasında değişiyordu. Tanımlayıcı istatistikler, LFB'de uygulanan orta düzeyde bir bilgi yönetimi gösterdi. Sonuçlar, bankacılık sektöründe bilgi yönetimi ile rekabet avantajı arasında yakın bir ilişki olduğunu göstermektedir.

**Anahtar Kelimeler:** Bilgi yönetimi, rekabet avantajı, bankacılık sektörü





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## ABBREVIATIONS

AFDB	African Development Bank
ANOVA	Analysis of Variance
APQC	American Productivity and Quality Centre
ATM	Automated Teller Machine
BPR	Business Process Reengineering
CSED	Collection Statute Expiration Date
EDI	Electronic Data Interchange
EFKMS	Enterprise's Financial Knowledge Management System
EFT	Electronic Funds Transfer
ERP	Enterprise Resource Planning
FSP	Functional Service Provider
HR	Human Resources
ICICI	Industrial Credit and Investment Corporation of India Bank
ICT	Information and Communication Technologies
IFI	International Financial Institution
IT	Information Technology
KLC	Knowledge Life Cycle
KM	Knowledge Management
KMA	Knowledge Management Activities
KPI	Key Performance Indicator
LFB	Libyan Foreign Bank
NEFT	National Electronic Funds Transfer

NPD	New Product Development
OECD	Organization for Economic Cooperation and Development
OME	Online Method Engine
RTGS	Real Time Gross Settlement
TNKM	The New Knowledge Management
UNDP	United Nations Development Program

## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 INTRODUCTION**

Knowledge management is directly associated with a group of multiple dimensions and different fields and aspects. Some of which are related to intelligent information technology and information systems and human resources management. Others are related to knowledge assets, intellectual capital, planning, hiring (recruiting and selection), and training and human resources development and management of knowledge assets including investing in the intellectual ability of the individuals and human resources performance evaluation and recruiting efficient banking employees, compensation and incentive system, preparing and developing personnel in addition to fast differential change in the business environment (Wang, Hjelmervik, & Bremdal, 2001).

Most of these variable and multiple dimensions and fields have made knowledge management a specialized intellectual field exceeding geographic boundaries, we cannot limit with a single intellectual and empirical support no matter how influential this support is, and it's increasingly essential influence on most human activities.

Because knowledge management, in achieving competitive advantage, depends on the indefinite organic component of knowledge. As consequences and knowledge entity, which depend on the urgent, need of organizing and investing mental and intellectual wealth and exploiting them for gaining assured strategic advantage in developing and building bases for administrative creativity for knowledge on all different resources and supports (Groff & Jones, 2012a).

Therefore, knowledge management rises as a solution that can yield tools and means for benefit generation for the beneficiaries of the organization. However, the question, which poses itself strongly here, is what is the meaning of knowledge management in achieving competitive advantage? Moreover, how does it contribute to generating value resources? In addition, what is the role of these resources in making wealth and achieving competitive advantage? Therefore, through this study, we shall answer these questions and other questions, but prior to that, we must say that knowledge management cannot be framed in a frozen theoretical form or give final revised conclusions without considering political, economic, social and psychological variables of societies, which include the Libyan case. And with the same meaning, it is not possible to frame a clear economic structure without framing knowledge management with certain forms and frames. In addition, by studying knowledge management, it is noted that knowledge assets portion goes up to 80% of global and multinational companies in a list of over 500 companies in the world. Moreover, Ducker mentions the increase of knowledge workers, which coincides with the decrease of production of abstract physical goods in favor of services. Thus, the knowledge has become the main pole in the foundation of economic growth and production resources. Consequently, knowledge management has become the essential specific quality for any economic activity regardless of its size instead of the natural and physical resources (Wang et al., 2001).

In addition, the increase of influence knowledge resources in all companies, which depend on of, advanced knowledge management including Silicon Valley companies. Bill Gates also describes this unique phenomenon when he says that the exit of 20% of main workers in the famous software company

Microsoft means that the company will be faced with the threat of bankruptcy (Farouki, Manni, & Sestini, 2001).

In other words, knowledge is not only the essential quality for economic activities but also the main player and element for survival and growth and continuation of business organizations or not. In fact, it is the more effective and important factor in drawing and defining individual life level and improvement of life quality due to its direct influence on the individual live and society in all political, economic and social aspects, and has even become influential on learning and education for generations due to its association with wealth and welfare and its relation to development and advancement.

Hence, most of these phenomena resulting from knowledge management and its methods of innovation have led to a new wide environment rich with business and have affirmed its existence and control over management sectors in all of its fields, addresses, and approaches. Most importantly, these motivating forces towards innovating knowledge management in achieving competitive advantage have reengineered and rebuilt value concept and is working today on forming innovative structures for value resources essentially different from value system in the industrial sector for example. Consequently, this study is intended to discover and analyze and crystallize one of the most important forms of transformation and transference in management and knowledge roles which is the differential transformation for concept and structure of competitive value in all fields including banks and their way of production and concentration on this dimension through analyzing the relationship between knowledge management innovation and new value forms represented by human resources which is considered the infrastructure of knowledge management and supply within the globalized knowledge management.

Taking into consideration that global economy has witnessed in the last two decades deep and fast transformation in the form of big challenges in the business world caused mainly by change in the basic structure in factors building innovation of knowledge and economic development of which was the increasing role of human resources and outburst of wars and terrorism and globalization and strategic merging and alliances between large

organizations on one side, and depending on knowledge management as the supplier of increasing innovations and creativities on the other side. And the transfer of the global economy to what is called economies of knowledge organizations and institutions. As knowledge has become the essential source in most economic and business transactions and has become a good that is sold and bought and a tool of excellence and competitiveness. As a result, successful business organizations are the ones which undertake knowledge management investment processes related to inputs, processes and outputs of business environment related to it through recruiting, selecting, developing and improving their personnel and investing their knowledge capabilities and skills and latent energies in leading and managing the economies of these institutions and paying attention to clients and customers' needs and interests, and utilizing different modern technologies existing in the surrounding environment to create new markets and marketing environments and to search and find new innovative tools, services and applications (Firestone & McElroy, 2005).

The main challenge facing business organizations among which are Libyan banks is the management of knowledge assets in the form of investing knowledge abilities for outstanding personnel and training them and developing and improving their skills and building knowledge management system which enables them to raise creativity and improve innovation in performing efficiently and to find new techniques and applications which shall be a support towards sustainable excellence in the banking services market on local and regional level. Undoubtedly, knowledge management has in the information era and based on the competitive economy, become the real capital for economic organizations as the corner, which plays the main role in innovation and renovation process and successful economic transformation. In addition, knowledge management is the train of the change and creativity and is the tool for transforming knowledge and changing it into a physical value controlling economies of geographic market and then to a fresh investing, recruiting and competitive advantage. Which means that the generator of value has transferred from exploiting natural resources (physical) to investment of intellectual knowledge assets and from revenue decrease law, which applies

to the physical goods to the revenues increase law relating to knowledge, ideas, and innovations (Drucker, 1998b).

Moreover, focus on knowledge management is one the most noted challenges facing global economy in resource management due to the urgent need for organizing both creativity and innovation and knowledge work systematically within knowledge frames since knowledge management is founded on innovative and creative energies within the existing personnel and staff in business organizations and how to discover them, exploit, invest and preserve them considering that modern business organizations deem their knowledge resources as the most precious and most valuable asset in achieving competitive advantage.

As a result, this study comes within the frame of increasing interest in knowledge management in achieving competitive advantage as one of the new concepts which is in process of building and developing in Libyan banking business institutions on one hand, and which has not received due interest by policy makers and decision makers on the other hand, where we find that it has become an essential and urgent element in the success of international business organizations and the matter calls for more focus and interest and preserving and developing it for its added value in achieving competitiveness and excellence in business organizations and particularly it influence and role knowledge management in achieving competitive advantage in Libyan banks considering that it is a management of knowledge capital in investing nonphysical assets for Libyan banks and achieving competitive advantage through the support and enabling of human resources and assisting personnel and motivating them to discover their potential. Furthermore, in order to enable the management to achieve and support this competitive advantage for banks, it must develop plans and implement the different programs within its strategic approaches on one side and achieve its targets on the other side. Taking into consideration that the concept of management objectives is no longer limited to stages of decision making, recommendations, control of works of human labor forces and hands or strict leadership, but also included among its objectives taking a number of knowledge recommendations by which decisions are made and showing good knowledge organization ,directing and

leadership able to deal with subordinates and clients equally and in such a way creating positive spirit, respect and feeling of satisfaction and keenness to achieve banking institutions goals.

Management objectives are based on many integrated and well – organized tasks and functions to use the available knowledge resources with highest possible energy and in the shortest time for the purpose of achieving the objectives and delivering the message of the banking institution including planning, organizing, directing and controlling...etc. Being the main goal of the management and cornerstone for its survival and continuation and success in competitive markets regionally and internationally with highest efficiency and effectiveness and less effort and high return.

Usually, the effectiveness of administrative systems in different economic institutions including banking institutions becomes clear from achieving the mission and objectives of these organizations. This all depends on how well prepared they are for investment and management of knowledge human resources including the energies, skills, ambitions, and innovations. Also, the knowledge resources element comes is as the most outstanding and important elements in those administrative systems based on the effective role played by its theories and innovations in monitoring and controlling the other economic resources which requires keenness by different organizations including Libyan banks for quality of this element, type and good investment to save time and develop the banking sector in particular as the Libyan banking sector represents the collarbone of the Libyan economy second to oil sector. Hence, the success of commercial organizations generally depends on their success in achieving their main objectives and goals by directly depending on the type of their skilled and trained knowledge resources who are able to take the responsibilities towards the organization especially in the field of competitiveness and market management.

Thus, managements of commercial organizations including banking sectors strive to face the strong competition and achieve competitive advantage in local, regional and international markets through increase of competitive human investment which is one of the main goals for adjustment programs and



building organizational structure and preparing the motivated organization for economic growth and accommodating modernization and keep up with developing globalization in terms of planning, exploitation, training and finding physical and psychological motives and evaluating them inside the banks which is not only an extreme urgency but also a basic requirement for continuation and survival and achieving high productions lines in the banking business industry through striving towards improving the level of competitive element in banking services and products to accommodate the fast changes in this industry locally and internationally.

No banking institution can keep up with the world of economic finance except by activating the role of competitive knowledge in its market and marketing systems. In order for banks to enter the new millennium, they must crystallize a new conception to go with the required performance level of knowledge resources. Hence, it is essential to concentrate and direct its full attention on the specific elements for their staff and personnel and raise their performance level and efficiency by developing their capabilities and enhance initiation spirit and knowledge competitiveness.

Knowledge is no longer just a mere intellectual and contemplating idea, it is now an economic, political and social issue...etc. And during these changes, we sense the difficulty of achieving the Arab knowledge development except by knowledge management through the competitive principles.

In addition, by looking at the capacity and interconnection of the economic sector particularly the Libyan banking sector in knowledge resources management we find that it has three basic tasks; the first is administrative, the second is monitoring, and the third is competitive. So, they are similar to them in the administrative aspects in how to manage knowledge human resources in their execution with the different organizational units in economic and banking institutions in the functions of planning, preparing, organizing, directing and allocating resources...etc.

The second task is a specialization task implemented by knowledge resources management directly starting from human resources planning and going through recruiting, selection, rehabilitation, training and personnel

performance assessment through a knowledge evaluation system, and planning their job course and ending by professional health and personal care. The last one is the main artery and blood vein in continuing the movement of economic institutions especially the banking institutions. As the element of competitiveness is considered the band of the flexibility of the movement of all organization members, departments, divisions, and their human and knowledge resources and in evaluating the performance role of knowledge management in achieving competitive edge in Libyan banks and compensation and incentives system through a deep and extensive study with the aim to address effectiveness of each role of functions of knowledge management and to provide a number of proposals in this study which shall contribute to development of commercial banks and organizations active in Libya.

It is no secret to any reviewer of the features of the competitive advantage and its big influence on the work market in general as well the effect of competitive advantage in the banking system in particular and specifically the Libyan banks. Hence, innovation and creativity are two of the most important pillars for any business and the banking business particularly as they form the mixture of which a group of capabilities, readiness and personal characteristics.

Creativity is one of the components of such mixture on which a group of capabilities are based upon in if an appropriate environment is there where it is possible to upgrade the mental and organizational to directly lead to original and fruitful results to the Libyan banking institutions. Such results will also be reflected on both the individual and the society and on a higher level regionally and globally. When we refer to the creativity concept we mean that intellectual quality which enables the individual to think in non-classical ways. In other word, thinking outside the square and getting out of the narrow frames of the common concept(s) by finding different and extraordinary types and techniques during interaction and that will generate the innovation process. This quality is what represents development process and interacting with any certain task or case. Using such mental characteristic effectively usually leads to several results and solutions because innovation is the creation or generation of an absolutely unprecedented new thing. This new innovative

incident may rarely occur except in certain and special innovation instances which makes it unique in quality and developing and useful in its application and very successful in sustaining the elements of competition on the local, regional and international level in achieving competitive advantage.

## **1.2. Research Terminology**

The great similarities between Libyan banks characteristics in terms of banking, administrative and financial conditions create many challenges in research. Also, it is attributed to the similar work in all Libyan banking sector as they are subject to laws, acts and procedures regulating the banking business regularly in addition to spread of these banks over an extensive geographic area in Libya which makes it very difficult to implement this field study on all of these banks requiring long time and big effort. Therefore, the researcher sees that the study shall be made on how to invest the role of knowledge management in achieving competitive advantage in Libyan banks through the focus on personnel sector in active Libyan commercial banks.

Moreover, based on the importance of knowledge management in establishing competitive principles on the performance of commercial organizations and institutions in general and on the banking sector in particular, and its effective impact on different dimensions of organizational performance including personnel, processes, outputs and transactions...etc. as well as the general performance of the banking institution. And that the adoption of knowledge management in the economic sector shall lead to achieving many benefits like development, growth, and improvement of processes and taking right decisions and achieving competitive advantage and improving creativity and fast response and increasing productivity and achieving efficiency and competence. And since Libyan banking sectors are considered one the most important organizations in applying effective management able to face the challenges and extreme competition and to strive towards reaching competitive advantage through the achievement and increase of client satisfaction and funds and organizations management and improving the quality of their services in all marketing fields and to serve the surrounding communities, and that requires adopting knowledge management an input to achieve quality in all of its administrative aspects.

Therefore, the problem can be formulated by the following questions:

1. How to apply knowledge management as an input of competitiveness in Libyan banks?
2. How to deal with legal restrictions in Libyan banking industry?
3. How is possible to innovate knowledge management?
4. How to achieve competitive advantage for Libyan banks?
5. What is the reality of knowledge management in Libyan banks?
6. How to find knowledge management methods and techniques which can be applied in order to establish and achieve competitive advantage in banks?
7. How to raise the level of competitive advantage, which may be achieved by Libyan banks?

The answers to these questions require addressing the following questions:

1. What is the degree of implementation of knowledge management processes by Libyan banking institutions?
2. What is a degree of awareness by the board of director's members of Libyan banks of knowledge management and its importance in achieving competitive advantage in Libyan banking environment?
3. What are the difficulties influencing the implementation of knowledge management by Libyan banking sector to improve quality in the Libyan banking sector?
4. What is the role of knowledge management in achieving competitive advantage in Libyan banks?
5. What are the most effective techniques in knowledge management, which are applicable for innovating and establishing a competitive advantage in the Libyan banking sector?
6. What is the reality and role of knowledge management in Libyan banking sector?
7. What are the difficulties influencing Libyan banks in the implementation of knowledge management to improve competitive environment in its financial sectors?

### **1.3. Importance of the Study**

The importance of the study lies in many aspects including:

1. To shed light on the concept of utilizing knowledge management in competitive advantage for banks as a management input in the Libyan banking sector to enable it to reach high quality and excellence based on the complex global economic and financial data and the high competition over it.
2. To take advantage of knowledge management as an essential input in achieving quality for Libyan banks investment of the role of knowledge management resources especially in business organizations as a tool to achieve competitive advantage.
3. Considering knowledge as the real capital on which the success of any business organization depends upon and which depends on its ability in forming an effective mixture of different types of capitals available in the organization.
4. To assist the banking sector in evaluating their knowledge capital and to be aware of its importance in creating a competitive value for customers and achieving a sustainable interactive advantage.
5. Producing knowledge awareness in Libyan banks management depends on an understanding of the correlation between its knowledge capital element and the departments in an effective way to enhance its competitive status in recruitment processes.
6. To assist in setting plans and development programs and investing knowledge management for banks and explaining the importance of investment of such assets for its essential value in creating value for customers and achieve excellence and enhance market competitiveness.

In addition, the results and recommendations of this study shall help officials in Libyan banking sector on how to benefit from knowledge management as input to achieve competitive advantage and quality in the sector which shall be positively reflected in the performance level of banking institutions and their development, and in fact taking them to the class of international financial and banking sectors and to accommodate modernization. Moreover, it defines

knowledge management and its basic components and how to invest and manage it and activate its role in achieving competitive advantage for Libyan banks.

Also, the models and tools used in the research shall give a clear picture to understand the works and analyze knowledge activities and influence of competitive advantage on economic institutions particularly the Libyan banks based on knowledge management which depend essentially on knowledge resources and their positive roles on business structure in addition to its ability to represent and analyze relationships and exchanges of intangible assets and resources specifically knowledge capital.

#### **1.4. Objectives of the Study**

The study is intended to find and develop knowledge techniques, which shall analyze the essential changes, which took place in the economic sector accommodated, by commercial and industrial transformation and the establishment of knowledge economies networks. The study also tries to understand the sound principles of knowledge resources investment, revise, and legitimize them. It is performed within frames of global economic climates through identifying available requirements of knowledge management with its different dimensions in Libyan banks based on the following topics:

1. Use a framework and a clear language for knowledge management concepts.
2. Define key knowledge management concepts such as intellectual capital, organizational learning and memory, knowledge taxonomy, and communities of practice using concept analysis.
3. Provide an overview of the history of knowledge management and identify key milestones.
4. Describe the key roles and responsibilities required for knowledge management applications.
5. To identify level of competitive advantage in Libyan banks.
6. To direct the attention of banks managements to the importance of adopting and including competitive advantage in their business activities and programs and the influencing factors and basic perimeters and how

to manage knowledge to achieve competitive advantage for business organizations in a changing environment.

7. To demonstrate the degree of importance of human resources and its effective role in improving the performance of banking sector, and how to preserve the knowledge management elements and investment mechanisms and development techniques within economic knowledge principles.
8. To study the different elements of knowledge management in achieving competitive advantage for banks.
9. To direct the attention of upper and middle management of banking sector and their personnel those banks cannot achieve their goals effectively and efficiently without a deep understanding of its knowledge capital and how to manage it.
10. To improve the role of knowledge in building the administrative personality within modern knowledge concepts (Earl, 2001).

### **1.5. Hypotheses and Research Questions**

Based on the available data and empirical reality, the study assumes that Libyan banks can achieve competitive advantage attributed to many factors like quality of services, low cost, efficiency, creativity, fast response to clients and time of response, renovation and innovation. This can be achieved through the application of concepts and elements of knowledge management. And according to problem and objectives of the research, it is founded on the following assumptions:

1. H1: There is a statistical significance relationship between knowledge management requirement and achieving competitive advantage in Libyan banks.
2. H2: There is a statistical significance relationship between personnel response to knowledge management requirement and achieving competitive advantage.

### **1.6. Research Questions**

The study focuses on raising some essential questions related to the role of knowledge management in achieving competitive advantage in Libyan banks and with innovative tools and techniques stemming from modern knowledge management principles. Hence, this study tries through its chapters to provide sufficient scientific answers and stimulating through its topics the following questions:

1. What do knowledge management and its role in achieving competitive advantage in Libyan banks mean and what are the driving forces for it?
2. What is the nature of the relationship between knowledge management and competitive advantage?
3. What is the nature of the difference between administrative system and competitive advantage based in the globalized knowledge management?
4. What are the dimensions of transformation to a knowledge banking system in a globalized world?
5. What is the economic affect resulting from knowledge management?
6. What is the innovation influence in improving knowledge management structure of Libyan banks?
7. What is the effect of globalization on the management of Libyan banks in the absence of knowledge in its institutions?
8. What is the role of knowledge innovation in achieving competitive advantage in Libyan foreign bank in Tripoli?
9. What is the role of human resources and technological knowledge in achieving competitive advantage in Libyan banking sector?
10. What is the role of knowledge in channels of distribution in achieving competitive advantage?
11. What is the role of surrounding competition in achieving competitive advantage in Libyan banking sector?

### **1.7. Variables of the Study**

1. Independent variables:



The independent variables of this study is the knowledge management, which includes following components:

- Knowledge creation
- Knowledge acquisition
- Knowledge filtering
- Knowledge storage and representation
- Knowledge auditing
- Knowledge application
- Knowledge distribution and exchange

2. Dependent variable:

The dependent variable of this study is the competitive advantage, which includes the dimensions of creativity and innovation.

### **1.8. Methodology**

The study was based on its topics on a descriptive analytical method to study the relationship between knowledge management and its influence on competitive advantage to extract new facts stemming from this field. The study, through its chapters, tries to compare these facts and reconstruct them and reform them into a useful theoretical frame to understand knowledge mechanisms in which the building of processes of building competitive advantage foundations for business organizations and particularly the banking sectors. In addition, the focus is studying the knowledge management and building case for Libyan banking sector activity through the study of the subject of the research and dealing with different dimensions and aspects and clarifying the goal behind it and identifying the mechanisms of how to apply its results. The descriptive and analytical methodology will be followed. Data and information will be collected from its sources and processed objectively and scientifically to reach the expected results of the research through the following:

#### **1.8.1. Research Society and Sample**

Society of the study is made of upper management employees and all department managers and division chiefs, technical units' supervisors and

employees of Libyan banks who are individual. The study is implemented by an overall survey methodology.

### **1.8.2. Information Collection Tools**

The study depends on are view of all kinds of office reports, data, and information organizing banking business.

1. The study shall depend on collection and review of all kinds of office reports, data, and information organizing banking business.
2. In order to explore the reality of knowledge management in Libyan banks from the point of view of officers, department managers and employees, a questionnaire will be designed as a main tool for data collection and through analysis of previous studies which have addressed the subject of knowledge management in addition to review of literature dealing with techniques of knowledge management applications.
3. Data collecting tools also include making personal interviews to complete any information lacking in the questionnaire (Davenport, 1994).

### **1.8.3. Data Analysis and Drawing the Results**

The data is analyzed and the results to be drawn according to the study hypotheses and variables through SPSS program and use of following statistical tests:

1. One way ANOVA
2. Correlation matrix
3. Mean score
4. Cronbach's Alpha

## **1.9. Thesis Outline**

This thesis is organized in five chapters.

In Chapter 1, an introduction is presented to clarify the background of the research.

In Chapter 2, a survey of the literature is provided on knowledge, KM, benefits of KM in the banking industry, FSP (Functional Service Provider) and KM, application of KM in banking, KLC (Knowledge Life Cycle) and the APQC (American Productivity and Quality Centre) process classification framework.

In Chapter 3, a FSP model is developed by merging and integrating the two models “TNKM” (The New Knowledge Management) (Firestone & McElroy, 2003) and “APQC Process Classification Framework.” (O'Dell & Hubert, 2011). Based on these studies a measurable indicator set is defined.

In Chapter 4, two case studies have been carried out using the qualitative, participatory approach in one foreign owned, and one jointly controlled bank in Turkey. Since the case studies include specific information that outlines the details of the firms, the tables of the case study are presented in a technical paper.

Finally, in Chapter 5, the outcomes of this research are summarized, limitations are discussed and a direction for future research is provided.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1. Theoretical Background**

Before getting into the details of the topic, we must give a brief profile of the theoretical framework of the knowledge concept and the evolution of knowledge economy and analyze the correlation between elements of non-knowledge economy and the economy which is based on modern knowledge principles and guidelines through technological knowledge, market knowledge, knowledge of channels of distribution, knowledge of surrounding competition (competitive advantage), and to present proposals and recommendations to management officers of in economic institutions , particularly Libyan banks, and to describe the role of knowledge in upgrading banking sector for decision makers and policy makers in Libyan banking sector organizations especially. Throughout the research topics, theories and views will be addressed to describe the relationship between knowledge and economic banking system and to analyze the common inputs between them.

The subject of competitive advantage has in recent years received large attention on a global level. This is mainly due to accommodating the requirements of fast developments faced by the modern world in the form of globalization and the relevant consortiums, political and military alliance and accords mixed with merging processes in the global economy between those

huge organizations as well as the new open market and marketing policies. In addition, the huge technological advancement in information, communication and technological and social media networks. Based on such fast changes, it has become impossible for any nation to live isolated from such dynamics and their direct impact on the individual, society and the state due to the huge and overlapping volume of knowledge and specialties such as organizational knowledge, technological knowledge, market knowledge, knowledge of channels of distribution and knowledge of surrounding competition and competitive advantage...etc. It is also no secret for any researcher or follower of knowledge movement and its influence on economic, social, political, and even health sectors. In fact, there is no life aspect that has not been crashed with knowledge in some way.

Hence, the economic sector and the banking sector represents the collarbone in the management of economy locally and internationally and the difficulties and obstacles associated with its dynamics and transactions especially in the fields of exportation and capital flow. Consequently, advanced nations have adopted correctional policies intended towards rehabilitation and structuring of its economies in general and the banking sectors in particular and to prepare the right economic environment supporting their competitive capabilities in a new global economy founded on bases of knowledge innovations and its human resources (Davenport & Prusak, 1998).

Therefore, we shall address the understanding of knowledge evolution and its role to enter those stages, which have characterized human societies, or what is called modern transformation by which advanced countries have moved and transformed from the agricultural society to the industrial society and arriving at the knowledge society based on elements of the economy and money movement in international markets.

These stages formed the infrastructure of man's movement on his land where man depended basically on nature in the first transformation with some conservatism, as man since his landing on earth has depended on nature and its resources automatically and instinctively, but in fact it was a natural expansion and instinctive human behavior through the ages from the

anthropological perspective generally. However, associated with this human history was the economical credit or economic history, which was depended upon from another criterion to describe a post-agricultural stage, which in turn established an agricultural society as the first transformation stage? During long centuries, human population would not be formed by economic concept which may be considered a society having in its feature's signs of integrated economic model to develop the required economic level which establishes post-agricultural revolution so to say for many reasons including low population dispersed and spread in limited areas and regions on earth in addition to lack of economic activity not exceeded self-sufficiency for those human congregations.

In addition, when the features of demographic growth become clear and organized populations have started increasingly and regularly taking agricultural and economic activity course, economic historic experts started their course of documentation and revision considering that stage as an agricultural revolution giving birth to an agricultural society as transformation in an economy produced by nature of need then.

And when the revolution started at riverside and high-water resources in some region (Tigris and the Euphrates) and also the regions nearby equator (Nile river, Indus, Gang and yellow river...etc.) where the soil is fertile, only then human populations had the right conditions to raise the individual welfare. In other words, signs of the economy have been formed (Nonaka & Takeuchi, 1995).

Following this transformation in the mobile agricultural societies running behind sources of water, they started building stable agriculture residences in line with the fast increase of technological and knowledge skills. This way, the scope has widened for forming the block for manufacturing tools and arms and trade and industry techniques also increased gradually. From there the transfer to the stage of possessing and breeding animals which enforced skills and abilities to transform to industrial stages through the investment of animal wool and dates trees fiber and plants to making textiles and tools. This advancement in use and control of fire to innovating kilns and furnaces to manufacture bricks

and ceramics and after that mineral. More technologies were available for man for manufacturing metal tools and extracting minerals from their natural material and other products, which he needs for his life. So, human societies have moved into a state paving the way for another deep transformation by which to move on to the start of civilized societies through the machine and what is called the industrial revolution.

Hence, the human society has been moving from an agricultural society to an agricultural-industrial society as a natural result of many causes including the huge population increase and especially in populated regions with limited natural resources and inability to fulfill their needs and provide enough quantities of life necessities and means of survival in addition to extreme difference of the populated areas in terms of geography and natural advantages available along with the coming of new generations and new and fast changing lifestyles and having new desires by people which were not originally existing in previous generations. In addition, this was accompanied with the discovery of new sources of energy. Thus, it was essential for populations in those consecutive eras to resort to a civilized and urban method, which depends on instead of agriculture and fishing, on industries setting rates and levels of the economy of human societies. Moreover, it was the manufacturing, which gave birth to an industrial society having among his priorities what is called the mechanical economy.

The second world war parameters represented a turning point and the door opening for all mankind as it caused the crystallization and change of many basic facts and aspects in the world and has caused the evolution of an unprecedented commercial and industrial movement which produced an economic project because of all of the destruction and demolition of human structure socially, politically and economically from both of its industrial and marketing sides. Thus, it had become the transformation point in our modern world represented by scientific or technological or knowledge revolution or what is so-called knowledge, globalization or modernization world.

From here, the point of transformation and take off towards building a new economic system in our modern world. One of the most important

characteristic which distinguished this transformation from the previous ones is the integration of knowledge in production and industry system and the transformation of scientific innovations into a producing force controlling the market joints and thus shortened the distance separating invention and its application in real life, so that difference in the knowledge revolution is merely over few hours under the technological revolution and internet networks to enter production market , marketing, and finance and take place in daily lives of people with maximum possible investment of knowledge time.

According to Daniel Bill (1967) about this issue, he states: the average length of the period between discovery of a new technological innovation and realization of its commercial potential was thirty years between 1880, 1919 and went down to 16 years in the period between 1919 and 1945 and then to 9 years. However, in our modern world, it does not require too long but in some cases it takes just hours to be put in a practical application.

In addition, in the collective and institutional production stage during the twentieth century, knowledge has become the controlling base of global economies and physical and cognitive capital movement through institutions, universities and societies and scientific centers...etc. In fact, it has become the leader of producing innovative, technological and knowledge industries and the main driver in global competitive operations.

