



Swedish University of Agricultural Sciences
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The Critical Success Factors of Information and Communication Technology Usage in Nigeria's Commercial Banks

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**The Critical Success Factors of Information and Communication Technology
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Abstract/ Summary

The rapidly changing business environments in which organizations operate have brought challenges that organizations must meet up with in order to remain competitive. According to Adewoye (2007), these environments in which banks and other organizations operate are competitive, complex and consist of changing operational conditions. The revolution in information and communication technology is the drive of present day economy and corporate strategies of organizations; it is responsible for the speedy changes in the mode of operations that organizations adopt.

Considering Nigeria's banking sector, the use of information and communication technology is relatively new. As at 1998 one bank in Nigeria had an automated teller machine (Agboola, 2006). On realizing the benefits of using ICTs in rendering of banking services, Nigeria commercial banks now deploy and use different ICT facilities in their various banking services.

In this study an attempt is made to find out from the various customers of Nigeria's banks included in this study what their most used and preferred ICT facility of their banks is. An attempt is also made to find out if bank customers most used and preferred ICT facility differs based on gender consideration and lastly, this study also tries to find out what the worst factors are that tend to limit customer usage of their banks' ICTs. To be able to answer these questions, a theoretical framework of CFS and contingency theory are used. The data received from the survey are analyzed by using SPSS.

The objective of this study is to identify, describe, explain and explore the different CFS of ICT application in banks to rendering quality services to customers in the studied commercial banks in Nigeria.

The findings are that: The individual customers of the studied banks prefer to make use of their banks' automated teller machine most of the time compare to other ICT facility been used in the banks. But, the banks' corporate customers prefer to make use of branch networking facility of their banks. According to the theoretical frame work of CFS being used in this study, the CSFs based on data gotten from individual customers and corporate customers are automated teller machines and branch networking. In determining what the CFS are based on gender, the results show that female customers of the studied banks prefer to use internet banking and the male customers prefer to use automated teller machines. From the responses received from corporate customers, it shows that the critical success factor for the females is mobile banking and for the males is branch networking. The survey revealed that low internet connectivity, security and epileptic power supply are the worst factors limiting customers' usage of their banks ICT facilities.

Abbreviations

ATC -Association of Telecommunications Companies
ATM -Automated Teller Machine.
AI -Achievement Index
CBN-Central Bank of Nigeria
CAN -Computer Association of Nigeria
CDSS -Clinical Decision Support Systems
CFS- Critical Success Factors
DPM-Due Process mechanism
DBI -Digital Bridge institute
EFCC- Economic and Financial Crimes Commission
EFT -Electronic fund transfer
EN -Enterprise Network
FMST-Federal Ministry of Science and Technology
FEC -Federal Executive Council
GDP- Gross Domestic Product
GR-Green Revolution
GPRS-General Packet Radio Services
ICPC -Independent Corrupt Practices and other Related Offenses Commission
ICT- Information and Communication Technology
ISPAN-Internet Service Providers Association of Nigeria
ISPN -Institute of Software Practitioners of Nigeria
LGA - Local Government Areas
ITU - International Telecommunication Union
MIC-Ministry of Information and Communication
MOF -Ministry of Finance
NEEDS-National Economic Empowerment and Development Strategy
NIT- National Information Technology
NITDA -National Information Technology Development Agency
NITDF -National Information Technology Development Fund
NCC -Nigerian Communications Commission
NIIT -National Institute of Information
NigComSat-1- Nigerian Communications Satellite 1
NAICOM -National Insurance Commission
OFN-Operation Feed the Nation
SAP-Structural Adjustment Programme
SEEDS-State Economic Empowerment and Development Strategies
SPSS-Statistical Package for the Social Sciences
TAI-Technology Achievement Index
UNDP-United Nation Development Programme
VMA -Value for Money audit
WAN -Wide Area Network
WAP-Wireless Application Protocol

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Chapter One

1. Introduction

The 21st century business environment is characterized by highly changing technological innovations, especially in information and communication technology (ICT) (Agboola, 2006). ICT has become an integral part of corporate organizations' life as it plays important roles in its management and organization (Laudon and Laudon, 1991).

The pace of the evolutionary trend of ICT in our society is phenomenal as its impacts are felt in every facet of the society including the outmost corners of the world; consequently the numbers of personal computers and internet subscribers are on the increase and are expected to keep growing especially in less developed countries (Mark, 2007).

In the assertion of Nijkamp and Cohen-Blankshtain (2005), *digital revolution* has not only impacted significantly on contemporary business life, our style of living and our occupation, but it has also affected the public services significantly.

1.1 Information and Communication Development in Nigeria

In Nigeria, the first computer ever came into the country in the year 1963. However, the revolution of ICT in the country started with the return of democratic rule (Www, Siteresources). In addition, Agboola (2006) said that ICT first made its way into Nigerian banks in the early 90s. In 1998, one bank had an ATM, but by 2004, fourteen commercial banks had acquired one.

In giving high priority attention to ICT, the Federal government came up with different policies to ensure a successful development of the sub sector and other major sectors that will serve as a market for the ICT. Such policies were National Information Technology (NIT) Policy, National Space policy, National Bio-technology Policy, National Telecommunication policy, etc (Www, Siteresources).

As the government intensifies its effort to aid rapid development of ICT in the country, records shown that the efforts are geared towards acquiring, programming tools, software, applications and internal software development, operating systems, computer and network systems integration, voice and data communications services, web hosting, data processing services, wired and wireless communications and IT consulting. These ICT related acquisitions and spendings by the government of Nigeria is reported by the World Bank to have doubled within the last 5 years. Below is the graphical representation of the World Bank report (Www, Siteresources).

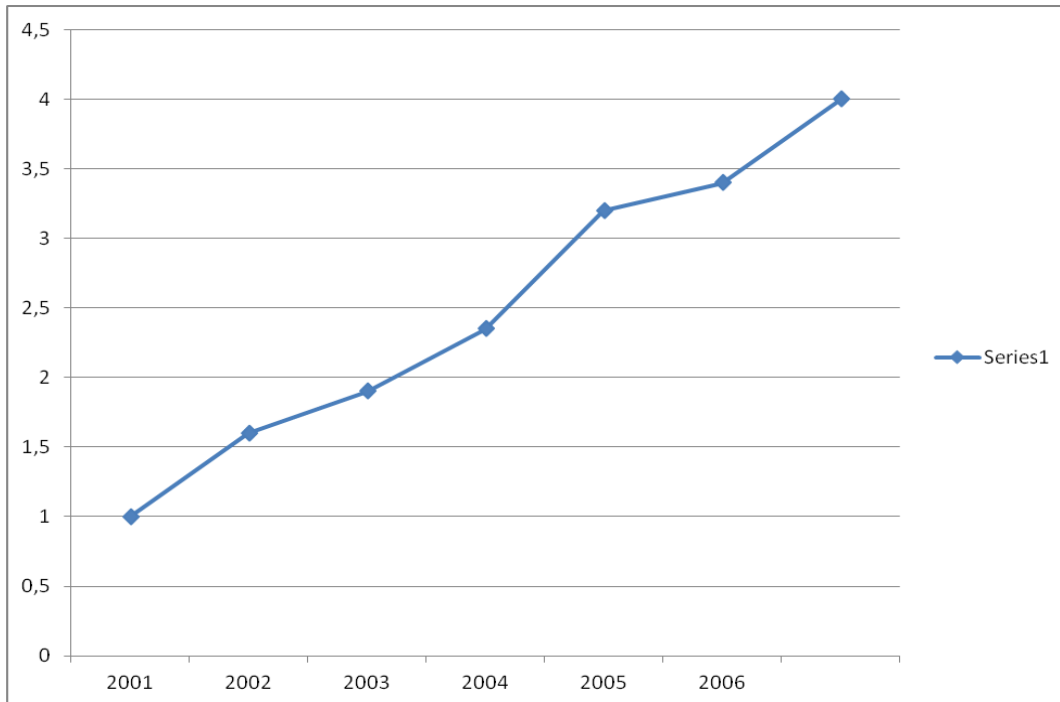


Figure One: Nigeria's ICT Expenditure (US\$)

Www, Siteresources

1.1.1 ICT Institutions in Nigeria

The efforts of the government in making Nigeria an ICT driven country is not only limited to ICT related acquisitions but it also includes the establishment of supporting institutions in various parts of the country. Such institutions include National Information Technology Development Agency (NITDA), Ministry of Information and Communication (MIC), Federal Ministry of Science and Technology (FMST), Nigerian Communications Commission (NCC). Others are National Information Technology Development Fund (NITDF), establishment of IT Parks with functioning infrastructures for training, service rendering and management which are necessary for harnessing the power of information and communication (Www, Siteresources).

The effort of the government to make Nigeria an ICT empowered nation has also spread to the education sector, this effort is seen in the establishment of Federal University of technology and Polytechnics in different regions of the country. Through the initiative of making Nigeria an ICT driven nation, the Ministry of education has significantly made progress in its development and implementation of the following ICT driven projects:

- The Nigerian Universities Network and National Teachers Institutes, Teachers Training program through Distance Learning.

- National Virtual Library project.
- National Open University of Nigeria and Distance Learning program.
- Computers in Schools Initiative.
- Educational Management information System (EMIS). (*ibid*)

Besides the Universities and Polytechnics, there are other ICT training institutes in Nigeria, these include Microsoft Training Academy, CISCO Academy, Digital Bridge institute (DBI), National Institute of Information Technology (NIIT) etc. These training institutes run certification programs leading to the award of different ICT qualification, such as IT Security Certifications, Microsoft Windows Network Certifications, Database Certifications, CISCO Network Certifications and others. At the industrial level, different industrial associations have been formed to fast track rapid ICT development in Nigeria. Examples of industrial association formed in this regard are Internet Service Providers Association of Nigeria (ISPAN), Association of Telecommunications Companies (ATC), Institute of Software Practitioners of Nigeria (ISPN), Outsourcing Development Initiative of Nigeria (ODIN), Computer Association of Nigeria (CAN) etc (Www, Siteresources).

1.1.2 Nigerian Communications Satellite 1 (NigComSat-1)

The desire of Nigeria to rapidly develop its ICT capability did not end with the establishment of Universities, polytechnics and other training institutions, but in 2006, Nigeria NigComSat-1 was incorporated. NigComSat-1 is an acronym that means Nigerian Communications Satellite 1; it was incorporated as a limited liability company to be in charge of management and operations of the Communications Satellites that was launched in 2007 (Www, Nigcomsat).

In the research of Oketola, (2010), the author said that the Nigerian government is making efforts to overcome the challenges that brought about poor e-readiness of the nation. E-readiness is defined as “*the degree to which a society is prepared to participate in the digital economy with the underlying concept that the digital economy can help to build a better society*” (GeoSINC International, 2002.Pp 5). In this regard Oketola, (2010), said that concerted efforts are been made to make the Nigeria NigComSat-1 satellite functional with rich ICT package related services to ensure that ICT development in the nation ranks high among the first 20 nations by the year 2020. The author also revealed that NigComSat-1 when fully operational promises to deliver to Nigerians the following benefits:

- Telecommunications

This is the exchange of information over reasonable distances through electronic devices such as telegraphs, radio, telephones, fiber optics, orbiting satellites, internet etc, in addition the NigComSat-1 is to enhance ,Urban Rural Telephony, Mobile & Paging Services ,corporate networks(VPN), Very Small Aperture Terminal (VSAT), networks,inter-carrier Services, Satellite to Satellite Services are all the awaiting benefits from the Nigerian Communications Satellites (Www,Searchtelecom and Www,Nigcomsat).

➤ Community Tele-Centre

A tele-centre is a common place for every person in the society where Internet, computers, and other digital technologies can be assessed to enable people in the society to, learn, get information, communicate with others, and learn important digital skills. One main reason for the incorporation of NigComSat-1 is to empower Nigerians digitally (Www, Nigcomsat).

➤ Broadcasting, Internet and Multimedia

Broadcasting is dispersing of messages or signals to a wider area or to connected electrical devices. The installation of NigComSat-1 is also expected to greatly improve on the Nigeria broadcasting subsector of the economy, especially in the areas of video streaming, multimedia and audio. It is also to enhance the availability of internet to all Nigeria citizens and corporate organizations so that Nigeria can realize her dream of being an ICT driven nation, (Www, Nigcomsat).

➤ Telepresence

“Telepresence is defined as the experience of being fully present at a live real world location remote from one's own physical location.”(Www, Transparenttelepresenceresearchgroup, 2004, Pp1)

The Nigeria NigComSat-1 is designed to support Telepresence, which will make distance learning, telemedicine, e-government and e-commerce possible in the country (Www, Nigcomsat).

1.2 Background to the problem

Banking operations in Nigeria started in 1892; the operation has been through different faces of modifications to enhance successful performance of the industry (Brownbridge, 1996).

Banking operation without the application of ICT facilities is slow and it limits the capability of the banks to attend to the need of their teaming customers and to effectively market their products (Kasum, *et al.*, 2006).

Nigeria's economy is cash based, regarding the payment system. This assertion reveals the problems faced by customers in having to go with bulk of physical cash in the process of business transaction; this way of paying for transactions predisposes business men and women to attacks of robbers who may dispossess them of their hard earned resources (Kasum, *et al.*, 2006).

Non availability of ICT facilities in banks make embarking on banking transactions difficult for customers. For example, checking account balance, the customers will have to go to his bank regardless of the distance. Customers are also unable to undertake internet transaction; this means that in time of financial need customers cannot transfer or receive money via internet but will have to wait until the physical cash is made available by any other means outside the use of ICT facilities. On the side of the banks, there is limitation of the number of customers or intending customers that can become aware of banks products. Non usage of ICT facilities restricts a bank to a particular geographical region (Kasum, *et al.*, 2006).

Therefore, not utilization of ICT in banking operations, especially in Nigeria, definitely poses problems for the nation's emerging economy, its population and other sectors of the economy that depend on the services of the various banks.

1.3 Statement of Problem

The economy of Nigeria is an emerging economy that needs the instrumentality of a viable banking sector to keep the economic engine running. The Nigerian banking sector cannot afford to lag behind in this present day dynamic business environment, it is therefore important for the sector to fully embrace and integrate the modern information and communication technology into all facet of its operations.

This study will analyze the conditions of some commercial banks in Nigeria in terms of deployment and utilization of ICT in their operations and also the effects of ICT facilities on their operations.

The specific questions that shall guide the research in this project are:

- What are the various ICTs that customers (both internal and external) regard as critical success factors (CFS) for enhancing banking service quality in Nigeria?
- To determine if there are any differences in the perceptions of customers regarding their choice of usage of their banks' ICT facilities based on their gender.
- To identify the worst factors limiting the usage of commercial banks' ICT facilities in Nigeria.

1.4 Objectives of the Research

The aims of the paper are to identify, describe, explain and explore the various CFS of ICT usage in the studied commercial banks in Nigeria as perceived by internal and external customers. In addition, this study is also aimed at determining what the CFS of Nigerian Banks' ICT facilities are, based on customers' gender as well as to find out what the factors are that tend to limit customers usage of their banks' ICT facilities in Nigeria. The stated research questions will be answered with the help of the theoretical framework of Critical Success Factor and contingency theory.

Present day business environment is characterized by dynamic technological innovations that places premium on business organization to upgrade their facilities if they are to stand out as being competitive and dominant in their market. As a result of this, Nigeria's commercial banks have begun to embrace the use of ICT facilities in their operations so as to be competitive (Agboola, 2006).

The concept of effects of ICT application in Nigeria commercial banks is met to unravel the ways that ICT has changed the banking procedures to procedures that are customer focused and highly valued by customers. In the findings of Stella (2010), the author noted that one of the effects of ICT application in banking services is its ability to enable banks to grapple with the challenges of the current day's rapid technological revolution in the banking industry. According to her, utilization of ICT in banking operations can greatly improve on banks' efficiency, profitability and productivity.

