

**IMPACT OF KNOWLEDGE MANAGEMENT PROCESS ON
ORGANIZATIONAL INNOVATION IN SELECTED DEPOSIT
MONEY BANKS IN ASABA**

BY

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**BEING A DISSERTATION SUBMITTED TO THE POSTGRADUATE
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DECLARATION

I hereby declare that this dissertation is my original work and has not been previously presented wholly or in part for the award of other degrees.

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CERTIFICATION

This is to certify that the research work “Impact of Knowledge Management Process on Organizational Innovation in Selected Banks in Asaba” was carried out by ENEH, Chinedu (PG/15/16/240483) of the Department of Business Administration and Marketing, Faculty of Management Sciences, is adequate in scope and contents and approved by the undersigned on behalf of Delta State University Asaba Campus.

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DEDICATION

This project is dedicated to Almighty God for his grace, mercies and insight to complete this work. It is also dedicated to my new baby Kenechukwu.

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I am grateful to God Almighty for his grace and mercies that has seen me through every phase of my life since the very beginning. For in him I find all the answers to life's questions and challenges. All the glory, honour, praise and adoration are unto his holy name.

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ABSTRACT

The study examined the impact of knowledge management process on organizational innovation in selected Banks in Asaba. The specific objectives of the study were to: ascertain the influence of knowledge acquisition on organizational innovation, assess the relationship existing between knowledge application and organizational innovation, examine the effects of knowledge sharing on organizational innovation and determine the effect of knowledge protection on organizational innovation. The main research instruments used for the study was structured questionnaire, the questionnaire reliability was tested using Alpha Cronbach based test with the aid of Stata version 13 software, the result showed an Alpha Cronbach value ranging from 0.798 to 0.852 for all the constructs. Multiple regression was the statistical tool adopted to test the hypotheses of the study. Survey research design was employed. The sample size of 210 was used from the population of 548. Survey research method was adopted. The analytical tool employed was correlation, multiple regressions and post regression diagnostics test were carried out. The study found that there is a significant positive relationship between Knowledge management and organizational innovation in the selected Banks in Asaba, The study concluded that when the acquired knowledge is applied within the organization in an effective and creative manner, the rate of innovation will increase because Knowledge application has a significant effect on organizational innovation. Organizations that encourage knowledge sharing are also bound to be more innovative than those that do not because Knowledge sharing has a significant effect on organizational innovation. When knowledge sharing is encouraged within the organization, ignorance will give way. The study also recommended that management of Banks should invest into knowledge management process so as to be innovative and this will improve their over-all performance.

TABLE OF CONTENTS

Declaration	i
Certification	ii
Dedication	iii
Acknowledgements	iv
Abstract	v
Table of Content	vi
List of Table	ix
List of Figures	x

CHAPTER ONE: INTRODUCTION

1.1	Background to the Study	1
1.2	Statement of the Problem	4
1.3	Research Questions	5
1.4	Objectives of the Study	5
1.5	Research Hypotheses	6
1.6	Significance of the Study	6
1.7	Scope of the Study	7
1.8	Limitations of the Study	7
1.9	Profile of the Nigeria Banking Sector	8
1.10	Operational Definition of Key Terms	10

CHAPTER TWO: LITERATURE REVIEW

2.1	Introduction	11
2.2	Conceptual Review	11
2.2.1	The concept of Knowledge Management	11
2.2.2	Organizational innovation	12
2.2.3	Knowledge Acquisition	14
2.2.4	Knowledge Application	15
2.2.5	Knowledge Sharing	16
2.3	Theoretical Review	32
2.3.1	Knowledge-based view	32
2.3.2	Resource-based view	34
2.4	Competence-based view	36
2.5	Capability Perspective Theory	39
2.6	Empirical Review	44
2.7	Summary of the reviewed Literature	50

CHAPTER THREE: RESEARCH METHODOLOGY

3.1	Introduction	51
3.2	Research Design	51
3.3	Population of the Study	51
3.4	Sample Size	53
3.5	Sampling Techniques	54
3.6	Instrument for Data Collection	55
3.7	Validity of the Research Instrument	55

3.8	Reliability of the Research Instrument	56
3.9	Method of Data Collection	56
3.10	Techniques for Data Analysis.	57

CHAPTER FOUR: RESULTS AND DISCUSSION

4.1	Introduction	58
4.2	Analysis of Respondents Profile	58
4.3	Test of Hypotheses	65
4.4	Discussion of Results	67

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATION

5.1	Summary of Findings	69
5.2	Conclusions	70
5.3	Recommendations	70
5.4	Contributions to Knowledge	71
5.5	Suggested Areas for Further Study	71
	References	72
	Appendix	76

LIST OF TABLE

Table 3.1:	Banks and the population	52
Table 3.2:	Sample Size Apportionment	54
Table 3.3.	Reliability Test	58
Table 4.1	Demographic Profile of Respondents	58
Table 4.2:	Effect of Knowledge acquisition on organizational innovation	59
Table 4.3:	Effect of Knowledge sharing on organizational innovation.	60
Table 4.4:	Effect of Knowledge protection on organizational innovation	60
Table 4.5:	Organizational Innovation	61
Table4.6:	Descriptive Statistics	62
Table4.7:	Correlation Matrix	62
Table 4.8:	Regression Result of Knowledge Management and Organizational Innovation	63
Table 4.9:	VIF Test	64

LIST OF FIGURES

Figure 2.1: Conceptual Framework

18

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Knowledge management is an imperative intellectual asset when used effectively; it is also a functional tool for organizations to contend in the amplified levels of market competition effectively. In this twenty first century knowledge has become the key economic resource and the dominant source of comparative edge which leads to effective organizational performance. Organizations can improve the creation of new thoughts or knowledge, knowledge accessibility, application of the accessible knowledge and communication within employees by efficiently managing the knowledge (Plessis, 2007).

Innovation is a vital factor that has a profound influence on organization's survivability, performance, and competitiveness (Plessis, 2007; Huang & Li, 2009). Innovation is best described as a generation, improvement, and accomplishment of something new into the organization as well as the extension of new products, services, processes, technologies, managerial systems or structures (Damanpour, 1991 and Damanpour & Evan, 1984).

It has been also defined as a knowledge process that alters knowledge into new products and services (Wilson, 2007). According to these definitions, organizational innovation includes diverse types of innovations pertaining to all parts and operations of an organization fairly to being symbolized by a single element as described in some preceding studies (Cooper, 1998; Damanpour, 1987).

Scholars have long argued that there are diverse types of innovation connected with dissimilar processes in organizations (Gopalakrishnan and Damanpour, 1997). Prior research

shows that there are three forms of organizational innovation types, which are administrative and technical, product and process, and radical and incremental innovation (Damanpour, 1991; Gopalakrishnan & Damanpour, 1997).

These innovation types, which have been classified as contrasting pairs, have gained increasing concentration in preceding research. According to the analysis of Damanpour (1991), when diverse types of innovation are measured in the research studies, there will be more dependable results rather than the investigation of a single innovation.

Evan (1966) and Damanpour (1987, 1991) state that the peculiarity among administrative and technical innovations is predominantly imperative for studies on organizational innovation since it reflects a more all-purpose dissimilarity among social structure and technology, and two innovation types can symbolize changes introduced in a broad range of tasks within organizations.

In organizations, an imperative antecedent of adopting and implementing diverse types of innovations is knowledge management (Darroch & McNaughton, 2002; Antonelli, 1999; Carneiro, 2000; Dove, 1999; Nonaka & Takeuchi, 1995) Knowledge management improves engagement in innovation through generating, using, and sharing new ideas and utilization of the organization's thinking power (Huang & Li, 2009; Darroch & McNaughton, 2002; Lin & Lee, 2005; Argote et al., 2003; Plessis, 2007).

Put another way, it amplifies the espousal and accomplishment of innovations by enhancing organizational innovativeness. Nonetheless, there are very few studies in the literature that observe the impacts of knowledge management on organizational innovativeness which

consequently boosts the espousal and accomplishment of different innovation types.

Accordingly, the main reason of the study is to discover the associations linking knowledge management processes (i.e. knowledge acquisition, knowledge application, and knowledge sharing) and two major innovation types. Management practitioners are putting more prominence on knowledge management (KM), which includes the steps of application, acquisition, and sharing of knowledge and stands as one of the critical factors for organizational innovation and thereby gaining competitive advantage (Hall, 2006).

Effective management of knowledge is *vita* and has a profound influence on organization's effective performance, creativity and competitiveness (Plessis, 2007). Innovation can be described as a generation, improvement, and accomplishment of something new in the organization as well as the extension of new products, services, processes, technologies, administrative systems or structures (Wilson, 2007).

In organizations, an imperative predecessor of adopting and implementing diverse types of innovations is knowledge management, because KM enhances engagement in innovation through generating, using, and sharing new ideas and utilization of the organization's thinking power, and it increases the espousal and accomplishment of innovations through enhancing organizational innovativeness (Huang & Li, 2009; Darroch and McNaughton, 2002).

KM helps organization and society at large to thrive knowledge-driven cultures which promote innovation (Plessis, 2007). Innovation is allied to change, which can be radical or incremental, it is really reliant on the availability of knowledge and thus the complexity

created by the detonation of richness and reach of knowledge has to be identified and managed to ensure successful innovation (Adams and Lamont, 2003).

1.2 Statement of Problem

The one end foremost challenge of contemporary organizations in the 21st century is that business and marketing environment is so competitive than ever before and saturated with innovative products and services, putting many Banks on the search for the best way of doing things better so as to remain relevant in the industry. Hence the need for effective knowledge management that can transform knowledge into new products and services cannot be over stressed.

There is lack of close contacts, interactions and knowledge sharing in the Banking sector which support innovativeness in the Banks that can improve their effective performance and a positive impact on openness to innovation or innovativeness. Thus has resulted to abysmal performances by some Banks.

Corporate downsizing in the Banking sector as resulted to intangible cost associated with loss of skills, inefficiency and replacement costs, loss of investment in training and loss of staff expertise. The loss of vital organizational memory is one of the negative and expensive effects Banks have suffered in downsizing. If managers do not think and plan ahead, their Banks risk losing key skills and experiences as well as valuable knowledge when employees are moved out of their working units or leave the organization entirely.

Organizations and their knowledge personnel are faced with problem in knowledge management due to their firm's value depend on the capacity of the organization to establish or invent and share knowledge across the entire organization in an effective way for achieving a sustainable competitive advantage, which is the same line with organizational

innovation in solidifying performance and this is consequently compelling drivers for knowledge management (Samina, Tahira, Muhammad, and Syed, 2015).

Most employee are ignorant of the need for acquiring, pertaining, and sharing knowledge among the purposeful areas of an organization which create conditions to promote enthusiasm of organizational members to partake in innovation activities. Therefore the study assesses the effect of knowledge management on organizational innovation

1.3 Research Questions

- i. Does knowledge acquisition influence organizational innovation?
- ii. What are the relationships between knowledge application and organizational innovation?
- iii. What are the effects of knowledge sharing on organizational innovation?
- iv. What are the effects of knowledge protection on organizational innovation?

1.4 Objective of the Study

The general objective of the study is to examine the impact of knowledge management process on organizational innovation. The specific objectives are to:

- i. ascertain the effects of knowledge acquisition on organizational innovation.
- ii. assess the effects existing between knowledge application and organizational innovation.
- iii. examine the effects of knowledge sharing on organizational innovation.
- iv. determine the effect of knowledge protection on organizational innovation.

1.5 Research Hypotheses

- i. Knowledge acquisition has no significant positive influence on organizational innovation.
- ii. Knowledge application has no significant positive relationship with organizational innovation.
- iii. Knowledge sharing has no significant positive effects on organizational innovation.
- iv. Knowledge protection has no significant positive effects on organizational innovation.

1.6 Significance of the Study

Prior studies on the effects of knowledge management on organizational innovativeness have provided inconsistent results (Plessis, 2007). Many scholars have thus far argued that effective management of knowledge leads to organizational innovation, some found positive relationship

(Hammandy et al., 2013; Darroch and McNaughton, 2002; Lin and Lee, 2005; Plessis, 2007), while others found no relationship (Huang and Li, 2009; Nonaka & Takeuchi, 1995). Davies (2005) opines in his study that it results to information overload. Hence the study is faced with the task of providing empirical evidence to clarify this gap in literature.