The knowledge revolution has developed those machines and added the so-called electronic minds in the operation system of the machine so its operations system has become automatic with no need to many labors. The control over the infinite has enabled technology to dominate and control whether in the fixed natures like the atom and the electron...etc., or in the live nature of genes and genetics and genetic code and invading the space and spreading of satellites there...etc. and the fully automatic control over machines and production cycles through automatism and computers...etc. In addition, the control over complex interactions of the social pattern through information and communication networks and commerce and finances movement and in fact everything that is related to humanity wherever they are. Based on the above, the development of human society is a natural result of



basic stages formed by agriculture, industry and knowledge as the foundation for innovation and in fact they formed most of the characteristics for correlation between individuals and element of production and between knowledge giving and its effect on preserving and providing means for good living in the societies and their development.

## 2.2. Knowledge Management and Knowledge Economy

After this introduction, we review the concept of knowledge management and knowledge economy. From many terms, which refer to knowledge management as an information economy, internet economy, digital economy, macroeconomy, electronic economy, and intangibles economy...etc. All of these definitions refer in general to knowledge management. Moreover, they are usually used interchangeably, which indicates that having a comprehensive definition for this econ

omy has not been unanimous between researchers, lecturers, and legislators. Therefore, we shall review the most important definitions for the sake of clarification and not limitation of the concept of the term (Groff & Jones, 2012b).

According to Groff and Jones (2003), Knowledge management has three main terms, which are data, information, and knowledge.

1. **Data:** The nature of data is raw and it does not have any context, and it can exist in any form, in which it can be usable or not. For example, any given numbers or figures in a spreadsheet are a type of data.
2. **Information:** Information can be defined as the data, which has been turned into a meaningful and contextual set. Spreadsheets are used to gather the data to turn into meaningful information; this information can be of weekly timing, salary of employees, annual sales etc.
3. **Knowledge:** It is the set of information put together to have an understanding of the information and it can be used as to make action. For example, teacher looking at the exam results of the students to figure out how many students are not doing well in the class and might be able to find a solution for it (Groff & Jones, 2012b).

### **2.2.1. Knowledge Management (KM):**

Knowledge management is an economic system represented by scientific innovations both qualitatively and quantitatively, and by the basic production element and driving force for producing the capital, which will raise growth of production rate largely and on long range thanks to the use and investment of knowledge technology, media and communication based on a banking knowledge structure.

**Definitions.** The United Nations Development Program (UNDP) defined knowledge management as spreading knowledge, producing it and utilizing it efficiently in all fields of society economic activity and political and civil society and personal life to reach the welfare of man directly. In another word, to achieve human development. This requires building potential human capabilities and successful distribution of human capabilities (**Davenport, 1994**).

Knowledge management can be defined as utilization of systematic strategies to manage the assets of knowledge of an organization in the best possible way (Danish, Asghar, & Asghar, 2014), simplified and summarized the definition by implying that knowledge management encompasses activities that involves storing the information that is right, and to make sure that the it is delivered to the right people and consequently utilized in a right way.

According to (Gupta & McDaniel, 2002), knowledge is a commodity of significant value and worth, it needs to be handled properly, and the proper utilization of which is an integral asset for the organization. Knowledge is that data and information that organizations utilize to solve their problems when the need be and hence it is integral to store and manage the valuable information that help achieve the goals of the organization stated by the authors.

Nature and Types: On the other hand, knowledge is the base for everything. Its use, utilization, innovation, and development are all for the goal of improving type of life in all fields through information services and advanced technological applications and the use of human mind as the capital is very important in producing and employing scientific research to make many strategic changes in the nature of the surrounding economic environment and

improving and developing it to become more responsive, synchronized and harmonized with challenges of globalization, information technology, communications and knowledge globalization and sustainable development. As the society whose economic institutions, particularly the banking institutions, are founded on knowledge bases shall have the initiative and contribution in creating, deepening and developing their different branches to become an effective element controlling joints of global economy and more qualified than others to catch up with advancement progress and enter the world of economic and political conflicts from its widest gates and in all social, scientific, cultural, commercial and industrial...etc. levels, which would achieve use of knowledge with high efficiency for the purpose of achieving social and economic development to the interest and development of human societies in addition to accommodating and creating knowledge to fulfill its special needs (Davenport & Prusak, 1998).

### **2.2.2. Knowledge Elements' (fields& forms)**

Knowledge elements are the drive in the investment, production and marketing ring, which must develop and continue to preserve the huge changes taking place in the global economy and its survival. Without knowledge, no society is capable of building an economy to qualify it to be among the efficient societies in the context of globalization, economic and political, and intellectual conflict or even what is so called a clash of civilization. Knowledge production, distribution use and investment are the main safety valve for sustainable development and to general wealth and employment opportunities in all fields. A society, which can produce knowledge, its innovations, use its fruits and achievements, is the society, which shall have a grasp on the economy and global leadership, since knowledge is the main source of society's wealth, welfare and development.

Consequently, it safe to say that knowledge is the real economy, which produces elements of welfare, development, and leadership for human societies. The role of knowledge and human capital form the economy as stated above. Any economy where knowledge is not occupying the larger part of is a dead economy, which does not produce healthy society, as it is the starting point for any society. In other words, knowledge is the only element in

the production process, and innovating knowledge information is the only producer in this economy, and that the information and their technologies form and defining the production techniques, marketing opportunities and its fields.

There are various elements of knowledge management, which are used by organization. These elements are used to transform their structure and processes to become learning organizations (M. Baldwin et al., 2001).The elements are as follow:

**Collaboration:** Social media should be available for the people to use, intranet and internet systems and people should be encouraged and motivated to collate data and share it with others in their team and the organization.

**Expertise and Access to Experts:** There should be the culture of job rotation in the organization so people are able to get the knowledge of different types of jobs, cross-functional projects should be given time to time to the employee so they can get knowledge of different jobs.

**Communities of Practice:** There different types of forms, which are developed for the organizational community to post issues, discussions of problems and for solving the problems which members, are having. People will common interest of area post their issues and discuss the problems in order to solve them. This tool helps people to communicate while they are at home or in their workspace.

**Real-time information:** As knowledge management is the concept of sharing information, this element puts emphasis on the sharing of information at the right time, at right place and with the right people. Systems, which are able to provide information to people at the right time and right place, are very useful to them.

**Knowledge of organization depth and scope:** If the knowledge is not provided to the people in the right way than it as no use. Knowledge should be easy to access and easily understandable to people can make use of it. This is why the way of storing the knowledge, knowing how to do it, and putting it into a format, which is easy for people to understand and use it, is very important.

**Personalization and navigation of the system and interface:** Not everybody is familiar with using computers or is not an expert with using computers. Therefore, it might be hard for them to enter data in the system and at the same time, they might not know the importance of the information. Therefore, it is better to develop a system, which is user friendly and can guide people to enter data, retrieve data and how to make use of that data is very helpful.

**Difference between instruction and information:** Information can be defined as a data that has a certain meaning to it. Organizations encourage their workers to share the information with others in the organization to keep everyone informed and up-to-date. It is also a good way of socializing, and it can be done through having meeting, online, or through setting up workshops. Instructions on the other hand are information that is used to teach as part of job training, classroom training or web-based training.

### **2.2.3. Knowledge Management Processes and Strategies**

Hence, we must distinguish between employing the two terms knowledge management and the economy that is based on knowledge. Some economists have expressed knowledge management with another reference, which is the economy that is based on knowledge or the economy that exists on knowledge. However, due to the fasteconomic changes and technological advances, some economic researchers have reconsidered these two different definitions and distinguishing them:

#### **2.2.3.1. First Reference**

Knowledge management is what is related to economies of the knowledge process itself, that is the production and making of knowledge, and research and development processes both in terms of costs of knowledge process such as research and development costs or costs of business administration, consultation or preparing and training consultants on one hand, and between the income or revenue resulting from this process as it is an absolute economic operation like any other tourism services or hotel services economies.

#### **2.2.3.2. Second Reference**

The term economy existing on knowledge refers to a wider and bigger meaning

to include in its reference the size of sectors of knowledge, information and investment inside the textile of the structure of the economy, as well as how far, have knowledge and technology penetrated its production activities (M. Baldwin et al., 2001).

#### 2.2.4. Knowledge Management Process Model

This Knowledge Management Model delineates the procedure that characterizes the methodology for management to shape, strip, and enhance information resources. This model puts weight on the parts of why and when. The qualities of this model lay on its key center, which puts knowledge management activity into setting. The model gives a great review of the technique behind the knowledge management however; in the meantime, it does exclude more profound knowledge into what activities are suitable in a given occasion (A. Botha, Kourie, & Snyman, 2014).

As figure 2.1 below shows, KM model try to give some practical outline of the KM exercises. Also, it is clear that there is interaction between all classes and spotlights on the key side of associations.

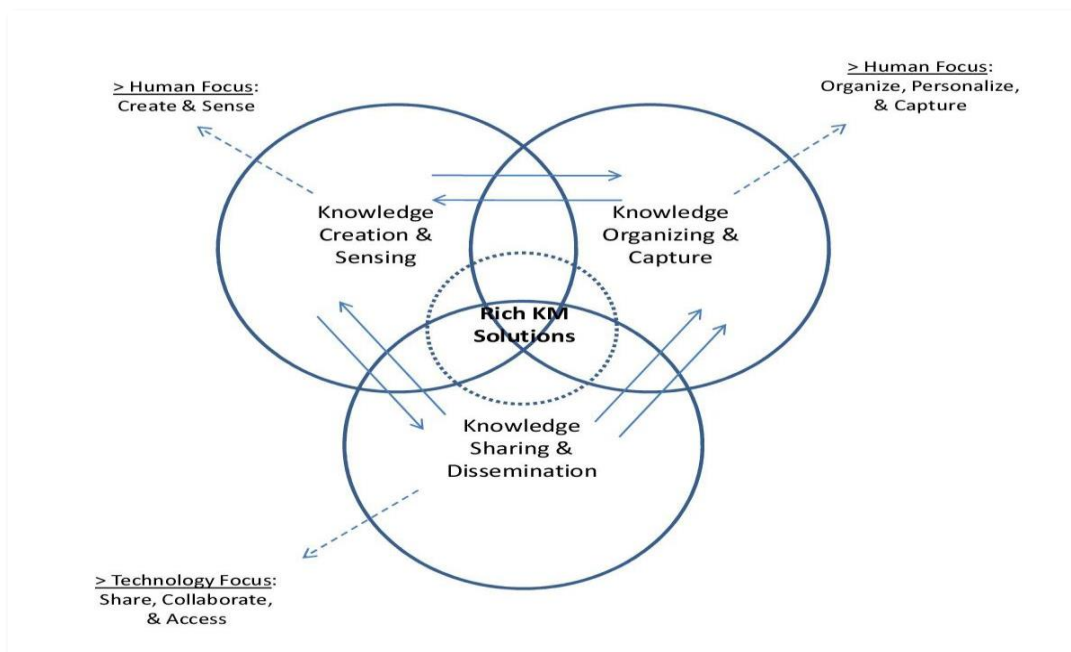


Figure 2. 1. The knowledge management process

Source: (W. Botha, 2008)).

### 2.2.5. The Knowledge Management Matrix

This Knowledge Management model exhibits a general theoretical framework, and in addition particular rules for execution. The KM procedure is part into four stages. To start with, management must find the wellsprings of knowledge. At that point, they should organize this learning in order to evaluate the company's qualities and shortcomings and decide its pertinence and reusability. This is trailed by socialization, where different methods are utilized to share and spread it to whomever needs it in the organization. Finally, the knowledge is disguised through use (Gamble & Blackwell, 2001b).

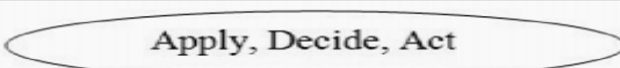
<b>Approach \ Type</b>	<b>Embodied</b>	<b>Represented</b>	<b>Embedded</b>
<b>Sense</b>	Observe	Gather	Hypothesize
<b>Organize</b>	Contextualize	Categorize	Map
<b>Socialize</b>	Share	Disseminate	Simulate
<b>Internalize</b>	 Apply, Decide, Act		

Figure 2. 2. Knowledge Management Matrix

Source: (Gamble & Blackwell, 2001a)

### 2.2.6. The Knowledge Management Process Framework

This model attempts to offer a more accurate impression of the Knowledge Management process. The three extensive classifications overlay and cooperate with one another. Like : (Gamble & Blackwell, 2001a) the focus is on managerial initiatives. Here too the strategic focus (the “when” and the “why” as opposed to the “what”) is absent. It is important that this model does include the formation of new knowledge as a particular Knowledge Management initiative (Greco, 1999).

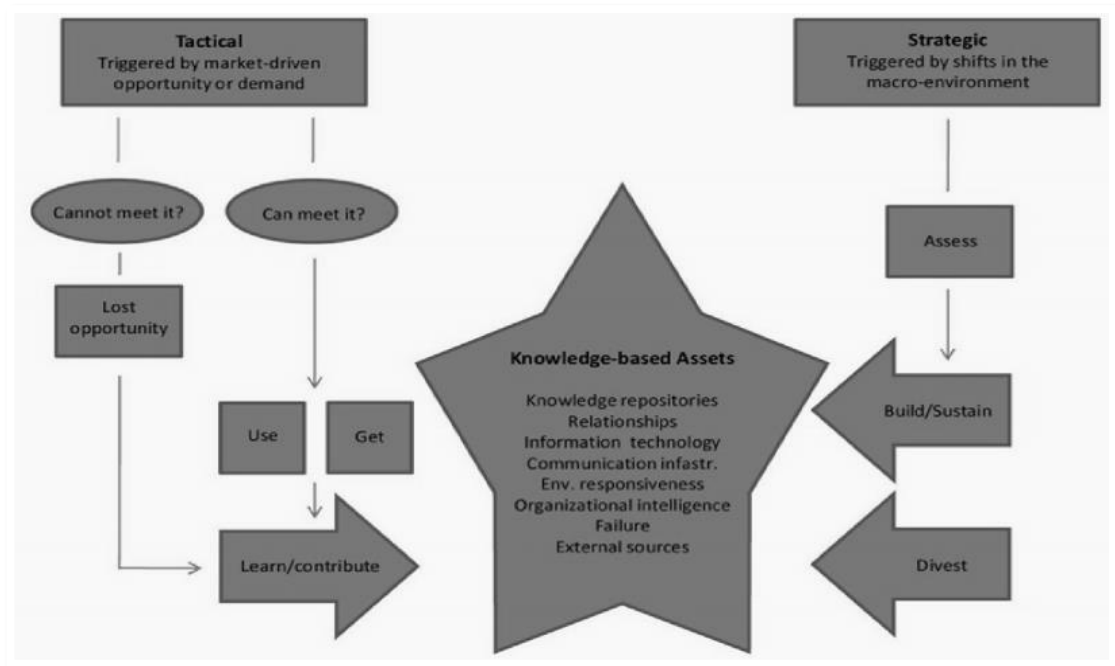


Figure 2. 3. The Knowledge Management Process Framework

Source: (Martinson & Stokes, 1991)

### 2.2.7. Relation of Information Technology (IT) with Knowledge Management

Any economy based on competitive knowledge is considered as an advanced stage of knowledge management. That is, it depends on the application of knowledge management in all social and economic activities like harmonizing between IT technology with multiple sectors such as communications (e.g., Remote disease diagnosis, remote medical operations, remote production, remote conferences...etc.). All of these make the economy dependent upon knowledge, science and innovation as largest industrial nations which have invested and benefited from achievements of the scientific-technological revolution and exploited it in the generation industry to produce new knowledge, discoveries and advanced technologies enabling them to reach an economy based on principles of knowledge and modern science or what can be called knowledge economy. On the other hand, the countries, which try to



produce knowledge including innovations, knowledge acquisition, and spread and storing, are still in progress of knowledge management (Zack, 1999).

Tools such as Lotus Notes, Microsoft SharePoint, World Wide Web and Lotus Notes are able to provide such useful and interactive environment through which knowledge can easily be shared and stored. However, effective use of information technology is necessary for the organizations in order to communicate the knowledge throughout the organization (Jan Duffy, 2000).

### 2.2.8. Knowledge Management Technology

The ability to innovate and invest intellectual capital. As it not only represents the basic source of wealth but is also, the foundation form acquired a proportional competitive advantage in the new global economy as show in Equation 2.1. Knowledge is the main tool to achieve efficiency of production, distribution and marketing operations and improving quality and quantity of production and opportunities for selection between different services and industries for both the consumers and producers. In general, the economy that is based on knowledge is characterized by durability against economic development process or communication or education or project success or the total integration in society in general (B. B. Scott, 2011).

$$\text{Knowledge Management: } \mathbf{KM} = (\mathbf{P} + \mathbf{K}) \mathbf{S} \text{ Information Technology:}$$

People
Knowledge
Share

Equation 2.1. Knowledge Management Equation (B. B. Scott, 2011).

### 2.2.9. Knowledge Management in Banks

All the major stakeholders of financial sector including banks have recognized power of knowledge. The main target of the financial institutions like banks is increased satisfaction of customers and to achieve greater level of revenues through that, hence managing knowledge is of paramount importance for

financial institutions in order to gain competitive edge in the market. Knowledge as we speak of includes important information regarding the transactions that customer's make and it also includes intellectual capital owned by the banks.

Day by day, the importance and worth of knowledge management is increasing. Especially in banks, it is gaining importance as it helps the banks to deliver information in timely manner that is utilized in the process that involves planning, evaluating and making decisions.

It also helps in achieving the goals of organization by managing information that is integral to strategy formulation, and other activities of operational level. Today contemporary financial institutions explore the significance of managing knowledge and encapsulate it as a part of the business practice of the bank. It is very critical for banks to store, create and disperse knowledge and usually it is very closely monitored. The procedures in the modern era are computerized and so does the bank's processes where the computer-supported systems are used for enhanced decision-making. By utilizing knowledge management system, the efficiency and effectiveness of the decisions made is improved.

It is also an economy open to the world. Because there is no economy which can create and monopolizes knowledge without getting involved with or import knowledge from others. In addition, the globalized economic climate in the economy that depends on knowledge overall must be encouraging for the investment of knowledge, information and acquiring experts to enable it to innovate and renovate. That is extremely important for the success of the economic operation in general and the banking sector.

In particular, because ensuring survival of knowledge-based economy requires promoting investment and capital flow in the future for which rates of revenues and income may be low or limited. Thus, such fields need the support of economic policy in the nations, which strive towards achieving an economy based on knowledge, innovation, and competition through constructing a strong knowledge- structured banking sector (Gärtner, 1999).

The business of banking has both a service and a manufacturing component. Banks provide financial services, such as domestic and foreign remittances,

automatic charge service, custody services, and settlement services. Banks also provide financial consulting service, e.g., they give advice to customers about investing. Some banks also give advice about mergers and acquisitions. At the same time, banks develop and sell. For example, manufacture a variety of financial products, and the quality of those products has a strong effect on competition, especially under deregulation.

Thus, banks have both a service and a manufacturing aspect. Managing knowledge is important in all banking industries all over the world. However, banks do not have plants and machinery, so their most important assets are their employees and branches, which are the interfaces for customer relationships. Therefore, managing employees and the customer relationships have become the banks' core competence. And that is why knowledge is the most important asset for banks (Guerra, 2001).

### **2.3. Introduction on Knowledge Management**

Knowledge management (KM) is distinguished with a number of features, characteristics, and other inputs. In addition, based on our review of the literature addressing features and characteristics of knowledge and its economies, we found that it only relates to knowledge being based on an investment of human resources and innovation tools as the real intellectual and knowledge capital to develop the economic state particularly banking.

The dependence on active, skilled, trained and specialized knowledge resources ensures that economic institutions including banks accommodate changes taking place in fields of knowledge and global economic movement to enable them to build an information system that is ultra-fast, accurate and with quick response. And to take the economic activity from goods production and manufacturing to knowledge service production and manufacturing through activation of research and development processes as the drive of change and development, and also raising income of knowledge makers according to the level of qualification, experience and efficiency and different innovations. Consequently, this knowledge becomes a fast drive towards change developing according to the changing needs and is characterized by global openness and competition, as there are barriers to enter a certain

economy but in fact it a fully open economy able to deal easily and glidingly with every variable arising in the economic field through innovation process and finding and generating new knowledge and intellectual not previously known in the markets. Hence, the success of any economy is associated totally with intelligence and innovative ability and imagination and competitiveness, and to awareness that is associated with the importance innovation, creativity, origination, initiation, surprise and individual and group competitiveness to achieve the best in production, marketing and profitability processes (Foray & Lundvall, 1998).

## **2.4. Knowledge Management**

Elements of the innovative and creative process are numerous but they remain a hostage to knowledge because it (the knowledge) is the main component and inexhaustible supplier for this creative process through its management, creation, exchange, storage and application especially in its competitive advantage. Because any sector of human life's sectors cannot develop and increase creative work without the creative and innovative process. Moreover, it cannot be made into intellectual pattern and practical technique because knowledge is the base and essence of creative thinking and source of creativity and development on all levels, but it is in fact the drive to everything (Bryant, 2003).

### **2.4.1. Evolution of Knowledge Management**

The huge impact left by knowledge management on all human techniques past and present is considered the real history of the evolution of knowledge at the same time. As philosophers and scientists wrote on this subject in past ages. However, they did not write under the title knowledge management directly. Most of their writings under this definition only appeared during the very recent few years. Since the 1980s, more interest has generated towards finding a new knowledge field called (knowledge engineering) and with its birth came a new job description called (knowledge engineer). In addition, in 1997, another new field rose because of realization of knowledge importance in the information era, which is (knowledge management). Moreover, in the second half of the nineties the subject of knowledge management became one of the important and essential subjects and even more dynamic in the intellectual

production and industry inside organizations and institutions through competition and investment of their human and technical resources and empirical theories and field studies (Ridge, 2000).

#### **2.4.2. Knowledge Management Concept and Definitions**

Knowledge management concept cannot only be limited to a certain scientific field, but also is considered one of the most important structural components for those scientific fields. However, there are many definitions for knowledge management as Skim, one of well-known persons who addressed the management concept and defined it as (the clear and regular management of knowledge and its operations related to its creation, collection, organization, distribution, use and exploitation. It requires the transformation of the personal knowledge to a cooperative knowledge, which can be divided clearly through the organization).

On the other hand, Ridge (2000) defines it an integration between information systems and work experiences which in turn assist the organization to organize, analyze and innovate information better). And we see it as (energies collected to form a cycle of operations helping boards to organize and control inside the organizations and contribute to generating knowledge, select, organize, invest, improve, use and distribute it to the organization in order to help and direct decision-making and problem solving and build a learning structure to serve the creative and innovative process which increases competitive force for organizations and institutions).

Furthermore, there is too many definitions to state. and we notice that most definitions are similar and most of them focus on previous work experiences available in the organization as well as knowing employees' experiences rooted in their minds to make them, within some frame, available to all organizational personnel and beneficiaries outside of the organization and to invest them in best way possible and take advantage of physical and psychological returns for the organizations and institutions (Fu et al., 2000).

### **2.4.3. Importance of Knowledge Management**

Some studies referred to importance of knowledge management, as Antaeon & Shekar (2000) stated that the rise of knowledge management and its importance are related to three most important challenges facing our modern world business management including:

- 1- How to trace customers and serve their needs through the internet and e-commerce.
- 2- How to use IT technology in getting a share and place in the economic market.
- 3- The mechanism to enable any organization to reorganize personnel accumulated ideas and experiences and exploit them to serve the creativity process in the organization.

Hence, most organizations presently try hard to distinguish themselves from others through competitiveness principles, so they work continuously on using new and modern techniques and innovations in developing their products and marketing processes methods and build outstanding relations with customers. In addition, from here knowledge management plays an essential, basic, and important role in defining competitive advantage factors. As these factors provide a number of services to the organizations and sectors especially the banking sector. Thus, it supports and improves decision-making processes and facilitates their implementation by individuals and organizations as it makes them more aware and with more experience and competitiveness about organization business, goals, operations, outputs, and inputs (A. H. Gold & Arvind Malhotra, 2001).

### **2.4.4. Fields of Use of Knowledge Management**

1. Making important decisions in all fields: as it helps to get the required information enabling decision makers, individuals or organizations, to understand all aspects of the subject, its dimensions, and reflections.
2. Strategic planning: the individual or the organization who has knowledge and experience is better equipped and more capable of planning than others.

3. Planning for operations, re-engineering and implementation: any restructuring and design of operations and their work procedures intended from execution
4. Communication and relations: it facilitate making any communications and enhances relationships to transfer information and experience.
5. Fields of research, development, and creativity.

## **2.5. Types of Knowledge**

There are two types of knowledge: tacit knowledge and explicit knowledge. Most knowledge is tacit since it is in the minds of human resources. Its efficiency, innovations and influences depend on their senses, experiences, skills and thinking and creative capabilities. It also includes facts generated in form of information with meaning and significance about the market, marketing, customer, technology, and all that is related to the production process. Knowledge is considered an intangible thing in all scientifically and intellectually qualified individuals. However, it is sensible and measurable and usually, plays an important role in achieving competitive advantage and reversing commercial equations. From here, (Omotayo, 2015), classified knowledge into two basic branches.

### **2.5.1. Tacit Knowledge**

It is usually related to tacit knowledge about skills. It actually exists in the minds of individuals and is acquired through accumulating past experiences and is usually of personal nature which makes difficult to get despite its high value because it is stored inside the mind of the possessor of the knowledge. Therefore, tacit knowledge is considered an intangible asset for the company and is definitely the most important of all assets as the company success is connected with its personnel and the success of the personnel is connected with their tacit knowledge. As a result, it is necessary to manage such knowledge although it is difficult to control. An example of tacit knowledge would be (sales person convincing skill and company general manager leadership skill).

### 2.5.2. Explicit knowledge

This usually refers to anything tangible. It is the information existing and stored in the organization or institution archives including books, documents (booklets related to policies, procedures, engineering designs, operation and working standards...etc.) or any other tool whether printed or stored electronically. Moreover, usually, individuals inside the organization can get access to them, use, and invest and may share with other staff through conferences, meetings, books, and recommendations. In addition, this is what happens to tacit knowledge to become explicit if recorded, documented or stored to be used by others whenever they want to.

Table 2. 1. Show comparison between Tacit Knowledge and Explicit Knowledge.

Tacit Knowledge	Explicit Knowledge
<ul style="list-style-type: none"> <li>• Imperceptible</li> <li>• Not documented but available</li> <li>• Secure: not accessible except by owner's consent</li> <li>• Included in person's minds and experiences</li> <li>• Getting it is considered a challenge in knowledge management and exchanging it is difficult if it does not change to explicit knowledge</li> <li>• Not common and can only be acquired by transfer or through direct discussion with the source person.</li> </ul>	<ul style="list-style-type: none"> <li>• Perceptible</li> <li>• Documented in suitable content</li> <li>• Insecure: anyone can get it</li> <li>• Included in person's minds and experiences</li> <li>• Easy to get and exchange inside the organization</li> <li>• Very common especially through electronic messages like the internet.</li> </ul>

Source: (Omotayo, 2015).



### **2.5.3. Implicit (Embedded) Knowledge**

This type of knowledge can be defined as the knowledge, which is locked in processes, products, culture, routines, artifacts, or structures (Horvath, 2000). This knowledge is embedded either formally, such as through a management initiative to formalize a certain beneficial routine, or informally as the organization uses and applies the other two knowledge types. Culture and routines, which have the embedded knowledge, are hard to understand and to change due to the time, which this knowledge has been applying, to them.

The key of knowledge management is in understanding the different types of knowledge, which exist. In addition, in knowledge management today it is very important for any organization to understand all types of knowledge and how to manage them.

### **2.5.4. Sources of Knowledge**

1. Data.
2. Information and facts.
3. Abilities and innovations.
4. Attitudes.

**I. Data:** they are a group of incoherent subjective facts highlighted and presented without pre-judgments. Data become information when classified, edited, analyzed and formed in a clear and understandable form for the recipient (receiver).

**II. Information and facts:** They are graphic facts giving credibility and are presented for a certain purpose. The information, which is developed and is upgraded to knowledge level when used for comparisons and evaluation of specific preliminary results or for communication purposes or to participate in a knowledge dialogue or discussion. Hence, information is data clarifying the frame and express and specific content to be possible for use in decision-making or describing methodologies. Information may be presented in multiple forms including the writing form or a picture or a conversation with another party as well as new modern audio and video methods. Thus, knowledge is information, which has been processed and is the conclusion of collecting and arranging information for a certain subject in a certain stage and is more

valuable and beneficial by which decisions are made.

**III. Abilities and innovations:** Knowledge usually requires an innovative and creative ability in human resources to make information of data acquired to use, invest, and take advantage of some human resources have the ability of thinking and innovating creatively and competitively to analyze and interpret the information and facts accordingly. In addition, if individuals do not have the basic creative efficiency and capabilities to deal with the information, then we can say that one of the basic parts of knowledge is missing which is the human resource, which is the most important element in knowledge generation and management.

**IV. Attitudes:** Regardless of this and that, knowledge is considered very closely linked to attitudes. In fact, attitudes drive individuals towards wanting to think, analyses, be creative and take action. Hence, attitudes form an essential and important element in knowledge management by stimulating the interest of knowledge human resources and finding the desire inside of them and motivating them towards creativity and competition, which really is missing in many organizations.

Therefore, we can summarize the essential operations for knowledge management as follows:

**Knowledge diagnosis:** It is a process of identifying knowledge inside and outside of the organization and then locating it and identifying the knowledge gap in it.

**Sources of internal knowledge:** It includes the capabilities of the organization and the efficient and advantageous information, facts and experiences of its human resources for the future of the organization. On the other hand, the external knowledge sources include the knowledge environment surrounding the organization or the sector.

**Sources of organizational knowledge:**

**Tacit:**

1. Experts and specialists

2. Current organizational knowledge
3. Competitors (competitive environment)
4. Organization clients' mission
5. Database
6. Organization archive

## **2.6. Knowledge generation**

This means acquiring knowledge from external knowledge such as merging, patent rights, recruiting personnel and experts, or from internal resources such as learning, promoting creative and innovative processes. Knowledge generation includes innovation, creativity and generating new competitive ideas. Knowledge, innovation, and creativity are two-way correlated processes. Knowledge is the source of innovation and creativity. When innovation is done rightly, it is classified as a source of new knowledge and an effective factor in its competitive advantage.