In supporting Stella's (2010) view, Accad (2000), posited that clarity of prices and empowerments of consumers brought about by information technology has led to products and price competitions among banks. While continuing, the author said that banks will have to take advantage of the effectiveness of ICT to differentiate their products and services in order to meet the demand of their customers, additionally, Accad also said that ICT enables banks to provide financial information to their customers in a customized user friendly fashion that allows them to easily trail data in the structure that is best suitable to their purpose. Similarly, Abdulazeez 2010 revealed that the use of ICT in Nigerian banks has brought about an effective means of extending banking services to cover more areas in the business environment. According to the author, through the instrumentality of ICT in the various commercial banks it is now possible to make room for more *"functions and processes in other sectors"* pp.40 , for example, the government can now receive payments for vehicle licensing and registrations as well as payment of school fees through internet banking.

In addition, the Government nowadays pays staff salaries through the e-payment means provided by bank's information and communication technology. In continuation, the author said that with the use of ICT in banks, customers can access their account balance to know their financial transactions, top up their cell phones and pay their bills using their mobile cell phones without the stress of having to go to the bank. Furthermore the author also revealed in his findings that access to different branches of commercial banks without difficulty is an encouraging management tool for commercial banks to effectively utilize their bank's resources. He also said that with the assistance of information and communication technology, commercial banks are now closer to their customers; and they are able to find out what the needs of their customers are and plan the best way possible to meet such needs as well as other variety of services in a personalized manner at the lowest cost possible (Abdulazeez, 2010).

In the findings of Nam (2006), the author said that the offering of an appropriate level of quality services that meet customers' expectations is important for the success of an organization as it is capable of attracting new customers and retaining the old ones. In the light of the opinion of Nam, quality of service is service rendered by an organization that is aimed at meeting the needs of its esteemed customers.

Similarly, Hanna (1994), contributed that flexibility of information and quick response to customer's requests are key factors to rendering quality services to customers on a timely fashion; while continuing she said that flexibility of information and quick responses rate are greatly influenced by ICT.

In the conclusion of Abdulazeez (2010), the authors accepted that international money transfer organizations such as Western Union Money Transfer and Money Gram are entirely reliant on ICT to provide convenient services to their customers in Nigeria and other parts of the world. Therefore, the use of ICT in Nigerian commercial banks will ease the difficulties that were associated with the banking sector such as long queue in the banking halls and delays in rendering of services.

In a similar assertion, Ovia (2000), submitted that the introduction of plastic money in the forms of ATM debit card or credit card are additional steps to improving on the quality of services rendered by banks to their customers. He also said that ICT will lead to a much desired cashless economy in Nigeria and will, in the long run, help in the decline of loss of cash to robbers and other vices.

To be able to fulfill the objectives of this study, the description of banking services rendered to customers with the aid of ICTs as a convenient, more efficient, cost effective, safer, and timely tool, (Ovia, 2005), will be taken for the definition of success.

The theoretical framework of CFS has been commonly used in businesses as well as in the context of technology, but in the context of this research work, the theory of CSFs will be employed to identify some ICT facilities that are critical to the success of Nigeria commercial banks and with contingency theory the researcher will be able to identify the contingent circumstances leading to the usage of ICT in the banks under study.

There are numerous ICT facilities being used in banks, but in this study attention will be given to those ones that have been deployed by Nigeria banks.

These shall include:

- ✓ Automated Teller Machine (ATM)
- ✓ Electronic cards
- ✓ Electronic fund transfer (EFT)
- ✓ Mobile Banking
- ✓ Internet Banking
- ✓ Telephone Banking
- ✓ Branch Networking

1.5 Significance/ Justification of Study

In trying to validate why this study is important, it is necessary to state that researchers have found this area of study very important to the advancement of the socio-economic activities in Nigeria. Many researchers have been carried out to x-ray the importance and benefits of ICT usage in banks, this research will therefore focus on the CFS of ICT usage in Nigeria commercial banks and the ways it has impacted on the quality of services rendered to customers. A study of this kind is likewise very significant because it is going to enlighten the general public on the importance and benefits of information and communication technology usage in banking operation.

In present day business environment where technological invention is rapidly turning the world into a global village, Nigeria commercial banks cannot afford to be left behind and overtaken by events in the dynamic world, to be able to do this Nigeria commercial banks should rise up to take advantage of the robust ICT to improve on the quality of their services.

1.6 Scope and Delimitation of Study

Commercial banks are spread out in the entire geographical landscape of Nigeria, with the main purpose of providing financial services to the general public and corporate firms. The aim of such services is to contribute to the social economic development of Nigeria. To cover all the regions in the whole country will be impracticable because of the limited time frame. Due to this reason, the research will be restricted to some selected commercial banks in the southern part of Nigeria, Edo

State and Benin City in particular. The CFS of ICT usage in the selected banks will be analyzed, looking at its contributions, and in what form.

1.7 Outline

This research work has six chapters, with first chapter providing an introduction ICT revolution, importance and benefit in the corporate society, ICT development in Nigeria, background to the problem, Statement of problem, objectives of the research, significance/ justification of study, scope and delimitation of study and finally, the outline. The Second chapter gives the theoretical perspectives. The third chapter is about the scientific methods used. The fourth chapter gives the background information about Nigeria. The fifth chapter presents the data presentation and analysis. And lastly, the sixth chapter presents the discussion and conclusions.

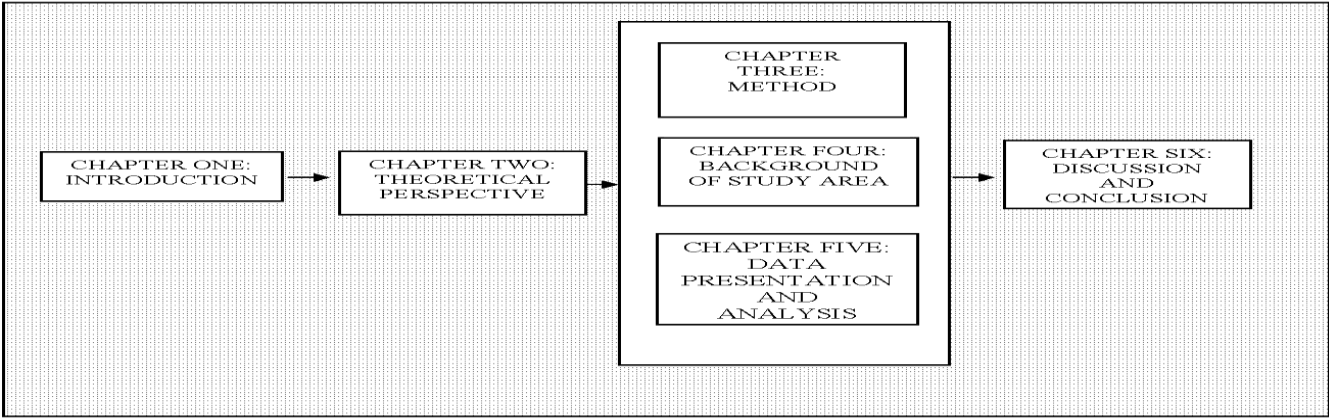


Figure Two: Outline of the Study

Chapter Two

2. Theoretical perspective and Literature Review

This chapter provides a description of the chosen theoretical frameworks of contingency and critical success factor theories. The theories presented in this chapter serve as a tool for carrying out the analysis of the CFS of ICT facilities being used in commercial banks operations in Nigeria. The first part of this chapter describes a brief history of commercial banking in Nigeria. Next is the description of the different phases of commercial banks evolution in Nigeria. Following thereafter is how the commercial banks in Nigeria perceive ICT; in this section the researcher presents the different perceptions about the use of ICT in Nigerian banks operation. The session immediately following this, is the session about the effects of ICT on banking operations, this session afford us the opportunity to look at some of the effects of ICT on banking operation visa avis quality of service. Next to this are the sections presenting the model describing the interrelationship of ICT facilities in Nigeria commercial banks with central focus on the various customers and the challenges confronting the use of ICT in Nigerian commercial banks .In these sections, the model helps us to have a better understanding of how the Nigerian commercial bank's ICT facilities works interconnectedly to enhance the quality of service render to banks' various customers. Lastly, in the next two sessions the review of the theoretical framework of contingency theory and CFS theory will be done.

2.1 Commercial Banks in Nigeria

The beginning of banking operations in Nigeria was 1892, at this time the banking operations were under the control of foreign expatriates. The period between 1959-1969 marked the era in which Nigerian banking sector had to recapitalize so as to overcome the problem of illiquidity that led to the failure of many banks between 1953-1959. At the beginning of Nigerian banking sector, there were no efficient financial system and there were no sufficient amount of financial instruments to invest in. As a result banks could only invest in real assets that cannot be quickly converted to cash in times of need (Brown, 1966).

However, by 1958 the Central Bank of Nigeria (CBN) was established, the establishment of the CBN facilitated the enactment of treasury bill law which led to the enactment of Nigerian first treasury bills. Following the enactment of the Treasury bill law was the establishment of portfolio management, money market and capital markets (Ekwere, 1993, Brown, 1966, Uche, 1996).

The Promulgation of company acts of 1968 was an additional important step toward strengthening of Nigerian banking sector for better performance. The Acts set out the rules and regulations within which the banks and other companies are expected to operate (*ibid*).

The Acts also require all important information about the operation mode of all companies including banks to be properly displayed to aid investors in making their choice of investment and to avoid fraud. Banks were particularly required to always furnish the CBN with information about the position of their liquidity, as it was an offence according to the Acts for banks to let their liquid asset go down below particular position. Banks were required to seek the consent of CBN before granting loans, especially when the liquidity of the bank falls below minimum (Ekwere, 1993and Uche, 1996).

In 2001, the drive for the establishment of a banking sector that is performance driven took a different dimension; this was in the form of deregulation which led to the adoption of universal banking method in Nigeria. Universal banking is a system of banking that allows banks to offer a range of services to their customers. In this type of banking system, banks are not restricted to just loaning, savings accounts, and other related activities, but are permitted to render investment services as well. The deregulation in Nigerian banking sector made banks not to be customers focused instead the banks became more of currency exchange centers (Uche, 1996, Szymigin and Carrigan, 2001).

2.2 Different Faces of Commercial Banks Evolution in Nigeria

Nigerian banking sector has evolved through four phases. The first phase can be described as the unguided laicize fairer phase, this phase witnessed massive failure of indigenous bank as a result of weak capitalization and poor regulation. The second phase was the control regime, during this phase, the Central bank ensured that only capable persons were licensed to operate banks subject to the given paid up minimum capital. The third phase was the period of liberalization which was heralded by the nation's structural adjustment program. This phase witness the new liberal idea of free entry which led to the approval of several bank licenses by political influence. The emerging fourth phase is the consolidation and recapitalization phase, the main emphasis of this phase is on recapitalization and industrious banking (Nnanna, 2005).

2.3 Perceptions About ICT Usage in Nigerian Banks

The dynamic business environment in which businesses organizations operate has brought unique challenges to organizations which they must live up to. In accepting this assertion, Adewoye (2007), said that these environments in which banks and other organizations operate are competitive, complex and consist of rapidly changing conditions and very volatile economic climate. In addition, the author also said that the unpredictability of economic conditions and the quick changing nature of the environment do not only affect the internal makeup of business organizations but it also affects their advancement, success and growth. Furthermore, the author revealed that advancement in ICT is the epicenter for the rapid changes in the business environment.

In Laudon and Laudon, (1991), the authors consented that the management of a present day business organization cannot disregard the importance of ICT in their decision about what goods to produce and what services to render. Dwyer, (1999), also established that ICT as an external factor affecting business organization has exerted more fundamental impacts on the operations of banks in the banking industry. This assertion of Dwyer is similar to the findings of Darlington (2000), in which the author asserted that getting information about customers plays vital role in enhancing bank competitiveness, as the revolutions in ICT make getting to customers much easier. In a similar reasoning, Evans (2008) agreed that the use of ICT facilities in an efficient and effective manner enhances the ability of a bank to attract and retain valued customers.

The use of ICT in banks does not only help in retaining old external customers or attracting new ones, it also helps in improving on the speed and accuracy of internal customers. External customers are those customers who are not part of the operation of an organization; instead they are the ones that pay to receive services and products of the organization. External customers consist of individual customers and corporate customers. Internal customers on the other hand are staffer of an organization that are part of the operation of the organization (Www, expertmanage).

Evans (2008) again confirmed that the use of ICT in Nigerian banks has the advantage of stimulating economic growth by helping to redirect available funds to the sector that is in need of fund to embark on production activities. In agreeing to this, Adam (1998) and Ojo (2007) collectively accepted that this function is important for an economy that wants to have speedy growth because through the use of ICT in banks, the borrowing organizations and the financial institutions are easily brought together.

In the contributing of Awuondo (2007), the author said that the use of ICT helps in the development of sophisticated products, creation of better marketing means and assisting banks to reach beyond their geographical boundaries. In the process of taking their products closer to the customer, the banks have become more customers focused in their daily operations through the establishment of a plat form for customer relationship management. Furthermore, the author also suggested that using ICT in banking operations has a rapid effect on the number of products and services that a bank can sell or render to its customers, in adding to this, Agboola(2006), said that ICT is the propelling force of competition in Nigeria banking industry. In his studies, he revealed that there have been fundamental changes in the quality of services rendered by Nigerian banks, and he said that these improvements are outcome of the effort made by Nigerian banking industry in other to gain recognition in the banking world.

2.4 Effectiveness of ICT on Banking Operations in Nigeria

Effectiveness has been defined by different persons in slightly similar ways. According to Drucker (2001, p 20), *“effectiveness is getting the right thing done”*. In the opinion of Chaffey (2008), it is a measure of the capability of an organization to utilize the resources available to it as the needed input to produce output that meets the organization’s objective in satisfying its customers. Erlendsson (2002) defined effectiveness to be the degree to which objectives are achieved and in the definition of Fraser (1994, p. 104), the author defined effectiveness as a *“measure of match between stated goals and their achievement”*.

Agboola (2006), acknowledged that through the use of ICT in Nigerian commercial banks, the different banks have taken the initiatives of launching their respective websites and as a result internet banking has sprang up in the banking sector to enhance the quality of service rendered to customers. These improvements arising from the usage of ICT has given Nigerian Banks a conducive environment to offer to their numerous customers the flexibility of effectively operating their accounts in any branch of their bank irrespective of the branch their accounts are domiciled.

ICT will only have effects on banks operation if its use is allowed by the top management. In the assertion of Tolbert and Zukar (1983), it was asserted that the innovative effect of ICT will only be seen if the political environment in which an organization operates has norms that favour its use.

While supporting the above assertion, Orlikowski (1993), stated clearly that the support of the top management is important for the acquisition and use of ICT facilities to enhance effectiveness and rendering of qualitative services to customers. Another factor that can affect the effectiveness of ICT use in Nigerian commercial banks in delivering quality services is organizational competency. Organizational competency is the accessibility of employees with sufficient knowledge and experience of ICT that are required to adequately use and manage ICT facilities (Molla & Licker, 2005)

In the findings of Mohr (1969), the author opined that the availability of a pool of qualified employees with competencies in using the different ICT facilities will facilitates the effective use of ICT in banks. ICT capability of Nigeria commercial banks is also a factor that affects the effective usage of ICT in the banks to render quality services, Akbulut (2002), pointed out that ICT capability is concerned with the level of ICT resources and personnel with current ICT knowledge that an organization has that are readily available to be put to use and operated by competent hands.

The capability of acquiring the needed ICT facilities is a factor that can affect banks operational effectiveness, right acquisition of ICT gadgets. These capabilities are important if the banks are to deliver quality services to customers. In the findings of Adepetun (2011), the he revealed that Nigeria banks on a yearly bases spent a total sum of N150 billion (about \$1 billion) on different ICT facilities. This implies that a bank that is unable to spend the required amount to secure the current ICT facility will be lagging behind in delivering quality services and in getting the benefits of effectiveness of ICT in banking operations.