The knowledge gained from the study will enable organizational leaders, and managers to put in place suggestions from the findings for effective management and utilization of knowledge within and outside the organization that will propel organizational innovativeness.

The outcome of the study will serve as a reference material for future researchers on the area of knowledge management, innovation, organizational survival and globalization.

1.7 Scope of the Study

The conceptual scope of the study covers the impact of knowledge management process on organizational innovation, the dimensions of knowledge management which includes: knowledge acquisition, knowledge application, knowledge sharing and knowledge, constituting the independent variables, while the dependent variable is organizational innovation.

The geographical scope is restricted to Asaba metropolis, hence the study focused on Ten (10) selected deposit money banks in Asaba which includes: First bank, FCMB, Access Bank, Eco Bank, Fidelity Bank, Zenith Bank, GTB, Union Bank, Skye Bank and UBA. The reason for selecting these Banks in Asaba is due to proximity and these Banks are involved in the practice of knowledge management through management meetings.

The research gathered diversified opinions on the subject matter and allowed for precision in the identification of knowledge management. The study is expected to be completed within the period of eighteen (18) months of the programme.

1.8 Limitations of the study

One major limitation is the methodology adopted in this study. This is because the small sample size is considerably not too large compared to the whole population in the Nigeria Banking industry. The busy time schedule of the respondents affects their respond rate and willingness to participate in this research work.

There is also the fear that the respondents are reluctant to give some vital information for fear of the unknown but with mutual and close relationship established, such fear were erased out of their mind.

1.9 Profile of the Nigeria Banking Sector

There has been exceptional progress in Nigerian banking sector lately, even when the rest of the world was battling with financial meltdown and hatch economy. The size of banking among services shows a very impressive and sound growth in the banking sector. However on the flip side, according to (<http://www.ibef.org/industry/banking.>) banks are slashing jobs since 2008 global credit crisis due to slowing down of operations. The loss of a lucrative job creates tremendous stress among employees resulting in psychological problems like frustration, strain, anxiety etc. that creates a fear and may affect the performance of the bank employees which may ultimately affect growth of the banking sector.

The Nigerian financial market was hitherto dominated by small assets-base banks that were not internationally competitive. Ovia (2002) noted that in repositioning the Nigerian financial market for competitiveness in the 21st century the expansion of information technology would play central catalytic role in emergent the market. Thus in the face of the keen competition in the industry, market players must set up new survival strategies. Financial institutions world-wide are obliged by the appearance of information technology to fast-forward to more essential transformation of business systems and models.

It is in the same spirit that Bill Gates (2002) noted that: “The triumphant companies of the next decades will be ones that use digital tools to reinvent the way they work. These companies will make decisions swiftly, act competently and unswervingly touch their

customers in positive ways. Going digital will put you on the leading advantage of the shock signal of change. That will ruin the old ways of doing business”.

We are now in a new period of technological revolution. Countries and industries are beginning to contend and fight over run of information rather than natural resources. The vogue today is e-platform which implies offering financial services in the course of electronic media to different customers irrespective of place, time and distance (Dabwor, 2011). A customer friendly environment with high quality service delivery needs to be created in order to increase high patronage.

To this end, development in the banking sector and institutional arrangements for transmission mechanism as well as other operational areas of banking operations to guarantee equipped competence has become a compelling necessity. The centrality of the human resource in enterprise management is a usually accepted aphorism. It is in this light that management needs to make adequate investment in human factor.

It should be noted that there is no competitive mace more compelling and successful in the banking industry than the superiority of its human resources. As remarked by Sanusi (1995) machines and advanced technology can provide informational and transactional convenience but only manpower can provide the trustworthiness, creativity and care that can build long-term customer and client relationships.

In other words, there is need for employees to increase their emotional intelligence to enable them cope with the wind of technological development. According to Ochejele (2000), no matter how precise or knowledgeable a computer is, it cannot feed itself with input and it can neither offer a friendly smile nor a warm handshake.

1.10 Operational Definition of Key Terms

Knowledge Management Process(KMP): KMP can be described as the systematic processes by which an organization identifies, creates, captures, acquires, shares and leverages knowledge.

Explicit Knowledge: knowledge that can be expressed in words and numbers and can be easily shared with others in a number of ways, formulae, specifications, or manuals etc.

Tacit Knowledge: knowledge that is embedded in experience and laden with emotion, values and ideals which are difficult to share with others people.

Knowledge Acquisition: Knowledge acquisition is the act of acquiring or creation knowledge within and outside the organization

Knowledge Application: knowledge application has to do with usage of already acquired knowledge to the benefit of the organization

Knowledge Sharing: knowledge sharing has to do with the dissemination of knowledge from person to another.

Knowledge Protection: Knowledge Protection is about ensuring that the knowledge created and stored in the organizational data base.

Organization Innovation: generation, development, and implementation of something new into the organization

CHAPTER TWO

LITERATUREREVIEW

2.1 Introduction

This chapter deals with the review of extant literature (existing works of scholars) on Knowledge management. The area covered in the chapter includes: conceptual reviews, the concept of knowledge management, organizational innovation, knowledge creation, knowledge application, knowledge sharing and knowledge protection, theoretical reviews, knowledge-based view, resource-based view, empirical review of past works of other scholars on the subject area of the study and summary of the reviewed literature.

2.2 Conceptual Review

2.2.1 The concept of Knowledge Management

Knowledge management means different things to different people (Bollinger and Smith, 2001). One central theme of KM is the assertion that the knowledge found in an organization has to be identified and accessible. The aim is for such knowledge to be transferred easily for re-use by others in solving organizational problems within and outside the organization. Knowledge is a shared collection of principles, facts, skills and rules. More specifically, organizational knowledge aids decision-making, behaviour and actions and is primarily developed from the knowledge of individuals within the organization.

Knowledge management is the process of critically managing knowledge so as to meet the immediate and existing needs, to identify and exploit existing and acquired knowledge assets and to develop new opportunities, also is the activity which is concerned with strategy and tactics to manage human-centered assets (Quintas, Lefrere and Jones, 1997).

According to Spender and Scherer (2007), KM is about shaping the purposive and the argentic activity of those working under incomplete knowledge, while their interactions are

being directed towards chosen goals, so instantiating the organization. KM has, as its crux, the rendering of knowledge to the end-user in the organization as and when it is required. In other words, knowledge should be in such a state that, when it is sorted for, it can be accessed in order to be used and re-used. KM also ensuring and focuses on making explicit the knowledge that is available in the form of knowledge items, widely accessible in the organization (Rezgui, 2007).

2.2.2 Organizational innovation

Effective knowledge management can also boost the amount of knowledge requisite for organizational members and make possible the swift diffusion of knowledge within the organization. Hence, knowledge management has a profound impact on transforming power of knowledge into innovation processes (Huang & Li, 2009).

Garcia and Calantone (2003) claim that innovativeness is the capability of innovation and innovative climate that has a profound correlation among the firm's existing technological resources, skills, knowledge, capabilities, or strategies in order to foster innovation. Organizational innovativeness is directly associated with developing knowledge resources of organizations (Subramanian & Youndt, 2005).

Innovativeness also creates basic values, postulation, and beliefs within the organization that lead workers behavior to alter knowledge into new products, services, processes, technology, and administrative systems or structures, policies, plans, and programs. Acquiring, applying, and sharing knowledge amid the functional areas of an organization create conditions to raise eagerness of organizational members to partake in innovation

activities (Subramanian & Youndt, 2005) and that knowledge sharing can develop close contacts and connections within an organization which support innovativeness in the organization.

When knowledge is functional or acquired by organizations, organizational learning takes place (Darroch & McNaughton, 2002) which also has a positive effect on openness to innovation or innovativeness. Additionally, effective management of knowledge increases the stock of knowledge within an organization that develops communications to support innovation and increases the innovativeness of an organization. Consequently, the following hypotheses are developed.

Innovativeness is unwavering by organization's cultural openness to innovation that is associated with members of organization enthusiasm to partake in innovation activities (Hurley & Hult, 1998). Dobni (2008) states that innovativeness is a multi-dimensional circumstance which includes the intention to be innovative, the communications to support innovation, operational level behaviors essential to persuade a market and value orientation, and the surroundings to implement innovation.

Garcia and Calantone (2003) claim that innovativeness is the capability of innovation and innovative atmosphere that has a profound correlation among the firm's existing technological resources, skills, knowledge, capabilities, or strategies in order to foster innovation. Organizational innovativeness is directly linked with developing knowledge resources of organizations (Subramanian & Youndt, 2005).

Innovativeness also creates basic values, postulations, and beliefs within the organization that lead workers behavior to alter knowledge into new products, services, processes,

technology, and administrative systems or structures, policies, plans, and programs. Acquiring, applying, and sharing knowledge amid the purposeful areas of an organization create conditions to raise enthusiasm of organizational members to partake in innovation activities. Knowledge sharing can develop close acquaintances and communications within an organization which support innovativeness in the organization.

When knowledge is functional or acquired by organizations, organizational learning takes place (Darroch & McNaughton, 2002) which also has a positive effect on openness to innovation or innovativeness. Additionally, effective management of knowledge increases the stock of knowledge within an organization that develops infrastructure to support innovation and increases the innovativeness of an organization. Consequently, the following hypotheses are developed.

2.2.3 Knowledge Acquisition

KM revolves around, and ends, with people. It is consequently relevant to believe people in KM strategy and achievement. People face evolving knowledge needs as part of daily assignment or routine. And these needs should be met through tools, processes, systems and protocols to seek integrate and apply relevant knowledge (Omotayo, 2015) The people-oriented approach to knowledge creation argues that knowledge can be only created by individuals (Wickramasinghe, 2006).

The people-oriented perspective can be further alienated into perspectives where knowledge is created only by individuals on one side and, on the other side, perspectives that knowledge can also be created by organizations. Many leading theorists in knowledge creation and management, and organizational learning assert that knowledge is created by individuals and cannot be created by organizations (Crossan, John and Johnson 1999).

Individuals acquire knowledge not only by actively creating and interpreting their experiences, but also through intuition (Crossan et al., 1999). Knowledge is entrenched in the circumstance in which it is created and is an individual and social process. Some authors opined for a shift away from the view that knowledge resides in individuals alone, toward the opinion that knowledge is entrenched in groups (Tywoniak, 2007). The organization consists of a set of interaction which create knowledge.

For knowledge creation to occur at the organizational level, the organization must support individuals that are creative and provide avenues for them in which to create knowledge (Hargadon, 2003). Therefore, organizational knowledge creation is the process by which knowledge created by individuals is shared and justified in the organizational setting (Nonaka and Takeuchi, 1995). As a result, knowledge creation involves a incessant interchange among the tacit and explicit dimensions of knowledge and a growing twist flow as knowledge moves through the individual, group and organizational levels resulting to organizational innovation.

2.2.4 Knowledge Application

The assumption that the source of competitive edge resides in the application of the knowledge rather than the knowledge itself, is an imperative feature of the knowledge-based theory of the firm.

Alavi and Leidner (2001) identifies three key mechanisms for the incorporation of knowledge in order to create organizational capability. Directives refer to a detailed set of rules, standards, procedures and instructions developed through the conversation of specialist's tacit knowledge to explicit and incorporated knowledge for competent communication to non-specialists.

Organizational routines refer to the expansion of tasks performance and coordination patterns, interaction protocols, and process qualifications that allow individuals to apply and integrate their specialised knowledge without the need to coherent and communicate what they know to others. Self-contained task teams are formed for problem solving in circumstances in which task vagueness and intricacy prevent specifications of directives and organizational routines.

While knowledge creation, storage and transfer do not unavoidably lead to improved organizational performance; efficient knowledge application leads to organizational innovation because organizational performance often depends more on the capability to turn knowledge into successful action and less on knowledge itself (Alavi and Leidner, 2001).

2.2.5 Knowledge Sharing

Along with knowledge creation and knowledge storing, knowledge sharing represents another important KM process which has been discussed extensively in the literature. It is not enough to create knowledge, there must be an intent to use and share it (Dixon, 2000). Syed-Ikhsan and Rowland (2004) believe that knowledge transfer requires the enthusiasm of a group or individual to work with others and share knowledge to their mutual benefits which yields organization innovation. Without sharing, it is more or less unfeasible for knowledge to be transferred to another person or group.