It is also noteworthy that the process of generating knowledge must not be limited to research and development only, but should also extend to all fields of work and experience in the organization and other economic sectors especially the banking sector. All individuals are responsible for generating knowledge to invest it in management. Hence, the organization or the sector must provide the right competitive environment, which drives, motivates, and supports knowledge-generating activities performed by individuals through communication, connection and continuous interaction between the personnel with transparency and reducing the barriers and lifting restrictions and moving any legal obstacles and routines in the legislation process.

In addition, from knowledge generating patterns we find the following:

1. Acquiring knowledge available in external sources: through dispatching personnel on missions, training, and educating them or through reading and observing experts or similar activities by listening to lectures and local and international conferences.
2. A new knowledge generating process through developing and expanding the previously existing knowledge and by thinking, analysis,

innovation, and utilization of certain situations.

3. Generating new knowledge through discoveries, experiments, and creativity: creativity and innovation are the most valuable sources for generating new knowledge.
4. Hiring and employment: hiring knowledge human resources or experts and paying them for sharing their knowledge, which they have in a certain field or sector through providing financial support to universities or scientific research centers provided that the organization shall be the first beneficiary and user and commercial investor or the results, experimented by these research centers.
5. Knowledge Storing: All of the procedures, which include storing, saving, and keeping knowledge, which is very important for the organizational memory. Also, to facilitate research and access to the knowledge at any time. Neglecting such storing process means the loss of organization experiences and analysis and its commercial and economic history because of the loss or damage to what is called its organizational memory (Song, Bij, & Weggeman, 2006).

### **2.7. Distribution or spreading knowledge**

They are a group of processes and procedures for exchange, sharing, and involvement of knowledge through the transfer of expertise, skill and facts between personnel to implant, develop and organize knowledge in each one of them. This is such an essential and very vital matter, which leads to taking advantage of any relevant person with any of its parts and hence serving the public interest for personnel, organizations, and sectors. Therefore, knowledge transfers and delivery to the right person at the right time and right form and cost is a profitable process in itself.

### **2.8. Knowledge application**

Application processes in use of knowledge in management and exploiting it at the right time are one of the most important management profit and intellectual capital investment. knowledge application is even more important than

knowledge itself and all previous processes such as generating, storing and distribution would not lead to improving organizational performance in organizations and economic sectors unless there is a mechanism for effective and pre-studied knowledge application (Liao, 2003).

## **2.9. Knowledge management models**

1. (Alipour, Idris, & Karimi, 2011) & proposed a comprehensive approach to knowledge management in the organization made of six stages:

- A. Acquisition
- B. Generation
- C. Storing
- D. Extracting
- E. Analyzing information,
- F. Transfer and distribution, application. These are independent processes.

2. (John Duffy & Papageorgiou, 2000)'s model includes five stages as below:

- A. Acquiring knowledge (purchase and generation).
- B. Restoring process (search and access).
- C. Distribution process (sharing and transferring).
- D. Sustainability (editing and storing).

Through following the many models, we find that they differ in their techniques but agree on dealing with the knowledge management subject in its context with a unified vision, which shows it as a multi-stage process integrated with organization management process and require change in its internal structures and systems to promote the culture of sharing knowledge and learning. These models also reflect a consensus on the essential knowledge management processes.

## **2.10. The KM Process Framework**

This knowledge management model portrays the procedure by means of which the management strategy can be tailored to create, share and improve the valuable assets of knowledge. This model highlights the question of “when”

and “why”. This model focuses on the strategy by putting the activities of knowledge management into the setting. The integral part of this model is the inclusion of concept of divestment, which is not usually a part of other models of knowledge management. The activities of knowledge management result from the changes in the strategy and the consequent need of the organization. This model helps to identify that which strategy to use for knowledge management but fails to provide any help in regard of solutions in case of a situation that needs to be solved and done by (Azzopardi et al., 1999).

### **2.10.1 Stages of knowledge management**

**I. Initiation stage:** Where institutions and organizations realize the importance of knowledge management and become mostly the main concern at this stage about how the organization shall make the initiatives and preliminary efforts for knowledge management by setting long-range plans for organizational changes through knowledge management. In addition, building work groups is very necessary at this stage especially in the Libyan banking sector.

**II. Spreading stage:** Organizations try to found the basic structure of knowledge with the aim of facilitating and motivating for its activities including finding knowledge, acquiring and storing it. Managers at this stage focus on building acknowledge base with efficiency and on how to increase knowledge related activities and its relationship with a competitive advantage.

**III. Integration stage:** From this stage, the organization begins to consider the knowledge management activities and its relationship with a competitive advantage as a daily matter and the personnel are getting familiar with which reflects its competitive level between them and to its accumulation. Managers at this stage concentrate on generating a kind of competitive integration between the distributed knowledge and collecting it in products, services, and processes related to knowledge.

**IV. Interconnection stage:** It is the final stage, which represents the outside competitive integration with some of the external institutions, organizations and personnel like suppliers, clients, research institutions, universities and banking sectors. In this case, the organization provides resources, time and activities to improve performance and reach an international level and concentrates on

main knowledge and its relationship with a competitive advantage and tries to introduce new knowledge from other organizations and sectors (Gottschalk, 2006).

This section looks at the previous studies which have been conducted the knowledge management, banking industry and topics related to it. (Sargis, 2009)'s study on Knowledge creation during cross-functional projects was conducted on the French Banking sector. It carried out a constructionist approach through which the study proposed a conceptual framework of knowledge creation process. This process was based on linkage between epistemological level (tacit/explicit) and ontological level (individual/organizational). The researcher had adopted qualitative method approach in order to obtain the essence of the knowledge, which is held by the individuals and the organization as a whole, and to find out how the organization creates knowledge through the projects. The study was mainly based on the work of (Nonaka, 1994) As the study was carried out to find out how the knowledge is created, they have given two conclusions one from theoretical perspective which is that "the knowledge evolves from tacit and individual to more explicit and organizational knowledge to gain tacit and individual new knowledge at the end of the project." In addition, the second conclusion was through managerial perspective "it involves that the tools used to manage knowledge creation in a project required to evolve in link with different steps of the knowledge creation process." This study shows how both the individuals do knowledge creation and its management and the management of the organization and by the project, which they are working on was done by (Sargis Roussel, 2009).

Knowledge trade and sharing in knowledge management system looks into the ways by which knowledge is transferred. There are many means by which knowledge is transferred from one entity to another and there is knowledge sharing culture, which is one of the most important aspects of this study. (Y. Ahn, Jeong, Lee, & Lee, 2015; Park et al., 2015) studied the effects of knowledge trade market and knowledge culture for transferring of the knowledge. The authors carried out their studied on Korean organizations and several global firms in order to see the various factors, which play a role in the

transferring of the knowledge. Study implemented qualitative approach to see how the organizations were transferring knowledge. The study found out that there are just a small number of companies out there, which are able to increase their productivity through knowledge management due to the complexity of the system as it holds number of factors, which are to be implement in order to get the fruitful results. They concluded that the “market mechanisms can control the cycle of knowledge creation and extinction in the knowledge market” and that the “knowledge trade in markets can be controlled autonomously by flexible prices.” This study emphasized the importance of the knowledge market and knowledge culture in transferring of the knowledge. It is one of the main aspects in knowledge management that the knowledge is transferred because if it is not transferred than there is no use of it and it will decrease the productivity of the individuals and of the organization (J. C. Ahn & Jeong, 2015).

(Khadir-Poggi & Keating, 2015) studied another aspect of knowledge management, which was based on the small asset firms of Ireland. Study examined how these firms rely on their knowledge-based assets and practices, which would lead them to innovation and increase their performance in the industry and within knowledge economies. Study implemented three different analysis levels, which were firm, industry and techno-economic paradigm. Qualitative method was applied by the researchers, which consisted of 35 semi-structured interviews, observations and documentation. Study’s main aim was to figure out how knowledge management helps these small and medium enterprises. Results of the study had shown that the organizational performance is a result of innovation which is gained through the knowledge-based assets and methods which these firms make use of. As the study looked over three different levels of firms, it concluded that it is impossible to implement one single approach of knowledge management (Durst & Edvardsson, 2012). Another finding was that the it is the knowledge-based practices of the firms, which lead them to be innovative, and it increases their productivity and success (Khadir-Poggi & Keating, 2015).

In a multi case study, (Safeena, Date, Hundewale, & Kammani, 2013) studied organizational knowledge management capability by taking a multiple case



study which aims to find out what are components of a Knowledge management capability in an organization, characteristics of knowledge management components, and which of the component is most important. The study aims to find out the answers to these questions in order to find out which of the components and characteristics are the ones, which affect the achievement of Knowledge management in a firm. The study had adopted the multi-case approach, which is based on a theory. Data was gathered through interviews, which were carried out in form of open-ended questions. The study is based in India, where six organizations were examined. The study found that the understanding of the importance of knowledge has a small amount of impact on the success of knowledge management implementation, meaning that it is not just having the understanding but also it must be practice and implementing of the knowledge. Second finding shows that the successful knowledge management capability is only achievable if the organization gets immediate benefits and an outcome from the implementation of knowledge management. The third finding of the study is that “knowledge work is relatively dependent on the type of knowledge worker, asset and technology enabling it.” According to the study Knowledge, management of an organization is defined in the following figure:

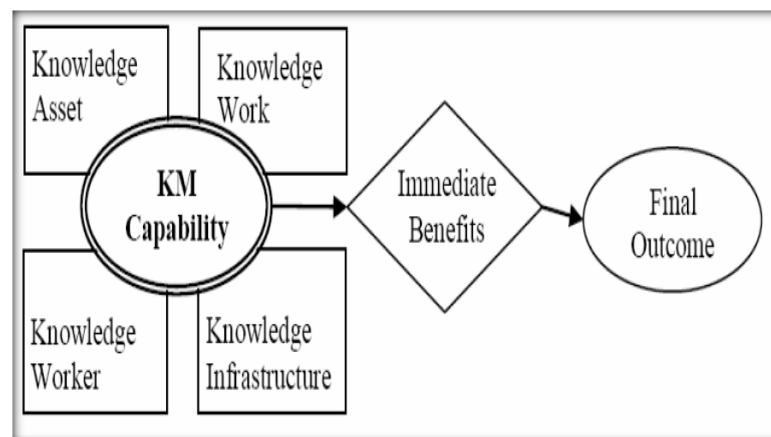


Figure 2. 4. Knowledge Management capabilities of an organization

*Source: Kammani, Date, & Hundewale, 2013.*

Therefore, it is very important that the knowledge management system applied in an organization bring immediate benefits and an outcome in order for the organization to be satisfied and successful (Kammani et al., 2013).

(K. W. Alrawi & Sabry, 2009) went over the practices of knowledge creation, knowledge sharing and knowledge acquisition practices in order to enhance the quality of banking. The authors emphasized on the importance of knowledge management for a new firm (bank). It noted that acquiring of new knowledge brings innovation and new understanding of how important knowledge management is for the bank (Lloyd, 2002). The concept of understanding knowledge management is presented in the Figure 2.5.

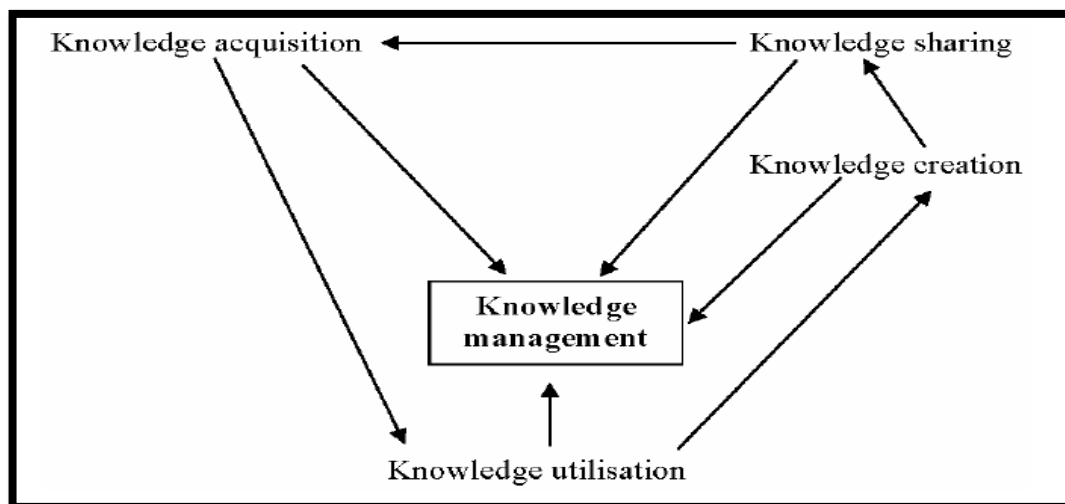


Figure 2. 5. Understanding of Knowledge management disciplines

*Source: (Lloyd, 2002)*

The study suggested a model for the banking system in which the employees of the firm are engaged in the decision-making process, and the management

of the bank should keep an open-door policy in order to get the best contributions from individual employees in order to fulfill the objectives as illustrated in (Figure 2.6).

<b>Global knowledge source acquisitions, Internet Access, Commercial</b>		<b>Knowledge management in organization</b> <i>Direct, Real Time, Continuous Learning</i>	
<b>Knowledge Sharing in Banks</b> <i>"EDMS", Data Collection and Knowledge Go Down</i>		<b>Give value to individual knowledge</b> <i>Corporate Register</i>	
<b>Integrated communication network</b> <i>Email</i>	<b>Multi-function working group</b> <i>Virtual Discussion Room</i>	<b>Inter-departmental knowledge sharing</b> <i>Intranet Internal Page</i>	
<b>The Process of Knowledge Management Progress</b>			

Figure 2. 6. Knowledge Management Progress [KMPs].

*Source: Bank Negara Malaysia (2000)*

The results of the study showed that not all organizations are able to make use of the knowledge management and do not gain any benefits until they are serious regarding the sharing of the knowledge within the organization. It was found that despite of the knowledge availability in the Dubai banks, they still are not making use of the knowledge management system efficiently and due to this they still lack in sharing of knowledge (K. Alrawi & Elkhatib, 2009; Lepecki, 2005).

(K. Alrawi & Elkhatib, 2009) looked over the problems of computer fraud faced by banking organizations. It emphasized that if the "managers' awareness and knowledge of how an organization functions can significantly affect the effectiveness of management information security." They argued that the computer fraud takes place due to lack of communication among the personnel at the organization, which gives the opportunity to some to carry out fraudulent activities. In addition, this is the result of having the lack of knowledge on knowledge management, due to the lack of sharing of related policies and

processes. Having to share the knowledge regarding the policies and procedures will have a great impact on stopping the fraudulent activities related to computer fraud. The paper of (K. Alrawi & Elkhatib, 2009) has used the case of Barings Bank. It also used the Mintzberg's five functions of an organization. Knowledge management within information security did it also emphasized on knowledge management in an effective management of information security: the case of Barings Bank study.

The findings of the paper are as follow:

1. The higher the level of the dependency on the information technology, there is a greater chance of computer fraud. Due to this, it is the organization's responsibility to set up policies, which are effective.
2. The individuals only see an opportunity in the areas where they find flaws in the system and these are the areas where the organization failed to emphasize on.
3. Having to not react to an undocumented or unknown activity within the bank is one of the mistakes, which the managers and staff make; it is due to the lack of communication within the departments and the managers. It is very important that people who see such activities should report it to the authorities.
4. Having to provide training and knowledge regarding awareness of these issues and threats, which are associated with information technology, is very important. If one thinks of misusing the IT, they would know that there are consequences related to it, and this will avoid the thoughts of performing such actions.

The author concludes the paper by acknowledging, "Lack of knowledge and awareness about both social and technical issues of information security largely manifests in the failure to implement the most basic safeguards and controls." In other words, if the knowledge is not managed in efficient way and shared with others than it can lead to IT fraud.

(Lepecki, 2005) studied knowledge management and carried it out on a state-owned company called Electronuclear which designs, constructs and operates

the nuclear plants in the nation of Brazil. It wanted to preserve its essential technological expertise (explicit knowledge). Through this study, the location and extent of the existing expertise were identified and the gaps were evaluated. The study was survey based. In-depth analysis was carried out of the survey, which in result was able to identify the gaps of expertise. The study adopted systematic approach in order to identify the technological expertise (Lepecki, 2005), it is Show in the Figure 2.7.

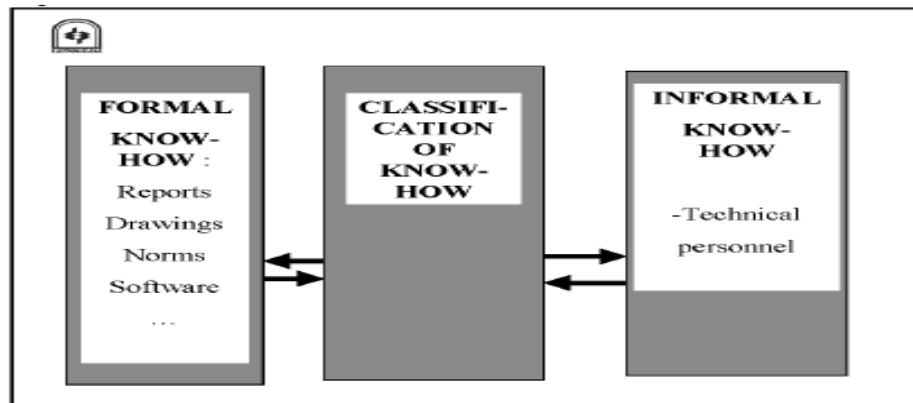


Figure 2. 7. Systematic approach.

Source: Lepecki, 2005.

The study of (Ahmed, Ghoneim, & Kim, 2008) explained that the “gap” was given a criterion through which it was identified. The criteria were applied to the data bank where all the data from the surveys was stored. Because of this study, an electronic tool (software) was developed and was applied. This tool was able to help with the self-evaluation for the management. Here all the knowledge was management through this software, access was given to all the employees in order to have the knowledge. Through this tool, the knowledge was shared very effectively.

In their study of Knowledge management as an enabler of change and innovation in Africa (Ahmed, Ghoneim, & Kim, 2009) evaluated the level of knowledge management being implemented in the government of Africa and how inclusive it is. The main aim of the paper is to spread the knowledge and awareness of knowledge management practices across Africa. Along with that,

it also looks over the challenges that can be observed and the opportunities, which are available for establishing a knowledge management system for Africa. The paper went over the current knowledge management situation of the major nations of Africa and compared it to other nations around the world, which have recently adopted and perfected the knowledge management in their governments. After analyzing the entire nation current situation, the authors presented strategic and policy implications. They pointed out that in order to come up with an effective communication strategy and a culture which is knowledge friendly we must work on the given points: Synergy, prioritizing resources, ownership of the knowledge creation process, sharing knowledge sharing experiences, equity in knowledge, and partnerships. Great emphasis was put on the effective communication because it is one of the most important points, which affects the development. It was concluded that currently in Africa there is an urgent need to popularize science and technology in order to build knowledge generation capacity. It showed that Africa currently lacks and is behind in the knowledge management, and in order to develop itself, all the nations must communicate and work together in making a science and technological research base (Ahmed et al., 2008).

Vlaanderen, (van Steenberg, Bos, Brinkkemper, van de Weerd, & Bekkers, 2013) based their study on improving the management of software through knowledge management (sharing). It discusses that even though software industry has been on the peak, yet there is not enough knowledge available to the product managers of software firms. Knowledge, which is, needed to develop better software and to come up with innovative ideas. This paper proposes a solution, which combines knowledge management principles with incremental process improvement in order to allow the software vendors to get all the guidance and knowledge, which is needed, for improving their skills. It emphasized that knowledge is one of the main aspects, which is needed to perform any job in order to get results, and that knowledge management is there "to support the creation, development, organization and leverage of knowledge (Earl, 2001) After going over the related literature the authors developed and proposed a knowledge management system called online method engine (OME). The aim of this online system is "know Ledge

dissemination, method assessment, method improvement and method enactment.” as Show in the Figure 2.8 (Ahmed et al., 2008).

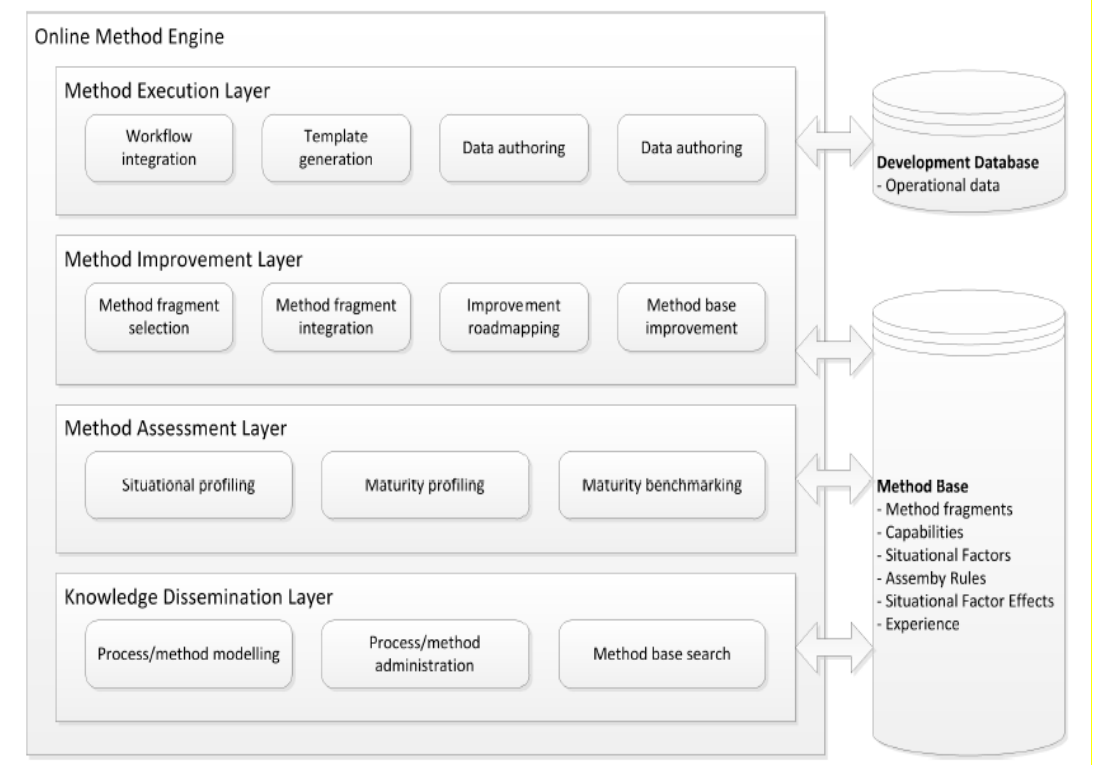


Figure 2. 8. Online Method Engine.

Source: Ahmed et al., 2008.

After the analysis of the proposed knowledge management system, (Vlaanderen et al., 2013) concluded, “effective knowledge dissemination is achieved by method-base, which forms the backbone of the approach. It provides a large variety of methods and techniques in combination with experience reports from other professionals” (Vlaanderen et al., 2013), All this can be done just by using the OME which assesses the current situation of the software and tells where improvements are needed and also provides with which type of improvements are need and solutions for it. This is all through the sharing of knowledge. Hence, knowledge management system plays an important role in the improvement of software product management.

(Kesar, 2008) studied creating an innovation culture through knowledge management in Greek firms. They started off with the history of knowledge management and how it has recently developed into a very important and well-known practiced concept in the business world. It investigated the how the level of cultural innovation and knowledge sharing affects the innovation of the culture, roles, structure, teamwork and leadership creativity in the business world. The main aim of the study was to study the impact of knowledge on the innovation culture. The study was carried on through the point of innovation theory in which they defined innovation as “the successful exploitation of new ideas.” The study used the following model, which was developed by (Neely & Kahan, 2001).

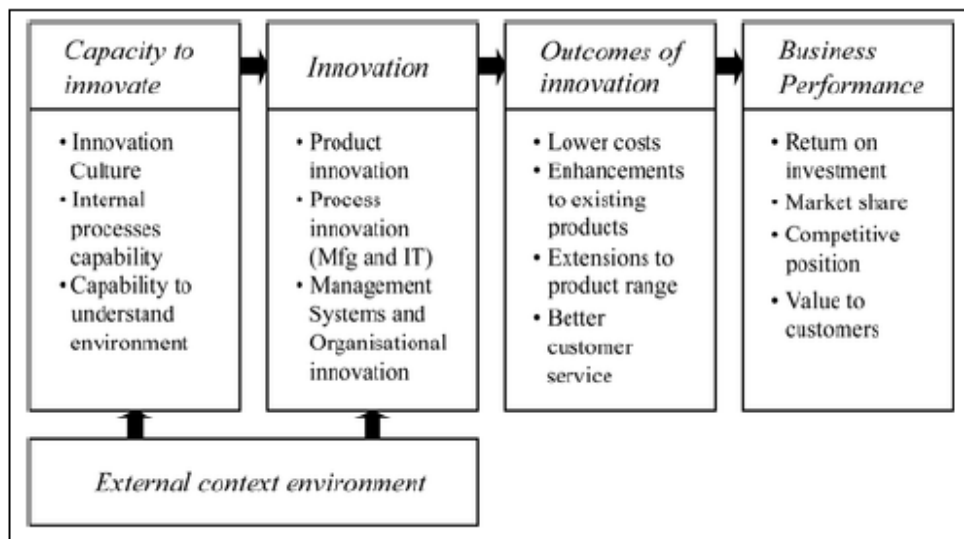


Figure 2. 9. Relationship between innovation, business performance and knowledge management.

*Source: Neely & Kahan, 2001.*

This model was used to study the relationship between innovation, business performance and knowledge management. As main purpose of the study was to see the impact of knowledge management on innovation culture, this model used as aid to conclude. It was concluded that teamwork in the innovation culture plays a very important role because it allows individual team members to communicate with each other, share ideas, problems, solutions etc. Also empowering the individual employees was another factor because it gives



them the power to make decisions and communication. It allows a higher level of coordination among different departments and different level of workers. Creativity is achieved when several minds work together, and when others hear each of them. The study also concluded that it is the knowledge management, which gives the organization an opportunity to be innovative and improve its culture.

Knowledge Management: the key to network-centric healthcare (Bali & Wickramasinghe, 2008) Information and Communication Technologies (ICT) one of the most innovative and revolutionary platform which has been created for the sharing of information among the healthcare facilities. This paper has developed a model, which could be used by this platform in order to apply the tools and techniques of knowledge management. The network-centric healthcare is one of the most complicated systems, which constitutes of a powerful and well-structured network to facilitate the information sharing. Below is the diagram of the network centric healthcare was done (Bali & Wickramasinghe, 2008).

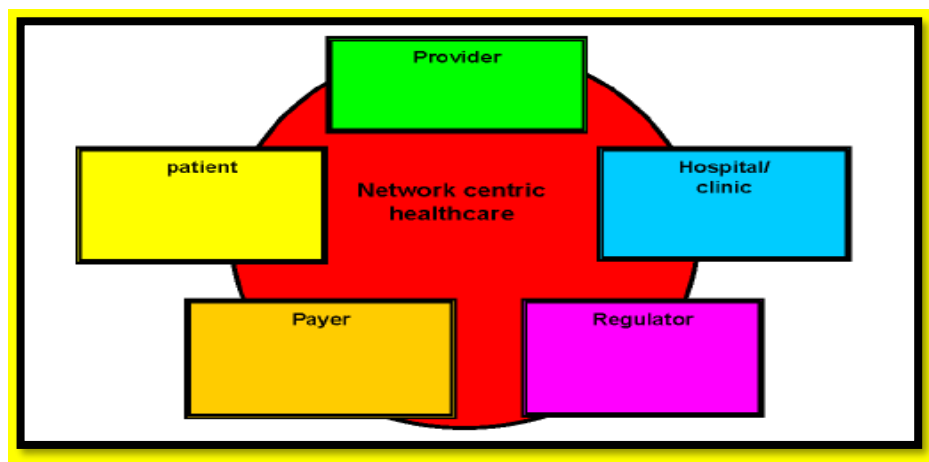


Figure 2. 10. Web of Healthcare Players

Source: (Bali & Wickramasinghe, 2008).

As it is known today, that knowledge is one of the most important and powerful tools which is needed in any organization and most of all in the healthcare facilities. If the knowledge is not shared on a regular basis in the healthcare community, it can lead to a number of mishaps and serious danger to one's life. It is important that healthcare facilities have the latest medical research

knowledge because it can be the only thing standing between life and death. This is why knowledge is to be shared as proposed the figure below.

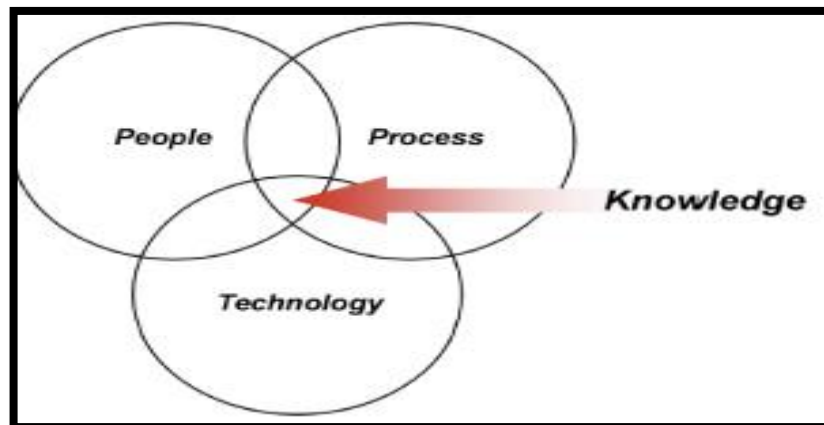


Figure 2. 11. Essential Schematic of Knowledge Management

Source: (Bali & Wickramasinghe, 2008).