2.5 ICT Facilities Being Used by Nigeria's Commercial Banks

Nigeria's commercial banks make use of different kind of ICT facilities. But in this study, attention will be given to some selected facilities that are considered to be CFS to the selected banks. These facilities will include:

- ✓ Automatic Teller Machine (ATM). The automatic teller machine is a remote cash dispenser which helps banks customers to have means of access of depositing and withdrawing to and from their account outside the banking hall and at anytime and anywhere (Shokan, 2005).
- ✓ Electronic cards, these are cards that have microchips capable of storing electronic cash that can be used for online and off line micro payment transactions. These cards consist of store value cards, debit cards, and credit cards, (ibid).
- ✓ Electronic fund transfer (EFT). This is a device that is used for electronic transfer of information, the value of goods and services, from one bank account to another account in a different bank, (ibid).
- ✓ Mobile Banking, this is a means of rendering banking services in which users are able to get information about their balances in the account through the SMS, but only mobile phones that are WAP, JAVA and GPRS enabled can perform variety of other banking services which include stock trading, confirmation of direct payments via the phone's micro browser and transfer of fund between accounts, (Mallat et al., 2004).
- ✓ Internet banking is a system of banking that allows bank customers to carry out wide range of banking transactions by electronic means through the web site of the bank. Some transactions that a bank customer having internet account can perform include paying bills, printing statements, writing cheques, transferring funds and checking account balances. (Tan and Teo, 2000)
- ✓ Telephone Banking, Telephone banking has become one of the service features offered by banks to render convenient services to their customers. The process involves the use of a

touch-tone telephone to carryout different banking transactions. Although it is closely related to internet banking, but customers do not need to have internet before engaging in telephone banking transactions. With telephone banking, customers only need to dial the hotline and then select from the different options by “*pressing a number, or a series of numbers*” (www, brainz, pp1).

- ✓ Branch Networking: Branch Networking is the computerization and interconnectivity of geographically spread individual bank branches, into an integrated system through the use of Enterprise Network (EN) or Wide Area Network (WAN) for creating and using of consolidated customer’s data or information. Branch Networking offers faster speed of conducting inter-branch transactions as it has removed the delimitation of distance and enhances efficiency of the use of time, especially for customers who will not have to travel to any particular branch of his bank as the several networked branches operate to serve the banking public as one system (Abor, 2005).

2.6 A Model of ICT Usage in Nigerian Commercial banks

A model is a human construct that is designed to assist us to have a better understanding of the systems of the real world around us. A model can be designed in different shapes and sizes (www, NSDL).

The model below is met to describe how the ICT of Nigeria’s commercial banks are used interconnectedly to enhance the quality of service being rendered to the customers. It is also met to portray the flexibility of interconnectivities between the different ICT facilities in the studied banks which will enhance flexible quality services that will be rendered to meet the constantly changing needs of the customers.

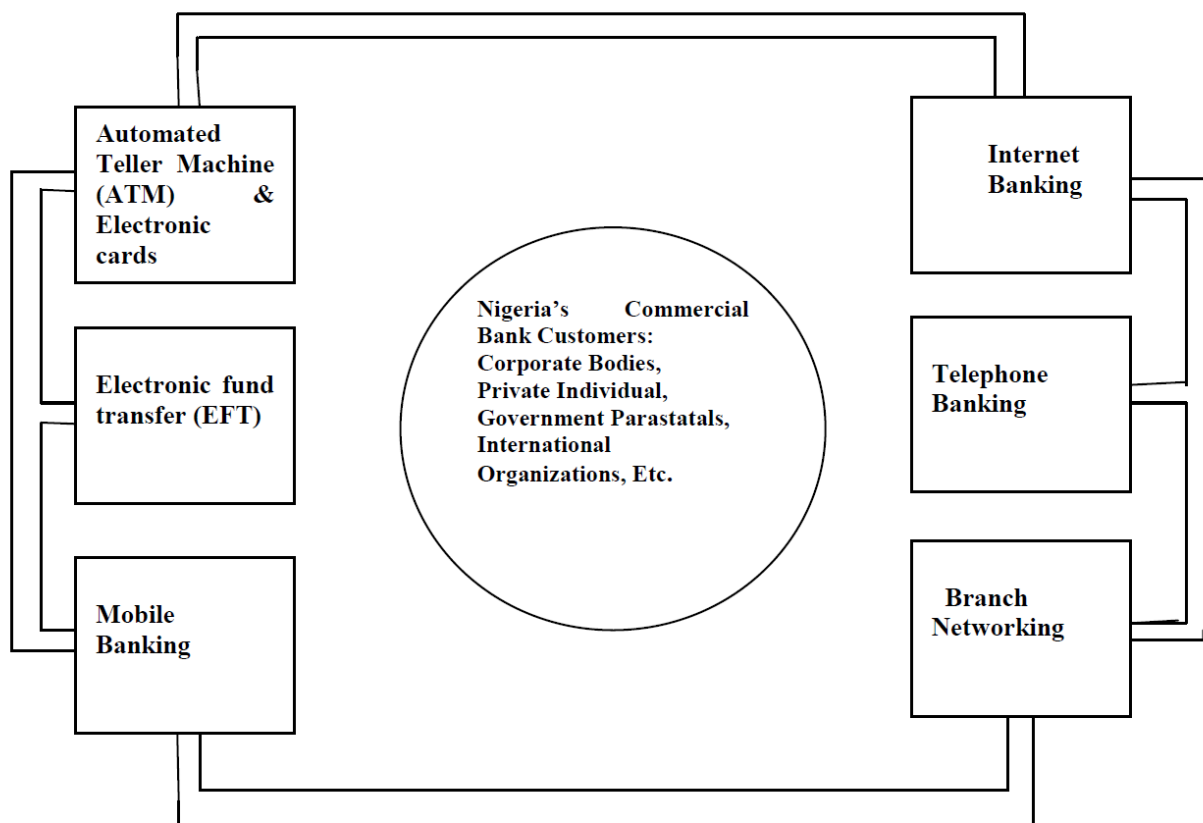


Figure Three: A Model for ICT Usage in Nigeria Commercial Banks
Designed for this research

2.6.1 The Challenges of using ICT in Nigeria's commercial Banks

ICT is the automation of processes, controls, and information production using computers, telecommunications, software and other gadget that ensure smooth and efficient running of activities” that enhance the rate at which business transactions are conducted. It uses in banks enables speedy resolution of conflicts and quicker attendance to customer needs (Agbolade, 2011, Pp 103).

Globalization begins with information and communication technology, which has empowered has people around the world including Nigerians through the facilities it provides such as browsing the internet (Www, Herkules, 1). The advent of ICT has also empowered Nigerian commercial banks in different ways such as offering of internet banking services, mobile banking, branch networking, Electronic fund transfer, Electronic cards, Telephone Banking and the use of automated teller machine. Despite these derivable benefits from the use of ICT, Nigerian commercial banks are facing some challenges.

In looking at what the challenges that Nigerian banks face in using ICT, Accad (2004), pointed out the state of poor infrastructures in Nigeria to be the main challenge that hinders the banks from being effective in rendering quality services to their customers; furthermore, the author gave examples of epileptic power supply, non functioning telephone lines and low internet access as

some of the poor infrastructural challenges that are facing commercial banks in Nigeria. The other challenges that the commercial banks in Nigeria are facing in using ICT, according to Ovia (2000) findings are:

➤ Dearth of E-Workforce

According to International Telecommunication Union (ITU, 2011) rating for achievement index (AI) on human development and ICT development, Nigeria was rated low especially in the areas concerning technological capacity of the country. Also, in the study carried out by (DESAI *et al.*, 2002), it showed that the technological ability of Nigeria to build, adapt and use universal technological innovations in its developmental strives as a nation is very low in the ratings of Technology Achievement Index(TAI).

➤ Security

This is one of the highest concerns of bank's executives and customers that hackers may compromise their internet banking transactions, which may lead to loss of money and vital information (Ovia, 2000).

➤ Low internet connectivity

Despite the fact that there is rising dependence on internet technology, but the supply in Nigeria is not commensurate with the high population rate, internet is not available to all Nigerians and where it is available the speed of connection is slow and subscription is costly (Ovia, 2000).

➤ Low Tele-density

Nigeria is rated to be one of the lowest tele-densities countries in the world. In the findings of (Www, nairaland), it was revealed that Nigeria tele-density has rising to 9.2. According to estimations, Nigeria teledensity must have to grow by 100% in other to have her economy fully ICT driven and to realize her desire of been one of the biggest economy in the world by 2020. *"Tele-density is the calculation of the percentage of a country's population which has access to telecommunications services as determined by the subscriber base"* (www, OnlineNigeria, Pp1). A teledensity that is calculated to be more than 100 suggest that there are more telephones than users. A developing country may have a teledensity that is less than 10, in this scenario, the rate of growth and expansion of banks using ICT will be greatly reduced, (Abdulazeez, 2010 and Ovia, 2000).

2.7 Theoretical framework of CFS

CFS is defined as those characteristics that a product has that are of value to customers in which an organization has to excel in; in other to gain a competitive stand over other organizations (Johnson *et al.*, 2008). In terms of service, CFS can be described as those factors that an organization deploys to: *"get their services closer to key targeted customers, deliver consistent, reliable, repeatable and sustainable services, focus on high quality service delivery, strengthen the service propositions, and establish more effective remote support for customers"* (WWW, Noventum, Pp1) According to (Rockart, 1979), the approach of CFS represents a conventional top-down methodology for embarking on corporate strategic planning and apart

from CSF being capable of identifying some success factor, it can also spot out vital information that are useful to top management.

In addition to this, (Chen, 1999), said that if CFS are identified and are controllable factors, the management of an organization can make strategic move to improve on its potential ability to be successful. ICT has been identified to be behind the rapid economic growth of emerging economies, its use has the potentials to impact on economic activities in different ways, such as improving on the quality of obtainable services, designing new services, enhancing labor efficiency and increased productivity. The revolution of ICT has brought about a class of economy that is information based in which capital; labor and information are the relevant resources that are needed to enhance competitiveness. (Www, What-When-How). Similarly, Oluyemiadeosun (2006) revealed that through the utilization of ICT, it is now feasible for countries to engage in trades without boundary limitation. The author opined also that ICT operations based delivery system of rendering of services by banks has made banks possessing this technological capability to become more profitable.

On recognizing ICT as a success factor to operate competitively, Nigerian banks are massively investing in it, Adepetun (2011). In consenting to this Calem *et al.*, (1996), said recapitalization has assisted Nigerian commercial banks in regaining favorable capital position in their ICT investment. According to Idowu *et al.*, (2002), the authors observed that customers in Nigerian banks have come to identified quality of services in the areas of speed, efficiency and safety of their money with the usage of ICT facilities in banks operation, the customers disposition toward the use of ICT in banking operations has strengthened Nigerian banks to improve on their ICT facilities in other to remain competitive in rendering of quality ICT enhanced services. The innovative effects of ICT are also felt in the dexterity with which bank employees carries out his or her duties. Oluyemiadeosun (2006), asserted that ICT enhances a quicker access to information concerning customers, business opportunities and sales. With the usage of ICT, employees are better equipped to respond faster to problems and opportunities with immediacy and accuracy.

2.7.1 Using CSF to meet banks customer's preference for ICT usage

An organization exists to serve its stakeholders, which are the employees, business Partners, customers, communities and shareholders who in one way or the other derive some benefits from the growth and existence of the organization. The interest of the stake holders are best served when the organization's operations are carried out in a manner that guarantees that the overall mission of the organization, which include maximization of the shareholders' welfare, production of quality products and rendering of quality services to customers and the communities, are accomplished. To accomplish this mission in a systematic and logical way, an organization is required to develop strategic goals (Caralli *et al.*, 2004).

Strategic goals "*encompass a set of goals or targets that the organization must achieve in a specific period of time*". In addition to having strategic goals, CFS theory should also be applied to "*define key areas of performance that are essential for the organization to accomplish its mission*" (Caralli *et al.*, 2004, Pp1-2).

In a banking organization, where ICT is use to enhance quality of service being rendered to customers, El Sawy *et al.*, (1999), said that for an organization such as banks to succeed in rendering quality service in this era of technological innovation, there is a need for the bank to embark on business process re-engineering that will pave way for the banks to be able to render

customers focused services. In line with this assertion, Enos (2001), identified security, simplifying and integrating basic services such as investment and payments, banking and lending, improving trust and customization capabilities in order to provide each customer with unique assistance as success factors which banks can use to attract customers preferences. In addition Cronin, (1998), contributed that for banks to render quality services that will rank high in the preference scale of the customer, he said that banks should make use of customized, integrated financial services which will enable the customers to see their financial transactions at a glance and not having to browse from website to website.

In other for banks to have a continuous loyalty of customers, it is important that the banks configure their ICT facilities to function interactively. Speaking categorically, Franco and Klein (1999), said that internet banking should be integrated with the automated teller machine so as to enhance online real-time banking, as complete integration of banks ICT facilities will create an opportunity for the bank to gain better understanding of their customers and know how to meet their changing preferences. But in the assertion of Jayawardhena and Foley (2000), the authors cautioned that for banks to be able to meet the demand of their customers they should continually develop new products and services in other to keep pace with the changes brought about by the Internet and also make old products suitable for online delivery.

2.8 Contingency theory

Contingency theory is defined as a behavioral theory that says that there is no best means to manage a business corporation and its organizational structures; rather the best approach that can be adopted is dependent upon the prevailing current conditions. This is an approach that is dependent upon the internal and external situations of the company. Adopting the contingency approach in the running of an organization assist in tailoring the designs of the organizational structure toward the sources of environmental uncertainties that is being faced by the organization. The advantage of this is that by tailoring the designs of the organizational structure toward the sources of environmental uncertainties enhances the design of such organization's structures to be capable of handling the uncertainties in the environment efficiently and competently. Consequently, the best way to manage and organize an organization is dependent on the prevailing internal and external situations of the company (Burns. *et al* 2009).

To make analysis of the external environmental contingencies, the frame work of PESTEL analysis will be of importance in analyzing the political contingency, economic contingency, social contingency, technological contingency, environmental contingency and legal contingency that organizations are facing in the macro environment. PESTEL analysis gives a broad data which help organizations to recognize the main drivers of environmental changes. Business managers can use these main drivers of environmental changes to build possible scenarios of the futures (Burns. *et al* 2009).

In the findings of (Bates,2001), it was noted that the revolution of ICT is a contingency situation that brought radical changes to the different economic sectors in which business organization are forced to drastically change their mode of operation. Organizations make changes in their mode of operations in other to take advantage of the prevailing changes in the technological environment in which they operate. In consenting to the assertion of Bates, Andoh-Baidoo *et al* (2007, Pp 1), confirmed that the significance of the application of ICT in the services of banks in “*developing countries cannot be overemphasized*”.

2.8.1 Contingency Approach in meeting banks customers' ICT preference

Contingency theory suggests that organizations that have “*internal features that best match the demands of their environments will achieve the best adaptation*” (Scott, 1989, Pp1). In other to cope with the rapid changes in the environments, proactive organizations create different subunits to confront the external demands arising from the environment.

In the assertion of Woodward (1958), he declared that technology is responsible for the changes in the environment in which an organization operate as such it is directly responsible for the organization's command structures, such as span of control, formalization of rules and procedures as well as centralization of authority. In the contribution of Hahn (2007), it was revealed that adopting contingency theory principle helps in the management of organization by assisting the managers to know what is required in a particular way that will enhance the attainment of organizational goals.

Inferring from the above assertions, for an organization such as banks to be able to meet the demands of it customers, it is important for them to develop new products and services that reflect or match with the prevailing situation in the environment in which they operate, for this to be achieved, there will have to be a restructuring of the internal features of the banks, such as creating a subunit for ICT that will be responsible for making recommendations about what ICT facilities to adopt , hiring of new qualified ICT staff and retraining the old ones. By so doing the banks can develop products and services

2.8.2 The important ideas of Contingency Theory

1. There is no general or singular best way to manage an organization (Fiedler *et al*, 2011).
2. The design of an organization and its subunits must 'fit' properly with the environment (Fiedler *et al*, 2011).
3. An efficient organization does not only have a proper match or fit with the environment but also have a proper fit between its subsystems (Fiedler *et al*, 2011).
4. The needs of organizations are better met when it is appropriately designed and the management style is suitable both to the responsibilities undertaken and the nature of the work group (Fiedler *et al*, 2011).