Knowledge transfer can only take place in an organization where its employees display a high-level of co-operative behaviour (Goh, 2002). According to Davenport and Prusak (1998), knowledge transfer involves two actions which are a) the transmission (sending or presenting knowledge to a potential recipient) and b) the absorption by that person or group.

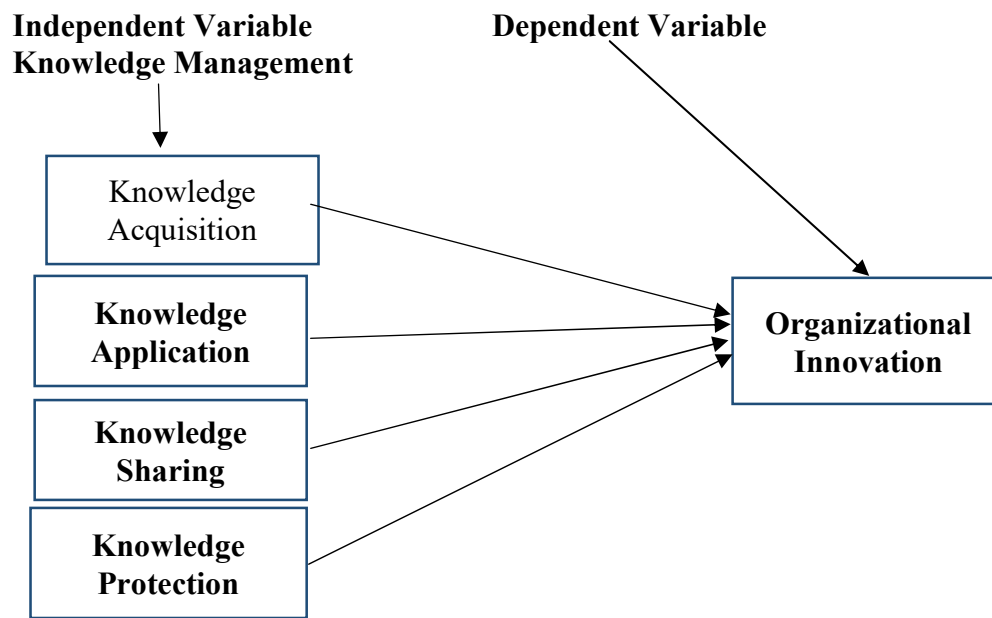
They further stress that transmission and absorption together have no value unless they lead to some change in behaviour, or the expansion of some idea that leads to new behaviour (Davenport and Prusak, 1998).

Knowledge Protection:

Learning can be placed away in the firm in company's remembrance which can take the structure like printed records; masterminded material put away in electronic documents, ordered human information stockpiled in expert frameworks, composed authoritative practices. It likewise incorporates non-physical means furthermore frameworks outside the association (Zaim et al., 2007). Forms which shield the learning burglary and illicit use inside of an association fall in information security movement. To keep up favorable position on contenders it is important to secure authoritative information. Much the same as application procedures there is no extraordinary accentuation on learning insurance in the writing survey. There is a supposition that information can be ensured by licenses, copyrights, trademarks and so forth. Yet, all information can't be characterized by property laws and copyright laws (Liebeskind, 1996). Information insurance is troublesome so it ought not to be given less significance. Resources can be secured by motivating force arrangement, worker conduct parts or employment plans. Innovation can help associations to confine access to information. Despite the fact that information protection is troublesome however it is imperative for an association on the grounds that an advantage will be a premise of focused lead on the off chance that it is exceptional and testing to duplicate (Barney, 1991). For association learning wellbeing is the principle subject. To secure information requests impeccable and exhaustive techniques to affirm that information assets

are innocuous unfailingly. It is expected to ensure that learning is protected and recovered by just endorsed personnel (Mills and Smith, 2011).

Figure 2.1: conceptual framework



Source: Researcher's Conceptualization.

The conceptual framework shows the measures of the independent variables (knowledge management process) which include: knowledge acquisition, knowledge application, knowledge sharing and knowledge protection and the dependent variable (organizational innovation).

The Management of Knowledge

Hislop (2013, p. 56) define KM as “an umbrella term which refers to any deliberate efforts to manage the knowledge of an organization's workforce, which can be attained via a extensive range of methods including straightforwardly, through the use of scrupulous types of ICT, or more ultimately through the management of social processes, the structuring of

organization in particular ways or via the use of exacting culture and people management practices”.

Defining KM could be really tasking since KM is a extremely interdisciplinary field that attracts scholars and practitioners from different fields (philosophy, information science, library science, economics, management, sociology, engineering, among others). Searching through so many definitions from different authors, the definition from Petrash (1996, p. 370) is adopted, which state that KM is getting the right information in front of the right people at the right time. The outfitted origin of KM arose within the consulting community, having realized the probable of the Intranet flavor of the Internet for connecting collectively geographically dispersed and knowledge-based organizations.

This realization came at a time when there was recognition that information and knowledge are essential assets for any organization's success. And so the focal point in KM is to capture the information and knowledge that is in people's heads as it were, and that has never been unequivocally set down and make this available, so it can be used by others in the organization.

Koenig 2012 state that the initial stage of KM was ambitious principally by Information Technology (IT), about how to set up IT to achieve more efficient use of information and knowledge and the trade mark expression of this stage was termed “best practices”. The appearance of KM also concurred with the enlargement of the global knowledge based economy in which prominence has been shifted from traditional factors of production, namely capital, land and labour, to knowledge.

The nature of work has changed extremely with the move from an industrial economy, focusing on commercial products, to a knowledge based economy, where service and proficiency are the main business outcomes (Epetimehin and Ekundayo, 2011). Numerous researchers (Jasimuddin, 2008; Davenport and Prusak, 1998; Day, 1994) argue the efficient management of knowledge is a decisive ingredient for organizations seeking to guarantee sustainable strategic competitive advantages.

The Need for Management of Knowledge in Organizations

Why the need to manage knowledge? The important factors that are driving the need for KM are organizational survival, competitive segregation, globalization effects and aging workforce. In view of the management dynamics today, the obligation of managing knowledge requires paramount focus as most of the work is information based.

It is an unquestionable fact that organizations contend on the basis of knowledge, since products and services are becoming increasingly complex. Hence the requirement for a life-long learning has become an inescapable reality and KM has become imperative since marketplaces are progressively more competitive and the rate of innovation is rising. Downsizing staff also creates a need to substitute informal knowledge with formal methods.

KM is also of significance since early retirements and rising mobility of the work force pilot to loss of knowledge while changes in strategic direction may result in the loss of knowledge in several detailed areas. In other words, knowledge and information have become the means in which business problems arise. As a result, managing knowledge represents the primary opportunity for achieving substantial savings, significant improvements in human performance, and competitive advantage.

Another significant factor that is driving the need for KM is the realization that an organization must manage its knowledge if it is to survive in today's vibrant and competitive marketplace. Survival concerns are not limited to for-profit firms as non-profits and even public agencies have all realized the value of KM. Desouza (2011) point out that without sufficient care in how knowledge is managed, organizations will not be operating optimally and this will result in the ineffective and inefficient creation and delivery of products and services leading to unfulfilled customers, which is what eventually leads to the failure of the organization.

The subsequently common rationale for conducting KM is to aid in competitive delineation. All Organizations, whether for-profit or not-for-profit, contend within a sector. KM is a vital driver of competitive advantages since it enhances the capability of organizations to innovate thereby differentiates itself from its competitors. Organizations that are unable to innovate at a sustainable pace will be deficient in the capability to incessantly attract new customers, which in turn will lead to their downfall.

But organizations that are able to innovate will be able to safe, and even maintain, their competitive positions in the marketplace (Desouza, 2011). The dawn of globalization has also driven the need for KM, as organizations search to find useful tools and methods for acquiring and sharing knowledge over many structural and cultural barriers.

Therefore, globalization has created an insistent need for organizations to be able to manage knowledge across countries and continents. Another need for KM is aging workforce. Most organizations are facing a grizzled of their workforce and soon much knowledge is going to leave the organizations. This logical capital needs to be captured so that future generations

in this work atmosphere do not have to repeat mistakes and reinvent knowledge.

Epetimehin and Ekundayo (2011) show that KM efforts aid organizations to share important organizational insights, to reduce superfluous work, to evade re-inventing the wheel, to lessen training time for employees, to maintain rational capital as employees' turnover in an organization and to acclimatize to changing atmospheres and markets. KM organizations that are competitively mindful consequently need to successfully implement KM systems.

This includes enforcing a connection among the archived organizational 'best practices' and the actions taken by organizational members based on that information. This is where the intellectual organizational creativity and innovation comes into the fore. KM is a fundamentally imperative skill for anyone working in any type of organization and has many significant aspects that give to form a strong knowledge management strategy.

Knowledge management and organization strategy

The need to ally KM strategy with organization strategy was identified as vital to the success of KM (Oluikpe, 2012; Gao, Li and Clarke, 2008). Du Plessis (2007) opines that an organization KM strategy is supposed to create an understanding of the organization's KM resources and where they reside; coherent the responsibility of knowledge in value creation; and encompass a number of incorporated projects or activities phased over time including swift wins as well as long term benefits.

An organization's strategy of KM is not illogical but depends on the way the company serves its clients, the economics of its business, and the people it hires (Hansen, Nohria and Tierney, 1999). It has been advised that KM should not be implemented because it is just "niceto-have" (Greiner, et al., 2007).The question is no longer whether or not, knowledge is

a vital organizational resource, but on alignment of KM to corporate strategy, measurement of KM impact and driving of business results.

KM as a Strategic Management tool

KM as a strategic management tool has to do with how organizations map out strategies to effectively work with KM (Greiner, et al., 2007; Gao et al., 2008; Lee et al., 2012). Strategic management literature has moved from a resource to a knowledge based view of the organization, with propositions centered on knowledge becoming the most imperative resource enabling organizational capability and leveraging competitive edge (Kogut and Zander 1992).

KM effort extends beyond with organizational learning and may be eminent from that by a superior focus on the management of knowledge as a planned asset and a focus on encouraging the sharing of knowledge. KM is frequently described as a management tool but more exactly described either as an operational tool or as a tactically focused management tool (Martensson, 2000). KM, as a strategic management tool, requires managing the collective information expertise of the employees.

It means encompassing knowledge as an explicit business activity that reflects in the organization's business strategy, policy, guideline, and practice at all the levels. But it has been found that not all KM activities have been shown to positively influence business/organization performance or to result in a competitive edge.

Many restrictions and their interactions need to be measured for the triumphant application of KM initiatives in an organization. Different KM strategies have been planned to be sufficient for diverse types of knowledge (Greiner, et al., 2007). It is pertinent to know that

the selection of a suitable KM strategy not only depends on the type of knowledge to be shared but also on the environment the organization operates in. To start to create a KM strategy, an organization needs to build systems for capturing and conveying internal knowledge and best practices (Ash, 1998; Jasimuddin, 2008, Oluikpe, 2012). The fundamental premise of KM strategy is that 'best practices' of yesterday may not be taken for established as 'best practices' of today or tomorrow. In other words, KM strategy is essential for organizations since what worked yesterday may or may not work for tomorrow.

Hence, learning, and relearning processes need to be premeditated into the organizational business processes. Therefore, to remain allied with the enthusiastically changing needs of the business surroundings, organizations need to incessantly re-assess their internal procedures of business for on-going effectiveness.

KM is also more than managing knowledge or sources of knowledge; it involves managing the environment where knowledge is exchanged. To successfully create and implement a KM strategy in organizations, so many authors have suggested that certain critical elements must be included. One of these suggestions is that, a KM strategy should be associated to what the organization is attempting to achieve.

It is also important to coherent the rationale of the KM strategy; the benefits the organization expects to gain from their work with KM; and how it will affect the employees' work (Merlyn and Välikangas, 1998). The significance of support from top management has also been suggested to be indispensable. The personnel function should focus on top management to hearten processes that will encourage cross-boundary learning and sharing. This includes helping to set up and, possibly, fund knowledge networks, as well as defining and developing the skills of learning from other people (Mayo, 1998). Organizations that

have accomplished the utmost success in KM are those that have prearranged a senior-level executive to presume the responsibility of full-time chief knowledge officer (Gopal and Gagnon, 1995).