Through its analysis, (Bali & Wickramasinghe, 2008) had identified that “technology, organizational, human and economic and facilitators both external and internal to the organization that must be considered when trying to implement an appropriate knowledge management solution in healthcare.” Authors mentioned that sharing knowledge through a system, which works efficiently, is the most important and should be considered as a priority all over the world in healthcare facilities.

(MacVaugh & Auty, 2008) researched proactive knowledge management as an independent enabler of New Product Development success. The study was carried out to study the effects of knowledge management activities (KMAs) on the success of new product development success (NPD). As it mentioned that previously it was claimed that only KMAs were behind the success of NPA success. This study investigated the matter if it actually is the only influencer or if other influencers exist in the success of NPD. Study took data from 124 NPD projects, which were based in UK. The study had also introduced new variables for the NPDs model, which are knowledge benchmarking, sharing and embedding. Through the analysis carried out it was shown that there is a correlation of all nine New Product Development drivers (NPD) with the success factors. In addition, all three of the KMA factors had a relation with at

least one of the aspects of the success of NPD. The study concluded that knowledge management holds a significant impact on the NPD success. In addition, that KM is not the only success factor; there are other factors, which play an important role in the success of NPD (MacVaugh & Auty, 2008).

## **CHAPTER 3**

### **KNOWLEDGE MANAGEMENT AND COMPETITIVE ADVANTAGE IN BANKING SECTOR**

This chapter explores the application of knowledge management in banking sector and its role in achieving competitive advantage. It also discusses the different factors that empower knowledge management in banking that paves the way towards a system that can compete in the sector.

#### **3.1. The Role of Knowledge Management (Km) in Banking Sector**

The role of KM in banking sector is such a great amount of enhanced regarding the idea of Human Resources (HR), however this examination investigates some of its role under the following headings:

##### **3.1.1. KM improved Leadership.**

Leadership is demonstrated by numerous scientists of KM to be the key predecessor of the knowledge management which prompts the adequacy of the organization. In this day and age globalization has invalid the announcement made in 1990s that just a single leader is sufficient to deal with the knowledge. What's more, in restrict of this, there is a conviction today that at all progressive level of the organization, knowledge management leader must be there. With a specific end goal to additionally expand this conviction

– (Riungu, 2017) said that keeping in mind the end goal to motivate the knowledgeable individuals, to fabricate communication channels, direct others to share knowledge and to try endeavors to make the procedure viable is the prime role play by the knowledge management leader. He additionally said that leaders are the main individuals expounding the essential objective of dealing with the knowledge with respect to the knowledgeable employees and to manage them towards the correct way in accomplishing those objectives. As it has been demonstrated, it is through research exploration that the organization became subject to giving the incidental advantages to employees or through building up an extremely solid culture yet in addition intensely reliant on the compelling leaders (Riungu, 2017).

### **3.1.2. Culture**

Individuals utilize their values, trusts, suspicions, standards as a guide that assistance them to play out their day-by-day exercises. Each organization's culture is unmistakable, and it impacts the way individuals perform. Since culture lies in qualities, convictions, and standards that individuals take after. As indicated by, culture assumes a critical role in knowledge creation, sharing, and use in a few ways. Culture ought to be to such an extent that gives: flexibility, social interaction, trust and so on. The culture of undertaking has an impact on the knowledge and estimations of a person that is the reason it is known as an effective integrator. As organization culture changes after some time, in light of the fact that because of increment competition and fast changes in the external condition, organizations need to embrace the change and change their culture likewise (Alavi & Leidner, 2001) additionally said that organization culture is advancing and complex in nature. Organizational culture clarifies how individuals participate with each other and works together; it additionally clarifies the class of individuals who fit into the organization. What's more, above all for fruitful Knowledge management activities, culture assumes a vital role.

Today, many banking sectors look into identified with Knowledge management are for the most part centered around Culture of the organization, since culture assumes an essential role in advancing knowledge management and a few investigations demonstrate that individuals communicate with each

other in their work condition. Organization work condition is where organization culture wins and individuals impart and play out their work as needs be. Coordination among colleagues is critical for the accomplishment of KM activities on the grounds that along these lines they speak with each other and offer their knowledge and experience (Alavi & Leidner, 2001). As indicated by many researchers' perspective, an empowering, supportive, helpful culture is central for accomplishment of knowledge management activities in an organization (Abrar Saeed, Fatehi, & Ni, 2011; Asma Saeed, Sharif, & Iqbal, 2010).

However, review has been conducted by the analyst among employees and in view of their reactions a factor investigation was completed, this brought about ID of the basic achievement factors in this examination entitled. This investigation centers knowledge management application in a bank are client relationship management and execution estimation, hazard management, showcasing management. KM framework in banks better and more productive outcomes in basic leadership, the principle point of this examination is to look at the fundamental parts of KM in banking sector with an exact investigation and furthermore to decide if there is a distinction between the private and State Bank with regards to KM existence (Abrar Saeed et al., 2011; Asma Saeed et al., 2010). Knowledge Management and growth of a private sector and banks comprehend the usage technique of KM activities and its effect. The specialists think about the execution of the biggest private sector bank by investigating the development and patterns of different execution parameters (Abrar Saeed et al., 2011; Asma Saeed et al., 2010).

Mohammed (2011) noted that bank embraced the knowledge management technique; bank is a main bank in private sector banks through the knowledge management procedure was executed in the bank picking up accomplishment in its advancement and development. Knowledge management was begun with proficient management approaches. The bank connecting with the technology through corporate intranet, banks give training, and preparing the employees to familiar with the electronic technology. It is likewise made enthusiasm among the employees they can take an interest in these exercises and offer the knowledge among them. Furthermore, (Lakshminarayanan &

SURESH, 2017) noted for instance, in 2002 the ICICI bank (Industrial Credit and Investment Corporation of India Bank) had a turnaround administrator with its parent organization with ICICI. At that point the knowledge management group has rebuilt the system. The beginning stages the knowledge management group in ICICI bank were interaction with employees, sharing of information, compelling communication, tending to the issues of knowledge, preparing and aptitude advancement of employees towards the knowledge management it makes enthusiasm among the employees for obtaining, sharing and spread of knowledge. It's made a management culture influenced the employees to figure decidedly to and professionally towards address the difficulties of the business. The bank has built up the shrewd person in the knowledge management web gateway which is effortlessly open. The entrance Wise Guy was begun on the grounds that knowledge sharing was disappointment (Abrar Saeed et al., 2011; Asma Saeed et al., 2010). At whatever point an employee moves he can't leave recorded information about the activity or customer that he was related with. Another explanation behind presentation the Wise Guy gateway could go about as a typical holding two unique cultures empowering a smooth change into an all-inclusive bank. ICICI bank has numerous branches spread everywhere throughout the nation. Employees are cooperating just through the messages and have never observed each other. They are working in a virtual group.

Hence the substance of the entryway were exchanges, inquiries, altered commitments, books, preparing timetable, merchants, external and inside reports, occasions, and caught disconnected addresses/introductions. With all these knowledge management activities the employees can make organizations scholarly capital; in ICICI bank knowledge management is embraced not simply like a strategy or practice for the organization advancement and development. Each employee related with the knowledge management in the bank felt that it is an open door for them to create themselves to improve their everyday action. The bank having great structure knowledge management methodology and it assessed and assess by top level management consistently. Protection and security can be made for all segments were ensured. However, the were noted on the role of knowledge

management in the banking sector by (Abrar Saeed et al., 2011; Asma Saeed et al., 2010):

1. It makes a knowledge management store in the bank. It makes a decent work culture. Its accentuation the having a place among employees.
2. It's produced the basic leadership limit and enhanced the employees' abilities. Each employee approaches to store the knowledge in the storehouse of bank. Each employee feels their workplace not a physical place. The fulfillment of knowledge clients dealing with the conduct, for example, knowledge sharing, self-improvement, and cooperation.
3. Another activity of knowledge management in the bank is formation of enthusiasm towards learning over the gatherings. The employees in the corporate workplaces are welcome to expedite an introduction a specific subject alongside their lunch to the web meetings and live web throws. The clients of knowledge management can partake from any area and offer their thoughts, with these prominent people. This has urged the staff to get self-inspiration towards knowledge creation and sharing.
4. Another vital activity of knowledge management presented in the bank is corporate learning. In this technique the capacity of the employee to gain from colleagues over the gatherings is supported. This has made a learning domain in the bank through push instrument and joint effort. This activity is known as the day by day does which introduce the synopsis of things which are new in the banking business and the entrance.

According to data from (Sutbeyaz, Koseoglu, Inan, & Coskun, 2010), banks give better support of the clients by utilizing technology the banking administrations can less demanding than the past framework. Clients can without much of a stretch evaluate the office 24x7. Banks give the web-based banking, ATM (automated teller machine), RTGS (real time gross settlement), NEFT (national electronic funds transfer), EFT (electronic fund transfer), EDI



(electronic data interchange), and some other more administrations accommodate the client fulfillments. In the recent period banking sector oversee the knowledge management through the technology. The banking sector with bleeding edge technology and imaginative practices and making progress toward accomplishing all out-client encounter. The bank is hoping to develop broadly and universally. The banking sector has gone past the typical areas of technology. The bank is included in the business advancement as well as with watch over the group and backings a scope of financial, instructive and wellbeing activities. Improve the hazard management capacities of banks. Banks has adjusted Information and Communication Technology (ICT) for accomplishing the development of the banks; the bank administrations had turned out to be more helpful after presentation of technology for knowledge management in banks. The most widely recognized fields of knowledge management applications in banks are hazard management, client relationship management, promoting management, execution estimation and so forth. Knowledge management makes, get, offer and usage of knowledge in banks. Knowledge management motivates the employees for more commitment to the organization. By utilizing the technology, the banks benefits as well as the clients are profited (Koseoglu & Baskaya, 2010).

(Koseoglu & Baskaya, 2010) opined that in the present period, the most intense instrument of any business organization is its knowledge from which the organization accomplishes its upper hand. Knowledge management assumes a critical role for making the progress of numerous organizations. Traditionally, banks have associated the quality of their networks in light of the quantity of branches. The technology is to some degree moderate in public sector banks when contrasted with private sector banks and outside banks. The ICT advancements changed the conduct of consumers. As new innovations change the way toward banking, bank confronted numerous difficulties in its executions in knowledge management (Koseoglu & Baskaya, 2010).

In most nation banks seems to be the biggest business enterprise in the nation, is all around situated to development, its dynamic banking market technology and creative practices and accomplishing all client experience. KM contributes

incredibly to meet the control for banking sector. Be that as it may, a knowledge approach requires the information technology, as well as makes a situation knowledge creation and sharing. There is a hole amongst programming and equipment utilized as a part of public sector banks at global level (Koseoglu & Baskaya, 2010). The bank connecting with the technology through corporate intranet, gives training and preparing the employees to familiar with the online technology. It is likewise made enthusiasm among the employees they can partake in these exercises and offer the knowledge among them. The bank has built up the astute person in the knowledge management web entry which is effortlessly open. Another activity of knowledge management in the bank is production of enthusiasm towards learning over the gatherings. Banks must have the capacity to mindful the advantages of decreasing the expenses from technology-based administrations to their clients as the whole organization of banking has been founded on client's trust (Koseoglu & Baskaya, 2010). Proper plan of IT and banking operations and organization structure is vital for the advantages of km usage in banking. the effectively execute of km measures in banking sector, the knowledge must be perceived by top management by enhancing inward process, client administrations and items and by making a superior situation for employees. KM ought to be on embracing and understanding the knowledge about clients and their needs. The issues in viable KM process are for the most part identified with human conduct viewpoints. Henceforth to enact KM process bank needs to center knowledge riches, successful communication, participative management, inventive demeanor and demonstrable skill. Accessible support of the clients on programming related issues bank may consider building up numerous assistance places for giving vital direction to branches. The greater part of employees that technology and KM helps in expanded profitability though certain components like absence of coordination for work, delays in up-degree and so on. The management may think about these variables and made suitable methodologies (Koseoglu & Baskaya, 2010).

Input from the clients on standard premise on different administrations may help bank to make plausible change. Preparing system can be led much of the time. So, the employees are refreshed and better administrations to the

requirements of the clients. From the above examination demonstrates that successful Knowledge Management usage relies on the organizations capacity to plan and build up the frameworks and forms and to build up a domain that relies upon learning, knowledge creation, knowledge sharing and the utilization and re-utilization of organizational and individual knowledge (Mohammed & Jalal, 2011).

Knowledge management takes crucial role in the banking sector. By utilizing the technology banking sectors pull in the clients to an ever-increasing extent. Appropriate preparing the employees of banks with the goal that the knowledge management can encourages the organization to accomplish the objectives.

Most of the interviewees in the study of (Mohammed & Jalal, 2011). have pronounced that there is no situation at the bank completely devoted to knowledge management. With respect to presence of the articulation "knowledge management" in the bank's archives the interviewees have announced that to happen more frequently than the presence of knowledge management investigates the banks. It is satisfactory to reason that knowledge management is a creating zone and detailing isn't yet a typical practice. With respect to presence of a knowledge management system at the banks the interviewees weren't consistent: some announced there is none; some others recognized a current knowledge management procedure, displaying qualities related to (Mohammed & Jalal, 2011).

Highlights on misuse knowledge management methodology were presented in the same study. With respect to presence of knowledge holding rehearses at the banks, interviewees could display a few illustrations and among them culture. The subjective substance investigation of the meetings enabled us to check experimentally the vast majority of the hypothetical knowledge management writing, similar to: Knowledge is a mind-boggling idea and it just exists in organizations in an extremely unique manner (Curado, Stainier, & Anderson, 2008).

The role of banking knowledge management framework is multifaceted inside the setting of changing examples of the worldwide knowledge economy and

the common risk of the budgetary emergency. Certainly, the appearance of banking knowledge offered a practical answer for the pre and post money related emergency issues as it accelerated the monetary assertion and hazard management process (Memon, 2018) As indicated by the finding, the bank-focused money related emergency of 2007–2009 was caused due the absence of banking knowledge and the disappointment of the best management in auspicious address the knowledge holes (Lakoff & Turner, 2009).

The greater part of the indebted banks amid budgetary emergency either disregarded the benefit of existing knowledge in banking operations or overlooked the driving force of knowledge creation, sharing and management which can be expended to manage the issues stirred by the monetary emergency (Memon, 2018) As such, just considering the monetary justification for finding the reason of the banking sector emergency, while disregarding knowledge capital from this emergency was unjustifiable, as well as an accident from the probability of future occasions (Memon, 2018). Besides, money related examiners are emphatically persuaded that the banking disappointment was informational, as opposed to monetary in light of the fact that best management neglected to make sense of the knowledge hole as far as their business procedures. In this association, a causal correlation amid the emergency demonstrated that the rate of survival was moderately high in knowledge-escalated banks contrasted with no knowledge-serious banks (Memon, 2018), For instance, (Memon, 2018) built up a hypothetical framework to examine how knowledge can formally make, oversee and enter into banks amid a period when more organizational discretion is required for appropriate hazard management. It can be supported that the persistent procedures of learning and organizational knowledge management alone streams down the odds of bank disappointment. In this way, it appears to be basic to set up a framework to see how monetary organizations, particularly banks, vigorously make new knowledge keeping in mind the end goal to support money related stuns and accomplish financial control (Memon, 2018).

Nevertheless, banking sector picked to actualize a knowledge management framework by reconstituting arrangements and creating knowledge-based

answer for employees working in all echelons (Memon, 2018). Supported that the survival of banking sector was attributed to their more mindful ways to deal with the improvement of such a framework. In any case, Swedbank (a prestigious Scandinavian bank) actualized a refined financial model in view of human capital (e.g. elusive resource) that gives a knowledge-based arrangement particularly during the monetary downturn (Memon, 2018). Observationally, organizational learning and organizational development are straightforwardly corresponding. The most widely recognized purpose for the banking disappointment amid the emergencies was center learning blunders and absence of fixation on the advancement of scholarly capital (e.g., elusive asset) It ruined the organizational learning, as well as decelerated the hazard management process. Hence, persistent gaining for a fact more than, or if nothing else half of the rate of progress in the earth could be a subordinate to reasonable upper hand. Despite the less focus on ecological dangers and bank adapting, some coming up short banks, e.g., the Bank of America, used complex learning and knowledge management capacities. Likewise, the greater part of the banks in Western Europe now embraced the framework keeping in mind the end goal to accomplish a supportable aggressive advantage (Srivastava, Fahey, & Christensen, 2001). Undeniably, a dynamic learning framework assumes a definitive role in knowledge creation capacities (or scholarly capital) of banking organizations.

In this manner, knowledge must be resuscitated through new 'encounters and intellectual aptitudes of financiers' and information of all inner and external partners', for example, workers, customers and providers (Baigent et al., 2010). The execution of the knowledge management framework in the banking business is as yet a hard nut to separate. In like manner, the intricacy of the banking condition and managing the extraordinary stream of information at one purpose of time makes it unusable in the banking task (O'Connell, Mosseler, & Rajora, 2006). What's more, organizations experienced through unintended issues, for example, lost concentration and best management unwillingness with respect to learning, knowledge creation, knowledge sharing and knowledge utilize. If there should arise an occurrence of banks, the enormous inflow and surge of knowledge anytime of time won't just be hard to oversee

yet here and there it might prompt the lessening of related advantages of this information. Knowledge management as a procedure sets another measurement for banks as 'it drives advancement by benefiting from organizational judgment and experience' (Cobleigh et al., 1999)

In this way, it is planned to support and manage the new knowledge creation and sharing system as a vital component in banking achievement (A. H. Gold, Malhotra, & Segars, 2001). In the knowledge time, the most effective device of any business organization is its knowledge from which feasible upper hand can be inferred. Knowledge management has turned into a critical achievement factor for all most all organizations (Mårtensson, 2000).

Generally, banks in have guaranteed the quality of their networks in view of the quantity of branches. The dissemination of technology is fairly moderate in public sector banks when contrasted with private sector banks and outside banks. The media, IT improvements changed the conduct of customers (Goldman et al., 2008). There appears a tremendous potential for IT in future particularly on separation in client benefit, resource obligation management. As new advances set off the change procedure, a few difficulties in its executions in knowledge management in banks might go over. Banking sector is the head, biggest business bank in most nation, it is very much situated to catch development in dynamic banking market and is viewed as a large-scale financial intermediary for the economy. Banking sector today is experiencing an earth-shattering period of its knowledge management through technology and harm. The banking sector is manufacturing a head with front line technology and imaginative practices and making progress toward accomplishing absolute client encounter. Conclusion from senior and junior class employees has been acquired on the composed strategies and plans of e-banking practices of banking sector uncovers that every one of the respondents know about them. While the knowledge on Email/Internet and Privacy arrangement isn't controlled by 25% of the lesser class employees (Majetich & Sachan, 2006). With respect to knowledge management on value-based system, it can be comprehended that all the senior classification employees and around 75% junior class employees are having the knowledge on protection, financier, and independent venture and put stock in

administrations. Around half of senior class employees and 75% of junior classification employees know about doing business exchanges and total administrations. Every one of the respondents know about web banking and bill installment administrations. No senior level employee knows about gateway administrations, and just half of junior classification employees know about it (Majetich & Sachan, 2006).

Although the idea of KM is very much acknowledged, it can be observed that the utilization of km in banking sector isn't at full degree. More extensive use of km is still particularly wanted, particularly in bank client and client connections to prosper more noteworthy knowledge sharing. Among different advances utilized for km in banking sector, databases and sites are the most widely recognized composes. KM contributes significantly to supporting upper hand for banking sector. Be that as it may, a knowledge driven approach requires the essential information technology, as well as a situation helpful for knowledge creation and sharing. it appears that dispersion of web banking, portable banking, home and office banking won't be affected in light of the fact that a normal client is yet to approach these administrations offered by banking sector (J. Gold, Burrige, & Turner, 2001).

There is a wide gap amongst programming and equipment utilized as a part of public sector banks versus at global level. As banking sector having global operations, it resembles to embrace technology to arrive similarity amongst banking industries and worldwide gauges (Yang et al., 2012). There were no protests with respect to convenient installment of intrigue, adjust enquiry, which shows the effect of technology management. Be that as it may, there were difficulties for banking sector on HRM front incorporate – such as:

1. Training and fitness of employees.
2. Change of mindset.
3. Shortage of experts and Challenges on Technology.
4. Financial arranging-based problems.
5. Customer Service Support.

It is germane to recognized that the banking sector's foundation encourage the interaction progression to suit the time and space differentials of its human

factor. banking sector's information technology and knowledge management has not quite recently made it simpler for buyers to finish their exchanges with a hitch, it has likewise empowered modern item advancement brought about market foundation and permitted dependable strategies for control of dangers, amid the most recent five years banking sector has assumed a key role of multi benefit stage in giving accommodation to the customer who can decide to either bank the conventional path through any of its branch or utilize ATMs or phone and the web to lead exchanges. It is recognized that banking sector has computerized its human resource management system thoroughly utilization of knowledge management (Oertel et al., 2002).

### **3.2. The Role of Knowledge Management in Financial Sector**

With the coming of the Enterprise's Financial Knowledge Management System (EFKMS), undertakings have gone into the period of KM. In the meantime, ventures' financial management should stay aware of the time, and actualize financial knowledge management which center is knowledge Edge, K. (2005). EFKMS is a framework management procedure to deal with the financial knowledge keeping in mind the end goal to accomplish the objectives of the amassing, sharing, advancement, refreshing, and full use of the financial knowledge to enhance the flexibility and development of the financial management. In the EFKMS, the premise is the financial management office in the venture and the cutting-edge information technology is to be utilized too. It is a management and technology stage for ventures to accomplish the sharing of unequivocal financial knowledge and certain financial knowledge, and advancement. The need of the knowledge management in financial sector as incorporated by:

1. Core competitiveness for undertakings to apply financial knowledge management: Today, KM is quickly creating. Subsequently, from one perspective, undertakings are requesting the financial management staff with more knowledge, expecting them to ace the knowledge related with KM, for example, financial, lawful, management, bookkeeping, measurements, and PC knowledge. Then again, the



senior levels of ventures are giving careful consideration to the knowledge and abilities of financial management staff. It has turned out to be imperative sources and the essential backbone for endeavors to reinforce the financial KM. Moreover, center abilities of the financial KM are epitomized as takes after. With the essential centers of financial knowledge, advancement, sharing and use, undertakings could improve their financial development and versatility to discover the wellspring of supportable competitive advantage.

2. Mining the knowledge advantage of the financial staff: Financial knowledge incorporates express and understood parts. Financial directions, principles and directions, inner control, financial reports and financial management of the essential speculations and strategies are express. The certain are the expert aptitudes and know-how, experience and presence of mind in the financial work, understanding and prospect utilized as a part of financial choices. In the period of knowledge economy, certain knowledge is ending up increasingly imperative, as it is inferred in the limit and the productivity in the exercises, turns into the way to the advancement of financial knowledge, and is firmly related with the improvement of ventures. Be that as it may, before, financial management staff laid more accentuation on individual capacity, in this way ignored trade and sharing of encounters among the staff. Finally, the general nature of human resources couldn't be enhanced amazingly. In any case, the certain knowledge spared in the financial faculty is changed into the express by the utilization of financial knowledge management, the transmission, trade and sharing of the knowledge among the distinctive financial staff can be accomplished to improve the expert characteristics and investment in basic leadership.
3. Playing an essential part in the financial sector: In a venture, the financial office, as the associating join, is at the focal point of its organizational structure, it fills in as the information handling and transmission and a critical part in the basic leadership. In the new economy, organizations are confronting expanding vulnerability of

the environment and expanding information, along these lines, it is increasingly stringent to get a handle on basic leadership time. Interim, in the new economy, the information technology and networks give the conditions to the difference in the models of the financial management in an undertaking. Therefore, the previous financial management show whose center is the management of assets task ought to be changed into the new financial knowledge management with the center of producing the financial knowledge and venture knowledge. Among the new financial competition commanded by the financial center competitiveness of endeavors, the critical part of financial offices in the basic leadership ought not to be debilitated. Then again, it ought to be esteemed and improved with a specific end goal to adjust to the requirements of new monetary advancement.

Still on the part of knowledge management in financial sector, it could be seen from the life cycle of the knowledge that there exists a knowledge chain in ventures. For the most part, the chain incorporates the distinguishing proof, obtaining, advancement, disintegration, stockpiling, exchange, sharing and assessment of the estimation of the knowledge, and so forth. In this paper, in light of the financial bookkeeping framework in a venture, EFKMS is developed with the center of financial knowledge chain (Hertog, 2000).

### **3.3. Procurement of financial knowledge**

Procurement in financial institutions incorporates different information resources related with money streams. Principally the knowledge can be procured from the accompanying two viewpoints. One is that the accumulation of the current unequivocal knowledge, for instance, the gathering of their current financial information, client information, and so on. To make electronic records to went into the knowledge stockroom; The other is the removal and catch of the verifiable knowledge. The information distribution center, combination must be utilized for the clients to successfully utilize knowledge (Hertog, 2000).

### **3.4. Capacity of the financial knowledge**

In the Financial Knowledge Management, Knowledge stockpiling includes many, which can be summed up into three sections. Endeavor knowledge base is mostly used to accomplish corporate culture, business tenets and directions, applicable laws and controls, proficient essential knowledge, presentation and competition of public knowledge, for example, new innovations and other new business, arrangement appears, which can encourage old and new staff to ask and learn knowledge auspicious. The knowledge base of the financial sector, which is connected with the requests and a common cases in the accompanying, for example, the arrangement of occupations in the sector, obligations, workflow, knowledge to adjust to employments and abilities, investigation of financial articulations, financial sharpness, speculation management, financing management, working capital management and benefit circulation, and so forth. It gives a stage to the individuals inside the office to aggregate the financial knowledge and offer learning. Individual knowledge base, which is utilized to store financial work understanding for the financial staff, learning encounters and justification recommendations of financial frameworks, financial hypothesis, bookkeeping guidelines, impose laws (Sandor et al., 2000).

By the utilization of the individual knowledge management focus, individual knowledge can be distributed in the knowledge base of the sector or knowledge base of the undertaking, basic territories be shaped to accumulate the corporate, departmental and individual knowledge. In this middle, it enables others to renew and assess it (Sandor et al., 2000).

In the service sectors of an enterprise, knowledge and aptitudes required are generally high in the financial sector. Consequently, the spread of the knowledge, especially the financial knowledge, is influenced vigorously by the mental state and the will to impart to others of the financial staff, as is more obstinate issue than others in the KM. In this manner, to accomplish the sharing of the financial knowledge, the financial sector can depend on the corporate network to scatter knowledge. By the accompanying strategies, for example, the foundation of a viable motivation instrument, knowledge pushing, electronic notice, the network of financial preparing, background trade, and so

forth, the expert accomplishment and ability level of the relative staff can be advanced (Stoll, Bolam, McMahon, Wallace, & Thomas, 2006).

### **3.5. Utilization of financial knowledge**

The point of the management is to utilize it to make profit and create wealth, and that of the financial knowledge management is the same too. Its motivation is to decrease financing expenses and chance and enhance capital productivity and viability by settling on the choices, for example, the speculation, benefit distribution, working capital, be logical and precise. When all is said in done, as can be accomplished by helpful work, knowledge pursuit and knowledge maps (Stoll et al., 2006).

### **3.6. Development of the financial knowledge**

Just through training can the financial knowledge genuinely make esteem. In the meantime, just when the financial knowledge is tried by and by, would it be able to be continually refreshed. Electronic meetings, group gatherings are great place to test, refresh, share and develop the knowledge.

### **3.7. Appraisal of the financial knowledge**

(Khera, 2006) noted that the appraisal is to decide the adequacy, productivity and estimation of the utilization of financial knowledge. It incorporates the useful stage of knowledge management, framework capacities, knowledge source, method of activity and practical proficiency. The right appraisal will urge the financial staff to impart their own knowledge to others inside the undertaking. In the meantime, it is a quantitative standard to create measures in order to motivate employees to contribute their knowledge. Organizational knowledge management frameworks is a multi-useful one which coordinates different knowledge management advancements, and it can bolster all the significant knowledge management and handling exercises, including knowledge obtaining, knowledge organization, knowledge characterization and understanding, troubleshooting and altering, pursuit and recovery, scattering, and exchanging and sharing of knowledge.

In the present time, EFKMS is still in the beginning period of investigation, and there is still more work to do to investigate and find it to splendidly accomplish it. Today the utilization of information and knowledge has expanded in a wide

range of organizations so as to streamline every one of the exercises and improve the choices making process. The significance of dealing with the organizations' information and knowledge turns into a key part that energizes the organization's whole chief to contribute more cash, times and push to oversee such information and knowledge (Stoll et al., 2006).

Knowledge management is an organization key exertion that used to catch information and experience of employees and clients which is put away in database, paper or in people groups' acumen at that point circulates this knowledge to acquire advantage. Knowledge management comprises of a few stages that permit the streams of knowledge among all intrigue clients in the organization. The initial step is knowledge creation that implies the entering of the knowledge in the framework. Second step is keeps up the knowledge by residual it in the framework which is allude to Knowledge Retention, the stream of knowledge starting with one section then onto the next inside the framework (Knowledge Transfer) lastly actualizing the knowledge in the organization basic leadership and any business procedure which is alludes to Knowledge usage (Stoll et al., 2006).

These entire procedures of catching, putting away and disseminating knowledge in the whole organization enable employees to work quicker witted, limit duplication, and convey more inventive items and administrations that meet the clients' prerequisites. From business perspective, knowledge management influences the entire organization by helping employees, administrators, and officials share information and best practices that decidedly affect aggregate execution. Knowledge management is an esteem added strategy that expects to boost benefits, development, and basic leadership by share better information and knowledge between each part working inside the organization (Stoll et al., 2006).

Knowledge can be ordered into three principal classes: express knowledge, understood knowledge and inferred knowledge. Unequivocal knowledge can be exchanged effortlessly through books and reports so it's an unmistakable type of knowledge Omar understood knowledge, and isn't unequivocally explained, yet can be essentially answered, for example, the working

background implied knowledge is an elusive type of knowledge, for example, qualities and convictions. For the organization the implicit knowledge is the most vital compose so it is occasionally recorded and exchanged.