CONTINGENCY THEORY OF ACTION & JOB PERFORMANCE (Boyatzis, 1982)

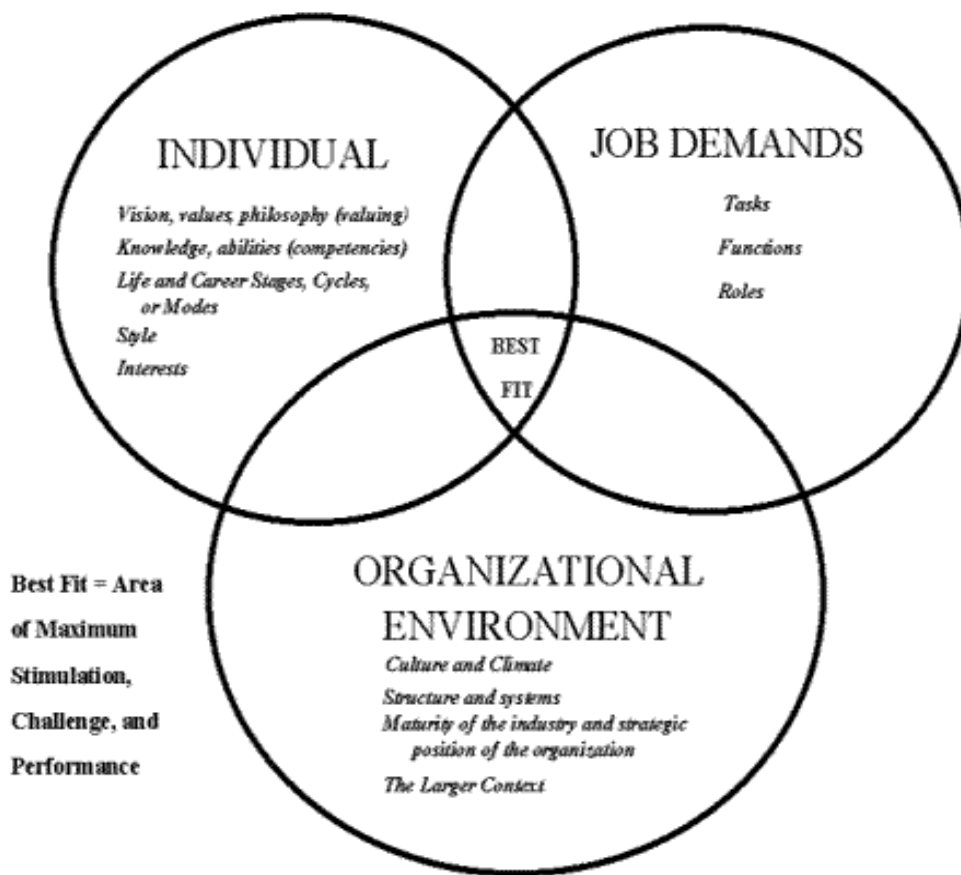


Figure Four: Contingency Theory

2.8.3 Analysis of Internal Contingencies of an Organization

- **Organizational culture;** basically has to do with the personality of an organization. Its comprises of the norms, assumptions, tangible signs of an organization members, values, and behaviors (Www, Managementhelp and Fiedler *et al.*, 2011).
- **Organizational strategy;** this is concerned with the formation, implementation and evaluation of decisions within an organization so as to enable it to accomplish the set long-term goals. It also specifies the organization's vision, mission, and objectives as well develop its plans and policies which are directed toward achieving the organization's objectives (Www, Ehow and Fiedler *et al.*, 2011).
- **Organizational objectives;** this refers to the missions, purposes and goals of organizations or its units, initiated through administrative processes. It includes the organization's administrative philosophies and long-range plans (Www.Definition and Fiedler *et al.*, 2011)
- **Organizational mission;** this is a statement of expression that states the basic characteristics, values, goals and philosophy that shapes an organization and define its purpose. It distinguishes between organizations by determining its scope of activities, market and its services/ products as well as the technologies and approaches it uses to meet its goals (Www, Careermideast and Fiedler *et al.*, 2011).

- **Organizational vision** is a communication of the intentions of an organization about how to realize its attractive and inspiring common vision of the future. It is a concise, brief and pragmatic high level description of the desired position of an organization. The aim of the vision statement is to express what the organization is expected to achieve and its purpose (Www, Casapalo and Fiedler *et al*, 2011).

2.9 Analysis of External Contingencies Using PESTEL

PESTEL is an acronym that stands for political, economic, social, technological, environmental and legal. It is a strategic planning technique that provides management with useful frameworks to analyze the macro environmental pressures on an organization (Www, Improvementnetwork).

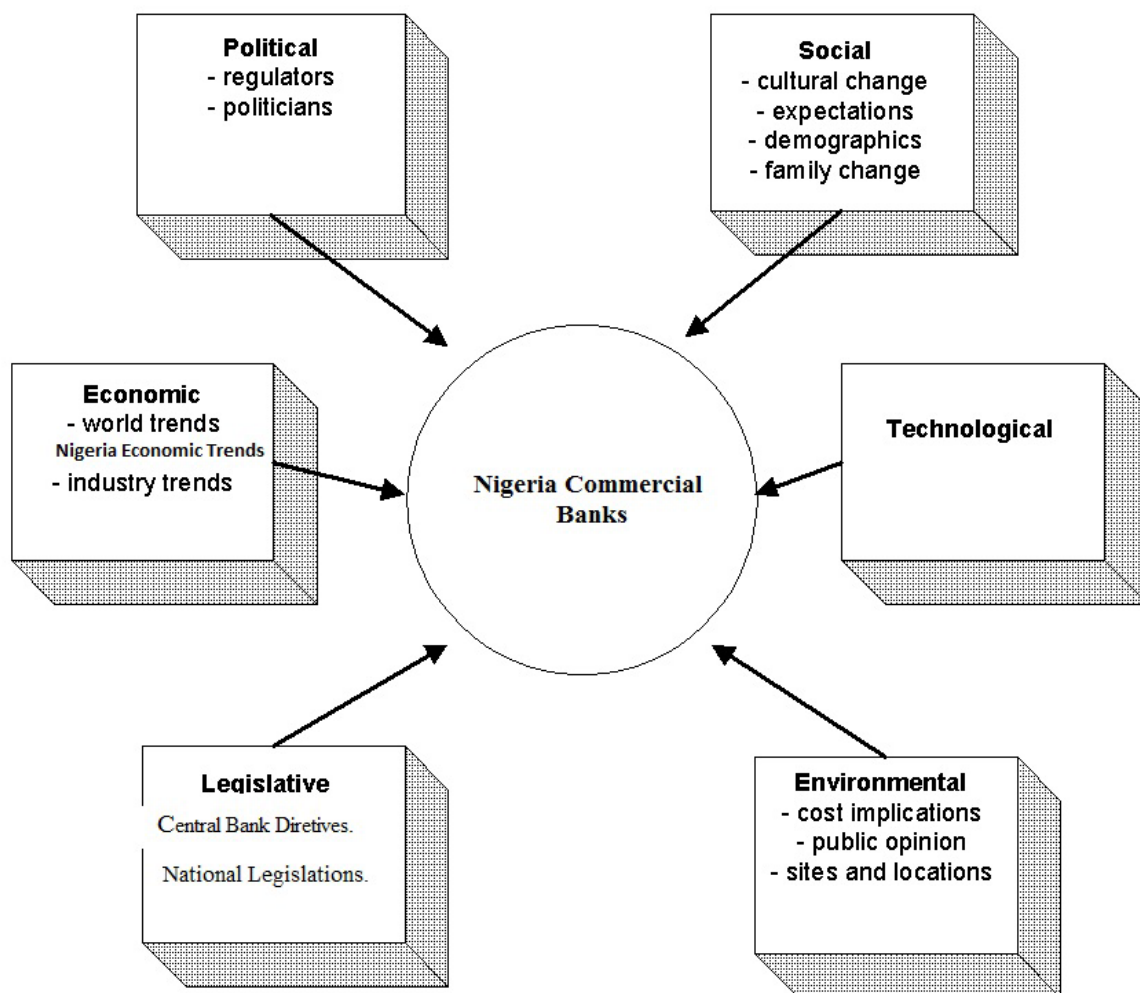


Figure Five: PESTEL
(Www, Improvementnetwork)

2. 9.1 Political Factors

The political situation in a country has a great influence upon the prevailing economic environment in which an organization exists. The following questions are to be taken into considerations by an organization.

1. Is the political environment stable enough to support the use of ICT in banks?
2. What is the position of government on use of ICT in banks?
3. What is the view of government on banking services rendered with the aid of ICT?
4. Is the government involved in any bilateral agreement with the bank to encourage and support the use of ICT in commercial banks? (Www, marketingteacher)

2.9.2 Economic Factors

Business organizations need to consider the state of economic activities in both short run and long run terms. This becomes very important when going international. In this case an organization will need to know:

1. If the anticipated economic activities can support the investment in ICT?
2. What the level of inflation in the economy is? Are customers discouraged from using banks' ICT facilities due high charges as a result of inflation?
3. If the people are employed? Do they earn enough salary that they can use to buy computer, mobile phone and pay internet subscription charges?
4. How well is the economy growing to encourage banks to keep up continuous investment in ICT?
5. What is the government's policy on ICT usage in banks?
6. What fiscal policy been implemented concerning investment in ICT by banks. (Www, marketingteacher)

2.9.3 Social Factors

The social influences on business organizations differ from place to place. It is essential that such factors are taken into consideration by organization such as banks. Such factors include:

- 1 The religious affiliation. Do the people in the area favours the use of ICT in banks?
2. The customers 'attitudes. What are the attitude of customers toward new products and services that commercial banks offer, for example internet banking?
3. Is the spoken language same as the banking language?

4. Is the level of education of the people good enough to be able to make use of banks' ICTs?
5. Are the people employed? Do they have money to keep in the banks? (Www, marketingteacher)

2.9.4 Technological Factors

Technology is important for company that wants to gain competitive advantage, and it is also the main driver of globalization. In considering the influence of technology on the organization, the following points should be noted:

1. Does technology enhances the quality of products and services rendered by banks?
2. Does technology offers customers and commercial banks better innovative services and products, such as mobile banking, Internet banking, branch networking etc?
3. How is transaction affected by new technologies e.g. internet transaction, getting cash from the ATM, paying through the cell phones?
4. Does technology offer organizations new way to communicate with their old, new and potential consumers, for example through mobile banking, customer relationship management, telephone banking? (Www, marketingteacher).

2.9.5 Environmental Factors

The environmental factors include the climate change and the weather conditions. Changes in environment can lead to global warming which could have negative impacts on the operations of companies. *"Global warming is the increase of earth's average surface temperature due to effect of greenhouse gases"*pp.1. As a result of global warming effects, there is now an increased environmental awareness about the responsibility of organizations in protecting the environment in which they operate. The increasing responsibility of organizations to protect the environment places a limitation on the extent an organization can go in its operations ; Environmental responsibility now has effect on the demand for company's products as consumers now prefers the products of companies that are environmentally friendly (Www,OxfordUniversiypress and Www,NMSEA). In Türk,*et al.*, 2003, the authors revealed that there are potential environmental benefits to be derived from the application information and communication technology in rendering of bank services, according to the authors, the use of ICT in banks reduces the number of paper based documents and the office spaces required for banking operations.

2.9.6 Legal Factors

These factors relate to the rules and regulations that operate in the environment in which banks carry out their banking activities. Different societies enact different laws to regulate the operations of firms in the locality. In the recent times, laws about the use of ICT as a national development tool were adopted in Tanzanian (URT, 2003). In Nigeria, by legal requirement, all existing licensed banks were required to recapitalize so as to have strong capital base which as enhance bank ability to invest in latest ICT facilities (Ayorinde, 2011).

Chapter Three

3 Method

3.1 Research purpose

In the definition of Saunders *et al.* (2009), research is described as an exercise that people undertake in order to discover new things in a logical way, and in so doing increase their awareness. In this definition, two phrases are of importance the first is *logical way* which presupposes that research is done based on logical interaction and not on belief (Ghuri and Groundhog, 2005) and the second important word is discover *new things*, which shows there are various possible reasons why one carries out research. These reasons could be explanatory, descriptive or exploratory (Yin, 2009).

Explanatory research studies problems and situations with the aim of seeking for an explanation of the relationships that exist between the variables, it does this by establishing a causal relationship between the variable. (*ibid*)

In the opinions of (Www, Blurtit), explanatory research seeks to know for the purpose of explanation why an incident occurred and in the process of explanation the reasons why the incident occurred are unearthed. According to the author some goals of explanatory research are:

To explain occurrences and not just reporting them.

To enhance knowledge advancement about the underlying process behind an occurrence.

It helps in providing evidences to support or refuse explanations.

It assists in determining the best way out of many explanations.

Descriptive research is the mostly used research method; the common reason for embarking on descriptive research is to find out the sources of an occurrence, descriptive research is also credited to portray a precise summary of an event or situation. It is a scientific research design method that involves observing and describing the performances or actions of a subject matter without influencing it in any way. This method is commonly used in social science and psychology discipline to acquire a broad impression of subject. (DJS, 2010, Www, Experiment-resources and Robinson, 2002).

In Saunders *et al.*, (2009), it was emphasized that description in management and business research is of importance in the role it plays, however, description should be taken as an end itself and not a means to an end. That is to say if one's research work makes use of description it is probable to herald explanation. These kinds of studies are called descripto-explanatory studies.

Exploratory research creates an important means of getting to know what is happening and searching for a new understanding of an event, asking questions as well as accessing an occurrence in a new way (Saunders *et al.*, 2009).

Exploratory research is conducted when a problem has not been clearly defined or the scope of the problem is not yet clear. Exploratory research gives the researcher the opportunity to be familiarized himself with the problem or concept to be studied so as to know the best research design, data collection method to adopt and the selection of subjects. (Www, Uoguelph, 1).

Exploratory research is helpful when you want to make clear your perception of a particular problem, when you are not sure of the exact nature of the problem that you are looking at. (Ngehnevu and Nembo, 2010).

Following the explanation of all the three research methods stated above, this research work is based largely on descriptive study as the research is centered on precise event, and trying to answer the what, who, how, where and when questions by using different sources of information and previously existing theories.

Considering the situation of this research project, the method that is considered favorable is the descriptive method based on the case of selected commercial banks in Nigeria.

3.2 Research approach

There are two research approaches mainly used in social science, they are the quantitative and qualitative research approaches. No particular approach is considered best to study management research but the approach that is considered to be very effective for resolving a given problem is dependent on a number of issues such as nature of the problem etc (Gill and Johnson, 2006).

Quantitative research approach refers to the methodical practical investigation of an occurrence and quantitative characteristics and their relationships. That is the research approach emphasizes on the gathering of statistical data, which is a deductive approach. Deductive approach gives rise to the development of hypotheses, theories, and proposes a research strategy to test the hypotheses. Quantitative research approach creates a means of relation between practical study and mathematical expression of quantitative relationships. Quantitative method is use base on previously determined and logical questions, in which all the respondents are asked the same questions. In other to give the respondent freedom to answer from different point of view, open ended questions are used (Saunders *et al.*, 2003 and Bryman and Bell, 2003). In Wwww, Orau, the author said that with quantitative research approach, survey can be conducted through different means such as mailing, by computer-assisted telephone interviewing, or face to face interview. In addition, the author said that embarking on a research using quantitative approach has the following pros and cons:

Pros:

- ✓ The researcher can generalize his or her results beyond the immediate participating group.
- ✓ Surveys could be images and these could be used to compare with the prototype.
- ✓ Surveys could also be unnamed, in cases of sensitive topics.