According to Riege (2007), for KM to be successful, they need to be commenced by senior and middle managers whom not only understand and support the strategic and operational need to support business and KM strategy by also recognize the human, organizational, and technological challenges of newly introduced actions. Human Resource Management (HRM) practices can have effect on workers' attitudes towards and involvement in KM activities (Hislop, 2013).

The use of HRM practices can be seen to be concerned not only with attempting to create a positive attitude towards, and a willingness to partake in, organizational KM activities, but also with making employees committed and loyal to their employer. This is fundamental since, if employees are not dedicated and loyal to their organizations, there is a peril of losing knowledge possessed by the employees through staff turnover. Recruitment and selection processes by employers can be utilized, as well, to support KM activities.

This can be used to recruit people whose values are attuned with the existing organizational culture and whose personalities are conducive to knowledge sharing. Swart and Kinnie (2003); Robertson and Swan (2003); Chen, Wang and Lin (2011) found that recruiting people whose values are allied with those of the organization was an imperative factor in the success of the companies they studied.

Retaining employees who acquire valuable knowledge should equally be as important an ingredient in an organization's KM strategy as motivating employees to partake in knowledge activities. This is because the tacit and embodied nature of much organizational knowledge means that when employees leave an organization, they take the knowledge with them.

In other words, staff turnover means a predictable leakage and loss of knowledge. The level of commitment an employee feels towards their employer is likely to affect their loyalty to the organization. As Byrne (2001) put it, “without loyalty, knowledge is lost”. The significance of communication is also not to be over-emphasized.

Nonaka and Konno (1998) found that the missing factor in strategic management texts was communication. A large proportion of the organizations failed to implement the strategies because of a lack of communication. Only a few companies designed a good communication plan to follow through on business strategies.

A connection between these two allows organizations to continue to exist in the future. Nonaka and Konno (1998) found that Ba comprise an imperative component of knowledge creation and management. Ba, according to Nonaka and Konno (1998) provides the “enabling conditions” for knowledge creation by facilitating interpersonal connections amid people where people share contexts and create knowledge.

One flourishing approach is to create formal learning networks so that the classification and transfer of effectual practices become part of the job (Nonaka and Konno 1998; Galagan 1997). Practice communities where employees could meet and solve problems and address

issues could also be recognized. CoP facilitate interpersonal knowledge sharing, providing an effective means for people and organizations to manage and share knowledge.

CoP are informal groups of people who have some form of practice and work-related activity in common (Hislop 2013), developing out of the communiqué and dealings which is a obligatory part of most work activities. CoP are groups whose members frequently share knowledge and learn from each other. They share common work activities or interests, recognize the collective value of sharing knowledge, and have developed norms of trust, reciprocity, and cooperation.

The importance of people and culture as the bedrock to successful KM has also been suggested by scholars (Hammandy, Rabeh, Jimenez and Martinez, 2013). Successful implementation of KM in organization is linked to such entities as culture and people. Several studies have shown that people and cultural issues are the most difficult problems to resolve, but produce the greatest benefits (Hammandy, et al., 2013).

Jashapara (2003); Koulsi (2000) mention that since KM can be incorporated into any number of IT systems, the prevalent challenge is not a technical one, but a cultural one. The difficult duty of overcoming cultural barriers, particularly the reaction that holding information is more valuable than sharing it is a big constraint that needs to be tackling (King 2007). Hislop (2013) shows that human, social and cultural actors are often key in shaping the triumph or breakdown of KM initiatives.

Knowledge is a resource locked in the human mind, consequently, the sharing and communication of knowledge requires enthusiasm on the part of those who have it to partake in such processes. Consequently, building a culture that value expertise should be

optimistic. The significance of sharing knowledge needs to be persistently communicated to the employee.

Mayo (1998) identifies that the capability to share knowledge and work together is missing in organizations since efforts to deploy KM group-ware are recurrently met with employee disinclination to share their expertise (Olatokun and Nwafor, 2012, Cole-Gomolski, 1997b). The probable motive for this is that employees are competitive by nature and may be more prone to accumulate than share the knowledge they possess (Forbes, 1997; Hislop, 2013). But on the contrary, a better process of sharing knowledge benefits the organization.

It is consequently been suggested that part of the preamble process for recruits should involve “capturing” their knowledge and experience. Although most new employees bring useful specialist experience with them, few organizations tap this rich reservoir of information. Part of the recruitment exercise should be about passing on the experience of antecedents to new employees.

When employee leaves an organization, the focus should not be only on asking for the company properties (car, identity card, and so on) but on demanding to extort as much knowledge as likely from the departing staff. Exit interview should be carried out to salvage information and knowledge. Efforts should be geared towards documenting very useful critical knowledge from top sphere of influence experts and key personnel before they leave the organizations.

Other potential alternative or pace is to establish which employees are flight risks and finding a way of keeping them in order not to lose their knowledge and expertise. Retired

employees could also be hired as consultants. One of the most imperative issues when working on a KM strategy is to create the right incentives for people to share and apply knowledge (Hansen et al., 1999; Cabrera and Cabrera, 2005; Milne, 2007; Olatokun and Nwafor, 2012). Personal reward systems must maintain the culture of sharing knowledge (Mayo, 1998). To progress this process, it is critical to reward employee's that contribute their proficiency and to make sure employees comprehend the benefits of KM. But the problem with many reward systems and incentives for sharing knowledge is that useful knowledge comes from the lower cadre in the organization, from people who are not on incentive systems and probably respond much more readily to the feeling that they belong to highly motivated, leading edge, innovative groups of people (Olatokun and Nwafor 2012). Aligning KM approaches to fit organizational culture is also a strategy to ensconcing good KM initiatives.

A lot of KM literature that examines organizational culture argues that it can significantly influence organizational KM activities (Lee and Chen 2005; Chang and Lee, 2007; Liao, Chang, Hu and Yueh, 2012; Rai, 2011). Hislop (2013) define organizational culture as the beliefs and behaviours shared by the members of an organization regarding what constitutes a suitable way to think and act in the organization, while Huczynski and Buchanan (2001) define organizational culture as “the collection of comparatively uniform and enduring values, beliefs, customs, traditions and practices that are shared by an organization's members”.

Even though aligning KM approaches to fit organizational culture has been suggested by literature as good, on the divergent, creating and managing an organizational culture to

support KM activities is extensively supported by literature (De Long and Fahey, 2000; Teo, Nishant, Goh and Agarwal,2011; Hislop, 2013). The reason is that organizational culture can be changed to produce appropriate knowledge related behaviours and values (Teo et al., 2011).

KM success can be achieved by modifying an organization's culture in ways that encourage and support desired knowledge attitudes and behaviours. Whether organizational cultures should be changed to create appropriate knowledge behaviours and values, or whether KM efforts should be designed to reflect an organization's existing cultural values, the bottom line is that there is a mutual correlation among organizational culture and KM activities, which KM managers must bear in mind to successfully create and execute a KM strategy in organizations.

Having Knowledge Repositories that contain databases of codified knowledge assets that are scientifically systematize to smooth the progress of searching, browsing, and retrieval is also essential (Choo, 2002). Knowledge repositories may contain lessons learned, best practices, planning documents, project proposals, marketing presentations, etc.

The implementation of mentoring programs is also important. The use of training and mentoring in organizations can facilitate informal sharing of knowledge. This involves the sharing of knowledge among a comparatively experienced person (the mentor/coach) and someone less experienced (the mentee) (Karkoulian, Halawi, and McCarthy, 2008).

Creation and adoption of Knowledge Maps (KMaps), which is a “feasible method of coordinating, simplifying, highlighting and navigating through multifaceted silos of

information” (Wexler, 2001, p.249; Liebowitz, 2005; Chan and Liebowitz, 2006; Lee and Fink, 2013) is also a good strategy. It has been pragmatic that many organizations do not suffer from lack of knowledge but rather from ways/means of accessing and exploiting knowledge and often times, trying to access the appropriate knowledge can be difficult, time consuming and frustrating.

K-Map points to knowledge but it does not contain it; rather, it is a guide and not a repository. It can facilitate the discovery of sources of knowledge in organization, tracing its flow, mapping its existence and its changes, and identifying relationships with other sources of knowledge.

Employees in organization can use K-Map to locate pertinent sources of expertise or understanding within the organization, which then can provide the knowledge that is being sought (Lee and Fink, 2013). Last of all, appraisal and feedback are of extreme significance. The need to create a system for evaluating the attempts that are made to use KM is very important.

The evaluation system can range from informal attempts, such as talking to people about how “best practice” is shared within the firm. Other management tools/measurements can also be adopted to measure the outcomes from KM usage in the organization.

2.3 Theoretical Review

2.3.1 Knowledge-based view

The theory is based on definite grounds regarding the scenery of knowledge and its responsibility within the firm; it explains the foundation for the firm, the explanation of its boundaries, the nature of organizational competence, the circulation of decision-making power and the determinants of strategic alliances. The knowledge-based view represents a convergence of a number of streams of research, the most prominent being the resource-based theory and 'epistemology'. Grant and Spender (1996), commenced their study into the knowledge-based field of the firm, with "Knowledge and the Firm." Here they introduced two diverse conceptual directions; an economic and a social constructionist one (Grant and Spender, 1996).

Spender suggested that knowledge should be regarded as embedded within socio-cultural conventions and conceptualisations and thus as socio-culturally construed. Therefore, within the strategy field, Spender materialized as one of the initiates of the social constructionist position (Spender, 2001). Spender's conceptualisation of a social-constructionist knowledge-based view of the firm includes the following core assumptions: (1) The firm can be understood as a system of knowledge; (2) explicit and implicit knowing are clearly dissociated; (3) firms are conceived as cognising entities (i.e. having a collective consciousness); and (4) intuition, shaped by shared cultural practices, is a higher source of managerial knowledge. The central feature of the knowledge-based view is the notion of 'tacitness' (Grant, 1996), since tacit knowledge is a potential source of organization innovation and competitive edge in respect to its limited transferability.

Although the knowledge-based view clearly suggests that knowledge can be a source of sustained competitive advantage, it is relatively unclear about the ways in which knowledge is utilised in order to contribute to the accomplishment of the competitive advantage. According to Grant (1996) and (Garud and Kumaraswamy, 2005), the foundations of knowledge-based view are a set of assumptions concerning the distinctiveness of knowledge and the circumstances of its creation and application. These include:

- i. Knowledge is the tremendously significant productive resource in terms of its involvement to value extra and its strategic connotation.
- ii. Different types of knowledge vary in their transferability. The critical distinction is between ‘explicit knowledge’, which is capable of articulation (and hence transferable at low cost), and ‘tacit knowledge’, which is manifest only in its application and is not amenable to transfer.
- iii. Individuals are the primary agents of knowledge creation and, in the case of tacit knowledge, are the principal repositories of knowledge. If individuals’ learning capacity is bounded, knowledge creation requires specialisation
- iv. Most knowledge is subject to economies of scale and scope. This is especially the case with explicit knowledge which, once created, can be deployed in additional applications at low marginal cost.

According to the knowledge-based view of the firm, knowledge is the main resource for a firm’s competitive advantage. Knowledge is the primary driver of a firm’s value. Performance differences across firms can be attributed to the variance in the firm’s strategic knowledge base. Strategic knowledge is characterised by being valuable, unique, rare, non-imitable, non-substitutable, non-transferable, combinable and exploitable.

Obviously, knowledge resides within personnel's or individuals within the organization and, more specifically, in the employees who create, recognise, archive, access and apply knowledge in carrying out their daily job functions or task (Liu and Chen, 2005). Therefore, the movement of knowledge across individual and organizational boundaries is dependent on employees' knowledge-sharing behavior (Liebowitz, 2005).

2.3.2 Resource-based view

According to the resource-based view (RBV), firms derive competitive advantage from the possession of, or access to, unique bundles of resources and capabilities (Teece et al., 1997). In a real unpredictable and chaotic business environment, such resource-capability package must consist of the firm's capacity to adjust to changing environmental conditions, even as they provide continuity in daily operations.

The resource-based theory states that corporate reputation can be considered valuable strategic resource because it contributes to or harms a corporation's sustainable position (Keh and Xie, 2009). The central principle in resource-based theory is that distinctive organizational resources of both tangible and intangible nature are the real source of competitive edge.