Knowledge management is ending up vital in all Banks since it disentangles the conveyance of convenient and viable information that are utilized as a part of all the organization's procedures from organization, controlling, basic leadership and assessment. It helps chiefs in defining key, strategic and operational exercises the best keeping in mind the end goal to accomplish the organization's coveted destinations. These days' Modern banks research the significance of the estimation of knowledge Management in the banks business hones. The knowledge covers the range from the bank organizations' own particular inside scholarly capital, to the abundance of information heel on any client's exchange (Sharifuddin) The financial sector is constantly focused to enhance their consumer loyalty that will bring about income expanding. The procedure of Knowledge creation, stockpiling and scattering winds up fundamental and banks dole out specific faculty to watch over and deal with these basic procedures. The most widely recognized fields of knowledge management applications in a bank are chance management, advertising management, and client relationship management and execution estimation particularly for the advantage of its partners. More often than not, in significant banks interests in Knowledge Management frameworks, for example, Decision Support Systems, Data Warehouses and Data Mining are quickly developing (Sharif Uddin et al., 2008).

These days, bank directors utilize automated emotionally supportive network as an individual help in choices making. Knowledge Management System in banks guarantees better and more effective outcomes in basic leadership. The point of this paper is to look at the effect of Knowledge Management System in supporting basic leadership process in the Bahrainis' Banks by featuring the significance of KMS in banking sector and the significance of knowledge management coordination and the part it plays in helping knowledge workers making viable and without a moment to spare choices. Numerous creators and specialists characterize KM in a few ways. In this way KM can prompt numerous organizational advantages like better critical thinking and basic

leadership, enhanced client administrations, expanding benefits, better staff fascination, more advancement and more prominent innovativeness. KM enables organizations to discover, select, compose, scatter, and exchange essential information and ability fundamental for exercises, for example, critical thinking, dynamic learning, vital organization and basic leadership (Sharif Uddin et al., 2008). Other specified the primary key segments of fruitful KM. (Drew, 1999) discovered that culture, technology, organization, and individuals as the principle key segments. In basic words KM comprise of a scope of procedures and practices utilized as a part of an organization to recognize, make, speak to, circulate, and empower appropriation and offers of knowledge, either encapsulated in people or installed in organizational procedures or practice.

KM is a quick moving field made by the impact of a few others, including human resources, organizational advancement, change management, IT, brand and notoriety management, execution estimation, and assessment (Sharif Uddin et al., 2008) perceived two fundamental classifications of Knowledge: express knowledge and implicit knowledge. As indicated by the British thinker Michael Polanyi, unequivocal knowledge for the most part alludes to the structure knowledge communicated by content, pictures and images, which can be educated verbally and learned by course readings, reference materials, databases, and so forth. Implicit knowledge just exists in individuals' psyches, which is hard to express by words, images, pictures media. The management of express knowledge is moderately simple; you can utilize information frameworks, for example, code and database to set knowledge base. The express knowledge is accomplished through educating, preparing. Its sharing relies upon electronic information frameworks. The unequivocal knowledge is the reason for advancement. In any case, the management of inferred knowledge is moderately more troublesome. Implicit knowledge contains numerous knowledge tricks, for example, the work of know-how, experience, point of view and qualities, which infers more creative thoughts. These are the pith of the center competitiveness.

Numerous innovations and items can be utilized to help KM. In view of the reasons they serve they can be grouped in at least one of the accompanying

classes: business insight, joint effort, substance and archive management, e-learning, knowledge base, gateways, client relationship management, information mining, workflow, and inquiry (Serban & Luan, 2002). Other show that knowledge management frameworks (KMSs) are a standout amongst the best techniques for overseeing, formalizing and mechanizing knowledge in organizations, for example, banks in the event that they are connected in proper zones and to fitting errands. A KMS typically catches and arranges knowledge, along these lines expanding profitability by lessening the time taken to play out a critical thinking errand (Serban & Luan, 2002).

In addition, a review found that 90 percent of organizations that convey a KM arrangement advantage from better basic leadership, and 81 percent say that they see increment efficiency (J. Gold et al., 2001). These reviews concentrated on indicating precisely how KM is significant for basic leadership. In this way, it isn't astonishing that numerous organizations have contributed huge measures of time and cash in KM activities in the course of the most recent couple of years (Walsham, 2001). In discovering approaches to work with knowledge as a benefit, banks and organizations are changing knowledge from a dynamic idea to an inexorably unmistakable and sensible one (Serban & Luan, 2002). KMSs assume a noteworthy part in help basic leadership in banks and IT without reasonable KM exercise would be do-nothing. The employees who collaborate or perform assignments together offer just in part covering objectives; singular gathering part's exercises must be facilitated to guarantee that the divergent people come to have similar objectives.

The general point of the banking sector is to upgrade their consumer loyalty and increment income therefore, accordingly ability at knowledge management has turned into a basic competency for banking sector survival in the 21st century. Likewise, it ends up basic to relegate a man or people to watch over and deal with the creation, stockpiling and scattering of knowledge (Serban & Luan, 2002).

While Widen-Wulff and Suomi, 2003 concentrated on the protection sector and concentrated the knowledge management practices of 15 Finnish insurance agencies of various sizes and item portfolios. Their investigation demonstrated



that powerful knowledge sharing has a positive connection to business achievement. Others concentrated on the numerous purposes for why bank employees don't share knowledge. (Vass et al., 1999) states that occasionally employees will share yet there isn't sufficient time to do as such, there is no expertise in KM systems, they don't comprehend KM and its advantages, there is absence of suitable technology, there is no dedication from senior supervisors, there is no subsidizing for KM, and the way of life does not empower knowledge sharing. Unless the organizational environment rewards knowledge sharing, the whole push to systematize a KM framework will fall flat (Serban & Luan, 2002).

It can be inferred that KMS enable banks to guarantee better and more productive outcomes in basic leadership and the banks top management needs to give their employees all proper and appropriate innovations to share knowledge (Mohsen, Ali, & Jalal, 2011). Moreover, they have offered the proper environment for utilizing KMS and urge their employees to share knowledge. In this way, KMS is support and help the coordination, communication, content sharing between all bank's employees. (Mohsen et al., 2011) states that gathering of elements speaking to the viability of Knowledge Management System inside the organization were considered. These variables that cover every organizational level include:

1. Availability of required advancements (Hardware and programming)
2. Expert's individuals: are the clients' capacities and mindfulness handlings of innovations and information.
3. Coordination and communication between employees at various levels inside various office.
4. Decision creators trust of the framework and information that contains.

Invariably Knowledge management has been perceived as a potential vital resource in numerous IFIs. Following the World Bank "knowledge bank" activity in 1996, numerous IFIs have acknowledged the significance of knowledge as a key resource and began to consider their knowledge management capacities. Every one of the reports checked on for this paper perceive that the early and mid-2000s saw a surge in the knowledge

management plans of most IFIs and other multilateral organizations (e.g., the OECD, the United Nations framework, and the World Trade Organization). Numerous IFIs distinguished knowledge management as one of their center management instruments or shaped devoted knowledge offices. A few IFIs received knowledge methodologies, driving them to make extensive interests in human resources, network apparatuses, and particular institutional courses of action to make committed knowledge applications extending from publications and databases to media arrangements and decentralized preparing. The quantity of worldwide organizations that have created particular knowledge techniques or frameworks has consistently developed amid the mid-2000s, an indication of their want to structure and plan their KPIs more systematically (Mohsen et al., 2011).

Knowledge management procedures are critical to characterizing the reason behind knowledge projects and knowledge-sharing methodologies. AFDB and the World Bank profited essentially from having a knowledge procedure embraced inside their organizations. AFDB's knowledge approaches gave expansive direction on knowledge work. The main technique embraced by the AFDB Board in 2005 expected to fortify AFDB's part as a knowledge bank; this was trailed by a more far-reaching Knowledge Management and Development Strategy 2008– 2012 of every 2008 spelling out the knowledge vision and targets that would empower AFDB to end up the "chief knowledge Bank for Africa." In 2010 the World Bank likewise received a knowledge system, called transforming the Bank's Knowledge Agenda: A Framework for Action. Around the same time, the World Bank built up a Knowledge and Learning Council to oversee knowledge activities, including a first knowledge report distributed in 2011. The methodology concentrated on three key columns: creating worldwide practices to advance versatility of staff and knowledge; dealing with the bank's knowledge items as a portfolio to guarantee more prominent effect; and fortifying the bank's part as a worldwide connector of knowledge (Mohsen et al., 2011).

At the key level, IFIs have likewise perceived that KPIs ought to wind up focal in the operations of loaning organizations, alongside advance and allow items. For example, the IDB influenced a critical sense of duty regarding knowledge

to in the 2000s at the key level, with an accentuation on research and knowledge spread to supplement its loaning operations. As demonstrated in a 2006 assessment Overseeing knowledge is as vital to banking establishments as it is for some other sort of organization. In spite of the hugeness of executing a knowledge management activity, there are not very many banking foundations formally occupied with a completely incorporated KM program (Prodromal and Vraimaki (2009). The adjustment in the worldwide competitive business environment has constrained banks to defend their items and benefits and made them to investigate knowledge management so as to enhance their competitiveness and execution (Dzinkowski, 2001).

### **3.8. The Relationship Between Knowledge Management And Human Resources in The Banking Sector**

The present investigation analyses the effect of KM on HR execution and its parts. The discoveries recommended that KM essentially affected banking sector capacity, with respect to this, it is suggested that organizations put weight on progression culture and staff strengthening through holding courses, meetings, taking staff to business-situated diversions, tutoring, and management training (Najafyan, Yonesi, Parsai, & Torabi-Poude, 2016). Concerning this, it is prescribed that organizations give solid help and support to innovative employees and the individuals who always look for knowledge and let them partake in organizational basic leadership. The discoveries likewise recommend that KM influences clarity. It is, in this way, recommended organizations acquaint employees with their obligations, common desires, organizational objectives and plans, and criteria for execution of assessment. Another finding was that prompts the proposal that administrators' assent ought to be gotten in actualizing KM systems. Moreover, since KM was demonstrated to impact assessment and legitimacy, it sounds to rationale to recommend that organizations put immense accentuation on employees' learning, instead of on their submitted failures, and also on fulfillment of more knowledge, experience, and information with respect to managers which prompts more prominent legitimacy of organization (Najafyan et al., 2016). At last, the examination showed that KM does not essentially affect environment. Along these lines, making an environment where information is effectively

traded and shared among employees may help build employees' knowledge, there is no less than one restriction of this article. The information was gotten subjectively, i.e., through utilizing survey. Another constraint is that this investigation inspected the issue just in one city which will not be regular of different parts of the nation. Examinations of various urban communities may change research outcomes. The article of (Najafyan et al., 2016) however is beginning in a territory ready for additionally look into. The significance of procedures which decide if KM can be associated with knowledge execution, to be specific knowledge forms and social setting, are at times focused on (Najafyan et al., 2016). Moreover, this examination has inspected KM in connection to execution as it were. Additionally, studies may address KM with knowledge-based culture and the knowledge procedure.

Be that as it may, verifiable knowledge is unmistakable and can't be effectively gotten to in light of the fact that its substance and sources are within the psyche of people using knowledge to prompt organizational goals. It is gained through involvement and operational learning and is, actually, unrecorded knowledge inside organizations. This kind of knowledge is profoundly inserted in intuitive personality, and, in this manner, couple of other than the specialists can access it and depict it. It is epitomized as thoughts, certainties, suppositions, questions, choices, speculations, and contemplations which scarcely transform into records and whose dominance is an overwhelming, if certainly feasible, and undertaking (Najafyan et al., 2016).

However, individual knowledge dwells in the individual and has establishes in their own behavior. Social knowledge, nonetheless, lies in social and social frameworks of an organization. Numerous researchers contend that knowledge dwells in man's psyche and can't be effortlessly recognized or exchanged starting with one individual then onto the next. It is accepted to lie in encounters, convictions, qualities, and culture of a man or an organization. Truth be told, knowledge is particular property of individuals or organizations and is occasionally duplicated by others. Such knowledge gives competitive advantage to the individual and the firm. KM is a strategy for rearrangements and change of the way toward making, sharing, disseminating, catching, and understanding knowledge in an organization (Karlsen & Gottschalk, 2004).

According to (Najafyan et al., 2016). KM is an arrangement of methodology, foundations, and specialized and administrative apparatuses intended for creation, sharing, and execution of information and knowledge inside and outside organizations.

The Challenge of KM is one of the most effective method to produce and use aggregate knowledge in an organization to make esteem that prompts competitive advantage (Hou & Zhang, 2007). KM is a way to deal with overseeing and expanding an organization's knowledge resources, which may incorporate knowledge of organization's accounts, forms, individual administrations, items, and clients (Brow & Silver, 2009), it gives varieties of knowledge in organizations with an organizational structure. Hence, it makes a one-of-a-kind structure for the knowledge premise of organization (Du Plessis, 2007) (Najafyan et al., 2016) believed that KM is overseeing knowledge through organizational and deliberate procedures to arrange, whereas the cutting edge of the world is the universe of knowledge-based organizations. Keeping in mind the end goal to accomplish new wellsprings of knowledge, knowledge management depends on present day speculations, for example, social knowledge management, which looks for access to a huge volume of clients, as of late, knowledge management is viewed as a key instrument to enhance proficiency and organizational execution and organizations have been permitted to distinguish advertise openings and increment in their competitive advantage. The present esteem and future accomplishment of any organization depends totally on the abilities and aptitudes of its employees. Today, the employees are the fundamental wellspring of competitive advantage, not raw materials, capital or technology; organizations that have empowered individuals can settle on choices rapidly in worldwide markets and keep pace with the speed of the networks.

### **3.9. Knowledge Conversion and Performance**

Knowledge transformation is a social procedure where people with various knowledge connect and along these lines make new knowledge which develops the quality and amount of both inferred and express knowledge (Nonaka & Konno, 1998). The reason for endeavors actualizing KM is to enhance and upgrade corporate execution (Zhang et al., 2007).

A procedure model of knowledge creation surmises that individual and organizations make and extend knowledge through transformation of implied knowledge into express knowledge and the other way around. Through knowledge transformation, the entire organization can share the express knowledge made and change over it into implied knowledge for people (Tseng, 2010). Knowledge that is caught from different sources should be changed over to organizational knowledge for successful usage inside the business (Nonaka & Konno, 1998).

(Nagao et al., 2002) observed that casual preparing is the principal wellspring of communication for sharing knowledge. Legitimate coordination of business insight and KM helps in overseeing express information and subsequently changing the information to knowledge which thusly can help bank in settling on better choices and place them in a superior position in contemporary business competitive environment. In addition, this reconciliation encourages the catching, coding, recovery and sharing of knowledge over the bank to increase key advantage and support a competitive market. (Nagao et al., 2002) opined that organizational structure, knowledge procurement, knowledge application and knowledge insurance influence organizational execution. By the by, the investigation inferred that organizational culture and knowledge transformation have no noteworthy impact on execution. These outcomes are conflicting to the degree that not all knowledge resources are found to add to execution. (Tseng, 2010) using knowledge externalization, knowledge blend, knowledge disguise and knowledge socialization to quantify knowledge change, uncovered that knowledge socialization has no impact on corporate execution. In any case, in its composite nature, knowledge transformation decidedly impacts corporate execution (Nonaka & Konno, 1998).

### **3.10. The Relationship between Knowledge Management and Human Resources in The Financial Sector**

More particularly it was discovered that knowledge management rehearses are specifically identified with different middle of the road measures of key organizational execution (to be specific, client closeness, item authority, and operational brilliance), and that those halfway measures are, thusly, related

with financial execution. With respect to the thought of Tanriverdi (2005) , KM has been connected with the financial execution measures yet observed to be a frail relationship. (J. Gold et al., 2001) found a solid and huge relationship between both knowledge framework and knowledge handling with organizational adequacy, utilizing an expansive arrangement of non-financial results. Furthermore, the outcomes demonstrate that KM hones are decidedly connected with organizational execution. The estimation of organizational execution may take diverse structures, it could be founded on financial execution or Intangibles, for example, consumer loyalty rate, new abilities and capacities, end client fulfillment with knowledge management usage (Rhodes, Brickman, & Gelman, 2008) Be that as it may, as complete financial information for experimental research may not be effortlessly acquired, in any case, measures of perceptual organizational execution which associates emphatically with target measures of firm execution can be utilized (Rhodes et al., 2008). In such approach the outcomes and the measures are gotten from questions soliciting members' observation from the circumstance to survey organizational execution in respect to the execution of industry contenders.

Execution factors can be utilized to quantify organizational execution. (Suzana, 2008) utilized execution hope factors to quantify organizational execution five factors that relate to execution anticipation as far as organizational execution were utilized and they were seen helpfulness, outward and inherent inspiration, work fit, relative advantage, and result desires.

### **3.11. Knowledge Management and Human Capital Repository**

Human capital typifies the knowledge, ability, judgment and experience of employees (Rhodes et al., 2008) Organizations can build their human capital by inside building up the knowledge and abilities of their present employees, and by pulling in people with high knowledge and expertise levels from the external work advertise. An organization cannot make knowledge all alone without people.

(Rhodes et al., 2008) confirmed that as people learn, they increment their human capital and make(Gillan et al., 2011) knowledge that possibly frames an establishment for organizational level learning and knowledge amassing.

Knowledge stocks give an establishment to understanding the part of human capital as a potential wellspring of association's center abilities. (Gillan et al., 2011) utilized exploratory research configuration demonstrated that organizations must plan knowledge exchange techniques helpful for multi-generational workforce flow remembering the generational assorted variety that exists in the workplace. In this investigation, contrasts in workforce ages and cross-generational strategies for passing knowledge were inspected. All things considered; these outcomes couldn't be summed up attributable to nature of the exploration configuration embraced. (Gillan et al., 2011) noticed that senior architects instead of documentation were the essential inside wellspring of profitable knowledge in item advancement, especially regarding settling on basic plan choices.

Just those designers with adequate involvement in their train, and in addition communitarian involvement with different orders, had the all-encompassing comprehension to decide. Worldwide Business Machines Corporation and the American Society of Training and Development uncovered that 60% and half of respondents used tutoring and documentation individually to capture and passing knowledge (Gillan et al., 2011). This examination noticed that tutoring is best type of knowledge exchange especially for experiential and inferred knowledge. Moreover, it can be utilized to connect the generational hole and where tutoring relationship can't be built up, knowledge exchange does not happen. Different types of knowledge exchange incorporate classroom preparing, encouraging learning groups, and utilizing interactive media instruments to protect noteworthy learning from maturing employees.

Human Resources rehearses is essential apparatus where an organization can influence and shape the abilities, states of mind, and practices of people to carry out their activity and to accomplish organizational objectives (Collins & Clark, 2003).

Furthermore, they should guarantee that accessible resources and capacities can be utilized to meet the opposition. Lower crude resources essentialness has pulled in the consideration of experts and scholastics to investigate the kinds of advantages that can catch and keep up a competitive edge and at



same time not effectively imitated by contenders (Gillan et al., 2011). The inquiry is the thing that sort of benefit that can give feasible, competitive advantage, and non-competitive execution has been examined between administrators and specialists sometime prior. Therefore, human resources wind up profitable resources of an organization to give replies on how organizations can contend in showcase, accomplishing prevalent execution, understanding a competitive advantage, and enhance organizational execution. Entire world perceives that human resources are imperative to make progress in best and productive way. Be that as it may, HRM work has advanced into a vital accomplice, sharing thoughts, points of view, and resources to showcasing division, back, and bookkeeping (Chang & Hsu, 2010; STOUTHAMER–LOEBER, Wei, Loeber, & Masten, 2004).

Essential KM empowers organizations to suspect the evolving conditions (Chang & Hsu, 2010; STOUTHAMER–LOEBER et al., 2004). giving maps and expected travel course and how to accomplish it (Shapiro, 2009). Key arrangement is completely required for key organization course and fundamental rules for improvement of organization (Malik, Nawab, Naeem, & Danish, 2010).

A few analysts revealed that fundamental positioning can enhance organizational execution (Glu(Brame, Fagan, Piquero, Schubert, & Steinberg, 2004)eck & Laurence, 2004). In conjunction with key organization and human resources capacities, (Shi et al., 2006) expressed that achievement of vital management process generally relies upon inclusion level of human resource management. Every part of vital organization process, to be specific formulation, implementation and technique assessment will include business issues identified with individuals, since human resource management work should be associated with every one of these segments (Shi et al., 2006). All together organization can be produced and managing vulnerability, organization must set up an integrative linkage. It is a progressing intuitive relationship between vital organization and human resources capacities, either formally or casually. HR Executive is viewed as a key business band together with different officials and effectively associated with key basic leadership process (Foucault, 1997).

Likewise, part of knowledge management is additionally vital to process a progression of information change and information into valuable knowledge for organization. A few yields of knowledge management are competitive advantage, advancement, organizational execution and consumer loyalty (Shi et al., 2006). The relationship between Information Technology and Knowledge Management in Banking Sector. This study centers around the part of information communication innovations (ICT) in knowledge management exercises (KME) The greater part of business administrators now has faith in the energy of ICT in KM and contend that information technology (IT) can give an edge in reaping knowledge from heaps of old covered information vaults (Bhatt, 2001). Knowledge depends on information and information, where information is considered as crude actualities, information is viewed as a 'sorted out information', and knowledge is seen as 'significant information'. In this way, knowledge can be seen both as a remark put away and controlled and as procedure of at the same time knowing and applying aptitude (Alavi & Leidner, 2001).

ICT-upheld organization learning does not have a long history (Swan, Newell, Scarbrough, & Hislop, 1999), yet, the expanded utilization of ICT has now seen a merging between organizations and individuals – particularly by utilizing such advancements as: email, groupware, master frameworks, information mining, database advances, information stockrooms, choice emotionally supportive networks, web innovations, intranets and so on. Numerous creators now acknowledge the focal advantages that ICT and KM can give organizations and are rebuilding their center business forms with a specific end goal to boost these advantages (Sulek & Marucheck, 1994).

The banking and fund business are at the core of trade and are hence extremely knowledge serious (as the business is continually evolving). In this unique situation, KM has been methodically created to enhance their business execution throughout the years, and ICT has significantly affected this procedure e.g. record and information exchange, sharing information, money trade and so forth this paper thusly investigates the utilization and use of ICT and KM in the financial sector explicitly to examine and investigate the future advantages which might be misused (Alavi & Leidner, 2001).

Notwithstanding, the term 'knowledge' can be characterized as an assortment of information, combined with the understanding and thinking. Knowledge can along these lines be reached out to incorporate the intellectual capacity to create understanding in light of information and information and is commonly increased through involvement or study (Alavi & Leidner, 2001). Consequently, knowledge can be said to be a liquid blend of 'confined involvement', values, logical information, and master understanding- gives a framework to assessing and joining new encounters and information. In organizations, knowledge regularly ends up implanted in archives or vaults as well as in organizational schedules, procedures, practices and standards. It along these lines should be found with regards to the choices or activity to which it drives so it is especially vital that organizations oversee and the procedure through which the knowledge is caught, prepared and dispersed. In any case, knowledge is more extensive, more profound and wealthier than information or information, it is a blend of logical information, experience, qualities, and master understanding that gives a premise to assessing and fusing new encounters and information.

KM has been expanding fame lately, however as a term, it frequently implies distinctive things to various individuals. For example (Chauvel & Despres, 2002) characterize knowledge management into four categories of usefulness, these being:

1. KM is the unequivocal control and management of knowledge inside an organization went for accomplishing the organization goals.
2. KM is the efficient and composed endeavor to utilize knowledge (on client, items, forms, contenders, and so on...) inside an organization to enhance execution.
3. KM is changing information and scholarly resources into persisting worth.
4. KM is the right utilization of information technology to catch information and information keeping in mind the end goal to deal with the knowledge that is critical in an organization.

In an outline along these lines, KM is presently being held by business elements, as it gives numerous business advantages, and now turn into an ordinary piece of the center business foundation. Besides, applications that

transform information into information (and transform information into knowledge) are an imperative segment of knowledge management methodologies (Patel & Vega, 1999).

### **3.12. Organization Learning**

Organization learning (OL) has been portrayed as the experience-based change in organizational assignment execution and as the organization's independent ability to make, offer and utilize vital information about itself and its environment for basic leadership. Fundamentally, an organization can be said to 'realize' when it enhances its activities through better knowledge and comprehension (Luke, 1988). Be that as it may, OL is unmistakably extraordinary to singular learning, as it incorporates corporate activities and bearing, to center around center business exercises. OL is in this way identified with 'change' in organization knowledge (Klimecki & Lassleben, 1998), the idea and precept of which expects organizations to deal with the way organizational change happens. It in this way gives a chance to make an environment that enables constant learning to create and develop and can give numerous other improved openings (Hong & Kuo, 1999).

### **3.13. Information Communication Technology and Knowledge Management**

ICT can be viewed as typifying two general capacities, particularly: classifying knowledge and making networks (Hansen et al., 1999). It is thusly critical that these issues are completely comprehended before any venture is to be made in these territories (Kridan & Goulding, 2006). Besides, (Nissen, Hansen, Ban, Moore, & Steitz, 2000) and (Alvesson, Kärreman, & Swan, 2002) recognized that KM has its underlying foundations in various information technology frameworks and standards including:

1. Artificial knowledge.
2. Business process reengineering (BPR).
3. Information frameworks.
4. Information management.
5. Expert frameworks and choice emotionally supportive networks.

#### 6. Data mining and information warehousing.

Information technology can be utilized to enhance the communication procedure by enhancing access to the information – in this manner expanding straightforwardness. Be that as it may, ICT has had the net impact of making knowledge more unequivocal, consequently encouraging a faster transmission and powerful institutionalized basic leadership methods (e.g. with choice emotionally supportive networks) and can be utilized to arrange knowledge (using master frameworks) – the main recipients of which was in bookkeeping frameworks (Gähwiler, Capogna, Debanne, McKinney, & Thompson, 1997). Broad knowledge exchange is fundamentally encouraged by present day information and communication technology - to help the knowledge network (Ruckdeschel, 1998). Moreover, Ventriss and Luke (1988) noted it is imperative to center around creating and actualizing KM database, devices and procedures with routine with regards to KM being often diminished to the execution of new IT frameworks for knowledge sharing (as a great part of the wealth of human relations is lost in repackaging).

#### **3.14. Knowledge Management And ICT in The Financial Sector**

In the financial administrations sector, deregulation and re-control have made a great deal of change (from a consistence viewpoint). Deregulation has likewise opened the way to expanded competition and made the extra test for financial administrations organizations of reclassifying their center reason. It is accordingly essential that their knowledge management methodology shapes a basic stage for supporting their center business abilities by bridling their ability for advancement (Ventriss & Luke, 1988). In this unique circumstance, numerous banks are finding critically picking up by moving from paper-based procedures and communication strategies to computerized pictures and workflow technology. This had significantly affected various business forms, including knowledge management, advance endorsements, renting, contracts, client administration, misrepresentation and charge card operations, and question settlement and so on. Advancements with the web have significantly affected the business by making, shared administrations and another information management foundation.

Information Technology for Knowledge Management. There is a continuous enthusiastic open deliberation about the part that information technology can play for knowledge management. From one perspective, information technology is utilized inescapably in organizations, and accordingly qualifies as a characteristic medium for the stream of knowledge. A current report from the American Productivity and Quality Center demonstrates that organizations leaving in knowledge management endeavors by and large depend, for achieving their objectives, on the setting up of a reasonable IT foundation (Ventriss & Luke, 1988). At the opposite end of the range, driving knowledge management scholars have cautioned about the disposition that drives management towards solid interests in IT, perhaps to the detriment of interests in human capital; for instance Ventriss & Luke, 1988 suggest the relationship between Information Technology and Knowledge Management in Financial Sector to an advancement of information technology (IT) and knowledge management in making competitive advantage has been one of the main worries of administrators and researchers. The present progressively changing environment makes its development empowered knowledge management capacity (KMC) as a center competency for organizations to improve singular execution, advancement, organizational abilities, and competitive advantage (Bhatt & Grover, 2005) finding, procuring, creating, sharing, keeping up, assessing and applying fitting knowledge by the perfect individual in the organization, which is led through connecting human resources, information and communication technology (ICT) and giving a sufficient framework to accomplish organizational objectives. Knowledge management is another method for dealing with the organization and of sharing scholarly and logical resources. Knowledge management can be the innovative, powerful and productive utilization of any type of knowledge with a specific end goal to pull in and hold clients and enhance the organization; at the end of the day, knowledge management is characterized as the utilization of individual and aggregate knowledge of the employees to accomplish organizational objectives. Knowledge management makes an instrument to standardize management of client relationships (Bhatt & Grover, 2005) Knowledge management in organizations helps straightforwardness as far as divided topography, since it makes access to knowledge. Accordingly, client

knowledge can be put away at an essential issue, and since it has been shared to shape a typical picture of the client, it builds the quality and speed of basic leadership and client benefit.

In this day and age, competition has gone up against another shape and a constant and long-haul relationship with the client is the most central key to achievement in organizations. Organizations and organizations are very much aware that to get by in the opposition, they ought to have the capacity to gain knowledge effectively and in a convenient way from the encompassing environment, particularly clients who are the fundamental driver of organizational life (Bhatt & Grover, 2005) Along these lines, by auspicious comprehension of the progressions and necessities of clients, it runs towards compelling cooperation with environment. In the present environment, technology and client needs are continually changing, so distinguishing and meeting client needs in the briefest conceivable time at the least cost and most astounding quality are essential and play a critical part in the achievement and survival of firms. New management approaches have been created and utilized and, in the meantime, fitting information frameworks that can bolster these new approaches have been created after some time to bargain adequately with such circumstances (Peppard & Ward, 2004).

The human resource information framework (ERP) is a far-reaching framework that tries to coordinate all capacities and offices inside the organization, utilizing a unit PC framework, with the goal that it can give the particular and extraordinary needs of these segments. As it were, it is an idea, technology and frameworks for more compelling management of resources in an organization, with the end goal that management is led via robotizing and incorporating all procedures, along these lines upgrading the productivity of the organization and expanding consumer loyalty.