Cons:

- ✓ These means of carrying out survey has limited capability to probe the correctness of answers.
- ✓ Respondent may have characteristics that are not applicable to the audience; this could bring about a possible unfairness in the study.
- ✓ They can be expensive means of carrying out survey

Qualitative research approach refers to all the non-numeric information or information that has not been quantified and this information could be a product of all research methods, it could vary from a small list of replies to open-ended questions in an online survey to a more intricate data such as the result of a detailed interview or a complete policy documents. This method lays emphasis on inductive approach, in which the researcher has to collect the data and develop theory from data analysis (Saunders *et al*, 2003).

The reasons why we engage in qualitative data analysis, according to the findings of (Www, learnhigher), are:

- ✓ To go beyond Looking for a precise numerical evidences in to non numerical evidences.
- ✓ To be able to look for occurrences such as, descriptions, events, manners and remarks.
- ✓ It serves as an *inductive process* that helps in the developing of a theory from the information that has been obtained.
- ✓ It helps in *Coding of categories and sub-categories identified*.

It is also possible to use both qualitative and quantitative methods in the same study. The combination of both methods in one research work enhances the quality of research work. I think the combination of qualitative and quantitative research methods will enhance the quality of this research since I have mail some of my structured questions to the selected banks.

In line with my stated objectives and to focus on realizing the aims of this study, I will place emphasis on qualitative research approach, though there is some level of induced quantitative approach gotten through interviews with the banks and customers of the bank.

3.3 Research strategy

3.3.1 Case Study

Case study is one of the methods used in carrying out research in the field of social science. Others methods comprise of, surveys, experiments, histories, and the examination of stored information. Each of the stated method has their merits and demerits, based on the kind of research questions formulated and the control that the researcher is able to exercise over the actual behavior of events, and the attention on the present-day events as opposed to past events (Yin, 2003).

The choice of using a case study method in a research work is considered favorable when the questions “*why*” and “*how*” are asked, when the researcher has small control over events, and when the attention is on a present-day real life occurrences. In short, the case study method assists the researcher to hold on to the holistic and important “*characteristics*” of present day’s real-life occurrences such as the maturation of industries, individual life cycles, neighborhood change, international relations, organizational and managerial processes (Yin, 2003).

Yin defined a case study research method as a practical investigation that investigates a present-day occurrence within its real-life situation; when the limitations between event and circumstances are not plainly evident; and in which several sources of evidence are used (*ibid*).

The importance of a case study is that efforts are made to show decision or set of decisions taken; the reasons for such decision, the ways the decision will be effected, and what result to expect (*ibid*).

Bryman and Bell, (2003) reasoned that case study method of research is by and large associated with qualitative research method which is usually used to carry out a study on an organization. In (Www, Shoreline), it was suggested that using a case study as a research strategy has the advantages of being a better foundation of ideas about behavior. Also a better method to carry out study on rare occurrences and a better method to challenge hypothetical assumptions.

I suggest that a case study method of research is the best method to be used in this research work since its investigates a real-life situation, in which the researcher will be able to identify, describe, explain and explore the various CFS of information and communication technology on the studied commercial banks in Nigeria as perceived by both customers(internal and external), in addition, the researcher will also use this same method of research to determine what the CFS of Nigerian Banks' ICT facilities are based on customers gender and lastly to find out what the factors are that tend to limit customers usage of their banks' ICT facilities in Nigeria.

These is will be achieved by making use of qualitative approach and some level of quantitative approach that will be gotten from interviews with the banks' managers, employees and customers.

3.3.2 Data collection

A case studies evidences maybe gotten from six sources namely: "*documents, archival records, interviews, direct observation, participant-observation and physical artifacts*" Yin, (2003 p. 83). It should be understood that no single source of evidence is of advantage over others. All case study sources of evidence are highly supportive of each other, and as such a good case will include as many sources as possible Yin, (2003). Since including many sources of case study evidences are highly supportive of each other, then triangulation will be a good means to combine primary and secondary data in a single case study to ensure that the information is valuable in providing the needed details. (Saunders *et al*, 2003). Semi structured interview could be a good way to triangulate information collected through other means such as the questionnaire (Yin, 2003). In all these the researcher has opted to make use of only one source to answer the research questions and this is by interview using questionnaires.

According to (Popper, 1995, Ackroyd and Hughes, 1981), using questionnaires as a means of data collection is advantageous in the following ways:

- ✓ It is Practical.
- ✓ A lot of information can be obtained from a number of people in a relatively short period of time.
- ✓ It is cost effective.

- ✓ It can be administer by the researcher or by anyone else without the validity or reliability of the research work being affected.
- ✓ The responses in the questionnaires can be easily analyzed or quantified by the researcher or by using a software package.

In this study, four banks are selected to participate in the survey, the basic criteria for the selection of these banks is that they have recapitalized in accordance to the directives of CBN. Recapitalization is referred to as a change in an organization's structure of capital, such as issuing of stocks to replace bonds, this makes the company's capital base to become stronger and more stable and could also enhances the stock price of the organization (Www, Investorwords). In the recapitalization process, the selected banks had to increase their capital base from ₦2billion (US\$0.0166billion) to ₦25billion (USD\$0.2billion) in 2004 (Somoye 2008). With the completion of recapitalization reforms in Nigeria, these commercial banks have become financially strong to support the nation's growing economic demands (CBN, 2006

The banks to be studied include First Bank, Oceanic Bank, Eco Bank and Access Bank. Each of these banks is studied with the aid of questionnaires, telephone interviews and secondary materials.

Questionnaires were administered randomly to the selected commercial banks branches. Secondary data were collected from textbooks, articles and made ready materials from libraries, from the annual report of the selected banks and their official websites. To analyze the data collected, SPSS is used.

Chapter Four

4 Background for empirical study

In this chapter, the back ground of Nigeria will be portrayed and more emphasis will be laid on the economic sector. The chapter starts with Nigeria and its geopolitical boundaries, next to this, is Nigeria economy and economic crisis; this is followed by Nigeria economic policies and the chapter will be concluded by information and communication technology development in Nigeria.



Figure Six: Map of Nigeria
(Www, Nationsencyclopedia)

4.1 Nigeria Political System and its Geopolitical Boundaries

Nigeria is situated in Western part of Africa on the Gulf of Guinea; it is bounded by Cameroon in the South East, by Niger Republic in the North and Benin Republic in the West. In the South, Nigeria is not bounded by any country apart from the Atlantic Ocean. The population of Nigeria is about 140 million with an annual growth rate of 2.8%. The population of Nigeria spreads over 350 ethnic groups. There are three major ethnic groups among the 350; these are the Yorobas, Ibos and Hausas. The common religion among Nigeria populaces are Christianity, Islamic religion and Africa traditional religion. (Www, Nationsencyclopedia, Www, Nigeria-tourist, and FMOWA, 2004).

In Nigeria, the system of government is the presidential system. This system is made up of three arms, the executive, the legislature and the judiciary. In this system of government the executive arm exists separately from the legislature and the judiciary (Www.C.I.A, and Obasi, 2002).

According to (Www, Uen), each arm of government performs different functions and check to balance the other arm's functions in different ways. The executive is made up of the president and his cabinet ministers representing the different sector of the national's economy. The main function of the executive is to implement laws. The legislature is made up of the Federal House of Representative and Federal House of Assembly, their main function is to make laws with which the country is governed. The Judiciary is made up of the Supreme courts and High courts; the main function of the Judiciary is to interpret laws made by houses of Assembly.

In Nigeria system of government, the government is divided into three tiers, which are the Federal, State and Local government. (Obasi, 2002).

Nigeria is divided into 36 states and one capital territory, Abuja, which serves as the administrative centre for the nation. (Www, statoids). The states are further divided into Local Government Areas (LGA). Presently there are 774 LGA in Nigeria. The 36 states and the 774 LGA in Nigeria are further divided in 6 geopolitical zones, these zones are North west, North central, north east, south west, south east, and south south. These zonings are to enable smooth political administration of the nation (Www, Nairaland and Obasi, 2002)

4.2 Nigeria Economy and Economic Crisis

The economy of Nigerian is one of the developed economies in the continent of Africa (Obadina, 1999). According to United Nation's categorization, Nigeria is a middle-income nation with well structured transportation sector, developed financial institutions and communications. Her stock exchange is the second largest in the continent. The economy of Nigeria is mainly dependent on crude oil; as a result the petroleum industry is important for her economic development (Obadina, 1999)

The estimated size of Nigeria oil reserve is 37.2 billion barrels or 2.79% of the World total reserves. In Africa, Nigeria is the largest producer of oil and in the world eleventh. This is why petroleum products account for at least 80% of the nation's export.

Crude oil was first discovered in Nigeria in the year 1956 at Oloibiri in the Niger Delta area by Shell-BP; before the discovery, exploratory search for oil had begun in 1908 by a German Company and Nigerian Bitumen Corporation in Araromi area located in Western part of Nigeria, the search by these two companies for crude oil was stopped by the outbreak of world war one in 1914. However, the search for oil started again in 1937 but the search was halted the second time by world war two. After the wars, search effort for crude oil was intensified and more investment was made toward the discovery and exploration of crude oil in Nigeria. In 1956 crude oil was discovered in large commercial quantity (Www, Economywatch, Wwww, Mbendi and Wwww, Pengassan).

As at 1960 when Nigeria got her independence agriculture was the main stay of the Nation's economy and it accounted for at least half of its gross domestic product (GDP). Agriculture was the major source of export and foreign earnings and a viable source of public revenue, but this has since been changed with the commencement of exploration of oil. Before the discovery of crude oil, the nation's economy was traditionally agriculture based and it thrives successfully during the colonial era. Shortly after the colonial time, the nation came up with different plans to boost the production of agricultural products. These plans included , introducing incentives to increase farmer's outputs , huge irrigation schemes, expansion of credit to farmers, better trade policies and rendering assistance to wheat-producing states, etc. (Wwww,Youngstars-foundation).

The implementation of these agricultural planes led to a time of boom in agricultural products in early 1970s, for example the Kano State "*groundnut pyramids*" (Wwww, Youngstars-foundation). According to Shimada (1979), cocoa is a very important agricultural product in Nigeria. The production of cocoa in the colonial era was one of the agents of development in the areas where it was cultivated as roads and rail tracts were constructed to ease the transportation of the product from the various farms in the different locality to the sea port. Rubber was equally an agricultural product that was also one of the mainstays of Nigeria economy; its cultivation was a good source of employment to some Nigerians and a source of foreign income to the nation as rubber was a source of raw material for different industrial products (Edna, 2000).

According to the research conducted by Aregheore (2005), Nigeria cash crops among others include palm Oil, Cocoa, Rubber, cotton, Coffee, peanuts and Sugar cane. The author revealed that in 1990/1991 Nigeria was the world fourth largest exporter of cocoa beans with a total sale of about 135000 tons which represents 7.1% of the world trade on cocoa beans, but this enviable Nigeria position in the world market for cocoa has significantly fallen in recent years, due black pod disease, labor shortages, smuggling, aging trees and low producer prices.

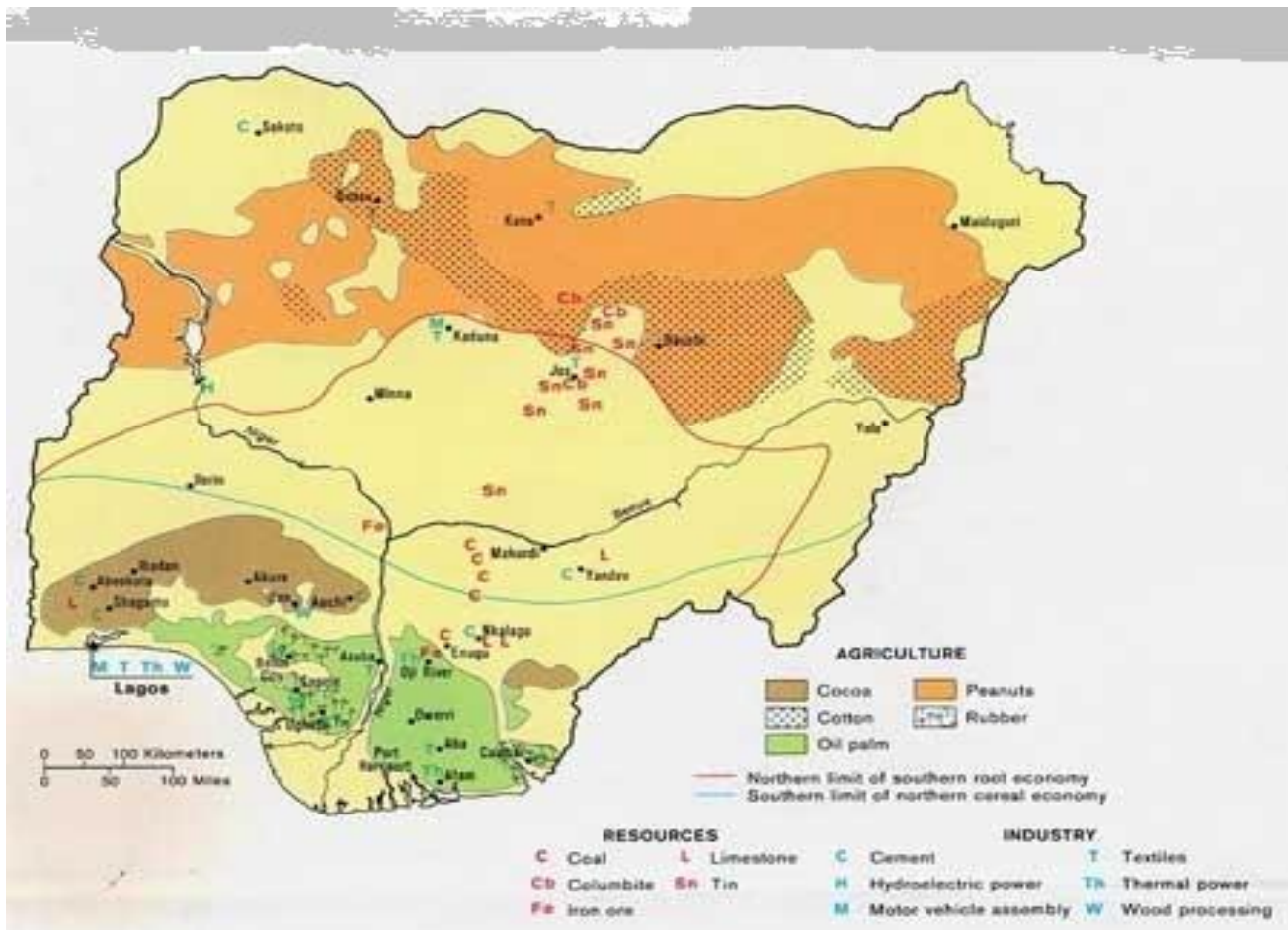


Figure Seven: Nigeria's Agricultural Products
Aregheore (2005)

Nigeria economy has being sustained by both petroleum resources and agricultural resources. From the mid sixties Nigeria economy has become a mono economy that is entirely dependent on the returns from the exportation of petroleum resources. This development started in the era of oil boom which made Nigeria to be dependent on oil to the detriment of other agricultural sector. The effect of the neglect or relegation of agricultural sectors to the background has made the nation to be unable to feed her teeming population; a nation that was once a large exporter of some agricultural products now relies on the importation of some major food stuff to feed her citizen (Www,ACF).

4.3 Nigeria Economic Policies

Shortly after the independence of Nigeria in October 1st 1960, the nation's economy became a center of attraction to many foreign organizations, as a result of this Nigeria economy was dominated by foreign companies. To reverse this occurrence, Nigeria government in 1972 came up with an economic policy that was aimed at promoting the Nigerian enterprises to occupy strategic place in the nation's economy as 70% dominance of the economy was dominated by foreign-owned commercial firms and this was not in the strategic interest of the nation. Following this, the government issued policies that prevent foreigners from having investment in some specific enterprises, and restrict participation in certain trades to Nigerian enterprises only. As part

of operationalizing this policy, the government of Nigeria bought over 60% equity in the marketing operations of the main oil companies in Nigeria (Www, ACF).