With resource-based theory, organizations are viewed as a set of resources that are heterogeneously circulated within and across industries. Accordingly, what makes the organization distinctive is the unique blend of the resources it possesses that derive the competitiveness of the organization. Corporate reputation, for example, is an intangible resource that affects stakeholder behaviour, including employees, management, customers and investors (Friedman, 2009). The resource-based theory of the firm places specific

emphasis on corporate intangibles that are complex to imitate, such as tacit knowledge.

The resource-based approach is magnetizing the awareness of a rising number of researchers, specifically since the agenda encourages discourse among scholars from a array of perspectives. In fastidious, three major research programs are presently entangled in the resource-based framework. The resource-based theory is concerned with the rate, course and performance implications of the diversification strategy, which are areas of significant focus in the KM and strategy fields (Ramanujam and Varadarajan, 1989).

Second, the resource-based approach fits contentedly within the discussion of organization economics (Barney and Ouchi, 1980). For this reason it may debatably be measured a fifth branch of the organizational economics tree of knowledge, along with the positive agency theory (Eisenhardt, 1989), property rights (Alchian, 1984) and transaction cost economics (Nelson and Winter, 1982).

Conner (1991) persuasively reasons that the resource-based approach reflects a strong industrial organization approach and is, at the similar time, unique for competitiveness. Also, it reveals that the nature of knowledgeable practice intercede the correlationamong a firm's human, social and technological capital (i.e. its tangible knowledge assets) and its innovation capacity.

Joseph and Rajendran (1992), in a study, 'Resource-based view within the dialogue of strategic management' demonstrated that resource-based theory incorporates traditional strategy insights concerning a firm's unique competencies and heterogeneous capabilities

and also provides value-added theoretical propositions that are testable within the diversification strategy literature.

2.4 Competence-based view

A competence-based perspective focuses on those competencies of employees that are relevant for successful behavior. Advantages of a competence-based approach are that competencies are assumed to be recognisable, assessible and relevant for practice (Hayton and Kelly, 2006). In contrast to stable personality traits, competencies can be developed; and they relate to organizational effectiveness (Hamel and Prahalad, 1994; Spencer and Spencer, 1993). The competitive advantage of organizations, in the long run, is to derive from the ability to build and leverage competencies at lower cost and more speedily than competitors (Prahalad and Hamel, 1990). Further, their view stresses the dynamic nature of competencies, suggesting that competencies should be nurtured, protected, sustained and developed. The competence-based view is primarily represented by authorologies such as Sanchez *et al.* (1996), Heine and Sanchez (1997) and Sanchez (2001b). The perspective rests solidly on resource-based thinking. In this regard, firms utilise competence in order to reach set goals and targets, regardless of whether or not it is reduced costs or competitive advantage. But the core of the competence-based perspective lies in its approach to the nature of knowledge and of its discussion of learning processes (Sanchez, 2001b). For instance, the difference between data, information, knowledge and interpretive frameworks is highlighted, as is the difference between learning and sense making. The relations between assets, resources, skills, competences, capabilities and competencies are elaborated upon (Sanchez, 2001b). A key feature is the transformation of knowledge into competence,

which is made through learning cycles, encompassing individual, group and organizational learning (Sanchez, 2001b).

In this perspective, however, the management of the transformation of knowledge to set goals is not well and clearly articulated and covered. The competence-based approach to strategy also focuses on the ‘internal factors’, such as organizational culture, staff strength and operational efficiency, in explaining firms’ performance differentials. The term ‘distinctive competence’, which is the main thrust of this theory, was first introduced by Selznick (1957). It refers to those things that an organization does especially well in comparison to its competitors. The intellectual roots of the competence-based theory can be found in the works of Snow and Hrebiniak (1980), Nelson and Winter (1982), Hitt and Ireland (1985) and Prahalad and Hamel (1990). Wernerfelt (1995), one of the founders of the resource based theory, credits Prahalad and Hamel’s (1990) work as ‘single-handedly responsible for diffusion of the resource-based view into practice’. Works that have stimulated the advancement of the competence-based theory can be found in the conceptual and empirical articles of Lado *et al.* (1992), Leonard-Barton (1992), Day (1994), representing both management and marketing domains of an organization.

According to Kandemir and Hult (2005), the resource-based theory and the competence-based approach are complementary. While for the resource-based theory a firm is a portfolio of resources (e.g. physical, human and organizational) (Barney, 1991), for the competence-based approach a firm is both a collection of products and a collection of competences (Prahalad and Hamel, 1990). The competence-based approach appears to be a more actionable version of the resource-based theory, with more emphasis on the sources of competitive advantage within the firm. Firms utilise competence in order to reach set goals,

regardless of whether or not it is reduced costs or competitive advantage. A key feature is the transformation of knowledge into competence, which is made through diffusion, learning cycles, encompassing individual, group and organizational learning (Sanchez, 2001a). However, the management of the transformation of knowledge into set goals is not well covered by the theory.

The theory perceived organizations as a collection of products and competencies, the utilisation of which culminates in the attainment of set goals. In this regard, competence-based theory is action-oriented through galvanisation and optimum use of staff potentialities to achieve the organizational objectives. It supports the notion of ‘use what you have to get what you want’ in business practices. Even though the theory was emphatic on attaining competitive advantage by organizations; it is limited in describing the practical ways for achieving such through knowledge conversion, which is one of the focuses of this study. These limitations have made the theory not wholly applicable for this study, but some of its constructs such as organizational skills, human capital application, internal factors, and distinctive competence can be used to address research questions 1, What type of knowledge is generated by the Nigerian agricultural research institutes? and research question 6, What factors influence knowledge management adoption in the research institutes? (see section 1.8). The theory has been successfully applied in related studies on KM within the disciplines of economics, business management and marketing. For instance, Kandemir (2005) in a PhD study at the Michigan State University, entitled ‘A study of market knowledge competence as a source of SBU performance’ found that that retailer/distributor equity increases market knowledge competencies; however, no association was found between supplier equity and market knowledge competence. Market orientation culture was

found to contribute to the level of market knowledge competence. On the other hand, market knowledge competence enhances customer performance, increases the speed of marketing strategy formulation and implementation and improves marketing learning performance.

2.5 Capability Perspective Theory

The Capability Perspective Theory ‘emphasises the key role of strategic management in appropriately adapting, integrating, and reconfiguring internal and external organizational skills, resources, and functional competencies to match the requirements of a changing environment’ (Teece *et al.*, 1997). Because the capabilities approach focuses on processes, a business can still specialise in one or a few specific processes that they do best, but these processes should be overarching, so that they can impact all business assets. The capabilities approach is a holistic approach, not only because it allows overarching competencies to be developed, but also because it focuses on both the internal and external environments. This approach allows businesses to become superior at one capability, which will enable them to utilise all external and internal assets in the most competitive manner.

Capabilities are complex bundles of skills and knowledge embedded in organizational processes (Helfat and Peteraf, 2003). They are critical sources of sustainable competitive advantage used by firms to leverage their assets and achieve superior performance. Distinctive capabilities enable firms to meet customer needs more effectively and cost efficiently. Capabilities serve as the ‘glue’ that binds different resources together and allows them to be deployed to maximum advantage (Day, 1994). The predominant view in past research work is that capabilities are positively associated with performance (Day, 1994). Nevertheless, several studies report that capabilities can turn into core rigidities and might

even have a negative influence on some aspects of firm performance (e.g. Atuahene-Gima, 2005; Haas and Hansen, 2007; Leonard-Barton, 1992). Therefore empirical generalisations through a meta-analysis would help in assessing the overall impact of firm capabilities on performance and highlight study characteristics that may cause variation in the capability-performance relationship.

Operations capability describes the skills and knowledge that allow a firm to be efficient. Treacy and Wiersema (1993) explain that superior customer value can be delivered through operational excellence, customer intimacy and product leadership. These strategies are evidently related to operations capability, marketing capability and R&D capability in organizations such as agricultural research institutes, for effective service delivery. The resource-based view of the firm reasons that resources, and the capabilities that enable the deployment of these resources, are the fundamental reasons why some firms perform better than others (Teece *et al.*, 1997). Capabilities reside in organizational processes and routines that are difficult to replicate, enabling firms to enjoy sustainable advantage over their rivals. Capabilities have been demarcated into those that belong in different functional areas such as R&D, products development and marketing in the case of research institutes. Marketing capability, therefore, is the organizational competence that supports market sensing and customer linking (Day, 1994).

Marketing capability spans those processes established within organizations to sense customer needs through effective information acquisition, management and use, to decipher the trajectory of customer needs and preferences. In addition, marketing capability involves the processes that allow a firm to build sustainable relationships with customers through stronger customer interaction with a firm or its brands (Day, 1994). R&D capability refers to

the processes that enable a firm to invent new technology, as well as convert existing technology, to develop new products and services. Therefore R&D capability will depend on the processes that help a firm develop new technical knowledge, place it in the context of existing technical knowledge and use this knowledge to design superior products and services. This is more relevant to the focus of the present study, where researchers in the agricultural research institutes use capabilities to innovate and create new products and leverage them for customers and societal good, in general.

Capabilities, as noted previously, are deeply rooted processes that are often not explicitly visible. The measurement of capabilities has frequently been based on secondary proxy measures that are considered their valid outward manifestations. For instance, marketing capability has been assessed using measures such as market research and advertising expenditures (e.g. Dutta *et al.*, 1999). Furthermore, the measurement of R&D capability has been approached in a manner similar to that used in capturing marketing capability. The most frequently used measure of R&D capability has been some operationalisation of R&D expenditure, which is often standardised relative to industry expenditures and expressed as R&D intensity (e.g. Kotabe *et al.*, 2002; Dutta *et al.*, 1999). Other measures focus on R&D productivity, e.g. patent output or new product output (e.g. Penner-Hahn and Shaver, 2005). In general, capabilities are developed by organizations through path-dependent evolutionary processes (Helfat and Peteraf, 2003) and cannot be easily acquired, transferred, or mimicked (Teece *et al.*, 1997). Capabilities are embedded in the routines through which managers acquire, integrate and deploy resources to generate firm value (Day, 1994; Grant, 1996; Eisenhardt and Martin, 2000). Capabilities are thus quite resistant to competitive attempts to imitate them (Dierickx and Cool, 1989). Danneels (2002) proposes that existing capabilities

may serve as leverage points for the development of new ones that help a firm sustain its performance. Overall, capabilities are critical determinants of a firm's competitive advantage and, hence, its performance (Day, 1994).

According to Teece *et al.* (1997), perhaps the most fundamental contribution of the resource-based view of the firm came when authors began shifting from the analyses of tangible assets to the analysis of intangible assets. Some of these intangible assets that have been examined in the literature are organizational culture, human know-how (knowledge resources) and other information and relational resources (Hunt and Morgan, 1999). According to Teece *et al.* (1997), the contribution of the intangible assets allows for an examination of the acquisition, learning and accumulation of these assets to create capabilities. These individual processes, from which a firm can acquire, learn about and accumulate resources, allow a firm to have a well-focused vision. They can still focus on a few specific things (to prevent over-diversification), which in the capabilities approach would be processes instead of resources, but they can use these processes in the development and deployment of many, diverse resources. Instead of focusing on one specific asset or resource, a firm can focus on a specific capability. The processes, which are necessary to allow for this transformation, became the cornerstone of the capabilities approach.

Teece *et al.* (1997), along with Eisenhardt and Martin (2000), claim that capabilities make up the abilities to create and utilise resources to improve performance. Like many of the other perspectives mentioned, the capability perspective suggests that knowledge is important and that it can contribute to improved performance. However, despite identifying

the link between capabilities and performance, it is not very clear on how this link is managed and whether or not there is automatic casualty between capabilities and performance. This theory identified competencies as dynamic capabilities in an approach to stress exploitation of existing internal and external firm-specific competencies, to address changing environments. The theory also emphasised the exploitation of the firm-specific existing knowledge in the creation of new knowledge to enhance productivity and development, which is the main concern of this study. According to the theory, knowledge capabilities include expertise, knowledge documents, lessons learned, policy and procedures, and data.