The advantages of actualizing this framework are to streamline the manageable business forms, cost decreases, and quality upgrades that prompt securing economic change, social value and equity, and environmental security (Peppard & Ward, 2004).

### **3.15. Historical View of Libyan Banking Sector**

The Libyan banking sector saw, all through its history, particularly from 2005 to 2010, numerous adjustments in some of these components. In any case, it is likely that the impact of these progressions can't be completely comprehended and defended in disengagement from the setting of the prior advancement of the Libyan banking sector. There are a few focuses to be featured in light of what is talked about in this study. Rightly, remote banks left a negative picture on the primary pages of the Libyan banking story. They illustrated, in the period preceding the second 50% of the seventies, that banks can go past their real monetary and financial parts to work in exploitative and even unethical ways that serve business or global political premiums to the detriment of the premiums of the country in which they lead their exercises. Italian banks were a decent case of this when they took part in plans for the colonization of Libya (Elsakit reseachgate.net).

To aggregate up, the audit of the verifiable improvement of the Libyan banking sector outlines that the way of life of this sector is an aftereffect of blended conditions, inside and outside the banking sector. Truth be told, it was impacted substantially more by approaches and choices taken outside the banking sector. The political framework and mediation of the political will were the primary driver of the sensational changes in the Libyan banking sector. To be more exact, one might say that any endeavor to comprehend the low execution of Libyan banks, financially or non-financially, requires understanding the external components, especially the political environment that molded the way of life and conduct of the monetary foundations, including banks, in Libya. What backings such a claim is, to the point that in regard to CSED (Collection Statute Expiration Date), for instance, the principal Libyan investigations in the field of social and environmental revelation. Pratten and Mashat (2009) showed the low level of this exposure gave by Libyan organizations, including banks. Following the advancement of the Libyan banking sector demonstrates that a large number of the affecting components in the issue of CSED, (for example, estimate, public possession, private proprietorship, outside proprietorship, posting on the financial market) have changed in Libyan banks, particularly since 2005.



These progressions were relied upon to raise the level and nature of CSED. However, later investigations by (Bayoud, Kavanagh, & Slaughter, 2012) found a CSED low level. In this manner, it can be contended that the effect of these variables is probably going to be impacted by different components.

### **3.16. Status of Knowledge management in Libyan Banking Sector**

In order to manage knowledge efficiently the technological aspect of the organization should be very strong. Technology is required for interchanging data, to share the information, communicating the information and to manage the workflow. Efficient software's are required for all the activities of knowledge management which if not provided might hinder the knowledge management process.

In order for efficient knowledge management process, it is critical to create and gain the necessary knowledge that needs to be stored. Gaining necessary and important information is also difficult, as it requires specialty in skills. It is not easy to transform the knowledge that is implicit into knowledge that is explicit and easily understood. In addition, the skills of individuals are of paramount importance in knowledge management activities. The information.

Disseminated to the employees may not be so simple to understand so in order to communicate the information and to be sure that it is utilized effectively the employees need to be properly trained because if the employees would not understand the provided information, it will not be utilized accordingly and hence there will be a wastage of resources. Also, in order for knowledge management to be effective, the organization should have a culture that supports the activities of knowledge management. Knowledge sharing is an important aspect of knowledge management but in organization, the people on the higher levels of hierarchy usually hesitate to share the knowledge hence hindering the process and creating the barrier in efficient knowledge management.

### **3.17. Best Practice and the Bad Practice of Knowledge Management in the Bank**

One best practice of knowledge management is that its activities should be incorporated in the usual routine of the employees and the process and

activities should be made easier for the workers to use. Many knowledge management initiatives failed in the organizations because the new activities became a burden for the employees and they failed to keep up with changing structure of work. Therefore, in order for effective knowledge management the activities should be made simple, understandable easy to implement and the employees should be trained accordingly as well.

Another best practice adopted by banks for knowledge management is that the information integral to quickly assess and solve the issues is made readily available to the right people. Knowledge required to solve certain issues or to make important decisions is usually available in the databases or records that are public but is not accessible to the right people. Therefore, banks should make available the knowledge necessary to take important decisions and to gain solutions to the posing challenges rather by utilizing the existing data rather than delving on the tedious task of creating knowledge from scratch.

Gaining the support of the executives of the organization in knowledge management process is also a best practice adopted by the successful banks. In order to implement the knowledge management system, it is important that the executives are on board and they provide the support and necessary information for the effective implementation. Support is also required by the employees implementing the knowledge management process. Effective knowledge management results from the alignment of goals of knowledge management process with goals of the organization itself.

### **3.18. Benefit of Knowledge Management in Capital Risk Management in Banking Sector**

Capital risk management is one of the integral functions of financial institutions like banks. Financial institutions are considered as risk and knowledge based. Knowledge management provides benefit to the banks in managing the risks associated with the management of capital. In order to incorporate culture of risk taking in the banks the instruments of knowledge management of risk knowledge management are utilized. The human resource of the organization made adaptable to the activities of risk management by shaping the practices, norms, values and culture of the organizations. Resultantly, the activities of

knowledge management are believed to be used efficiently to promote the creation of knowledge, its effective utilization and to share the disseminated knowledge with the right people in the process of management of risk. It is also important the activities of knowledge management and capital risk management be aligned in a way that it furthers the process of knowledge management and instills the behavior of risk management in the employees. In addition, the proper knowledge management helps take effective decisions regarding the management of capital and to gain information on the risk associated with the capital management.

### **3.19. Benefit of Knowledge Management in Capital Risk and Liquidity Funding**

Liquidity is explained as the capability of the banks to have sufficient funding to pay for the new assets acquired and to perform any function necessary to achieve the goal of the institutions without any burden and sustaining losses that are unacceptable for the banks. Banks are exposed to the risk associated with the liquidity as the banks transform the deposits that are short-term into loans that are long term and the risk associated with such process has an effect on the market as well as it is specific to the institution as well. Therefore, the transactions made by a financial institution has repercussions for liquidity of a bank. Liquidity risk management is considered effective only if it increases the ability of a bank to meet the uncertain cash commitments arising because of an event that is external. So as liquidity is important for the bank so is managing it. Knowledge management helps take decisions regarding liquidity funding based on the important and relevant knowledge related to the funding decision hence minimizing the risk associated with it. When faced with a challenge of liquidity funding knowledge related to prior decisions, their results, the knowledge on market and the consequent results help gain a competitive edge in the market. By effective utilization of knowledge management techniques, the risk associated with liquidity funding is greatly managed by the financial institutions.

### **3.20. Benefit of Knowledge Management in Human Capital Management**

Human capital management is also integral to financial institutions. The knowledge management activities and human resources management activities are both important for banks to gain competitive advantage.

The practices of human resource management are aimed at creating a positive attitude of employees so that they contribute in the activities of knowledge management. These practices also aim at increasing the loyalty and commitment of the employees to the organization. This is of paramount importance because a loyalty and commitment of employees is of critical significance for the banks, as the employees have valuable knowledge of the organization so if they are not committed and loyal the organization is exposed to the risk of losing critical information. Knowledge management benefit the process of human capital management as the important information related to human capital is stored in a systematic way hence the utilization of systematic information helps the banks gain competitive edge in the market. Therefore, the alignment of human resource and knowledge management activities hold significant importance, for example if those people will be hired that have similar goals and vision as of the organization, they will identify themselves with the organization and will be more committed. Similarly retaining employees with the important knowledge is necessary for the financial institutions like banks. The employees possess important knowledge and skills which if the leave is lost. Therefore, through knowledge management activities this can be managed as well.

### **3.21. The Role of Knowledge Management in Financial Sector Practical Case**

In the year 2000, the ICICI bank of India adapted the strategy of knowledge management. It is one of the leading banks in India that come in the category of private banks. The bank gained success in its growth and development by effectively utilizing the techniques of knowledge management. The bank adopted the knowledge management by making changed in the corporate management. Technology was used for this purpose by linking the company by an intranet. ICICI trained its employees to help them understand the new changes in the system. The knowledge management team restructured the

strategy. Initially the team started by interacting with the employees and shared the information with them, the issues of communicating the useful information and knowledge pools was discussed, the employees were trained in the necessary skills required. The involvement of the employees throughout the process increased their interest in the activities of knowledge management and they became more open to acquire, utilize and share the knowledge. Because of this, the culture of management was incorporated and the employees tend to think more professionally and in a positive way. Their involvement made the achievement of organizational goals and results more fruitful. A portal was introduced on the web named the wise guy in order to create a bond among different prevailing cultures and so that the transition from different cultures into a more universal one is smooth and steady. Hence, introduction of knowledge management techniques brought about positive results for the ICICI bank and helped achieve the bank the goals in an effective and efficient manner.

### **3.22. Errors Resulting from Knowledge Mismanagement**

Some studies concluded the discovery of many errors resulting from mismanagement of organizations and sectors to available knowledge or their inability to deliver it at the right time, which are summarized as follows:

1. Not identifying the definitions (procedural and scientific) for terms stated in researches and studies exchanged by personnel.
2. Classical management still store knowledge and keep it and not spreading it or delivering to the relevant people in middle and low levels who need in addition to the misconception that computers are the place for saving information and not people's minds while in any dialogue or discussion, it is required that the ones who keep the information in mind attend before computers.
3. Not paying attention to tacit knowledge which may be acquired from explicit knowledge and which is disclosed based on the principle of (not telling everything you know). In most instances, such knowledge that is inferred or extracted is more important from the disclosed or written knowledge.
4. Buying ready-made and available knowledge from consulting entities

may lead to stopping thinking, analysis, search and creating processes by personnel in addition to inability and failure of making experiments directed towards generating knowledge and testing and developing it and being sufficed only by receiving it without processing or ascertaining its suitability to the existing reality or nature of the problems to be dealt with or resolved.

5. Attention is limited to making researches on the previous stage with the reasoning of evaluating and extracting lessons from it, or the focus of present one to solve the problems or reduce the stress which consumes time, effort and money and disregarding studies which concentrate on being ready for the future and considering its challenges.
6. Dealing and communicating to get knowledge is done through new technologies and projects rather than through meetings, conferences and direct dialogue where there is human contact to develop speaking, listening, and convincing skills.
7. Not paying attention to the role played by competitive advantage and its influence on creativity and innovations and the competition between intellectual and creative elements in the intellectual capital system.

## **CHAPTER 4**

### **INNOVATION AND CREATIVITY MANAGEMENT**

#### **4.1. Introduction**

Innovation and creativity are undoubtedly very vital and needed tasks. It is the management of creativity and urging spirit of competitiveness from start to finish. And it has been since about more than twelve decades when the first modern knowledge innovation came out in the form of the lamp and up to the typewriter ...etc. And today after one and a quarter century from that day, innovation process still carries same difficulties and still depends on undertaking such task. It may be easier for us to await what luck brings to us from time to time instead of having to exhaust ourselves. But the real secret of achievement is what made creativity and innovation happen over and over as each time we need them by activating competition between the entities and creative and innovative resources. Scientists and experts must follow new innovations, shall develop them and not wait until another innovation comes out.

#### **4.2. Latency and Acquisition of Creativity and Innovation**

We can observe that most innovators and creative persons were not born so nor did they inherit that even if inheritance may have its influence on transferring knowledge through genes. However, innovation usually comes

with the preparation of man to be qualified to acquire new knowledge, add to his already possessed knowledge, and hence accumulate numerous knowledge and experiences. Most experts and scientists are normal persons with a skill that is only discovered through struggle, persistence, learning and personal experimentation. Mihalye Csikszentmihalyi, the author of psychology of discovery and creativity) is keen on reminding us that invention is: the overall result of interaction between many humans and factor and can be easily enforced by change of environment which we work through and by our way of interaction and not by utilizing an innovative skill by the organization of a single person. The invention is constructing different ideas, which have been arranged in a unique way suitable for a certain matter or problem.

It is also safe to say that it is achieving more advancement and development by using what is available where the available material is tested and checked to decide how to use and invest in solving the problem and construct the administrative structure.

#### **4.3. Importance of Innovation**

1. The invention is an essential requirement for achieving creativity. Creativity requires invention, but the invention doesn't necessarily lead to creativity unless it is within the circle of competition.
2. The invention may provide advantages to the organization or the sector including speed, flexibility in both the design and problem solving and building bases for development.
3. Invention contributes in making the organization or the sector faster and with more efficiency in recognizing and dealing with variables taking place in its complex environment.
4. The invention may become a continuous process leading to continuous creativity, which is to the interest of activation of competitive advantage, and creating a durable economic market.

#### **4.4. From Invention to Creativity**

It is no secret that invention is the main factor for creativity. The invention is a discovery process related to generating ideas and finding a new thing for the



organization or the sector and provides solutions to present problems but its degree of success is unknown. On the other hand, creativity includes achievement, competition, adopting and use of scientific inventions. The resulting object is practically successful through the process. And by applying it, in reality, the old models are replaced and the methods of process performance are restructured completely. At this point problems come out with the new models, as understanding the new model by old model language is impossible and words and logical arguments will not convince that the new model is better. In such case, performance and trust shall be the main pillars when presenting and applying the new model in real life where the results can be evaluated.

#### **4.5. Creativity**

Definition of creativity is still somewhat unclear as more interest was paid to the subject of creativity starting from last century. The first contributor in this field was the American economist Schumpeter who defined it from an economic perspective stating: "it is a transformation made by jumping from the old to the new..."

It can also be said that creativity is: exiting the old techniques by using new techniques which are the unfamiliar production characterized by newness, applicable ideas, employment and investment of certain use(s) through individuals or small or large work groups.

#### **4.6. Types of Creativity**

##### **4.6.1. Incremental creativity**

It is the one, which actually leads to relatively small changes in the available product or service and is based on exploiting available information and facts. For example, if the roof fan stayed in same common design for cooling the room for ten years and the changes, which have been made on blade design and modifications, which make it intensifies the amount of air and is provided with a low noise motor and is produced in different colors fit with room decorations. All of this is called incremental creativity.

#### **4.6.2. Radical (root) creativity**

It is based on new models and thus leads to new markets. Such creativity may pose a problem for leading companies in their field since it destroys their available capabilities and this type usually forms the base for entry of new companies and sectors to the market. An example for that would be developing central air-conditioning, which represents a radical, and root creativity as the matter requires new elements and providing different technologies. This creativity makes the capabilities of fan manufacturers obsolete and unable to achieve physical profit due to the new central air-conditioning and the way it operates and its advantages and production ability.

#### **4.6.3. Constructive creativity**

The management of Cornell University defined this type of creativity, which is non-radical but creates many new opportunities, new markets, and competitive potential and at the same time does not make these technologies out of date but rather expands the capabilities and benefits of such technologies. An example, in the seventies of last century, when the company Xerox leading in the field of manufacturing photocopying machines on white paper faced a strong competition from Japan (which used small sized photocopying machines with the addition of more capabilities). As a result, Xerox lost 50% of its market share and took about eight years until it presented a product, which could meet market competition.

Therefore, creativity here is not radical because the basic technology did not change but some changes took place in some of the internal relations between the components. And in the previous example, the mobile fan would be a good example for constructive creativity. Therefore, we say that creativity process is closely associated with the role of competitive advantage.

#### **4.7. Advantages of Creativity**

(Dvir & Pasher, 2004) said that in the changing world, the organization or the sector must be creative and takes initiative of creativity for the advantages and benefits, which may be achieved including:

1. Improving customer's services through flexibility and adjusting to their

needs and interests.

2. Improving productivity of organization or sector through achieving competitive efficiency and effectiveness in performance and achieving the goals and using and investing resources, energies, information and competitive knowledge to improve quality or produce new and right products.
3. Increase the ability of the organization or the sector through the fast provision of new products and innovations and changing productivity products as well as reducing production cost and the capital through creativity within the process.
4. Improving organization or sector image and status and making it attractive to customers by limiting routine procedures in its transactions particularly in banking sectors and facilitating loans and projects support.
5. Creativity develops and accumulates personal skills in collective thinking and group interaction through the competitive brainstorming teams.

In addition, creative thinking is concerned with changing prototypes; a prototype is any concept, idea or image. It is a chronological arrangement of ideas and concepts. Creative thinking focuses on changing prototypes by restructuring the prototype and arranging things differently instead of getting a certain type and developing it for ideal use of the stored information. For example, they are ideas, which were useful in the past, but many not have the same benefit today because of the changes and this fast change that is called globalization.

On the other hand, creative thinking is an approach and a method of using information. It is by result the useful tool to get the useful and necessary facts and using them in a good way. It is also a method of using information to be able to construct new competitive types. For this reason, the creative thinker must try to use and invest the information and facts, which he gets on a group of subjects, and so he allows ideas to develop and compete instead of canceling them and judging them to with error or failure. Also, regular re-evaluation (reconsidering fixed and accepted matters which are not to the level of doubt and hence that means challenging all assumptions.

Factors, which help motivate creativity, also exist in every person who can be creative but needs some incentive and stimulation by factors to compete (Drucker, 1998a). In this regard, refer to some factors including:

1. **Organizational structure:** When insuring freeing from status quo and ensure participation and involvement of work teams and reducing hierarchy.
2. **Culture:** It is the beliefs and assumptions common between organization or sector members, which enforce creativity process such as motivating personnel for learning and acquiring special skills, and motivating them to take the difficult issues and get away from familiarity.
3. **Providing resources:** The financial resources, tools, facilitation, and information, knowledge which contributes to enhancing and supporting creativity.
4. **Developing work teams:** Team members have different skills, confidence, and transparency in transferring information and complying with it in addition to ensuring cooperation between personnel instead of competing among themselves.
5. **Social support:** If there is a support to creative ideas by the management, personnel, and supervisors, that should have apposite effect on creativity. Also, it should be stressed that failure is associated with learning and opportunities.

For example: when an employee at Peer wood furniture manufacturing company in U.S.A innovated and created a solution to a problem facing the company relating to the falling nails on the factory ground which was causing holes in tires of vehicles carrying material into the factory. The solution was the following: putting a magnet in the front bottom of each vehicle entering the factory so that the magnet would attract and pick the falling nails before they could harm the tires. It was an easy, simple, and non-costing process all in one.

Therefore, we must give some examples, which stress the successful creativity principles including establishment of some drug companies, which depend on creativity. More than 200 companies from all over the world have

contributed in a comprehensive survey about the discovery of drugs and production and development practices (Jung, Shen, Gonzalez, Albuquerque, & Jia, 2019). And the results were the following:

1. Twenty percent of these companies were depending on offering products and sales and were classified among the more creative and more successful as 47% of their total sales were new products offers.
2. But sales of 80% of the remaining companies represented an average of 36% of new products, which were classified as less successful.

By analysis of more facts of that study, we observed that many factors were unified to achieve success and creativity. The numbers between brackets indicate to what extent the average exceeded what these successful companies have achieved in comparison to less successful and creative companies.

1. Applying knowledge management (75%).
2. Clear definition of creativity concept (33%).
3. Right use of project management technique (34%).
4. Innovating creativity culture (28%).

And based on the above, we infer that for creativity to be successful, there must be some coordination and achieving competitive integration between different activities in the organization and the sectors where the role of knowledge plays an outstanding factor. Creativity in this field must be implemented according to competitive requirements in the market, organization and the sector to ensure its success, the availability of the following factors is essential (Elsamrai, 1990).

1. Defining target market clearly
2. Defining present and future customers needs and interests
3. Defining qualities and requirements of products intended to be developed.

In addition to the above, we add defining and diagnosis of competitive focal points and investing them in building economic relations and defining goals scientifically.

Regarding how to make a creative and innovative environment, the answer would be making creative and innovative mentality. Preparing scientific staff and investment of human resources must be through the providing the basic qualities and components which help manage your innovations and creativities. These qualities are represented in the following points:

1. Feeling of amazement, surprise, and curiosity: the creative and innovative person must have such qualities, which help him develop and improve his creative and innovative mentality by accepting the new and developing the old.
2. The competitive urge to continually develop himself and get many alternatives and the individual must strive to improve himself always to serve the objective and goal, which he intends to achieve. The creative and innovation person shall never be convinced that what is happening before he or she is right but shall always seek the highest number of alternatives about the subject to researched, studied and addressed.
3. Not fearing new and developed ideas, because no matter how right the present is, there is always the better and more in the future, which must be sought after. Thus, creative and innovative persons shall not be fearful of new ideas and facts and shall not fear the unknown but shall go after and try to urge it to appear.
4. Must be able to test and check new ideas. So, thinkers and creative people must focus on ideas which they present and shall check and test and experiment them to ensure validity and suitability to the subject of the goal.
5. There shall be scientific flexibility in dealing with new and developed ideas. And in order to feel the right content from dealing with such ideas, their results must be seen. If these ideas have achieved the intended results, they have become new ideas, which need to be developed. So, it is essential to give support and encouragement to offer new ideas more suitable and easier to apply and giving more successful solutions.

In addition, the above points, proposals, and recommendations help establish and form creative and innovative mentality and personality, which shall come

up with useful innovations and creativities and everything, that is new and creative ready for use and investment and utilization in every possible part of business and sectors.

#### **4.8. Brainstorming: The Creative Thinking**

It is considered one the commonly used methods which open the door for instinct, creativity, innovation, enthusiasm, and competitiveness. Therefore, it is considered a practical application of a collective and cooperative concept which is based on the idea that all are most important than any component parts. When individual efforts are unified with their potential, capabilities, and energies, not only resolutions are achieved but also, they are personally enhanced and improved by expanding their mental perceptions and knowledge horizons and stimulating competitive awareness amongst themselves.

##### **4.8.1. Definition of brainstorming**

A collective method-promoting group thinking to find and create ideas. It forms a tool to get a large volume of ideas in short time. Hence, this thinking method includes the following:

1. Getting most of the ideas and creativities in shortest time possible.
2. Reducing shyness and fear of being criticized and competition.
3. Increasing opportunity to reach and achieve the goals.
4. Promoting development of creative alternatives in group decision-making.

As for methods of creative thinking, it includes three main ways:

1. Discussion or round table.
2. Absolute freedom method.
3. Streamlining method.

Each method has its advantages and disadvantages .in some case, it is best to use a group of different methods together to achieve the intended goal.

**I. Discussion or round table method:** In which each member helps the other one in the group with the idea related to the objective of the discussion through

the rotation. Each idea must be recorded on a map of the graphic board. Ideas must be continuously shown so nothing else is needed to be added. Some of the advantages of this method are; it is difficult for one person to dominate and manage the discussion. As for its disadvantages, the person may feel frustrated while waiting to give his opinion.

**II. Absolute freedom method:** This method is because each team member gives his ideas freely. Every idea is recorded and the process goes on until they run out of any additions. One of the advantages of this method is that the individual does not feel any frustration while waiting for his turn to get involved. As for the disadvantages, it is possible here that one person may dominate and manage the discussion.

**III. Streamline method:** In which each group member writes down his ideas on the subject to be discussed or dealt with by presenting certain ideas or the alternatives, which can be presented in a streamlined method on the paper. The ideas are collected and written on the board for discussion. One of the advantages of this method is that the ideas presented are unknown and unnamed. The negative thing about this method is losing part of the creativity due to the inability of the team members to interact with others ideas.

#### **4.9. Obstacles of Creativity**

Some of the most importance obstacles facing creativity and its promotion according to (Sevim, 2019) include:

1. Physical obstacles: those that are related to physical capabilities or assets of the organization or the sector and inability to fulfill the creativity process requirements such as information technology, special places, physical incentives...etc.
2. Laws and systems: which limit creativity and initiation. Such principles must not be strictly and fixedly followed. Some principles are necessary but other may impede creativity because it promotes unintelligent mental acceptance of status quo (we have always been acting this way).
3. The resistanceto change by management, personnel, and holding onto familiar norms and traditions. For example, negative attitudes of some



managers as the chairman of the board of IBM Mr. Thomas G. Watson said (Television will not stand in any market it enters for more than six months because people will get tired of staring at a box all night long).

4. Lack of encouragement by the organization to try new things and fear of making mistakes. This is one the most important obstacles according to (Tom Peters) one the well-known management leaders who say (to arrive at this tremendous number of inventions, there must have been a tremendous number of failures).
5. Insufficient information available on internal and external conditions of the organization or the sector and not taking advantage of information systems in such a way to ensure getting it very fast and continuously which leads to making dull assumptions. For example, the research and development manager at an international technology company who discovered missing some testing tools and material and assumed there is some thefts, which required installing a security system. He noticed following that slowing of work because the individuals would not take testing tools and material outside of the laboratory to continue their work.
6. Not supporting group work by the organization and not providing the right environment to support creativity and that is reflected on nature of the relationship between personnel and managers and between personnel themselves in addition to the lack of awareness and recognition of principles and concepts of creativity management.
7. Overdependence on foreign experts and not concentrating on building acknowledge base for the organization which supports personnel inside of it and enhances their creative behavior in addition to the lack of training course intended to provide individuals with skills enabling them to use and invest information systems and competitive knowledge in management and application of creative ideas.

The extraordinary obstacles include:

1. Inconvincibility: as Thomas Fogarty, the first inventor of bypass treatment stated : “one of the hardest things about creativity is convincing people to accept the idea that the method they are using is

not the best” (Amabile & Khaire, 2008). Fear of employment of intelligent people: because they are more intelligent than you are and thus pose threat to you.

#### **4.10. The Educated Organization**

As (Chin, Yoon, & Smith, 1996) states, organizations and sectors intend to achieve success, survive and profitability which means they need to be better than their competitors are. This requires that these organizations and sectors must improve, change and develop continuously and hence they need to learn from their experience and experiments and researches and to observe what others do as well as all other available sources and then shall exploit what they have learned to ensure that the role of the new knowledge has become available for all stakeholders at the right time with ease and facilitation.

However, (Elali, 2006) say: that the educated organization is that organization in which everyone is busy in identifying a solving problem and making continuous improvement to enable the organization to increase its competence.

Moreover, from the research we see that the skillful organization in applying every role of competitive knowledge and creative and innovation management and which seeks to achieve leadership in its field through the investment of the two advantages creativity and competitiveness in all of its economic and developmental processes.

Based upon some values, which include:

1. The whole is more important than the part and boundaries between little parts: to allow for free flow of information and facts and ideas through learning and continuous acquisition of experiences.
2. Equality: it is an essential element in its culture, which enhances secure and trusted climate even if experimentation lead to making mistakes which are ok and that enforces learning and gaining experience. It is also considered among equality and freedom of access to information and knowledge.

3. A culture which encourages taking risks, improvement, and change, as the basic value for the learning organization or sector, lies in opening the doors for creativity, innovation, improvement and bonus and promoting incentive and competitive system.
4. Problem-solving: by depending on scientific techniques more than guessing and ensuring data more than assumptions in most of their moves.
5. Experimentation includes researching new knowledge and examining it by using scientific methodology.
6. Learning from experiences: by reviewing past success and failure and evaluating them in a good way and recording the learned lessons to enable individuals to access to them and use as a guideline in solving present and potential problems.
7. Learning from others: looking to other organizations may be a fertilized land for ideas and motivating creative thinking. This requires facilitating extensive participation based on information technology and communications.
8. Know-how transfer: knowledge must be spread fast and with high efficiency all over the organization and it shall have a more positive effect than if kept in the possession of few persons.

In addition, the creative and educational organization follow multiple and variable strategies to enhance learning and transfer of knowledge and expertise and creativity management (Skinner et al., 2005), highlighted in the following points:

1. Building information systems and systems related to knowledge management and continuously developing it to allow for participation of all in the learning process.
2. Sharing the responsibility of collecting knowledge and transferring it through encouraging every individual in the organization or the sector to have the desire to collect knowledge.
3. Recognizing the meaning of creativities and its features and to believe

that creativity is not limited to one individual but rather for all to have the ability to be creative.

4. Promoting and appraising creativity. The will to survive in the market requires continually generating new techniques intended to provide new products and services and better methods and processes.
5. Transformation towards network structure in place of bureaucracy because it enables sharing information and promotes cooperation.

Consequently, the creative and educational sector or organization is considered the babysitter for creative and innovative people and their ideas, and from there they can take their structures from relieving knowledge to creating and formulating it and innovating it and from the transfer of creative ideas to adopting them.

The role played by these sectors and organizations in knowledge management and the projection of its role in the competitive advantage is not limited to collecting, storing and giving access to information to the relevant people but exceeds that to include the ability to create and innovate knowledge. That means, creating, providing, exchanging and applying new creative roles, ideas, and innovations in the form of marketable goods, tools and services to contribute to the success of the organization or the sector particularly the banking sectors.

Moreover, in order to reach the required road of creativity, knowledge, and activities that are related to their management and marketing must be made available because organizations and sectors have to do business.

#### **4.11. Competitive Advantage in Banking Sector**

Competitive advantage is essential for an organization's execution in developing markets. Numerous organizations dismissed competitive advantage to develop and competition locally or what's more, worldwide competitions (Kramer & Porter, 2011). In this way, numerous organizations

attempt to pick up it from overseeing knowledge. In any case, while the organizations need to use their knowledge inside and externally to make and support a competitive advantage, they need to confront numerous issues to oversee knowledge.

There is no basic definition for „„competitive advantage practically speaking or in advertising system, it is infrequently utilized reciprocally with unmistakable capabilities to mean relative predominance in aptitudes and resources. According to (Kramer & Porter, 2011) competitive methodology is the look for an ideal competitive position in an industry, the essential field in which competition happens. The manageability of this positional advantage requires that the business sets up boundaries that make impersonation troublesome, on the grounds that these obstructions to impersonation are persistently disintegrating, the firm should keep on investing to maintain or enhance the advantage.

Various investigations have investigated the conditions under which a business" competitive advantage is maintainable (Coyne, 1985). Barney records four 4 fundamental prerequisites for a resource or expertise to be a wellspring of practical competitive advantage. As per Barney, for resources or abilities to constitute a wellspring of supportable competitive advantage they should have the accompanying qualities;

- They should be profitable.
- They should be uncommon among a firm's present and potential contenders.
- They should be defectively imitable.
- There must not be any deliberately comparable substitutes for the resource or aptitude.