This policy was also directed at the agricultural sector, the focus of the policy in this direction was to intensify efforts to attain food self-sufficiency goal, to actualize this, the government came up with different plans and strategies which include the followings:

4.3.1 Operation Feed the Nation (OFN)

The OFN scheme was met to encourage Nigerian farmers by providing them with low interest loans that will make it possible for them to get involved in commercial farming throughout the country. The second aim of the scheme was to encourage young people to be involved in farming as leaders of tomorrow, (OBIBUAKU, 1977).

4.3.2 Green Revolution (GR)

The government adopted this policy with the intention of taking advantage of technological advancement in mechanized agriculture to increase food production. GR was considered a good option for food security in the country on the realization that the food subsector was growing at an average annual rate of 2.5% and the population growth rate was about 3.0% per annual, (Famoriyo and Raza, 1982).

4.3.3 Structural Adjustment Programs (SAP)

SAP were sets of economic restructuring measures that were designed to help the nation's economy attain recovery and growth, this policy was adopted in Nigeria in 1986. The policy was aimed at helping the nation to stabilize her economy that was dominated by imported products and reliant on oil revenues to the detriment of other sector, (Ogugua, 1994).

4.3.4 National Economic Empowerment and Development Strategy

In the second term era of the administration of President Olusegun Obasanjo, Nigeria embarked on a comprehensive homegrown restructuring program, which was the "*National Economic Empowerment and Development Strategy (NEEDS)*", the program had its main focused areas to include implementing institutional and governance reforms, pursuing structural reforms, strengthening public expenditure management and improving the macroeconomic environment (Okonjo-Iweala and Osafo-Kwaako, 2007 and World Bank, 2003).

In addition to this, NEEDS program also laid emphasis on the significance of improving the private sector in order to be able to support the creation of wealth and eradication of poverty from the country. To operationalise this program at the States level, the 36 states of the Federation including the Federal Capital Territory (FCT) Abuja, came up with a complementary program which is called "State Economic Empowerment and Development Strategies (SEEDS)". NEEDS and SEEDS programs are taken by both the Federal and States government as commencement steps to a long "*journey of economic recovery and sustained growth*" (Okonjo-Iweala and Osafo-Kwaako, 2007. Pp5).

The analysis of the macroeconomic performance of Nigeria economy showed that the nation's economy over a long period before the introduction of NEEDS was poor as the GDP average

growth rate was 2.25% in the period between 1992 to 2002 and the population growth rate was 2.80% p.a, this was an indication of decline of living standards for the majority of Nigeria citizens. Apart from a fall in living standards, there was a high level of inflation in the country between the same periods of 1992 to 2002; the average level of inflation was about 28.94% p.a (Okonjo-Iweala and Osafo-Kwaako, 2007).

Nigeria economy was also hindered by her macroeconomic volatility. The volatility of the economy was due to the fact that the nation's economy was largely based on foreign terms of trade and over reliance on revenue from oil export (Okonjo-Iweala and Osafo-Kwaako, 2007)

The central aim of the macroeconomic reform through NEEDS was to bring about stabilization of the nation's economy by improving on its budget preparation and implementation and also to provide an environment for a continuous economic diversifications that is not based on oil revenue (Barnett and Ossowski, 2006; IMF 2005a).

In order to be able to achieve the aims of NEEDS, different structural reforms were required to strengthen the nation's domestic business and to contribute to its competitiveness. The reform is also aimed at reducing the government presence from the nation's different economic sector and to give attention to all structural constraints that hinder economic growth. The structural reform of NEEDS that was immediately attended to was privatization. Before the introduction of the reform, the Nigerian public sector was performing below expectation and constituted a source of financial drain to the public treasury but through the implementation of NEEDS objectives, a total of about 116 Federal Government owned enterprises were privatized between 1999 and 2006, these enterprises include hotel, telecommunications, petrochemical, insurance, etc. In this same period, government control presence in some sectors of the economy was reduced through deregulation. (Okonjo-Iweala and Osafo-Kwaako, 2007).

The Nigeria civil service was also affected by the reforms of NEEDS. Prior to the reforms, Nigerian civil service has an uncontrollable size and was badly remunerated this resulted in delivery of poor service and frequent strike actions. The reforms started with government various ministries, departments and agencies. In the process of reform the structures of organization for the ministries, departments and agency been reformed were reviewed and the suitable skills for rendering professional services were highlighted. This led to the dismissal of unqualified personnel from the various government parastatals and also the discovery and removal of ghost workers from the government payroll (Okonjo-Iweala and Osafo-Kwaako, 2007).

The reforms of NEEDS also cut across the banking sector of Nigeria economy. Before the commencement of the reforms, *"the Nigerian banking sector was weak and fragmented,"* (Okonjo-Iweala and Osafo-Kwaako, 2007, Pp15). The banks were only capable of financing short term projects and were reliant on government funds, for this reason the banks were not able to finance long term capital projects. The author also reported that during the time of weaknesses in the banking sector, some banks had *"bad balance sheets"* and many others carried out partial lendings to their customers but they were more involved in highly profitable *"short-term arbitrage foreign exchange round tripping activities"*.

In order to restore the Nigerian banking sector to be able to play its role of being the financier of the nation's economy, banks recapitalization and consolidation was launched by the Central Bank of Nigeria (CBN). This exercise mandated all commercial banks in the country to raise their minimum capital base from capital base from US\$15m to US\$192m by December 2005. The process of raising the required capital created an opportunity for some of the weak banks who

were not able to raise the capital to merge with viable ones, the banks that could not merge and could not raise the capital were liquidated by the CBN. At beginning of the recapitalization exercise there were 89 commercial banks in Nigeria but at the end of the exercise, a total of 25 banks met the requirement. The reformed process in the commercial banks has restored confidence to Nigerian commercial banks (Okonjo-Iweala and Osafo-Kwaako, 2007).

The insurance sector was not left out of the reform process. The initiation of reform in the insurance sector was to strengthen the industry. The aim of the reform in the industry was to shrink the number of insurance companies in the country from 103 to 30 through consolidation and recapitalization of \$1.6 billion by the ending of February 2007. According to the regulatory authorities, the Ministry of Finance (MOF) and National Insurance Commission (NAICOM), the minimum paid up capital for the different categories of insurance companies were \$15m from \$1.2m for life insurance companies and \$1.5m to \$23m for general insurance companies, (Okonjo-Iweala and Osafo-Kwaako, 2007).

An important part of the reform in Nigeria is the institutional and governance reforms. Prior to the reforms, the bane of Nigeria development as a nation was corruption and poor governance, the effect of these ugly occurrences were stunted economic growth and poor public service delivery, while these undesired occurrences persisted, resources met for human capital development and for other desirable investments, such as infrastructures, health care improvement and educational facilities were time and again diverted for personal use (Okonjo-Iweala and Osafo-Kwaako, 2007)

Eradicating corruption which has eaten dip into the fabric of Nigeria administrative system was a main target of the institutional and governance reforms crusade in Nigeria. To be able to accomplish this, the government of Nigeria made anti-corruption measures to be an integral part of the implementation of NEEDS in the country. Secondly for the anti corruption measures to work successfully, the government conducted a diagnostic survey to identify the exact areas in which corruption has had high impacts on the government treasuries, this survey led to the introduction of Value for Money audit (VMA) or Due Process mechanism (DPM), in awarding public contracts. By this process, any government project that is over and above N50 million (US\$400,000) requires an approval from an appropriate quarter of the government, either from the supervising ministry, the Federal Executive Council (FEC) or the presidency. To ensure that the due process mechanism works in an up to date manner, the government developed a database of international prices to provide a guide during the time of the bidding processes, in additions to this, the government also publishes tender journals from time to time for the education the public about the government due processes and finally a certificate of well completed public contracts are issued by the government before the final payment is made (Okonjo-Iweala and Osafo-Kwaako, 2007)

In the effort of the Nigeria government to prosecute corrupt practices in the country, two separate institutions were “*introduced to tackle corruption in the nation’s domestic business environment*” (Okonjo-Iweala and Osafo-Kwaako, 2007, Pp19). These two institutions are the Independent Corrupt Practices and other Related Offenses Commission (ICPC) and Economic and Financial Crimes Commission (EFCC). These institutions are commissioned to pursue cases of fraudulent practices, such as, corruption in public offices, bribery, internet fraud etc

Chapter Five

5 Empirical study

5.1 Presentation of data

This study is focused on identifying, describing, explaining and exploring the various CFS of information and communication technology in the studied commercial banks in Nigeria, therefore this section is to show the presentations and analysis of the collected data based on the theories that have been reviewed in chapter two.

Three sets of questionnaires were designed. These were for the bank managers, the employees and the customers of the different banks. The questionnaire that was administered to the bank managers was made up of fourteen questions, ten questionnaires were sent out to the bank managers in different banks, six of these were responded to and four had no response. For bank employees, the questionnaire was made up of nineteen questions and a total of twenty five questionnaires were sent out to bank employees in the different banks been studied, sixteen were answered and nine were not answered. The bank customer's questionnaire was made up of thirteen questions and a total of fifty questionnaires were administered to the customers, thirty of the questionnaires were answered and the remaining twenty were not responded to. Requests for telephone interview were made, but the contacted respondents opted for the online questionnaire, they claim it was more convenient for them rather than telephone interview.

5.2 presentation of Responses from Different Respondent

		Actual Responses					Total
		Bank Employees	Bank Customers	Bank Manager		0	
Gender Responses for the Different Respondent Groups	Bank Manager, Female	0	0	0	0	0	0
	Bank Customer, Female	0	12	0	0	0	12
	Bank Customer, Male	0	17	0	0	0	17
	Bank employees, Female	5	0	0	0	0	5
	Bank Manager, Male	0	0	6	0	0	6
	Bank Employees, Male	9	0	0	0	0	9
		0	0	0	0	0	1
	Total	14	29	6	0	0	49

*Figure Eight: Gender Responses from the Different Respondent Groups * Actual Responses Cross tabulation*

Source: Researcher's Survey, 2011

The questionnaires were distributed at random to the different groups of respondent in the studied banks. A total of 85 questionnaires were distributed in the following order; Bank Managers 10, Bank Employees 25 and Bank Customers 50. All the questionnaires sent out were not responded to. The actual responses were 6 for Bank Managers; these were made up of 6 males Bank Managers and 0 female Managers. For Bank employees, the actual responses were 14; these were made up of 9 males' employees and 5 female employees. And lastly, the Bank Customers responded to 30 of the questionnaire. The respondents were 17 males and 13 female customers. The distribution of the questionnaires was restricted to the southern part of Nigeria, Edo State and Benin City in particular as earlier stated in delimitations of the study in chapter one.

5.3 Bank Customers Data Analysis

5.3.1 Customers' ICT Awareness in their Banks

Table One: Are you aware that Nigerian commercial banks now use ICTs?

Count

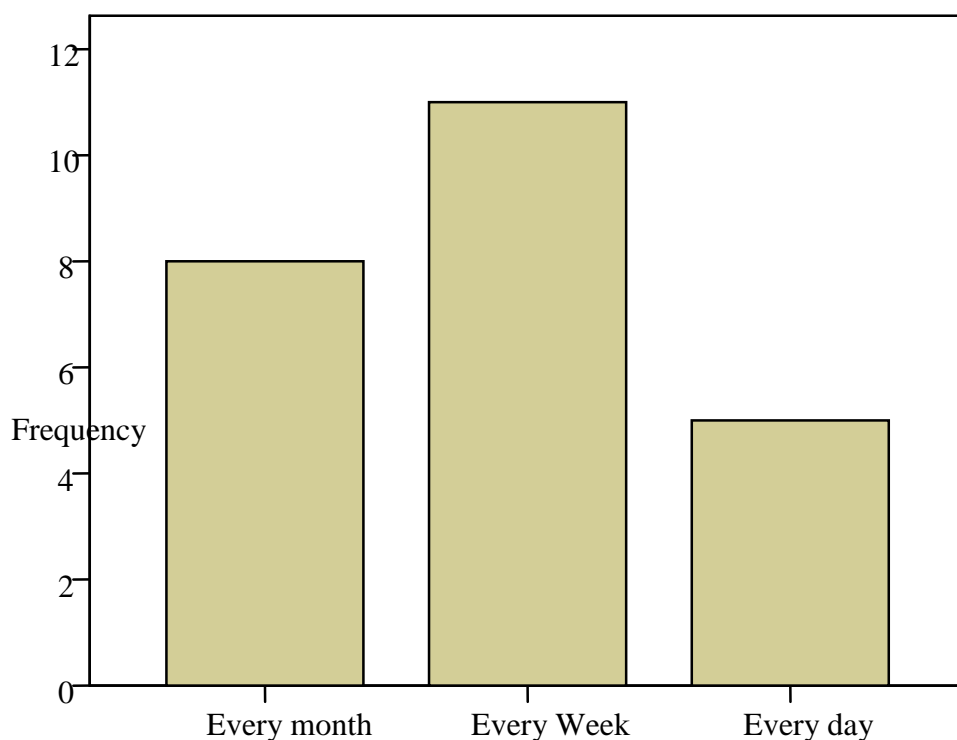
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	23	43.4	43.4	43.4
Yes	30	56.6	56.6	100.0
Total	53	100.0	100.0	

Source: Researcher's Survey, 2011.

This question tries to find out the level of awareness of customers about ICT usage in the Nigerian commercial banks. The responses showed that the customers are very aware of ICT usage in their respective banks.

5.3.2 Customers' Usage of ICT facilities under Study

Table Two: How often do you use the ICT facilities that you are familiar with?

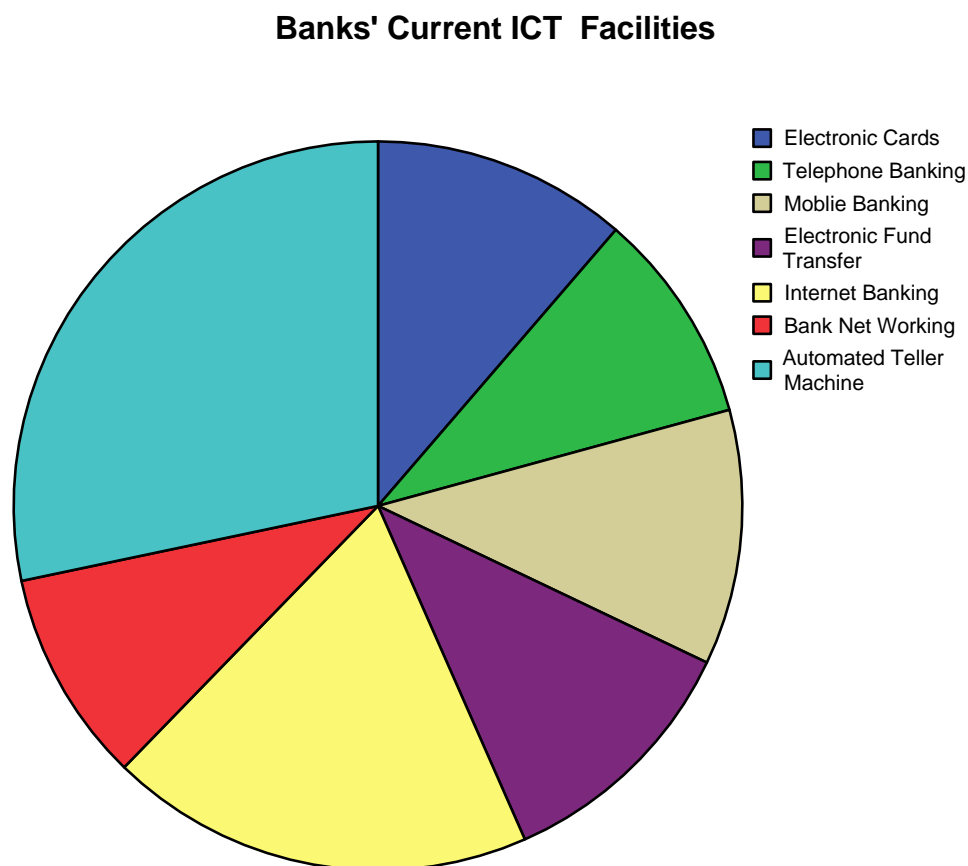


Source: Researcher's Survey, 2011

This question seeks to find out how often various customers make use of their banks' ICT facilities. The frequency axis represent the number of respondents and the month, week and day axis represents monthly, weekly or daily use of ICT by respondents. In the figure , it is shown that 11 respondents make use of their banks ICT facilities on a weekly bases,8 make use of their bank ICT on monthly bases and 5 on a daily bases.