Though the theory is tacitly knowledge-based, some of its attributes are explicit knowledge-oriented, such as knowledge documents, policy and procedures. Hence the effective application of the theory to research question 1 of the present study, What type of knowledge is generated by the Nigerian agricultural research institutes?. In a similar vein, the theory can be used to address research question 3, What knowledge management strategies are used by the research institutes to drive research and innovation? (see section 1.8), since the use of organizational capabilities could direct and galvanise the management of knowledge and other resources of an organization for improved performance and competitive advantage. Similar studies have used the theory. Alexander (2007), in a study at the University of South Carolina, examined the relationship between marketing capability and firm performance, using the dynamic capabilities perspective (Teece *et al.*, 1997). Their study demonstrated that marketing capability has a stronger effect on performance than operational capability. It demonstrated that customer relationship management capability has a negative effect on firm cost efficiency and a positive effect on firm profitability.

Overall, the study by Alexander (2007) provides new insights into the role of marketing capabilities on firm performance. Foley (2005), in a study at the University of Mississippi on ‘the conceptualization and integration of marketing and learning capabilities: implication for organizational performance’ found that market information processing and learning capabilities have significant, positive effect on dynamic marketing capabilities, which, in turn, have a positive effect on creativity, which then has positive effects on customer satisfaction, market effectiveness and financial performance.

2.6 Empirical Review

Chun-Ming, Meng-hsiang, and Chia-hui,(2012) conducted a study whose objective is 'Factors affecting knowledge management success: the fit perspective', in an aerospace manufacturing company in Taiwan, using a sample of size of 304 employees of the company, the study found that the KM system capabilities and task characteristics can improve KM performance. The study concluded that there is strong support for the correlation among fit perspective and performance.

Silva, Kovalski, Gaia, Garcia, and Junior,(2013)carried out a study with objective “KM and its relation to learning organizations (LO)”. Retail business employees working in organizations in Lebanon were surveyed to test whether KM enhances LO or vice versa, using a sample size of 452 from the educational sector of Lebanon. The results indicated that the two dimensions of LO and KM are distinct. This revealed that KM enhances LO more than LO enhances KM. It was concluded that KM enhances LO and its performance.

Hammandy, Rabeh, Jimenez-jimenez and Martinez-costa,(2013) studied managing knowledge for a successful competence exploration using a sample size of 249 of Spanish industrial companies. The results revealed that organizational absorptive capability and the

firm's old knowledge positively affect utilization of existing opportunities. In relation to the interaction between internal exploitation and firm performance, the results revealed a positive and significant effect. The study concluded that effective knowledge management is vital for a successful competence exploration. The study recommended that Spanish industrial companies should embrace KM practice.

Miguel, Fanio, Barry and Richard, (2006) examined KM-intensive SMEs, in two knowledge-intensive SMEs in the South Yorkshire region, UK, using interpretive paradigm and interview as data collection instruments. The results indicated that owner/managers of SMEs do not perceive KM as a business critical function. While both small and medium companies collect and store explicit knowledge in the form of training materials, newsletters, databases and company's website, they do not seem to make active use of them as a source of knowledge.

Thomas (2003) studied KM and occasional link with performance, in some European Manufacturing Companies (MNC), focusing on the variables of knowledge development; knowledge utilisation; and knowledge capitalization. The results showed that, in all cases, new knowledge was developed through various means, but it did not result in widespread utilisation and in overall improvements in profitability.

Davies (2005), in a study of 'The global and the local in knowledge management', assessed Du Pont, a multinational company focusing on the practices, bottle-necks and constraint of KM and knowledge sharing in Kenya using correlation and regression. The findings revealed that information overload was a constant constrain, especially among the R&D personnel.

The results further revealed that the amount of information pushed to people through e-mails, document attachments and databases, they concluded that physical means, is much elevated than what can be meaningfully processed by most in the time available. Chung-Jen and Jing-Wen (2007) examined the role of knowledge management capacity in the correlation among strategic human resource practices and innovation performance from the knowledge-based view.

This study uses regression analysis to test the hypotheses using a sample size of 146 Taiwanese firms listed in the yearbook published by the China Credit Information Service Incorporation. The results designated that strategic human resource practices are positively correlated to knowledge management capability which, in turn, has a positive impact on innovation performance. The findings provided evidence that knowledge management capability plays a mediating role among strategic human resource practices and innovation performance.

Marko and Verica (2013) posited the significance of knowledge management and its contribution to organizational performance and innovativeness has been the subject of many studies and is progressively more gaining recognition universal. The study analyzed the impact of knowledge management on perceived organizational performance and innovativeness in the context of the Serbian economy.

The study used regression analysis to test the hypothesis; a sample of 185 firms in Serbian was used for the study. The results revealed that knowledge management generally has a positive impact on organizational performance. Also, the results revealed that knowledge

management is positively associated to the diverse dimensions of organizational innovation (process innovation and administrative innovation).

The mediating effects of process innovation and administrative innovation on the correlation among knowledge management and organizational performance are only moderately supported. He recommended that any development in the processes related to knowledge management will also mean encouraging innovation in the organization, which ensures competitiveness in the long run. Kambiz and Aslan (2015) studied the Impact of Knowledge Management on Organizational Innovation: An Empirical Study. The key purpose of the study is to appraise the consequence of knowledge management on innovation straightforwardly and over organizational learning in Iranian automotive industry namely Iran Khodro Company. A total of 272 managers were selected from systems and techniques as the participants of the existing study. The data were analyzed using the Structural Equation Modelling (SEM). The study concluded that there is an effect of knowledge management on organizational innovation in Iranian automotive industry, also the exploration revealed that organizational learning has an imperative character as a intermediary on the connection among knowledge management and organizational innovation.

Moses, Joseph and Augustine (2010) examined the correlation among knowledge management and competitive advantage, in a developing country, Uganda; with a fastidious focus on the intermingling influence of market orientation. A sample size of 718 organizations was preferred from a population of 11,153 organizations using a simple random sampling method. Primary data were collected through a self-administered copies of

questionnaire. Descriptive and inferential statistics were used in the analysis. The findings revealed that there is a positive connection among knowledge management and competitive advantage; which relationship is greatly enhanced by the dealing sinfluence of market orientation. When market-based knowledge is properly responded to, it augments the competitiveness of the organization.

In addition, this is a hint that competitive edge is best achieved through a mishmash of knowledge-based resources. In conclusion, a number of managerial implications were identified such as: creating a balance among knowledge management and market orientation. Among the advanced recommendations is the need for the improvement of practical market-oriented organization. He also recommended that firm Management is expected to make continuous follow up of market changes, disseminate market information to others in the organization, be pro-responsive to market needs and persuade taking risks; create attentiveness and make small adjustments and It is important for management to encourage the development of pro-active market orientation in order to stand a chance of keeping up-to-date with current and future customer needs which have a strong correlation with the development of sustainable competitive advantage.

Burcu and Ceyda (2013) examined the connection among effective knowledge management processes and innovation types in organizations as well as detaching light on the mediating impact of innovativeness on the connection involving knowledge management process and innovation types. Survey data collected from a survey sample of 103 participants in Turkey. The result showed that knowledge management processes (i.e., knowledge acquisition, sharing, and application) have been measured as successful means of promoting an innovative culture and facilitating diverse types of innovation in organizations. The study

recommended that through managing knowledge efficiently, organizations can encourage not only the expansion of organizational innovativeness, but also enhancing all types of innovation.

Shu-hsien and Chi-chuan (2009) studied the Relationship among Knowledge Management, Organizational Learning, and Organizational Performance. The study adopts a multi-step approach for data analysis. The analyses include testing the measurement model by subjecting our measures to a series of assenting factor analyses (CFA) by using SPSS12.0 and 327 questionnaires were retrieved from 1100 sample frame used. The study concluded that knowledge management through acquiring, conversion and application has positive drive behavioural routines of organizational performance. And recommended that KM implementation is the ability of organization to acquire, converse, and apply their knowledge. So, managers should consider does one firm set up system only? Or does one firm have the capability to set up and exercise it well? Also Managers should take some measures to extend OL in order to connection KM and partnership performance, for example: team work, managerial commitment, learning orientation, sincerity to new ideas. Shiaw-Tong, May-Chiun and Yin-Chai (2015) observed that SMEs play a vital role in the economy by carrying out research on the correlation among knowledge management and organizational performance in chosen SMEs. Malaysia.

The study concluded that the KM processes capability antecedents such as KM acquiring, conversion, application and protections are important of organizational performance positively. The study recommended that the growing significance of knowledge has motivated businesses to espouse knowledge management as an imperative practice in

developing their business strategies.

In order to further encourage businesses to apply knowledge management, businesses should have a better understanding on the consequences of implementing knowledge management. This study provided insights to the businesses by demonstrating the empirical evidences of the correlation among knowledge management capabilities and organizational performance. Jelena, Vesna and Mojca (2012) observed the effect knowledge management and organizational performance.

The study revealed that through creating, collecting, organizing and exploiting knowledge, organizations can develop organizational performance. The effect of knowledge management practices on performance was empirically tested through structural equation modeling.

The results revealed that knowledge management practices measured through information technology, organization and knowledge positively affect organizational innovative performance.

2.7 Summary of the Reviewed Literature

The literature review discussed the current literature which deals with knowledge management and organizational innovation other related issues. It was divided into three parts: the conceptual review, theoretical review and empirical reviews. Under the conceptual review items such as knowledge management, organizational innovation, knowledge creation, knowledge application, knowledge sharing and knowledge protection, theoretical reviews, knowledge-based view, among others were discussed. The study reviewed recent works done on the area of knowledge management were empirically reviewed.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter focuses on the plan for collecting and analyzing data collected; so as to give a meaningful interpretation. The methodology for the study include research design, population of the study, sample size, sampling techniques, research instruments, validation and reliability of the research instruments, data collection method and finally, technique for data analysis.

3.2 Research Design

The research design is a framework of collecting and analyzing data for a study. It is also referred to as a “program “that guides the researcher in process of collecting, analyzing and interpreting observation (Elikwu, 2008).

The design method that was adapted for the research is a survey design, as it allows samples to be selected and explanatorily studied. The design permits the collection of original data meant for describing large population with individual as a unit of analysis. The research is designed to examine the impact of knowledge management process on organization innovation.

3.3 Population of the Study

The population of the study refers to the totality of the objects or elements under study and to which generalization from findings will be made. Yomere and Agbonifoh (1990) define a population as the totality of objects being studied and to which conclusion of the result will apply. The population for the study is a finite population because all of its members/

elements known. The population comprises of 548 management staffs in the selected deposit money banks in Asaba the Delta State capital.

Table 3.1: Banks and the population

S/N	Number of Banks	Number of Employees
1	First bank	92
2	FCMB	30
3	Access Bank	35
4	Eco Bank	85
5	Fidelity Bank	30
6	Zenith Bank	93
7	GTB	30
8	Union Bank	62
9	Skye Bank	25
10	UBA	66
TOTAL		548

Source: Human Resource Departments of the Banks

3.4 Sample Size

The sample size of the study is the proportion of individuals drawn from the population in order to examine the impact knowledge management process and organizational innovation in the banking industry. A total of 231 employees were selected from the entire population using Taro Yamen's formula:

$$\begin{aligned}n &= \frac{N}{1+N(e)^2} \\n &= \frac{548}{1+548(0.05)^2} \\n &= \frac{548}{2.37} \\n &= 231\end{aligned}$$

Where: n = The Sample size

N = The population of study

e = level of significance (0.05)

Sample size of 231 Participants was used for analysis.

Table 3.2: Sample Size Apportionment

Name of Banks	Number of Employees	Apportionment
First bank	92	39
FCMB	30	13
Access Bank	35	14
EcoBank	85	36
Fidelity Bank	30	13
Zenith Bank	93	38
GTB	30	14
Union Bank	62	26
Skye Bank	25	11
UBA	66	28
TOTAL	548	231

$$\text{First bank} = (92/548) \times 231 = 39$$

$$\text{Zenith Bank} = (93/548) \times 231 = 38$$

$$\text{FCMB} = (30/548) \times 231 = 13$$

$$\text{GTB} = (30/548) \times 231 = 14$$

$$\text{Access Bank} = (35/548) \times 231 = 14$$

$$\text{Union Bank} = (62/548) \times 231 = 26$$

$$\text{EcoBank} = (85/548) \times 231 = 36$$

$$\text{Skye Bank} = (25/548) \times 231 = 11$$

$$\text{Fidelity Bank} = (30/548) \times 231 = 13$$

$$\text{UBA} = (66/548) \times 231 = 28$$

3.5 Sampling Techniques

Sampling technique is the sampling method adopted in the selection of element in the sample. For the purpose of representativeness and to be unbiased with data collection, the probability sampling technique was employed to select the sample unit. This sample technique gives equal chances to all elements to be selected for the study.