(Bharadwaj, Varadarajan, & Fahy, 1993) placed that the fulfillment of manageable competitive advantage isn't an end in itself, yet an unfortunate chore – in particular non-competition long haul financial execution. An organization isn't ready to go to accomplish a feasible competitive advantage

over its competitions yet to make riches for its investors. Activities which add to maintainable competitive advantage however bring down making investor riches can be a decent system in the competitive sense, yet awful technique for the organization. It is likewise significant that specific wellsprings of competitive advantage might be more continuing than others (Hooley et al., 2000).

The capacity of a business to improve (or both) than its competitions – non-competitive aptitudes are the unmistakable abilities of work force that set them apart from those of contending firms. It likewise incorporates uncompetitive resources, areas, size of operations, expansiveness of offers power and dissemination scope, mark names and so on. Better aptitudes and predominant resources lead than positional advantage, non-competitive client esteem and lower relative cost.

The positional advantage of a business is specifically similar to competitive versatility obstructions that could hinder a firm from moving its vital position. It is seen best inside the esteem chain or business framework (Hooley et al., 2000).

A company's relative position inside its industry decides if benefit is above or underneath the business normal. The basic premise of better than expected benefit over the long haul is reasonable competitive advantage (Porter, 1985). Despite the fact that a firm can have a horde of quality and shortcomings, versus its competitions, there are two essential kinds of competitive advantage a firm can have: minimal effort or separation. The two fundamental kinds of competitive advantage joined with the extent of exercises for which a firm tries to accomplish them, prompt three bland systems for accomplishing better than expected execution in an industry: cost administration, separation and core interest.

The three non-specific methodologies offer essentially unique courses to competitive advantage, consolidating a decision about the sort of competitive advantage looked for with the extent of the vital focus in which competitive advantage is to be accomplished (Porter, 1985). Separation and cost initiative

techniques go for competitive advantage in an expansive scope of industry fragments, while center systems target cost advantage (cost center) or (separation center) in a limited section (Porter, 1985).

(Kotler et al., 2000) characterized competitive advantage as an organizational capacity to perform in one or numerous ways that contenders discover hard to mirror now and later on. Competitive advantage can be depicted as a management idea that has been so well known in the contemporary writing of management these days. The purposes for such prominence incorporate the fast change that organizations confront today, the many-sided quality of the business environment, the effects of globalization and unstructured markets, the regularly changing buyer needs, competition, the upset of information technology and communications, and the freedom of worldwide exchange.

(Al-Rousan & Qawasmeh, 2009) considered that competitive advantage becomes out of esteem a firm is ready to make for its purchasers that surpasses the association's cost of making it. Esteem is what purchasers will pay, and non-competitive esteem comes from offering lower costs than contenders for proportionate advantages or giving one of kind advantages that more than counterbalance a higher cost. Layman perceived competitive advantage as a key objective; that is a needy variable and the purpose for this is the great execution is identified with accomplishing a competitive advantage.

## **CHAPTER 5**

### **CASE STUDY: LIBYAN FOREIGN BANK**

The scales of knowledge management and competitive advantage are applied to the banking sector in Libya through a case study of Libyan Foreign Bank (LFB). After distributing the questionnaires on the bank's employees, the data is analyzed using SPSS. Descriptive statistics and correlational analysis are performed to investigate the relationships between the variables. Moreover, the results are compared to similar studies to understand similarities and differences.

#### **5.1 Background on Libya Foreign Bank (LFB)**

The Libyan Foreign Bank (LFB) has been established in 1972, as a governmental entity governed by the Central Bank of Libya, with a capital of ten million Libyan Dinars, which was increased in different occasions until the mid-1980s. The main aim from investing in the LFB is to lead the domestic market and leading investments in the regional and international markets in order to strengthen the national economy. The Capital of the Bank was increased to three-hundred Libyan Dinars; however, the LFB converted its



assets to the American dollar in 2004. The capital of the LFB was increased in 2006 to one billion dollars and once again in 2010 to 8.7 billion American dollars("History," 2014).

The main purpose for the existence of the LFB is to become a key player in the national, regional and international in the banking market. Subsequently, the bank is established to enrich the Libyan economy and as a driver for its growth by maximizing revenues and profits. The LFB adopts ethical values that are in accordance with the Arab traditions and Islamic teachings, as follows:

1. Transparency with all financial dealings and clarity in standardizing and implementing banking operations.
2. Maximize profits to the stakeholders with concern to Islamic financial laws.
3. Drive the growth of the national Libyan economy.
4. Provide a source for positive example in modern banking for the Libyan banking sector.
5. Attending to the needs and aspirations of the Libyan people.

The vision of the LFB is to drive with power and consistency the national economy, as well as to become a key player in the international banking sector. The bank aims to diversify its investment portfolio and implement the latest technology and communication tools into its operations. Furthermore, the mission of the LFB is defined through being the leader in commercial and corporate banking, setting an example for national banks to follow. The LFB looks into regional and international partnerships as a core service in order to provide the best and a unique banking service for its clients.

In addition to investing on the domestic and international levels, the LFB provides variety of services that include personal and corporate loans, financial facilities for businesses and projects, and handling deposits. Moreover, the Libyan Foreign Bank (LFB) invested in forty-two financial entities internationally as shown in Table 5.1 below.

Table 5. 1. Libyan Foreign Bank (LFB) international investments and subsidiaries

	Name of Financial Institution	Date of establishment	Country of incorporation	Participation
	Central Bank of Libya		Libya	100.00% Of LFB Shares
<b>SUBSIDIARIES</b>				
1	Alubaf Arab International Bank – Manama	1982	Bahrain	99.50%
2	Alubaf International Bank Tunisia	1985	Tunisia	100.00%
3	Arab Turkish Bank Istanbul	1975	Turkey	62.37%
4	Banca UBAE Rome	1972	Italy	67.55%
5	Aresbank Madrid	1975	Spain	99.86%
6	Banque Commercial Du Niger – Niamey	1978	Niger	92.05%
7	Banque Commercial Du Sahel – Bamako	1982	Mali	96.64%
8	British Arab Commercial Bank – London	1972	United Kingdom	87.80%
9	Chinguitty Bank – Nouakchott	1972	Mauritania	71.42%
10	Demoreco Holding Co. Beirut	1995	Lebanon	100.00%
11	North Africa Commercial Bank – Beirut	1973	Lebanon	99.56%
12	Societe Interafricane De Banque – Lomi	1976	Togo	94.07%
13	Tropical Bank Ltd – Kampala	1972	Uganda	99.83%
<b>ASSOCIATES</b>				
14	Almasraf - Arab Bank for Investment and Foreign Trade – Abu Dhabi	1974	United Arab Emirates	42.28%

	<b>Name of Financial Institution</b>	<b>Date of establishment</b>	<b>Country of incorporation</b>	<b>Participation</b>
15	Arab International Bank Cairo	1974	Egypt	35.84%
16	Arab Leasing Company Ltd – Khartoum	2009	Sudan	20.00%
17	Banque BIA – France Paris	1974	France	50.00%
18	Banque Commerciale Du Burkina- Ouagadougou	1984	Burkina Faso	50.00%
19	Banque Commerciale Du Chari – N'Djamena	1982	Chad	50.00%
20	Banque Du Maghreb Arabe Pour Inv. Et Le Commerce- Algeria	1988	Algeria	50.00%
21	Banque Tuniso Libyenne – Tunisia	1983	Tunisia	50.00%
22	Inversiones Hoteleras - Los Cabos	1987	Panama	32.90%
23	Nuran Bank (Previous name was Libyan Qatar Bank)- Tripoli	2009	Libya	50.00%
24	National Financial Leasing Company- Tripoli	2011	Libya	30.00%
25	Suez Canal Bank Cairo	1996	Egypt	27.71%
<b>INDIRECT INVESTMENT</b>				
26	North Africa International Bank – Tunisia	1984	Tunisia	50.00%
<b>AVAILABLE FOR SALE INVESTMENTS</b>				
27	CBZ Holding Company Ltd- Harare	2000	Zimbabwe	14.12%
28	Housing Bank for Trade & Finance – Amman	1997	Jordan	% 16.18
29	Arab Jordanian Investment Bank – Amman	1987	Jordan	% 12.79
30	Arab Banking Corporation (ABC) – Manama	1980	Bahrain	% 1.93
31	Bank of Jordan– Amman	2010	Jordan	% 4.50
32	Libyan Company for Investing & Operating Health Utilities – Tripoli	2004	Libya	% 4.00

	<b>Name of Financial Institution</b>	<b>Date of establishment</b>	<b>Country of incorporation</b>	<b>Participation</b>
33	Libyan Italian Joint Company– Tripoli	1999	Libya	% 2.30
34	Oil Investments Company Antilles Island	1988	Netherlands	% 15.00
35	UBAF Paris	1972	France	% 5.57
36	UBAF Hong Kong Ltd	1974	Hong Kong	% 10.80
37	Societe Tunisienne de Banque (STB) – Tunisia	2001	Tunisia	% 1.80
38	The Libyan Fund for Inland Investment and development– Tripoli	2009	Libya	% 0.83
39	Arab Trade Financing Programme Abu Dhabi	1989	United Arab Emirates	% 0.47
40	Highways (Motorways) Services Company– Tripoli	2002	Libya	% 3.50
41	Moamalat for Financial Services – Tripoli	1994	Libya	% 14.29
42	UBAC Curacao N.V. - Curacao	1977	Netherlands	% 12.95

Source: ("Libyan Foreign Bank," 2014)

## 5.2 Questionnaire Design

The measurement tool used in this research is a questionnaire, template available in appendix A, that is mainly measuring the knowledge management implementation in the Libyan Foreign Bank (LFB) through the assessment of its different dimensions. Moreover, the questionnaire measures the role of knowledge management in achieving competitive advantage in the LFB banks. All questions are evaluated on a 5-point Likert scale representing the extent of the implementation or influence. Therefore, the questionnaire is mainly divided into two main sections:

1. Knowledge management practices implementation.
2. Role of knowledge management in achieving competitive advantage.

In the first section of the questionnaire, the assessment of implementation of knowledge management practices is performed through evaluating the following dimensions:

- Knowledge creation: participants are asked to assess the dimension based on the ability of the bank to develop abilities and skills of subordinates, attend to the new ideas proposed by employees, Motivate and reward creative employees, encourage team work and cooperation instead of competition, encourage employees to strive for new ideas from all sources, carry on jobs with appropriate methods, develop commitment to new ideas, and facilitate of ideas sharing among employees.
- Knowledge acquisition: participants are asked to assess the dimension based on the ability of the bank to seek the help of external experts and specialists to transfer their knowledge and experience to existing personnel, participate in conferences and workshops inside and outside Libya as a method of obtaining knowledge, and encourage personnel to join training programs inside and outside Libya to gain knowledge in their fields.
- Knowledge filtering: participants are asked to assess the dimension based on the ability of the bank to modify international communication practices to be suitable for Libya conditions and environment, filter obtained knowledge and determine the most important part to be distributed and exchanged between personnel on the bank and department levels, and filter new knowledge to suit the its work environment.
- Knowledge storage and representation: This dimension evaluates the banks practices in having a comprehensive, adequate database which is available for all personnel and documenting new acquired knowledge for each accomplished project. Moreover, the ability of the bank to document faced problems and their solving techniques for future benefit.

- Knowledge auditing: the dimension evaluates the bank departments to follow up new ideas in the work and to transfer it to the subordinates, review work processes and procedures to ensure up-to-date ness, and review and modify databases. Furthermore, the dimension assesses the bank continuity in providing training courses to develop personnel skills and knowledge.
- Knowledge application: this dimension assesses the bank treatment of all information received from any source and benefit from it and the ability to follow up to ensure that subordinates use and apply method gained during training courses. Also, the dimension evaluates the employees' ability to apply work methods they have been trained on.
- Knowledge distribution and exchange: participants are asked to assess the dimension based on the ability of the bank to include a list of names and addresses of experts to call up for consultancy when needed in its databases, overcome difficulties in accessing any information needed in any work, and provide an intranet which enables sharing and exchange of knowledge with others. Furthermore, the dimension evaluates the management promotion of training courses to develop employees' skills in sharing and exchanging new ideas, as well as the employees' ability to easily access internet to collect any information needed and use e-mail to share and exchange knowledge with others.

In the second section of the questionnaire, the participants are asked if the implemented knowledge management practices impact the reduction of redundant work, reduced training time, easy adoption of new ideas, ease in sharing best practices, minimum loss of valuable knowledge, developing innovative products and services, supporting knowledge access, strategic decision making, and application of intellectual expertise. Data from both sections are entered into SPSS Statistics for descriptive findings and analyses are run to establish the needed relationships between knowledge management practices and its impact on achieving competitive advantage.

### 5.3 Research Model, Sample, and Population

The Libyan Foreign Bank (LFB) has forty-five direct and indirect subsidiaries in different countries around the world. Questionnaires were sent to all subsidiaries to be filled by top managers with one questionnaire for each unit. Thirty-seven completed questionnaires were returned and analyzed using SPSS statistics. The study tests the relationship between knowledge management and competitive advantage, as shown in the research model illustrated in Figure 5.1.

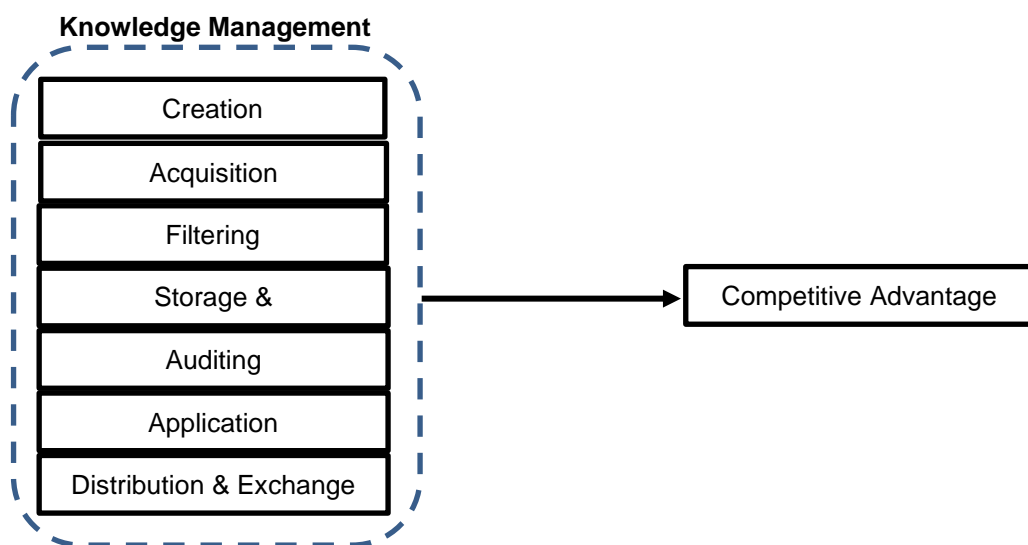


Figure 5. 1. Research model

### 5.4 Results and Analysis

The designed questionnaire was distributed to different branches that are under the Libyan Foreign Bank (LFB) around the world, including Libya, Turkey, Algeria and Egypt. Thirty-seven questionnaires were returned, which provided an overall reliability scale of 0.978 using Cronbach's alpha. Table 5.2 shows the reliability scale for each of the questionnaire dimensions. Cronbach's alpha for knowledge management is calculated as 0.976, while it is calculated for the competitive advantage perception as 0.925. All of the dimensions' Cronbach's alpha values are above 0.7, which is considered acceptable for social sciences and management researches.

Table 5. 2. Cronbach's alpha for questionnaire

Variable	Dimension	Dimension Alpha	Variable Alpha	Overall Alpha
Knowledge Management	Knowledge creation	0.926	0.976	0.978
	Knowledge acquisition	0.875		
	Knowledge filtering	0.906		
	Knowledge storage and representation	0.884		
	Knowledge auditing	0.895		
	Knowledge application	0.793		
	Knowledge distribution and exchange	0.917		
Competitive advantage perception		0.925		

Source: author's own computation

In the questionnaire, a 5-point Likert scale is used to evaluate the different dimensions and indicators. The scale starts with a "not at all" option, which meant to indicate the lack of a certain indicator. During the data entry process, that option was assigned to a score of 1, while the rest of the scale points were assigned with the scores of 2, 3, 4 and 5, respectively. Therefore, the scale point "small extent" indicates a weak evaluation, the scale point "moderate extent" indicates a fair evaluation, the scale point "great extent" indicates a good evaluation, and the scale point "very great extent" indicates an excellent evaluation. Mean scores that fall between the scale points are described as higher and lower with respect to these scale points.

In studying the knowledge creation dimension, the descriptive statistics show that all of the indicators achieved a mean score above 2.5 on a 5-point Likert scale, which indicates that the dimension is implemented in an acceptable manner. The lowest indicator with 2.81 mean score is the motivation and reward for creative employees, with a moderate extent percentage of 40.5%. The highest indicator that had a mean score of 3.24 is the development of abilities and skills of subordinates, which measures a good effort given to the training and qualification system implemented within the Libyan Foreign Bank.



Facilitating ideas sharing among employees had a mean score of 3.16, which shows a better reward system for innovation need to be implemented in order to motivate employees for innovation and creativity. However, the work environment encourages team work and ideas sharing, which can be beneficial in gathering a momentum for worthy ideas to be passed across the team up to executive management. Overall, knowledge creation in the Libyan Foreign Bank (LFB) seem to be fairly implemented through the different indicators used for measurement in the current study.

Table 5. 3. Knowledge creation results and mean scores

	Percentage					Mean Score
	Not at all	Small Extent	Moderate Extent	Great Extent	Very Great Extent	
Developing abilities and skills of subordinates	2.7	18.9	35.1	37.8	5.4	3.24
Concerns with new ideas proposed by employees	2.7	21.6	43.2	29.7	2.7	3.08
Motivating and rewarding creative employees	8.1	29.7	40.5	16.2	5.4	2.81
Encouraging team work and cooperation instead of competition	8.1	32.4	27.0	24.3	8.1	2.92
Encouraging employees to strive for new ideas from all sources	10.8	27.0	27.0	29.7	5.4	2.92
Initiativeness to carry out jobs by methods believed as appropriate	10.8	18.9	37.8	27.0	5.4	2.97
Existence of a strong commitment to new ideas	8.1	27.0	27.0	27.0	10.8	3.05
Facilitation of ideas sharing among employees	8.1	16.2	35.1	32.4	8.1	3.16

Source: author's own computation

The knowledge acquisition dimension seems to be well addressed in the Libyan Foreign Bank, as shown by the indicators in Table 5.4. The highest indicator with a mean score of 3.73 is giving to the encouragement the bank provides for his personnel to join trainings on the domestic and international levels, which is considered one of the basic forms of knowledge acquisitions. Conference participation aggregated a mean score of 3.65, which is considered a medium high on a 5-point Likert scale. Interaction with people from the field on a regular basis is essential for development that is synchronized with the industry. The indicator that had a mean score the least with 3.27 evaluated the effort put by the bank to bring experts and specialists into the organization in order to utilise their expertise for the interests of the bank and transfer their knowledge to its personnel. The overall assessment of talent acquisition in the LFB is good, while some areas can be enhanced to increase the pace of the development.

Table 5. 4. Knowledge acquisition results and mean scores

	Percentage					Mean Score
	Not at all	Small Extent	Moderate Extent	Great Extent	Very Great Extent	
Seeking the help of external experts and specialists to transfer their knowledge and experience to existing personnel.	0.0	27.0	29.7	32.4	10.8	3.27
Participation in conferences and workshops inside and outside Libya as a method of obtaining knowledge	0.0	16.2	24.3	37.8	21.6	3.65
Encouraging personnel to join training programs inside and outside Libya to gain knowledge in their fields	0.0	13.5	29.7	27.0	29.7	3.73

Source: author's own computation using SPSS

The third dimension of knowledge management that was evaluated is knowledge filtering, which is considered a sensitive task that aims to adopt knowledge as needed by the vision and goals of the bank and to facilitate it in the forms that are suitable for the work environment. Through the evaluation of four indicators, Table 5.5, the highest mean score was within the medium range with 3.41 for modifying the knowledge and practices according to the Libyan conditions and environment. A fair mean score (3.14) was aggregated for filtering the knowledge for Libya. Nonetheless, the least scores were given for filtering in circulation within the departments of the bank (3.00) and filtering for knowledge prioritizing (2.84), which is considered a fair but low score. The evaluation of the knowledge filtering dimension shows that more effort should be made in order to enhance it. Specific development is recommended on systems that enhance prioritization of knowledge; however, other enhancements can be made to other knowledge filtering systems and practices.

Table 5. 5. Knowledge filtering results and mean scores

	Percentage					Mean Score
	Not at all	Small Extent	Moderate Extent	Great Extent	Very Great Extent	
In case of adopting successful international communication practices, the bank modifies these practices to be suitable for Libya conditions and environment.	2.7	16.2	35.1	29.7	16.2	3.41
The bank filters obtained knowledge and determines the most important part to be distributed and exchanged between personnel	5.4	32.4	40.5	16.2	5.4	2.84
Each department determines important knowledge in its field to be distributed and exchanged between personnel.	5.4	27.0	35.1	27.0	5.4	3.00

When new knowledge is created the bank filter it to be suitable for work environment	2.7	16.2	54.1	18.9	8.1	3.14
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Source: author's own computation using SPSS

Storing and representing knowledge measures the accessibility to the acquired knowledge through creating a database with an interface in order to enable personnel to use the knowledge. Through the provided accessibility, enhancements and developments can be made to the current knowledge. In this category, Table 5.6, the highest score is considered a fair score of 3.22, which was aggregated by providing an available database accessible by all personnel. Closely, documenting knowledge had a mean score of 3.14. Nonetheless, the lowest score was averaged by documenting problems and their solutions (2.89), which is significant and can lead to knowledge creation. The overall evaluation of knowledge storage and representation in the Libyan Foreign Bank is fair, but enhancements in the internal knowledge management strategies can be made through focusing on documenting problem solving for future reference and benefit.

Table 5. 6. Knowledge storage and representation results and mean scores

	Percentage					Mean Score
	Not at all	Small Extent	Moderate Extent	Great Extent	Very Great Extent	
The Bank has a comprehensive, adequate database which is available for all personnel	5.4	18.9	40.5	18.9	16.2	3.22
The Bank documents new acquired knowledge for each accomplished project	2.7	32.4	27.0	24.3	13.5	3.14
Problems faced are documented and methods used to solve these problems for future benefits.	8.1	29.7	35.1	18.9	8.1	2.89

Source: author's own computation using SPSS

Auditing the current knowledge is essential to ensure that the processes and procedures used in the bank are compatible with the best practices available in the banking industry. In knowledge auditing in the Libyan Foreign Bank, the highest mean score of 3.49 was given to the bank facilitating trainings, which is a fair but high score, as shown in Table 5.7. The process of the departments reviewing and modifying databases followed with a mean score of 3.05. Moreover, the indicator measuring the process of reviewing processes and procedures aggregated a mean score of 2.97, which is a fair score. Nevertheless, the lowest mean score of this category is 2.78, which was aggregated by the innovative ability of the departments to research and look for new knowledge for filtering and implementation. With a fair low mean score, it is evident that more effort can be put into a role for department managers to develop the knowledge in their departments, which can reflect on the overall knowledge auditing strategy of the bank. The overall assessment of knowledge is fair with possible enhancements.

Table 5. 7. Knowledge auditing results and mean scores

	Percentage					Mean Score
	Not at all	Small Extent	Moderate Extent	Great Extent	Very Great Extent	
Every Department is concerned to follow up new ideas in the work and to transfer it to the subordinates	8.1	24.3	51.4	13.5	2.7	2.78
Department review work processes and procedures to ensure up-to-date ness.	8.1	29.7	29.7	21.6	10.8	2.97
Banks continuously concerns in training courses to develop personnel skills and knowledge	2.7	24.3	16.2	35.1	21.6	3.49

Departments review and modify databases	2.7	21.6	48.6	21.6	5.4	3.05
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Source: author's own computation using SPSS

The application of the knowledge is the most apparent form of knowledge management in the organization, as it can be noticed by the clients and observed by the employees. The highest mean score in the category of knowledge application was aggregated by the easiness of applying work methods acquired through training (3.22), as shown in Table 5.8. The practice of the bank treating information provided by all sources and filtering it to benefit from it followed with a mean score of 3.08, which is a fair score on a 5-point Likert score, followed by the practice of assuring knowledge from trainings is implemented with a mean score of 3.03. The overall evaluation of knowledge application is fair, while there are possibilities for further enhancements to ensure that knowledge is applied and in the right manner.

Table 5. 8. Knowledge application results and mean scores

	Percentage					Mean Score
	Not at all	Small Extent	Moderate Extent	Great Extent	Very Great Extent	
The Bank treats all information received from any source and benefit from it.	5.4	27.0	29.7	29.7	8.1	3.08
Employees don't face difficulty in applying work methods they have been trained on.	0.0	18.9	45.9	29.7	5.4	3.22
There is always a follow up to ensure that subordinates use and apply method gained during training courses	2.7	27.0	45.9	13.5	10.8	3.03

Source: author's own computation using SPSS

Knowledge distribution and exchange mainly depends on the communication processes and practices that are implemented in the bank. This dimension has been evaluated through six indicators, as shown in Table 5.9, where the highest mean score of 3.59 was aggregated by the banks providing an intranet that allows its employees to share and exchange knowledge amongst them. The evaluation is close to the good scale point and followed by promoting training courses (3.49) and using emails in knowledge exchange (3.43). In an indicator that assesses the accessibility of the bank to needed information, a mean score of 3.24 was aggregated. Moreover, the practice of keeping experts' contacts available for further knowledge acquisition had a mean score of 3.16. The lowest mean score is attributed to the accessibility the employees of the bank have to the internet (3.08), which is considered a fair score. The overall assessment of knowledge distribution and exchange is fair; however, further enhancements can be made in order to increase its efficiency and benefit.

Table 5. 9. Knowledge distribution and exchange results and mean scores

	Percentage					Mean Score
	Not at all	Small Extent	Moderate Extent	Great Extent	Very Great Extent	
The bank's database includes a list of names and addresses of experts to call up for consultancy when needed	2.7	29.7	29.7	24.3	13.5	3.16
The bank does not face difficulty in accessing any information needed in any work.	2.7	21.6	37.8	24.3	13.5	3.24

The management fosters and promotes training courses to develop employees' skills in sharing and exchanging new ideas	0.0	24.3	21.6	35.1	18.9	3.49
The bank has an intranet which enables sharing and exchange of knowledge with others.	2.7	21.6	21.6	21.6	32.4	3.59
Employees can easily access internet to collect any information needed.	10.8	24.3	29.7	16.2	18.9	3.08
Employees use e-mail to share and exchange knowledge with others.	5.4	16.2	21.6	43.2	13.5	3.43

Source: author's own computation using SPSS

The second variable evaluated in the research is the perception of the bank's competitive advantage, which is evaluated through nine indicators evaluated on the same 5-point Likert scale used for knowledge management evaluation. As shown in Table 5.10, the highest mean score of 3.59 was aggregated by strategic decision making, followed by supporting knowledge access (3.43), developing innovative products and services (3.38), application of intellectual expertise (3.38), ease of sharing best practices (3.24), minimum loss of valuable knowledge (3.19) and easy adoption of new ideas (3.16). The aforementioned indicators are considered highly fair evaluations. Nonetheless, the lowest mean scores were aggregated by reduced training time (2.78) and reduction of redundant work (2.81), which are considered below fair evaluation. Therefore, ensuring the efficiency and value of training time and reviewing processes to reduce routine and unnecessary procedures is essential to enhance competitive advantage in the Libyan Foreign Bank (LFB).

Table 5. 10. Competitive advantage perception results and mean scores

	Percentage	$\Sigma$ $\phi$ $\alpha$
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	Not at all	Small Extent	Moderate Extent	Great Extent	Very Great Extent	
Reduction of redundant work	5.4	32.4	45.9	8.1	8.1	2.81
Reduced training time	10.8	21.6	48.6	16.2	2.7	2.78
Easy adoption of new ideas	5.4	16.2	45.9	21.6	10.8	3.16
Ease in sharing best practices	2.7	18.9	43.2	21.6	13.5	3.24
Minimum loss of valuable knowledge	2.7	18.9	40.5	32.4	5.4	3.19
Developing innovative products and services	5.4	13.5	37.8	24.3	18.9	3.38
Supporting knowledge access	5.4	13.5	37.8	18.9	24.3	3.43
Strategic decision making	5.4	5.4	40.5	21.6	27.0	3.59
Application of intellectual expertise	2.7	13.5	43.2	24.3	16.2	3.38

*Source: author's own computation using SPSS*

Furthermore, the mean scores of the seven dimensions of knowledge management and the mean score of competitive advantage were aggregated in order to provide a relative scale for comparison, as shown in Table 5.11. The results show that knowledge acquisition had the highest mean score of 3.550, followed by knowledge distribution and exchange (3.333). The lowest mean score was aggregated by knowledge creation (3.020), which suggests giving the priority to innovation and development as a drive to enhance knowledge management in the Libyan Foreign Bank. An aggregated mean score of 3.180 was achieved by knowledge management, which is similar to the mean scores of all of the seven dimensions above 3, indicating a fair level of knowledge management. The aggregated mean score for competitive advantage perception is 3.219, which is slightly higher than the knowledge management aggregated mean score. Further correlations and testing for significant differences are provided.

Table 5. 11. Aggregated mean scores for the study variables and dimensions

Variable	Dimension	Aggregated Mean scores	
Knowledge Management	Knowledge creation	3.020	3.180
	Knowledge acquisition	3.550	
	Knowledge filtering	3.095	
	Knowledge storage and representation	3.081	
	Knowledge auditing	3.074	
	Knowledge application	3.108	
	Knowledge distribution and exchange	3.333	
Competitive advantage perception		3.219	

Source: author's own computation using SPSS

Spearman's rho is used to establish the relationships between the seven dimensions of knowledge management. As shown in Table 5.12, the correlation factors between the different dimensions vary between 0.651 and 0.856, indicating moderate to strong correlations. All of the correlation factors are positive, which means that the increase in any dimension impacts the other dimensions with an increase. The strongest relationship is between knowledge auditing and knowledge application ( $\rho = 0.856$ , Sig.=0.001). The indicators of both dimensions depend mainly on the practices and processes of assurance: whether it was assurance of adequate and updated knowledge or assurance of proper knowledge application.