5.3.3 ICT Being Used by Nigerian Banks commercial banks.

Table Three: Current ICT in Nigerian Banks under this study



Source: Researcher's Survey, 2011

This question seeks to find out the ICT facilities that the studied banks are currently using to render quality service to their customers. The researcher noticed from the responses gotten from the cross tabulation of responses from the questionnaires sent to various customers of the bank, that though all customers are aware that their banks make use of ICT in rendering services, but not all of them are making continuous use of these facilities.

5.3.4 Frequency of ICT Usage by Banks' Customer

*Table Four: Which of the ICT facilities are you familiar with? * How often do you use the ICT facility that you are familiar with? Cross tabulation*

			Which of the ICT facilities are you familiar with?			
			Internet Banking	Branch Networking	Automated Teller Machine	Total
How often do you use the ICT facility that you are familiar with?	Every month	Count	0	1	7	8
		% within Which of the ICT facilities are you familiar with?	.0%	100.0%	33.3%	33.3%
	Every Week	Count	2	0	9	11
		% within Which of the ICT facilities are you familiar with?	100.0%	.0%	42.9%	45.8%
	Every day	Count	0	0	5	5
		% within Which of the ICT facilities are you familiar with?	.0%	.0%	23.8%	20.8%
Total		Count	2	1	21	24
		% within Which of the ICT facilities are you familiar with?	100.0%	100.0%	100.0%	100.0%

Source: Researcher's Survey, 2011.

The table above shows a crosstabulation of ICT facilities that banks customers are most familiar with and how often they make use of them. From the table, the researcher noticed that 33.3%, 42.9% and 23.8% of respondents make use of Automated Teller Machine on a monthly, weekly and daily base. While 1% and 2% of the respondent customers make use of internet banking and branch networking. The table also shows that more respondents make use of their banks' ICTs on weekly a base which is equal to 45.8% of the total usage.

5.3.5 Which of these ICT facilities are you familiar with?

Table Five: Which of the ICT facilities are you familiar with?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	23	43.4	43.4	43.4
Electronic Cards	1	1.9	1.9	45.3
Internet Banking	2	3.8	3.8	49.1
Branch	2	3.8	3.8	52.8
Networking	25	47.2	47.2	100.0
Automated Teller Machine	53	100.0	100.0	
Total				

Source: Researcher's Survey, 2011.

The question tries to find out which of the ICT facilities customer are more familiar with. The researcher found out from the table that 47.2% of the respondents are more familiar with automated teller machine, 3.8% are each familiar with internet banking and branch net working while 1.9% is familiar with electronic cards.

5.3.6 Factors hindering ICT usage in Nigerian Commercial Banks

Table Six: What is your Gender * what are the limitations to your using your bank ICT facilities? Crosstabulation

Count

	What are the limitations to your using your bank ICT facilities?					Total
	Scarcity of E-Workforce	Low Internet Connectivity	Low Tele Dencity	Security		
What is Male	1	4	4	6	0	15
your Female	5	9	1	0	0	15
Gender	0	0	0	0	23	23
Total	6	13	5	6	23	53

Source: Researcher's Survey, 2011.

This table is a cross tabulation of gender and the limitations to customers usage of their banks ICT facilities. The views of the respondent varies as the male respondent considered security to be the main limitation to their usage of their banks' ICT facilities but the female respondents, think that low internet connectivity is the main limitation to using ICTs facilities of their banks.

5.3.7 Customers Preference for Banks that Use ICT Facilities

*Table Seven: Why do you prefer to carry out your banking transactions with a bank the uses ICTs? * What is your Gender Crosstabulation?*

		What is your Gender			Total
		Male	Female		
Why do you prefer to carry out your banking transactions with a bank the uses ICTs?	It is Safe	2	0	0	2
	Count				
	% within What is your Gender	13.3%	.0%	.0%	3.8%
	Access to one's account anywhere in the country	6	8	0	14
	Count				
	% within What is your Gender	40.0%	53.3%	.0%	26.4%
	It is fast and efficient	7	7	0	14
	Count				
Total	% within What is your Gender	46.7%	46.7%	.0%	26.4%
	Count	0	0	23	23
	% within What is your Gender	.0%	.0%	100.0%	43.4%
	Count	15	15	23	53
		% within What is your Gender	100.0%	100.0%	100.0%

Source: Researcher's Survey, 2011

This question tries to find out the reason why customers prefer to carry out transactions with a bank that uses ICT in its service delivery. The table above is a cross tabulation between gender and the reasons why customer prefer banks that use ICT. From the table above, 13.3%, 40% and 46.7% of male respondents think that they prefer to carry out their transaction with banks that make use of ICTs in its service delivery because it is safe, fast and efficient and they can have access to their accounts anywhere in the country. On the other hand, 53.3% and 46.7% of female respondents think that they prefer to carry out their transaction with banks that make use of ICTs in its service delivery because they can have access to their accounts anywhere in the country and it fast and efficient.

5.3.8 Problem with ICT Usage in Banks.

*Table Eight: Did you experience problem while using any of your banks' ICT facility? * What is your Gender Cross tabulation*

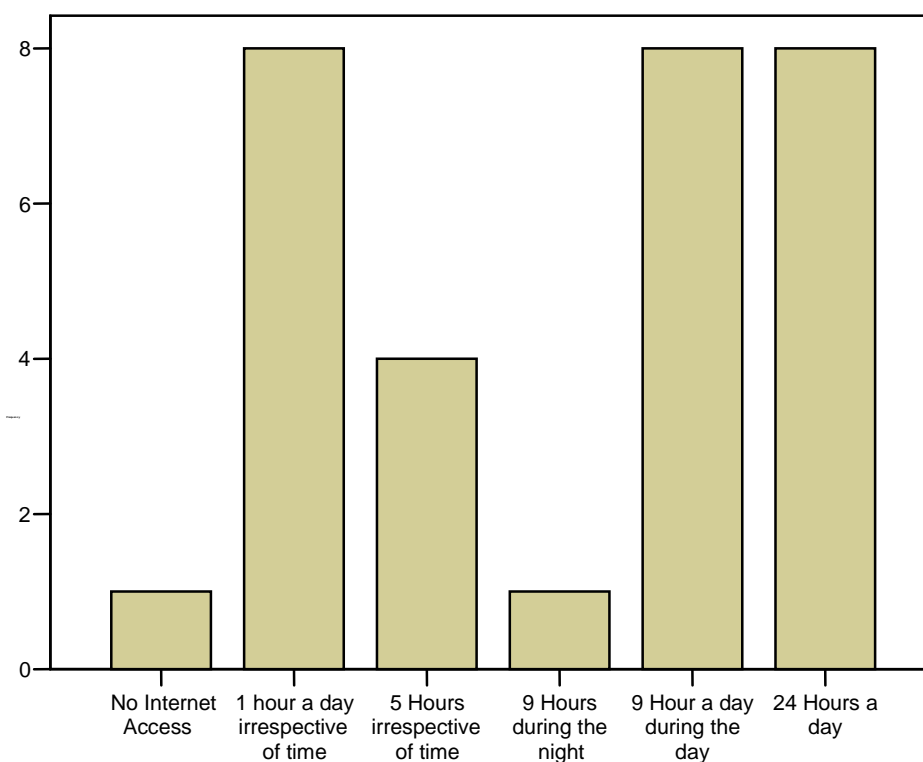
		What is your Gender			Total
		Male	Female		
Did you experience problem while using any of your ICT facility?	Yes	Count 10	Count 7	Count 0	Count 17
		% within What is your Gender 66.7%	% within What is your Gender 46.7%	% within What is your Gender .0%	% within What is your Gender 32.1%
	No	Count 5	Count 8	Count 0	Count 13
		% within What is your Gender 33.3%	% within What is your Gender 53.3%	% within What is your Gender .0%	% within What is your Gender 24.5%
Total		Count 0	Count 0	Count 23	Count 23
		% within What is your Gender .0%	% within What is your Gender .0%	% within What is your Gender 100.0%	% within What is your Gender 43.4%
		Count 15	Count 15	Count 23	Count 53
		% within What is your Gender 100.0%	% within What is your Gender 100.0%	% within What is your Gender 100.0%	% within What is your Gender 100.0%

Source: Researcher's Survey, 2011

This question is met to find out if bank customers experienced difficulties while making use of any of their banks' ICT facilities. From the table which is a cross tabulation between gender and if customers have had problem with their banks' ICT facilities, 66.7% of male respondents and 46.7% of female respondents said that they have had problems while using their bank ICT facilities. While 33.3% male respondents and 53.3% female respondents said they have not had problem using their bank ICT facilities.

5.3.10 Internet Accessibility

Table Nine: How often do you have access to the internet?



Source: Researcher's Survey, 2011

This question is to find out how many hours per day bank customers have access to internet. In the bar chart above, the frequency axis represents number of respondents. Eight of the respondents said, they have access to the internet for 24 hours a day, 9 hours during the day time and 1 hour a day irrespective of time. Four respondents said they have access to internet 5 hour a day irrespective of time. One respondent has access to internet 9 hours a day during the night only and one has no access at all.

5.3.11 Access to internet based on gender

*Table Ten: How often do you have access to the internet? * What is your Gender Crosstabulation?*

			What is your Gender		
			Male	Female	Total
How often do you have access to the internet?	No Internet Access	Count % within	1	0	1
		What is your Gender	6.7%	.0%	3.3%
	1 hour a day irrespective of time	Count % within	3	5	8
		What is your Gender	20.0%	33.3%	26.7%
	5 Hours irrespective of time	Count % within	1	3	4
		What is your Gender	6.7%	20.0%	13.3%
	9 Hours during the night	Count % within	1	0	1
		What is your Gender	6.7%	.0%	3.3%
	9 Hour a day during the day	Count % within	5	3	8
		What is your Gender	33.3%	20.0%	26.7%
Total	24 Hours a day	Count % within	4	4	8
		What is your Gender	26.7%	26.7%	26.7%
		Count % within	15	15	30
	What is your Gender	100.0%	100.0%	100.0%	

Source: Researchers' Survey, 2011.

This is a cross tabulation between gender and access to internet, it is to find out which of the gender has more access to the internet. From the table all female respondents have access to the internet at least one hour a day, while one male respondent does not have access to the internet.

5.3.11 Preferred ICT facility based on Individual Customers' gender

*Table Eleven: The Different ICT Facilities Being used by Nigerian Commercial Banks under Study * What is your Gender Cross tabulation*

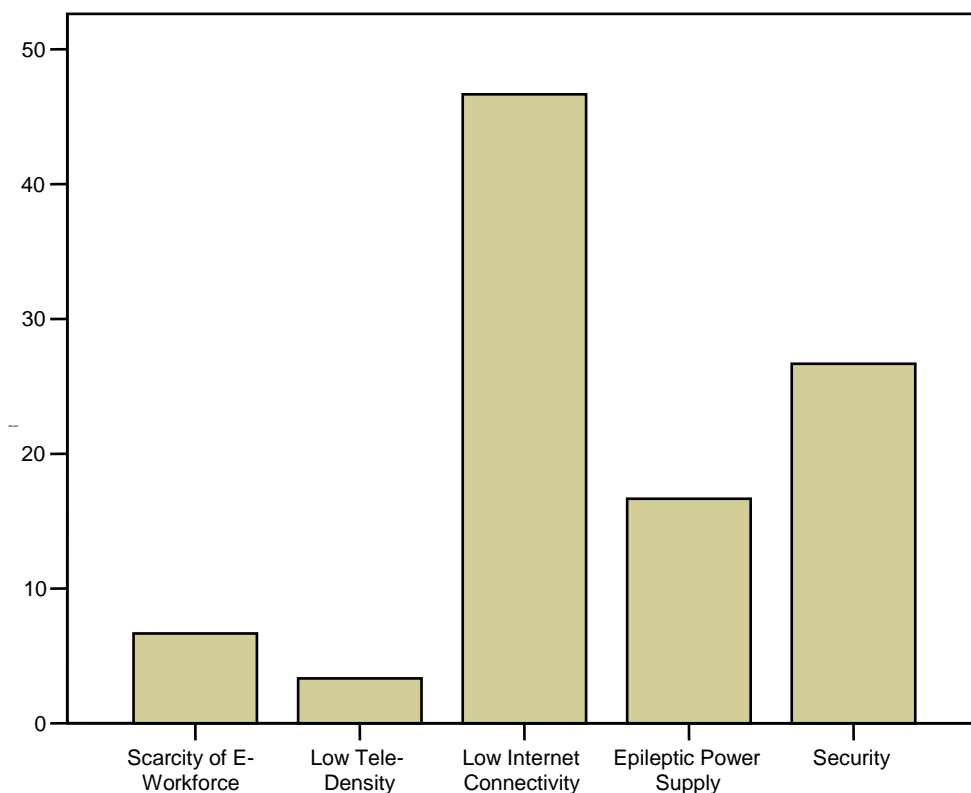
				What is your Gender			
				Male	Female		Total
The Different ICT Facilities Being Deployed by Nigeria Banks Under Study	Mobile Banking	Count	0	1	0		1
		% within What is your Gender	.0%	8.3%	.0%		1.9%
	Electronic Fund Transfer	Count	0	4	0		4
		% within What is your Gender	.0%	33.3%	.0%		7.5%
	Internet Banking	Count	0	5	0		5
		% within What is your Gender	.0%	41.7%	.0%		9.4%
	Branch Networking	Count	5	2	0		7
		% within What is your Gender	27.8%	16.7%	.0%		13.2%
	Automated Teller Machine	Count	13	0	0		13
		% within What is your Gender	72.2%	.0%	.0%		24.5%
Total		Count	0	0	23		23
		% within What is your Gender	.0%	.0%	100.0%		43.4%
		Count	18	12	23		53
	% within What is your Gender	100.0%	100.0%	100.0%		100.0%	

Source: Researchers' Survey, 2011.

This is a cross tabulation between gender and the different ICT facilities being used by Nigerian commercial banks under study. The cross tabulation tries to find out if there is a difference in preference in usage of banks' ICT facilities based on customers gender. From the table, 41.7% of female respondents prefer to use internet banking and 72.2% of male respondents prefer to use automated teller machine.

5.3.13: Limitations to customers' usage of their bank ICTs

Table Twelve: What are the limitations to your using your bank ICT facilities?