3.6 Instrument for Data Collection

Research instrument is the tool used to carefully collect data from the respondents. The research instrument used for the study is the questionnaire. Olannye (2006) defined a questionnaire as an instrument for gathering data from respondent to aid in finding solution to research problem.

The questionnaire used for the study is divided into two sections. The first section which is sections. "A" is structure to elicit response concerning respondents profile or biography. The second section which is section "B" was based on the major research question asked earlier in chapter one. The section B was scaled using the Likert scaling of five (5) point closed ended question which are, 5 = strongly agreed (SA) 4 = agreed (A) 3 = undecided (U) 2 = disagreed (D) 1 = strongly disagreed (SA).

3.7 Validity of the research Instrument

For validation of research instrument, we did content validity and face validity were used. Face validity was established by giving the instrument to lecturers in the Department of Business Management, Faculty of Management science, Delta State University, Asaba Campus. Content validity was established by ensuring that the items in the questionnaire relates to the concept being measured and were extracted from literature review and for authenticity and accuracy the questionnaire were validated.

3.8 Reliability of the research Instrument

Reliability refers to the extent to which your data collection techniques or analysis procedures will yield consistent findings whereas validity is concern with the ability of the instrument to measure what it is designed to measure (Olannye, 2006). Measurement of the model reliability was assessed using Cronbach's alpha (CA) based tests. CA provides an estimate of the indicator inter correlations (Sekaran, 2003). And acceptable measure for CA is 0.7 or higher. Table 3.2 indicated that the reliability test for the constructs ranging from 0.798 to 0.852.

Table 3.3. Reliability Test

Item	Cronbach's Alpha
Organizational innovation	0.852
knowledge acquisition	0.811
knowledge sharing	0.798
knowledge application	0.782
knowledge protection	0.825

3.9 Method of Data Collection

The data used in the study were sourced from two sources; the primary source and the secondary source. In the primary source, the data were collected using the research questionnaire administered on the respondents, while the secondary data were gotten from existing sources like magazine, newspaper, journals, textbooks and other data were gotten from the internet.

3.10 Techniques for Data Analysis.

The statistical tool used for the test of hypotheses are the regression and correlation analytical tool reasons being that the tool are used in measuring relationships. It is used to ascertain the relationship between variables and the significant level of such relationship. The regression analysis used to test the hypotheses was conducted at 0.05 level of significance. The Stata version 13 was used for the regression analysis.

Model specification

$$\text{ORGInv} = \beta_0 + \beta_1 \text{KAcq} + \beta_2 \text{KShr} + \beta_3 \text{KApp} + \beta_4 \text{KPrt} + \mathbf{u}$$

Where: **ORGInv**: represents Organizational innovation

KAcq: represents knowledge acquisition

KShr: represents knowledge sharing

KApp: represents knowledge application

KPrt: represents knowledge protection

u: represents stochastic variable

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the analysis of data collected from the staff of the selected Banks. Then the results of the analysis of the descriptive statistics are presented. Finally, the results of testing the hypotheses were presented and the findings interpreted and discussed.

Questionnaire Distributed	Questionnaire Retrieved	Questionnaire Used
231	215	210

Out of the 231 sets of questionnaire administered, two hundred and fifteen (215) were returned, five (5) were not properly filled and two hundred and ten (210) were useable, which is 90%. Therefore, the analysis is based on the sample size of two hundred and ten (210) copies.

4.2 Analysis of Respondents Profile

Table 4.1 Demographic Profile of Respondents

Option	Frequency	Percentage
SEX		
Male	117	55.7
Female	93	44.3
Total	210	100.0
AGE		
18-27 years	89	42.4
28-37 years	66	31.4
37 years and above	55	26.2
Total	210	100.0
MARITAL STATUS		
Married	111	53
Single	99	47
Total	210	100.0
EDUCATIONAL QUALIFICATION		
WAEC/GCE/NECO	32	16
OND/NCE	33	16
HND/B.Sc.	64	30
MBA/MSc.	15	7
OTHERS	66	31
Total	210	100.0

Source: Field Survey, 2017

The demographic information of the respondents revealed that 55.7% of the respondents were males and 44.3% were females. In terms of age, 42.4% of the respondents were in the age group of 18-27 years, 41.4% were in the age group of 28-37 years. While 26.2% were above 38 years.

The respondents were also classified in terms of marital status. The analysis shows that 53% of the respondents were married while 47% were single. In terms of educational qualification 16% of the respondents reported that they possess O' level certificate, 16% of the respondents indicate that they have either NCE or OND certificate. Those that have either HND or B.Sc. as their highest qualification were 30% of the total respondents. 7% reported to be either MBA or M.Sc. certificate holders. Finally, 31% of the respondents indicated to have other qualifications.

Table 4.1: Effect of Knowledge acquisition organizational innovation

S/N	Statements	Respondents Choice					Total
		SA (5)	A (4)	U (3)	D (2)	SD (1)	
5	Acquire knowledge on developing new products/services.	58 (27.6)	79 (37.6)	26 (12.4)	21 (10)	26 (12.4)	210
6	Acquire knowledge from employees.	68 (32.4)	74 (35.2)	32 (15.3)	11 (5.2)	25 (11.9)	210
7	Acquire knowledge fro supplier.	85 (40.5)	84 (40)	25 (11.9)	5 (2.4)	11 (5.2)	210
8	Generating new knowledge from existing knowledge.	53 (25.2)	53 (25.2)	32 (15.3)	32 (15.3)	40 (19)	210
	Total	264	290	115	69	102	840

Source: field work, 2017

Table 4.1 shows the respondent's view on questions 5, a total of 137 respondents agreed that in their organization, they acquire knowledge on developing new products/services, while 47 are in disagreement. High agreement rate were recorded for the following questions as well - Acquire knowledge from employees (67.6%).For the question in my organization I acquire

knowledge from supplier (80.5%) agreed and Generating new knowledge from existing knowledge (50.4).

Table 4.2: Effect of Knowledge application on organizational innovation

S/N	Statements	Respondents Choice					Total
		SA (5)	A (4)	U (3)	D (2)	SD (1)	
9	Apply knowledge to solve new problems.	68 (32.4)	79 (37.6)	26 (12.4)	21 (10)	16 (7.6)	210
10	Apply experiential knowledge.	63 (30)	89 (42.4)	32 (15.3)	11 (5.2)	15 (7.1)	210
11	Utilize knowledge into practical use.	95 (45.2)	84 (40)	26 (12.4)	5 (2.4)	- -	210
12	Apply knowledge learned from experiences.	105 (50)	53 (25.2)	5 (2.4)	26 (12.4)	21 (10)	210
	Total	331	305	89	63	52	840

Source: field work, 2017.

In Table 2 are included questions about knowledge application. 70% of the respondents agreed that in their organization they apply knowledge to solve new problems, 72.4% - Apply experiential knowledge, 85.2% Utilize knowledge into practical use and 75.2% were in agreement to apply knowledge learned from experiences.

Table 4.3: Effect of Knowledge sharing on organizational innovation.

S/N	Statements	Respondents Choice					Total
		SA (5)	A (4)	U (3)	D (2)	SD (1)	
13.	Share knowledge between supervisors and subordinates.	68 (32.4)	79 (37.6)	26 (12.4)	21 (10)	16 (7.6)	210
14.	Share knowledge across units.	63 (30)	89 (42.4)	32 (15.3)	11 (5.2)	15 (7.1)	210
15.	Share knowledge among colleagues.	95 (45.2)	84 (40)	26 (12.4)	5 (2.4)	- -	210
16.	Share knowledge among partners.	105 (50)	53 (25.2)	5 (2.4)	26 (12.4)	21 (10)	210
	Total	331	305	89	63	52	840

Table 4.3 shows that 70% of the respondents agreed that they share knowledge between supervisors and subordinates, 72.4% agreed to share knowledge across units, 85.2% share knowledge among colleagues and 75.2% were in agreement to share knowledge among partners.

Table 4.4: Effect of Knowledge protection on organizational innovation

S/N	Statements	Respondents Choice					Total
		SA (5)	A (4)	U (3)	D (2)	SD (1)	
17	Has extensive policies and procedures for protecting trade secrets.	116 (55.2)	68 (32.4)	11 (5.2)	11 (5.2)	4 (1.9)	210
18	Values and protects knowledge embedded in individuals.	100 (47.6)	84 (40)	5 (2.4)	11 (5.2)	10 (4.8)	210
19	Clearly communicates the importance of protecting knowledge.	52 (24.8)	88 (41.9)	35 (16.7)	20 (9.5)	15 (7.1)	210
20	Knowledge that is restricted is clearly identified.	94 (44.8)	63 (30)	26 (12.4)	11 (5.2)	16 (7.6)	210
	Total	362	303	77	53	45	840

Source: field work, 2017

87.6% of the respondents agreed that their organization has extensive policies and procedures for protecting trade secrets, 87.6% agreed that their organization values and protects knowledge embedded in individuals. 66.7% - Clearly communicates the importance of protecting knowledge and 74.8% agreed that Knowledge that is restricted is clearly identified.

Table 4.5: Organizational Innovation

S/N	Statements	Respondents Choice					Total
		SA (5)	A (4)	U (3)	D (2)	SD (1)	
21	Develops innovative administration in planning procedures	68 (32.4)	79 (37.6)	26 (12.4)	21 (10)	16 (7.6)	210
22	Develops innovative administration in process control systems.	63 (30)	89 (42.4)	32 (15.3)	11 (5.2)	15 (7.1)	210
23	Develops innovative administration in integrated mechanisms.	95 (45.2)	84 (40)	26 (12.4)	5 (2.4)	- -	210
24	Enhances the development of new technologies.	105 (50)	53 (25.2)	5 (2.4)	26 (12.4)	21 (10)	210
	Total	331	305	89	64	52	840

Source: field work, 2017.

Questions regarding organizational innovation were asked 70% of respondents agreed that their organization develops innovative administration in planning procedures, 72.4% agreed to develops innovative administration in process control systems, 85.2% develops innovative administration in integrated mechanisms and 75.2% agreed that enhances the development of new technologies.

Table 4.6: Descriptive Statistics

stats	kpvt	kapp	kshr	kacq	orginv
mean	3.809524	3.761905	3.857143	3.890476	4.128571
p50	4	4	4	4	4
max	5	5	5	5	5
min	1	1	1	1	2
N	210	210	210	210	210

Source: Stata version 13

The mean score of above 3.5 was reported for all the constructs. The maximum was 5 while the minimum was 1 except for Organizational innovation. Table 4.7 below reveals the direction of association of the variables of study

Where: **ORGINv:** represents Organizational innovation
 KAcq: represents knowledge acquisition
 KShr: represents knowledge sharing
 KApp: represents knowledge application
 KPrt: represents knowledge protection

Table4.7: Correlation Matrix

```
. correlate kp rt kapp kshr kacq orginv
(obs=210)
```

	kp rt	kapp	kshr	kacq	orginv
kp rt	1.0000				
kapp	0.4415	1.0000			
kshr	0.4951	0.3824	1.0000		
kacq	0.4982	0.5794	0.4085	1.0000	
orginv	0.6155	0.5508	0.5938	0.6123	1.0000

Source: Stata version 13

The correlation analysis in Table 4.7 indicates that the studied variables are positively correlated

Table4.8: Regression Result of Knowledge Management and Organizational Innovation

```
. regress orginv kp rt kapp kshr kacq
```

source	SS	df	MS			
Model	94.1960872	4	23.5490218	Number of obs =	210	
Residual	65.3324843	205	.318695045	F(4, 205) =	73.89	
				Prob > F =	0.0000	
				R-squared =	0.5905	
				Adj R-squared =	0.5825	
				Root MSE =	.56453	
Total	159.528571	209	.7632946			

orginv	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
kp rt	.2349839	.0496129	4.74	0.000	.1371669 .3328009
kapp	.1553273	.0516099	3.01	0.003	.0535729 .2570816
kshr	.2775989	.050895	5.45	0.000	.177254 .3779437
kacq	.2760271	.0616482	4.48	0.000	.1544812 .3975729
_cons	.5044531	.2170639	2.32	0.021	.0764892 .932417