Another strong correlation was found between knowledge storage and representation and other two dimensions; knowledge distribution and exchange ( $\rho = 0.800$ , Sig. =0.001) and knowledge auditing ( $\rho = 0.805$ , Sig. =0.001). The relationships suggest that an eligible, practical and efficient knowledge storage and representation facilitates better distribution, exchange and auditing, and vice versa. Moreover, a strong correlation was found by

knowledge creation and application ( $\rho = 0.833$ , Sig. =0.001), which shows that better application leads to more innovation of knowledge and creating genuine knowledge by the bank increases the ability of the employees to apply it efficiently. The remaining relationships show similar relationships with lesser strength; however, the correlations are considered significant to the 99% confidence level and relationships between specific indicators are subsequently moderate to strong. The results show that enhances in certain processes and practices, within one or more dimension of knowledge management, has the potential to enhance other dimensions and the overall knowledge management level in the Libyan Foreign Bank.

Table 5. 12. Spearman's rho correlation factors between the dimensions of knowledge management ( $p < 0.05$ )

	1	2	3	4	5	6	7
1. Knowledge creation	1.000	.742**	.756**	.726**	.765**	.833**	.746**
2. Knowledge acquisition		1.000	.651**	.666**	.686**	.706**	.762**
3. Knowledge filtering			1.000	.708**	.714**	.717**	.654**
4. Knowledge storage and representation				1.000	.805**	.781**	.800**
5. Knowledge auditing					1.000	.856**	.770**
6. Knowledge application						1.000	.797**
7. Knowledge distribution and exchange							1.000

\*\* Correlation is significant at the 0.01 level (2-tailed)

Source: author's own computation using SPSS

Moreover, the seven dimensions of knowledge management are correlated with the competitive advantage perception using Spearman's rho, as shown in Table 5.13. The relationships vary between moderate ( $\rho = 0.654$  for relationship with knowledge storage and representation) and strong ( $\rho = 0.757$  for knowledge application). The correlations reflect the high influence of knowledge management on competitive advantage perception. Thus, the

development of knowledge management in the Libyan Foreign bank enhances competitive advantage. Nonetheless, the extent of the enhancement can be evaluated by understanding the most influential dimensions of knowledge management and prioritizing their development in order to increase the competitive advantage. Moreover, Table 5.14 shows the correlation between the independent and dependent variables: knowledge management and competitive advantage, respectively.

Table 5. 13. Spearman's rho correlation factors between the dimensions of knowledge management ( $p < 0.05$ )

	Competitive advantage perception
Knowledge creation	.739**
Knowledge acquisition	.690**
Knowledge filtering	.700**
Knowledge storage and representation	.654**
Knowledge auditing	.713**
Knowledge application	.757**
Knowledge distribution and exchange	.684**

\*\* . Correlation is significant at the 0.01 level (2-tailed)

Source: author's own computation using SPSS

Table 5. 14. Correlation between independent and dependant variables

	Competitive advantage perception
Knowledge creation	.769**

\*\* . Correlation is significant at the 0.01 level (2-tailed)

*Source: author's own computation using SPSS*

A one-way ANOVA testing was further performed to ensure the correlational analysis carried out earlier, as shown in Table 5.15, where differences in competitive advantage are tested based on the seven dimensions of knowledge management. Competitive advantage perception had significant differences at the level of  $p < 0.05$  based on all of the seven dimensions with significance levels between 0.000 and 0.015. Those results assure the close relationship between knowledge management and competitive advantage and show the influence of each dimension on the competitive advantage of the Libyan Foreign Bank (LFB).

Table 5. 15. One-way ANOVA testing for significant differences in competitive advantage based on knowledge management dimensions ( $p < 0.05$ )

Knowledge Management Dimension		Sum of Squares	df	Mean Square	F	Sig.
Creation	Between Groups	18.198	16	1.137	3.018	<b>.011</b>
	Within Groups	7.536	20	.377		
	Total	25.735	36			
Acquisition	Between Groups	22.609	16	1.413	4.041	<b>.002</b>
	Within Groups	6.994	20	.350		
	Total	29.604	36			
Filtering	Between Groups	19.094	16	1.193	3.204	<b>.008</b>
	Within Groups	7.450	20	.373		
	Total	26.544	36			
Storage and representation	Between Groups	29.103	16	1.819	5.966	<b>.000</b>
	Within Groups	6.098	20	.305		
	Total	35.201	36			
Auditing	Between Groups	20.111	16	1.257	2.834	<b>.015</b>
	Within Groups	8.872	20	.444		
	Total	28.983	36			
Application	Between Groups	17.462	16	1.091	3.575	<b>.004</b>
	Within Groups	6.106	20	.305		
	Total	23.568	36			
Distribution and Exchange	Between Groups	24.389	16	1.524	3.540	<b>.004</b>
	Within Groups	8.611	20	.431		
	Total	33.000	36			

*Source: author's own computation using SPSS*

Table 5.16 correlates the knowledge management dimensions to the concept on knowledge management using Spearman's rho. Knowledge application, distribution and exchange, and storage and representation yielded correlation factors with rho more than 0.9 at a significance level of 0.01, testing at  $p < 0.05$ . All of the seven dimensions have strong correlations with knowledge management.

Table 5. 16. Spearman's rho correlation factors between the dimensions of knowledge management and the concept of knowledge management ( $p < 0.05$ )

	Knowledge Management
Knowledge creation	.877**
Knowledge acquisition	.827**
Knowledge filtering	.814**
Knowledge storage and representation	.902**
Knowledge auditing	.887**
Knowledge application	.911**
Knowledge distribution and exchange	.903**

\*\* . Correlation is significant at the 0.01 level (2-tailed)

*Source: author's own computation using SPSS*

## 5.5 Discussion

The results shown in the previous section show knowledge management, competitive advantage, and the relationship between them from the Libyan Foreign Bank's employees' perspective. However, it is important to discuss the results in accordance with the literature's results and models that were

reviewed earlier. One of the most important models that were presented is the knowledge management matrix by (Gamble & Blackwell, 2001a) , which classifies knowledge management processes according to the type of knowledge and the approach used to utilize the knowledge. The results presented for knowledge management for the Libyan Foreign Bank show an aggregated score of 3.180, which is considered fair on the designed 5-point Likert scale. Such an overall evaluation shows that better improvements can be made following the knowledge management matrix. The goal of the knowledge management matrix is to increase the efficiency of the knowledge acquisition, filtering, auditing, and subsequently application as shown in the model presented by (Lloyd, 2002).

The knowledge matrix, shown as Figure 3.2, illustrates the approaches as stages that can be followed during the pursuit of knowledge and the types of knowledge according to their proven records. The sensing approach is a decision by the organization to monitor knowledge, the organizing approach is a decision by the organization to enhance knowledge, the socializing approach is a decision to test knowledge to put it into a more suitable context, and the internalizing approach is the decision to implement the knowledge and incorporate it into the current knowledge of the organization. The types of knowledge are categorized according to the relative easiness for the organization to acquire. Moreover, the actions that result from the intersection between an approach and a knowledge type are described according to the decision made by the organization towards the knowledge, which may be influenced by the banking and market environments.

For instance, if the bank has knowledge that requires more filtering and commitment level, while the knowledge is provided and relatively easy to acquire, then the decision is to adopt the sensing approach; however, such a decision may be impacted by the environment, where the bank is operating. Furthermore, it is beneficial to implement the knowledge management matrix in order to have a knowledge management map that allows the bank to categorize the knowledge and provide a clear development plan that serves its vision and mission. The aggregated mean score for knowledge

management indicates that a fair level of knowledge management, which means that further development can be made in order to bring its level towards a good and excellent evaluation. Implementing the knowledge matrix as a process knowledge management is expected to facilitate a more efficient knowledge acquisition and filtering.

The scale used to measure knowledge management in the current study categorizes its dimensions into seven main parts; creation, acquisition, filtering, storage and representation, auditing, application, and distribution and exchange. However, in the knowledge management equation presented by (J. Scott & Carrington, 2011), knowledge management is put into a hypothetical mathematical form; knowledge management is the result of adding people to knowledge through information technology amplified by the power of sharing, equation 3.1. Similar to the knowledge management equation concept, (Wickramasinghe & Bali, 2008) showed knowledge as the resultant of people, process and technology.

The knowledge management equation by (J. Scott & Carrington, 2011), intends to illustrate the process of knowledge management and present it as a logic. There are forty indicators that were used to measure the seven dimensions of knowledge management, which can also fall under one of the variables shown within the knowledge management equation. Nonetheless, information technology is not a variable rather than the tool that allows the interaction between people and knowledge.

The interaction between people and knowledge is further amplified by the ability to share the knowledge with the most and required people within the organization, which information technology, as well as practices of training and conference, plays a major role in it. Knowledge can be assumed as a constant that is added to the expertise of the people who are acquiring the knowledge, as well as performing filtering, auditing, application. Sharing is mainly performed through storage, representation, distribution and exchange, while knowledge creation is a resultant to these operations. In order to be able to quantify the dimensions into the terms that were used by (J. Scott & Carrington,



2011) , group of dimensions could be averaged, added or subtracted; however, the most important factor that needs to be considered in developing a mathematical logic to knowledge management is to represent all of the dimensions. Moreover, the development of such a mathematical logic shall be based on a definition and indicators that has consensus amongst the researchers, scholars, consultant, and professionals.

The current study provides an assessment of knowledge management and competitive advantage from the perspective of the banking and management professionals of the Libyan Foreign Bank (LFB) through several indicators. Other indicators can be considered in order to incorporate the actual performance of knowledge management in a banking organization. The main purpose of this study was to establish the relationships between knowledge management and competitive advantage from the perspective of banking professionals at a major banking institution in Libya. Thus, a mathematical logic was not intended to be as the result and the method of average was used to compare the results to the used 5-point Likert scale and statistical analysis techniques were used to establish relationships and differences. Nevertheless, through an understanding of the measurement tool that was used in this study and its application to other cases, there could be a possibility to develop a feasible mathematical logic that helps organizations to measure their success in knowledge management.

As shown in Table 5.11, each of the dimensions are aggregated through a mean score and further all aggregated into a final mean score. The method is used to simplify the proven relationship through the Spearman's rho analysis in Table 5.13. Moreover, the equation of (J. Scott & Carrington, 2011) can be written in as shown in Equation 5.1, where knowledge management is measured on a scale varying between 1 and the square of the scale. In the current study, a 5-point Likert scale is used, which makes the maximum value that can represent knowledge management is thirty. Furthermore, knowledge is presented as a constant of 1.

$$KM = C + \left( \left( \frac{Ac + F + Au + Ap}{S} \right) + 1 \right)^{\frac{S \&R + D \&E}{S}} \quad (5.1)$$

Where, KM is knowledge management with a minimum of 1 and the maximum of  $S^2+S$ , C is creation, Ac is acquisition, F is filtering, Au is auditing, Ap is application, S&R is storage and representation, D&E is distribution and exchange, and S is the Likert scale used to measure the indicators under each dimension.

Based on the suggested model, the knowledge management measurement for the Libyan Foreign Bank according to the developed logic of (J. Scott & Carrington, 2011) is as the following:

$$KM = 3.020 + \left( \left( \frac{3.550 + 3.095 + 3.074 + 3.108}{5} \right) + 1 \right)^{\frac{3.081+3.333}{5}} = 8.128$$

Alternatively, if all variables were substituted by the aggregated mean score for knowledge management as calculated in Table 5.11, which is 3.180, while keeping the scale value as 5, the result is as the following:

$$KM = 3.180 + \left( \left( \frac{3.180 + 3.180 + 3.180 + 3.180}{5} \right) + 1 \right)^{\frac{3.180+3.180}{5}} = 8.180$$

The difference between the two results is 0.6% which can increase according to the skewness of the dimensions' mean score. Results with minimum skewness make it possible to graph knowledge management according to the logic presented by (J. Scott & Carrington, 2011), as shown in Figure 5.2.

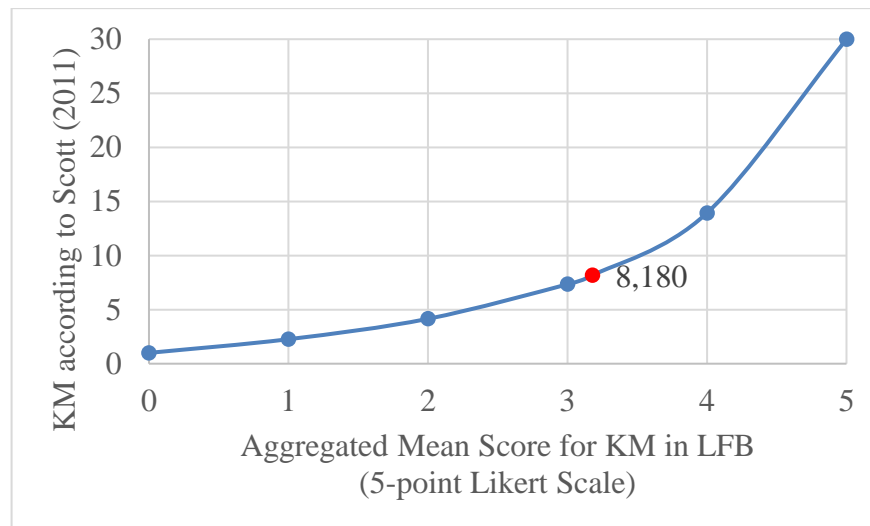


Figure 5. 2. Application of knowledge management equation by (J. Scott & Carrington, 2011) on the case study of the Libyan Foreign Bank (LFB)

The graphical representation of the knowledge management equation presented by (J. Scott & Carrington, 2011) suggests that the organization's focus on the internal systems that performs storage, representation, distribution and exchange lead to an exponential growth in knowledge management, especially for current knowledge management evaluated between fair (3) and good (4) on a 5-point Likert scale. Furthermore, the results of applying a developed model for knowledge management indicates that there could be a possibility to prove such a model for overall knowledge management measurement.

Based on the correlational analysis presented in Tables 5.12, 5.13 and 5.16, the relationships between the different knowledge management dimensions can be plotted similar to the model presented by (Lloyd, 2002) in Figure 2.3. Nonetheless, the model showed four dimensions to knowledge management, where filtering, storage and representation, distribution and exchange, and auditing are not shown. The author assumes that all of the missing dimensions are included in the knowledge sharing dimension. Moreover, the relationships

can also be established with competitive advantage correlations, based on results in Table 5.13.

Figure 5.3 below shows the correlations between knowledge management dimensions and competitive advantage. The network structure is developed from the relationship between knowledge management and its dimension, Table 5.16, while the structure logic is inspired by (Lloyd, 2002). The Spearman's rho correlations are taken from the statistical analysis performed on the Libyan Foreign Bank (LFB). Missing dimensions are added along with their relationships with other dimensions through the process of knowledge management reviewed in (D. S. Baldwin, 2001) and (W. Botha, 2008). The relationship between competitive advantage and the knowledge management dimensions are shown. The presented model in Figure 5.2 illustrates the process and the relationship between knowledge management and competitive advantage, while the latter is a result of a successful knowledge management strategies and processes.

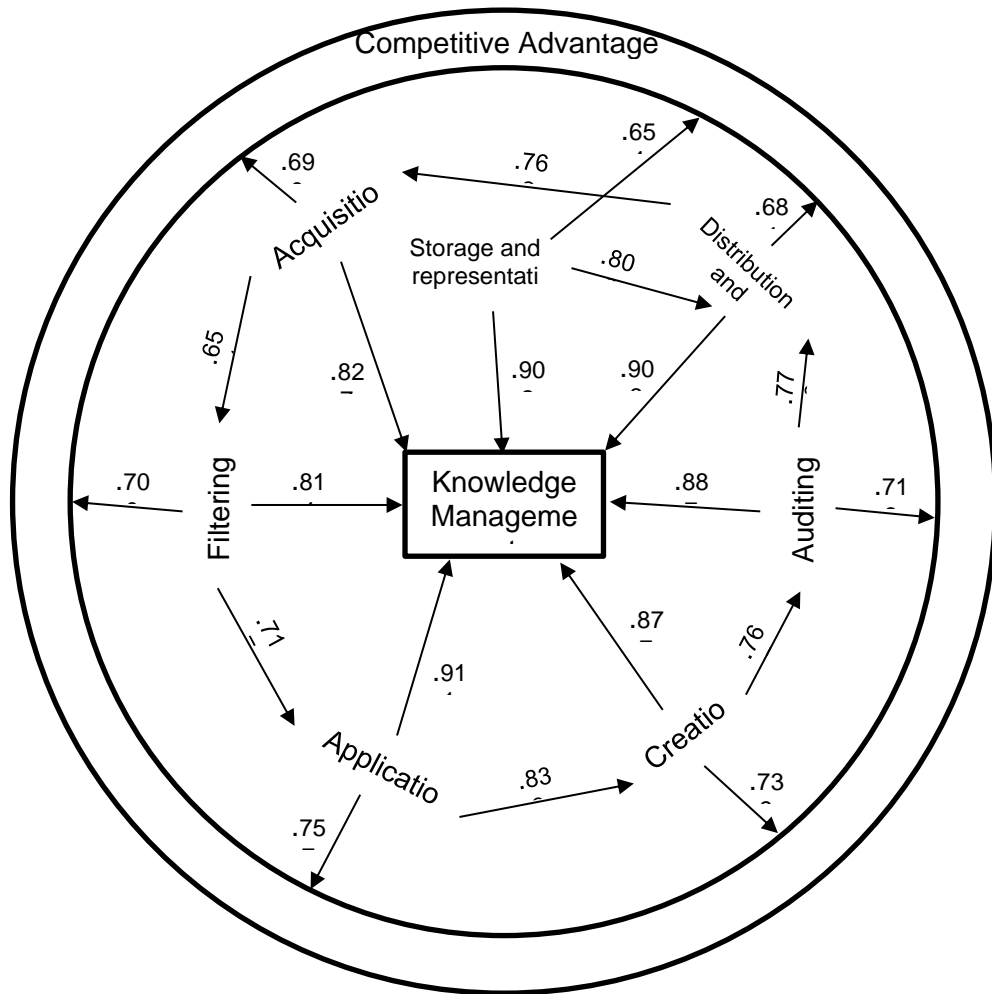


Figure 5. 3. The network of Knowledge Management & Competitive Advantage with Spearman's rho relationships for the case study of the Libyan Foreign Bank (LFB)

The overall findings of the current research show a strong positive relationship between knowledge management and its dimensions, and competitive advantage ( $r = 0.769$ ,  $p < 0.01$ ). These results confirm the findings of findings of ( Rezaee and Jafari ,2015), who found strong positive relationships between knowledge management and each of market-centered competitive advantage ( $r = 0.77$ ,  $p < 0.01$ ) and customer-centered competitive advantage ( $r = 0.76$ ,  $p < 0.01$ ). The authors also found a moderate positive relationship between knowledge management and financial-centered competitive advantage ( $r = 0.53$ ,  $p < 0.01$ ).

(Khoualdi and Binibrahim, 2019) also confirmed a moderate to strong relationship between the knowledge management and competitive advantage, as whole concepts and in their sub-dimensions.

Moreover, the mean values of the dimensions of knowledge management in the case of Libyan Foreign Bank (LFB) ranged between 3.020 and 3.550 in the dimensions, while the overall mean score was 3.180 on a 5-point Likert scale. These results show lower levels of knowledge management than most of literature studies. (Ugurlu and Kizildag ,2013) showed knowledge management dimension mean scores that ranged between 3.42 and 3.81 for the case study of banks in Turkey.( Bourini et al ,2013) conducted a study on the banking sector in Jordan and found that knowledge creation had a mean score of 4.57, knowledge acquisition had a mean score of 4.27, knowledge filtering had a mean score of 4.58, knowledge storage and representation had a mean score of 4.44, knowledge auditing had a mean score of 4.70, knowledge application of 4.50, and knowledge distribution and exchange had a mean score of 4.69, which are at least 40% higher than the results aggregated by the current research. The overall mean was 43% higher than the level of knowledge management found in LFB through the current research. (Shawaqfeh et al, 2019) also showed that the overall knowledge management in Jordanian banking sector is 3.423, which is 7.6% higher than the one found for LFB.

## **CHAPTER 6**

### **RESULTS AND RECOMMENDATIONS**

Competitive advantage is considered one of the most important factors in creativity, innovation and human resources and intellectual capital generation. The intellectual capital with its human resources plays an essential role in making strategic goals and monitoring and analyzing the external environment and supervising internal processes and assessing efficiency in all economic operations. In addition, it is concerned with helping and increasing productivity especially in the banking sectors. This methodology or approach and within this framework is the strategic guide as well as in the organized use and investment of human resources and intellectual capital and to achieve the competitive advantage for the organization or the sector and their status in competing with others in the market or in all economic operations. Based on that, many organizations have announced that their human resources distinguish them from their competitors, as their human resources have the strategic value especially those with capabilities, technical and professional competence and outstanding experience to for intellectual capital management and utilizing it for servicing knowledge management within the competition factor in the economic operation. Thus, they seek to attract those

and keep them and have they continued with the organization or the sector as competitive elements with their counterparts in other sectors.

As a result, it has become well known that human resources and its intellectual capital contribute in the role of management through the competitive advantage of the organization or the sector. Personnel can be an essential sufficiency in the organization or the sector when they transform into a working cell comprised of creator and innovators in addition to their abilities and experience enabling them to make decisions and policies. This is what we shall address in the first part of the research and shall research the different definitions attributed to competitive advantage to move on after that to identifying its types and quality criteria so that we shall arrive at the different sources and resources of this advantage and its multiple relations with the role of knowledge and human development ( through creativity and innovation) as a basic entry with an essential relevance in achieving competitive advantage for modern business organizations and sectors , and to accommodate the fast transformation in global markets including banking sectors. and due to the importance, a sensitivity of this subject matter, the focus of the study shall be about being introduced to the competitive advantage concept and the role of human development and investment of intellectual capital in achieving competitive advantage with the relevant effects produced by these elements on the role of knowledge management in the context of a globalized economy, and also shall review a study summary about (creativity, innovation and innovators in development of banking sector).

For bank managers, there are certain domains of knowledge management that requires focusing in order to be able to achieve competitive advantage. Three knowledge management dimensions requires additional improvements: creation, filtering, and auditing. It is evident that these domains are related to innovation and auditing disciplines in the bank. It is recommended that future and strategic plans contain clear paths for improving innovation and auditing within the different departments, as well as similar plans for knowledge management. Moreover, additional enhancement can be applied to knowledge storage and application. It is recommended that a review is performed on



knowledge storage infrastructures of the bank's subsidiaries, in addition to knowledge management tools and processes that are currently in place. These reviews should enable managers to identify shortcomings within knowledge storage systems and allows them to provide adequate plans for development. In knowledge application, managers are recommended to establish standard processes that identify knowledge types and their usages during different operations. These standards can be acquired through international partners that cooperate with LFB in order to have a base for the bank's standards. Thereafter, the standards can be adjusted according to LFB's special needs. The strong relationship between the dimensions of knowledge management and competitive advantage is evident through the findings of the current research. Thus, managers are recommended to include knowledge management as a key indicator in performance measurements and annual reports.

The practical implications of the current research are divided into two main points. The first one is the strong positive relationship that was found between knowledge management, as a whole and as sub-dimensions, and competitive advantage, which implies knowledge management as a clear path to achieve a better market position, organizational performance, and an overall advantage over competitors. This finding should strengthen the position of investments allocated to enhancement of knowledge management systems in the banking sector in Libya, especially for Foreign Libyan Bank (LFB). The second one is the low level of knowledge management found in the case study of the current research, which should motivate executives in the bank to diagnose issues according to the results of the research, propose development plans, and monitor their execution to ensure the elevation of its position in their organization. The strong relationship with competitive advantage should imply the current market position of LFB in comparison with their competitors. Therefore, knowledge management can be used as an indicator of the performance of their operations.

For future research, performing an assessment for different banks, and other types of organizations in Libya or worldwide. Combined with the current

research, an equation can be developed to measure the level of knowledge management in any organization. Similarly, competitive advantage can also be measured through certain key indicators, including perception indicators that were used in this research. A clearer mathematical relationship can result from such a research. The results presented in the current study suggest that a moderate to strong relationship exists between the dimensions of each concept and based on banking professionals' perceptions. Therefore, a mathematical illustration of this relationship will motivate organizations, specifically banks, to realize the importance of knowledge management in achieving competitive in their industry or increase the efficiency of the current knowledge management strategies.

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## APPENDIX

### QUESTIONNAIRE

The Purpose of this study is to explore the Role of Knowledge Management in achieving competitive advantage in Libyan banks.

### **PART A: BIO DATA OF BANK AND EMPLOYEES**

1. Designation \_\_\_\_\_

2. Number of employees \_\_\_\_\_

### **PART B: THE EXTENT OF ADOPTION OF KNOWLEDGE MANAGEMET PRACTICES BY THE BANK**

Knowledge management practices are following please indicate your level of agreement to each of the below mentioned items regarding whether the bank adopt them using the scale of 1-5 where 1= Not at all; 2 = Small extent; 3 = Moderate extent; 4 = Great extent & 5 = Very great extent	<b>Not at all</b>	<b>Small extent</b>	<b>Moderate extent</b>	<b>Great Extent</b>	<b>Very Great Extent</b>
<b>Knowledge Creation</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Developing abilities and skills of subordinates					
Concerns with new ideas proposed by employees					
Motivating and rewarding creative employees					
Encouraging team work and cooperation instead of competition					
Encouraging employees to strive for new ideas from all sources					
Initiativeness to carry out jobs by methods believed as appropriate					

Existence of a strong commitment to new ideas					
Facilitation of ideas sharing among employees					
<b>Knowledge Acquisition</b>					
Seeking the help of external experts and specialists to transfer their knowledge and experience to existing personnel.					
Participation in conferences and workshops inside and outside Libya as a method of obtaining knowledge					
Encouraging personnel to join training programs inside and outside Libya to gain knowledge in their fields					
<b>Knowledge Filtering</b>					
In case of adopting successful international communication practices, the bank modifies these practices to be suitable for Libya conditions and environment.					
The bank filters obtained knowledge and determines the most important part to be distributed and exchanged between personnel					
Each department determines important knowledge in its field to be distributed and exchanged between personnel.					
When new knowledge is created the bank filter it to be suitable for work environment					
<b>Knowledge Storage &amp; Representation</b>					

The Bank has a comprehensive, adequate database which is available for all personnel					
The Bank documents new acquired knowledge for each accomplished project					
Problems faced are documented and methods used to solve these problems for future benefits.					
<b>Knowledge Auditing</b>					
Every Department is concerned to follow up new ideas in the work and to transfer it to the subordinates					
Department review work processes and procedures to ensure up-to-date ness.					
Banks continuously concerns in training courses to develop personnel skills and knowledge					
Departments review and modify databases					
<b>Knowledge application</b>					
The Bank treats all information received from any source and benefit from it.					
Employees don't face difficulty in applying work methods they have been trained on.					
There is always a follow up to ensure that subordinates use and apply method gained during training courses					
<b>Knowledge Distribution &amp; Exchange</b>					



The bank's database includes a list of names and addresses of experts to call up for consultancy when needed					
The bank does not face difficulty in accessing any information needed in any work.					
The management fosters and promotes training courses to develop employees' skills in sharing and exchanging new ideas					
The bank has an intranet which enables sharing and exchange of knowledge with others.					
Employees can easily access internet to collect any information needed.					
Employees use e-mail to share and exchange knowledge with others.					

**PART C: THE EXTENT TO WHICH ADOPTION OF KNOWLEDGE  
MANAGEMENT PRACTICES AFFECT THE COMPETITIVE ADVANTAGE OF  
THE BANKS**

<p>Knowledge management practices are following please indicate your level of agreement to each of the below mentioned items regarding whether the bank adopt them using the scale of 1-5 where 1= Not at all; 2 = Small extent; 3 = Moderate extent; 4 = Great extent &amp; 5 = Very great extent</p>	<b>Not at all</b>	<b>Small extent</b>	<b>Moderate extent</b>	<b>Great Extent</b>	<b>Very Great Extent</b>
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Reduction of redundant work					
Reduced training time					
Easy adoption of new ideas					
Ease in sharing best practices					
Minimum loss of valuable knowledge					
Developing innovative products and services					
Supporting knowledge access					
Strategic decision making					
Application of intellectual expertise					

## SIMILARITY REPORT

### ROLE OF KNOWLEDGE MANAGEMENT IN ACHIEVING COMPETITIVE ADVANTAGE IN LIBYAN FOREIGN PARTICIPATION BANKS

#### ORIGINALITY REPORT

<b>11</b> %	<b>4</b> %	<b>5</b> %	<b>7</b> %
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

#### PRIMARY SOURCES

<b>1</b>	Du, Maobao, Fengxia qiu, and wenjing Xu. "Construction of Enterprisesâ€™ Financial Knowledge Management System (EFKMS)", <i>Procedia Environmental Sciences</i> , 2011. Publication	<b>1</b> %
<b>2</b>	Zainab Abdulshaheed Mohsen. "The Significance of Knowledge Management Systems at Financial Decision Making Process", <i>International Journal of Business and Management</i> , 08/01/2011 Publication	<b>1</b> %
<b>3</b>	docplayer.net Internet Source	<b>1</b> %
<b>4</b>	Submitted to University of Wales central institutions Student Paper	<b>1</b> %
<b>5</b>	ijeais.org Internet Source	<b>1</b> %

Submitted to CVC Nigeria Consortium

**ETHICS COMITEE APPROVAL**

31.05.2021

Dear Ghada Hasan Ben Oman (20153771),

Your query regarding your research titled “Role of Knowledge Management in Achieving the Competitive Advantage in Libyan Banks: Case of Libyan Foreign Banks” has been evaluated. Since you were not informed about the ethics committee application process by your supervisor, it is decided that the failure to deliver the revisions to the ethics committee was not deliberate and you can defend your thesis on the condition that the Graduate School gives you the permission.

Assoc. Prof. Dr. Direnç Kanol

Rapporteur of the Ethics Committee