Test for Heteroskedasticity

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
variables: fitted values of orginv

chi2(1)      =    17.34
Prob > chi2  =    0.4300
```

Table 4.9: VIF Test

```
estat vif
```

variable	VIF	1/VIF
kacq	1.72	0.580395
kapp	1.61	0.622863
kppt	1.58	0.633498
kshr	1.41	0.708254

Mean VIF	1.58	

Source: Stata version 13

The regression analysis was immediately followed by post regression diagnostic test.

The F-statistic value of 73.89 and its associated P-value of 0.000 shows that the regression model on the overall is statistically significant at 1% level, this means that the regression model is valid. The table above also shows a mean VIF value of 1.58 which is less than the benchmark value of 10, this indicates the absence of multicollinearity, and this means no independent variable was dropped from the model. Also from the table above, it can be observed that the results had no heteroscedasticity problem (17.34(0.43)) that is not significant.

4.3 Test of Hypotheses

Hypothesis One

Ho: Knowledge acquisition has no significant positive effect on organizational innovation.

H₁: Knowledge acquisition has a significant positive effect on organizational innovation.

The regression result output in table 4.8 showed Knowledge acquisition have a significant effect on organizational innovation (Coef. 0.276, p = 0.000). The p-value 0.000 at 1% level of significant for knowledge acquisition process is less than 0.05, hence we reject the null hypothesis and accept the alternate, which state that Knowledge acquisition has a significant positive effect on organizational innovation.

Hypothesis Two

Ho: Knowledge application has no significant positive effect on organizational innovation

H₁: Knowledge application has a significant positive effect on organizational innovation

The regression result output in table 4.8 showed Knowledge application have a significant effect on organizational innovation (Coef. 0.155, p =0.003). The p-value 0.003 for knowledge application process is less than 0.05, hence we put value reject the null hypothesis and accept the alternate, which state that Knowledge application has a significant positive effect on organizational innovation.

Hypothesis Three

Ho: Knowledge sharing has no significant positive effect on organizational innovation.

H₁: Knowledge sharing has a significant positive effect on organizational innovation.

The regression result output in table 4.8 showed Knowledge sharing have a significant effect on organizational innovation (Coef. 0.277, $p = 0.000$). The p-value 0.003 for Knowledge sharing is less than 0.05, hence we reject the null hypothesis and accept the alternate, which state that Knowledge sharing has a significant positive effect on organizational innovation.

Hypothesis Four

Ho: Knowledge protection has no significant positive effect with organizational innovation.

H₁: Knowledge protection has a significant positive effect with organizational innovation.

The regression result output in table 4.8 showed Knowledge protection have a significant effect on organizational innovation (Coef. 0.234, $p = 0.000$). The p-value 0.000 at 1% level of significant for knowledge protection process is less than 0.05, hence we reject the null hypothesis and accept the alternate, which state that Knowledge protection has a significant positive effect with organizational innovation

From table 4.8, Adj. R-Squared of the models is 0.58. implying that 58% change in organizational innovation is brought about by knowledge management process variables (knowledge management acquisition process, knowledge sharing process, knowledge management application process and knowledge management protection process).

4.4 Discussion of Results

Knowledge acquisition has a significant effect on organizational innovation (0.276(0.000)).

The test of hypothesis shows that there is significant positive relationship between Knowledge acquisition and organizational innovation.

This finding is in alignment with (Burcu and Ceyda, 2013) that knowledge management processes (i.e., knowledge acquisition, sharing, and application) have been considered as effective means of promoting an innovative culture and facilitating different types of innovation in organizations. This is further supported by Hammandy, A., Rabeh, D., Jimenez-jimenez, D. and Martinez-costa, M., (2013) and Miguel Miguel, B. N., Fanio, A., Barry, E. and Richard, W. (2006).

The regression result in table 4.8 shows that Knowledge application have a significant positive effect on organizational innovation. The test of hypothesis further shows that Knowledge application has a significant positive effect on organizational innovation.

The findings is in agreement with Kambiz and Aslan (2015)that there is an influence of knowledge management on organizational innovation in Iranian automotive industry and also the investigation showed that there is association between knowledge management process (application and other activities) and organizational innovation.

The study found that Knowledge sharing has a significant positive effect on organizational innovation. This is in accordance with (Huang & Li, 2009 and Omotayo, 2015) that there is significant positive relationship between Knowledge sharing and organizational innovation. Supported by Burcu and Ceyda (2013), that there exist a significant positive relationship between Knowledge sharing and organizational innovation.

The regression result in table 4.8 showed Knowledge protection has a significant positive effect on organizational innovation (0.276(0.000)). The p-value 0.000 at 1% level of significant for knowledge protection process is less than 0.05, hence we reject the null hypothesis and accept the alternate, implying Knowledge protection has a significant positive effect on organizational innovation. This is in consonant with (Darroch and McNaughton, 2002; Lee and Kang, (2005); Plessis, 2007) that Knowledge management enhances engagement in innovation through generating, using, and sharing new ideas and exploitation of the organization's thinking power.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

The demographic information of the respondents revealed that 55.7% of the respondents were males and 44.3% were females. In terms of age, 42.4% of the respondents were in the age group of 18-27 years, 41.4% were in the age group of 28-37 years. While 26.2% were above 38 years.

The respondents were also classified in terms of marital status. The analysis shows that 53% of the respondents were married while 47% were single. In terms of educational qualification 16% of the respondents reported that they possess 0' level certificate, 16% of the respondents indicate that they have either NCE or OND certificate. Those that have either HND or B.Sc. as their highest qualification were 30% of the total respondents. 7% reported to be either MBA or M.Sc. certificate holders. And, 31% of the respondents indicated to have other qualifications. There is significant positive relationship between Knowledge acquisition and organizational innovation.

The study adopted the survey research design, the sample size of 202 was used for analysis from a population of 548 and a sample size of 210 was used for analysis. The employed descriptive, correlation and multiple regression as analytical tool for the study. The findings of the study are:

Knowledge acquisition has a significant positive effect on organizational innovation.

Knowledge application has no significant positive effect on organizational innovation.

Knowledge sharing has a significant positive effect on organizational innovation.

Knowledge protection has a significant positive effect with organizational innovation.

5.2 Conclusions

The aim of the study is to examine the impact of knowledge management process on organizational innovation. The study conclude that Knowledge acquisition has a significant effect on organizational innovation, when organization encourages the acquisition of knowledge through recruiting knowledgeable employees their level of innovation will increase.

When the acquired knowledge is applied within the organization in an effective and creative manner, the rate of innovation will increase because Knowledge application has a significant effect on organizational innovation. Organizations that encourage knowledge sharing are also bound to be more innovative than those that do not because Knowledge sharing has a significant effect on organizational innovation. When knowledge sharing is encouraged within the organization, ignorance will give way.

Knowledge protection has a significant effect on organizational innovation. Organizations that protect their acquired knowledge are bound to be innovative reason being that the protected knowledge will give them competitive advantage and the knowledge will be confined to that particular organization.

5.3 Recommendations

1. The management of Banks should invest into knowledge management process so as to be innovative and this will improve their over-all performance.
2. Banks should encourage knowledge sharing within the organization so as to promote knowledge within the organization and drive ignorance.
3. Management should come up with policies that will sustain employee participation in knowledge management practices in other to improve their ability to compete.

5.4 Contributions to Knowledge

The study made the following contributions to knowledge:

1. The study affirmed that Knowledge application aids organizational innovation. Pointing out that when acquired knowledge is applied within the organization they will be able to solve new problems and lead to innovation within the organization.
2. The study established that Knowledge sharing facilitate organizational innovation. The study shows that knowledge transfer requires the willingness of a group or individual to work with others and share knowledge to their mutual benefit which yields organization innovation.
3. The study demonstrated that with Knowledge protection organizations can perform more creditably through protection and securing of information about the organizational Values, impeccable and exhaustive techniques which are assets to the organization

5.5 Suggested Areas for Further Study

The present study is concern with Knowledge management and organizational innovation using Ten (10) banks in Asaba. Future studies should expand the sample size to accommodate more Banks in Nigeria. More so, the study utilized four (4) dimensions of Knowledge management, future studies should include other dimensions of knowledge management and be conducted in the manufacturing sector in Nigeria

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APPENDIX 1

QUESTIONNAIRE

Department of Business Management
& Marketing,
Faculty of Management Sciences,
Delta State University,
Asaba, Campus.
September, 2017.

Dear Respondents,

REQUEST FOR THE COMPLETION OF STRUCTURED QUESTIONNAIRE

I am M.Sc. student in the department of Business Management and Marketing, Faculty of Management Sciences, Delta State University, Asaba Campus. I am conducting research on “The effect of job stress on employee performance in selected banks in Asaba as part of the requirements for the award of M.sc degree in Business Management.

I will appreciate it if you kindly respond objectively to the sets of questions contained in this questionnaire. The exercise is purely academic and whatever may be your views will be treated confidential.

Thanks for your time and assistance on this research.

Yours faithfully,

ENEH, Chinedu
(*Researcher*)

SECTION A

RESPONDENTS PROFILE

INSTRUCTIONS: The questions in the sub-section of the questionnaire are designed to elicit information about the impact of Job stress on Employee Performance. Please answer by ticking (X) in the blank space provided.

1. **Sex:** (a) Male [] (b) Female []
2. **Age:** (a) Below 25 years [] (b) 25-30 years [] (c) 31-35 years [] (d) above 35 years []
3. **Marital Status:** (a) Married [] (b) Single []
4. **Educational qualification:** (a) 0' level certificate [] (b) OND/NCE [] (c) HND/B.Sc. [] (d) MBA/M.Sc. (e) Others []

SECTION B

Kindly read through the following statement, use the scale below as your guide:

SA = Strongly Agreed

A = Agreed

U = Undecided

D = Decided

SD = Strongly Disagree

Knowledge Acquisition

S/N	In my organization I.....	SA	A	U	D	SD
5	Acquire knowledge on developing new products/services.					
6	Acquire knowledge from employees.					
7	Acquire supplier knowledge.					
8	Generating new knowledge from existing knowledge.					

Knowledge Application

S/N	In my organization I.....	SA	A	U	D	SD
9.	Apply knowledge to solve new problems.					
10.	Apply experiential knowledge.					
11.	Utilize knowledge into practical use.					
12	Apply knowledge learned from experiences.					

Knowledge Sharing

S/N	In my organization I.....	SA	A	U	D	SD
13.	Share knowledge between supervisors and subordinates.					
14.	Share knowledge across units.					
15.	Share knowledge among colleagues.					
16.	Share knowledge among partners.					

Knowledge Protection

S/N	My organization.....	SA	A	U	D	SD
17	Has extensive policies and procedures for protecting trade secrets.					
18	Values and protects knowledge embedded in individuals.					
19	Clearly communicates the importance of protecting knowledge.					
20	Knowledge that is restricted is clearly identified.					

Organizational Innovation

S/N	My organization.....	SA	A	U	D	SD
21.	Develops innovative administration in planning procedures					
22.	Develops innovative administration in process control systems.					
23.	Develops innovative administration in integrated mechanisms.					
24.	Enhances the development of new technologies.					

. regress orginv kprr kapp kshr kacq

Source	SS	df	MS			
Model	94.1960872	4	23.5490218	Number of obs =	210	
Residual	65.3324843	205	.318695045	F(4, 205) =	73.89	
Total	159.528571	209	.7632946	Prob > F =	0.0000	
				R-squared =	0.5905	
				Adj R-squared =	0.5825	
				Root MSE =	.56453	

orginv	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
kprr	.2349839	.0496129	4.74	0.000	.1371669	.3328009
kapp	.1553273	.0516099	3.01	0.003	.0535729	.2570816
kshr	.2775989	.050895	5.45	0.000	.177254	.3779437
kacq	.2760271	.0616482	4.48	0.000	.1544812	.3975729
_cons	.5044531	.2170639	2.32	0.021	.0764892	.932417

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

H0: Constant variance

Variables: fitted values of orginv

chi2(1) = 17.34

Prob > chi2 = 0.4300

estat vif

Variable	VIF	1/VIF
kacq	1.72	0.580395
kapp	1.61	0.622863
kprr	1.58	0.633498
kshr	1.41	0.708254
Mean VIF	1.58	