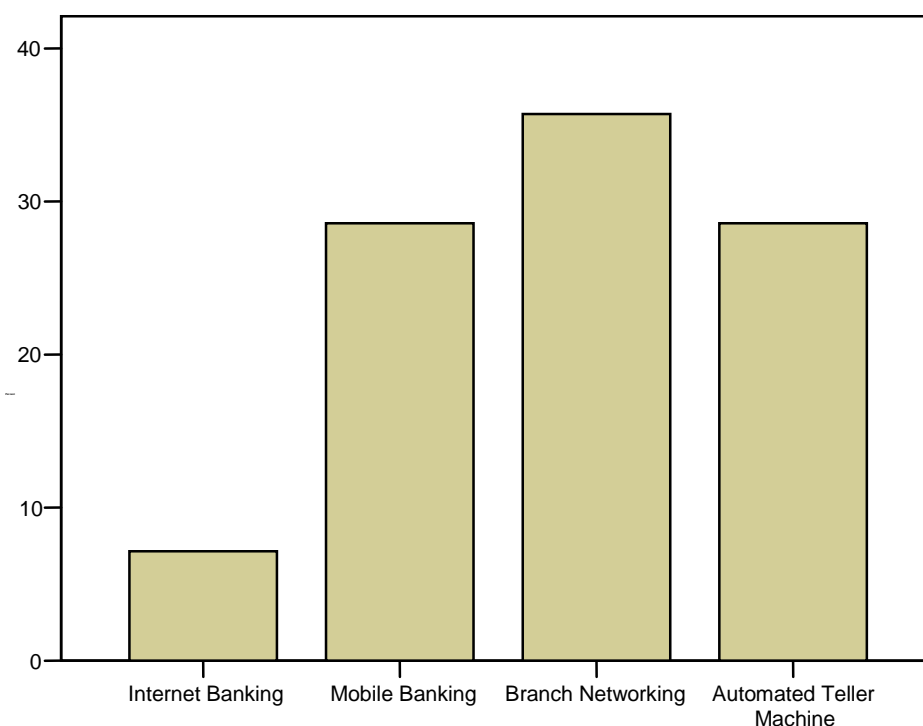
Source: Researcher's Survey, 2011.

This question aims at finding out what the worst limitations that limit the ability of customers to utilize ICT facilities of their banks. In the table, 46.7% of respondents think that low internet connectivity is the worst problem, 26.7% think it is security while 16.7% think it is epileptic power supply. Scarcity of E-work force was considered to be the worst limitation by 6.7% of the respondents and lastly 3.3% respondents considered low tele-density as the worst limiting factor.

5.4 Bank Employees' Data Analysis

5.4.1 Most important ICT for the success of a Nigeria's commercial banks.

Table Thirteen: Which of the listed ICT facilities is or are most important for the Success of your bank

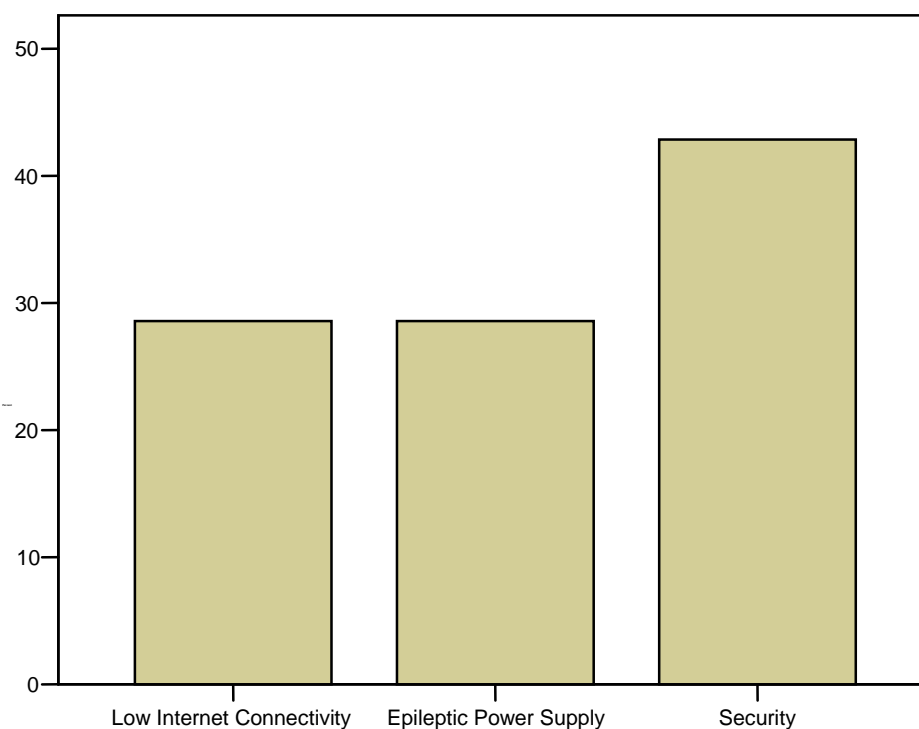


Source: Researcher's Survey, 2011

This question tries to find out from the banks' employees the most important ICT facilities for the success of their banks in rendering quality services to their customers. From the graph, 35.7% of employee respondents think that branch net working is most important for their banks to render quality service, 28.6% of respondents think that both automated teller machine and mobile banking are of most importance to their bank in rendering quality service while 7.1% of respondent think it is internet banking that is most important for their bank to render quality service.

5.4.2 Limitations to Banks Employees' ICT usage

Table Fourteen: Factors affecting the use of ICT in rendering quality Service in Nigeria's Commercial Banks

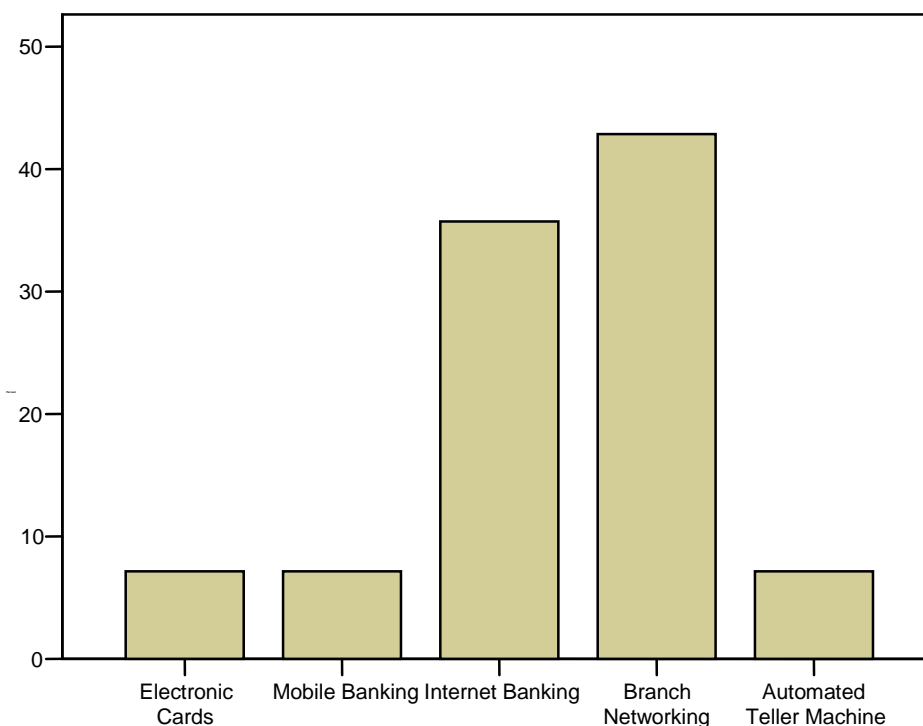


Source: Researchers' Survey, 2011

This question seeks to find out from the various banks' employees respondent the worst factors affecting the usage of their bank ICT facilities. According to the responses obtained from the respondents, 42.9% think that security is the worst problem affecting the usage of their bank ICT facilities, while 28.6% of the respondents think that low internet connectivity and epileptic power supply are both the worst factors affecting the use of their bank ICT facilities by their customers.

5.4.3 Most used ICT facilities by the banks corporate Customers

Table Fifteen: Which of your bank's ICT is most preferred by your bank corporate customers?



Source: Researcher's Survey, 2011

This question seeks to find out from the banks employees what ICT facility their corporate customers use most. From the responses displayed in the table, it shows that 42.9% of the various banks corporate customers make use of branch networking, 35.7% of the corporate customers make of internet banking while 7.1% make use of electronic cards, mobile banking and automated teller machine to transact their businesses.

5.4.4 CFS base on Bank employees' Gender

*Table Sixteen: Which of the listed ICT facilities is or are most important for the success of your bank * Gender Cross tabulation*

			Gender		
			Male	Female	Total
Which of the listed ICT facilities is or are most important for the success of your bank	Internet Banking	Count	1	0	1
		% within Gender	11.1%	.0%	7.1%
	Mobile Banking	Count	0	4	4
		% within Gender	.0%	80.0%	28.6%
	Branch	Count	5	0	5
	Networking	% within Gender	55.6%	.0%	35.7%
	Automated	Count	3	0	3
	Teller Machine	% within Gender	33.3%	.0%	21.4%
	0	Count	0	1	1
		% within Gender	.0%	20.0%	7.1%
Total		Count	9	5	14
		% within Gender	100.0%	100.0%	100.0%

Source: Researcher's Survey, 2011

The is a cross tabulation between the most important ICT facility of the studied banks and gender. This cross tabulation seeks to find out from bank employees the ICT facility they think, based on their gender, is most important for their banks to succeed in rendering of quality services to their customers. From the responses in the table, 80.0% of female respondents think mobile banking is the most important ICT facility for their bank while 55.6% of the male respondents think that it is branch networking.

5.4.5 Social factors considered by banks when deploying ICT facilities

Table Seventeen: Which of these social factors is or are considered by bank when deploying ICT facilities?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	The customers' attitude toward the new products and services	5	35.7	35.7	35.7
	The level of education of the people	9	64.3	64.3	100.0
	Total	14	100.0	100.0	

Source: Researcher's Survey, 2011

The aim of the question is to find out from the banks employees, if their banks take into consideration any social factor before deploying any ICT in any of their branches. The responses shows that banks take customers' attitude toward the new products and services and level of education of the people into consideration before embarking on the rendering of ICT aided services.

Chapter Six

6 Discussions, Conclusion and Recommendation

6.1 Discussion

This chapter is to address the research questions that are stated in chapter one based on the theoretical frameworks and the empirical data. The presentation and analysis will be done within the theoretical frameworks of CFS and contingency theories that were presented in chapter two. Conclusion will thereafter be drawn if there are no differences or the results are in line with the theory. Should there be differences, I will try to find out why the inconsistency and propose a possible solutions.

The main objective of this paper is to provide answer to the research questions which are:

What are the various ICT that customers (both internal and external) regards as critical success factor for enhancing banking service quality in Nigerian commercial banks?

To determine if there are any differences in the perceptions of customers regarding their choice of usage of their banks' ICT facilities based on their gender.

To identify the worst factors limiting the usage of banks' ICT facilities in Nigeria.

6.1.1 ICT and Nigeria's Commercial Banks' Customer

ICT in Nigerian commercial banks is taken as a tool by which banks can reach their numerous customers to provide them with quality services. In the assertion of (Agboola, 2006), ICT in banking services increases awareness of customers and also increases their demand for their banks' products. This assertion is in line with the findings of (table 2) that customers of Nigerian commercial banks are very aware of the benefits of banking with a bank that is ICT driven in its operations. Due to the awareness of customers, all customers respondents in this study prefer to carry out their banking transactions with a bank that make use of ICT, this is because the services of a bank that uses ICT in its operations are considered safe, fast and efficient and also it provides them access to their account anywhere in the country.

The revolution in technological environment in which Nigerian commercial banks operate has brought about information availability to customers. Based on this information, customers are able to make informed decisions as to what bank service they prefer; it is therefore contingent upon the commercial banks to come up with different strategies to meet the preferences of their customers whose choices and decisions are constantly being influenced by the changing technologies. In this regard, contingency approach is a good option for banks executive to adopt in dealing with the changes in the environments so that the best action can taken toward meeting the demands of their customers. As a way of adopting the principles of contingency theory the studied banks are found to utilize different ICT facilities that will enable them to render services that will meet the standard and expectation of their well informed customers and to make their services attractive to them.

6.1.2 CSF of ICT for Individual Customer in Nigeria's Commercial Banks

CFS in a service based organization are those factors that an organization deploys to: *“get their services closer to key targeted customers, deliver consistent, reliable repeatable and sustainable services, focus on high quality service delivery, strengthen the service propositions, and establish more effective remote support for customers”*(Www, Noventum,Pp1) . But according to (Johnson.G *et al*, 2008), CFS is defined as those characteristics that a product has that are of value to a group of customers in which an organization has to excel in; in other to gain customer patronage and retain competitive stand over others.

Nigeria commercial banks being service oriented organizations are deploring different information and communication technology facilities to carry their services closer to their numerous targeted customers and even more to their living rooms through internet banking. Table 4 shows the current ICT facilities being used by commercial bank in Nigeria, among these ICT facilities, the customers are more familiar with automatic teller machine and make use of it more often than other ICT facilities been considered in this study.

According to table 6, 42.7% of customers said they are familiar with ATM. Also in table 5 which is a cross tabulation of the ICT facilities customer are familiar with and how often they make use of it shows that customers make use of automated teller machine more than other; that is 33.3% of customer respondents make use of ATM on a monthly bases, 42.9% do same on a weekly bases and 23.8% on daily bases. Additionally, it shows that customers make use of ATM more on a weekly bases. In the responses of the internal customers, that is the employees of the banks in table 14; it shows that branch networking is of basic importance to the success of their respective banks.

The preference of ATM and branch networking above other ICT facilities of the respective banks in this study has been influenced by the rapid development in the technological environment of both the customers and the banks. Before the use of ICT in commercial banks in Nigeria, the customers have no choice but to queue up for long hours for bank service that will last for few minutes (Abdulazeez 2010).

The effects of technological changes is very evident in the attitude of respondents as seen in table 7 in which the respondents said they prefer to carry out their transactions in a bank that render its services with aid of ICT for reasons ranging from “it is safe”, “access to ones’ account anywhere in the country” and “it is fast and efficient”.

The development in the technological environment has impacted on the social environment of the customers and the banks. In table 18, it shows that banking services in Nigeria is been redirected to focus on the customers, this is by way of the banks having to take in to consideration the social status of their customers before embarking on rendering of ICT aided service. In this table, it shows that the studied banks take the educational status and the attitudes of customers toward new products and services into consideration; this is in line with contingency approach of managing contingencies in the social environment. It aids the management to take action that matches with the prevailing condition.

6.1.3 CFS of ICT for Corporate Customer in Nigerian Commercial Banks

Corporate customers are organizations that make use of the services or products of another organization (Www, Authorstream). In the case of Nigeria commercial banks, they render their services to many corporate organizations within and outside Nigeria. From the findings of table 13, 42.9% of the respondents think that corporate customers make use of branch networking in their business transactions with different banks under study, 35.7% think corporate customers make use of internet banking while 7.1% think that corporate customers make use of electronic cards, mobile banking and automated teller machine to transact their businesses. Similarly, in table 11, the responses shown that 35.7% of respondents think that branch networking is most important for the success of their bank to be able to render quality services to their customers, 28.6% think that it is mobile banking and automated teller machine that is most important while 7.1% of the respondent think it is internet banking. The various degree of responses show that there is a situation of contingency arising from the demand for the different ICT facilities been considered, every customer is important to the banks, therefore the banks should deploy more of these facilities to satisfy customers preferences.

6.1.4 CSF of ICT in Nigerian Commercial Banks Based on Gender of Customers.

Customers' preference for a service or product is an indication of an improved quality of service or quality of product. According to International Communication Research (ICR, 2011), customer preference is regarded as the ability or power of a customer to opt for one thing over another with the expectation that the choice will result in better satisfaction, better capability or better performance. In table 12, it is shown that the preference of Nigerian commercial banks customers for the usage of ICT facilities of their banks differ based on gender. The responses revealed that female customers prefer to use internet banking, this responses has a corresponding 41.7% of female respondents. The male respondents prefer to use automated teller machine. A total of 72.2% of male respondents opted for ATM facility.

In the case of bank employees, the female employees think that mobile banking is more important for their bank to render quality services but the male respondents think that it is branch networking that is most important for their bank to succeed in rendering quality service. The social environment of the customers is constantly being flooded with information emanating from their daily interaction with information technology as seen in table 7 and again reemphasized in table 12 in which customer preferences based on gender was presented, the situation therefore demands a contingency response from the banks that will ensure each gender preference is adequately attended to so as to ensure continuous usage of their ICT facilities by customers.

6.1.5 Factors limiting the usage of Commercial banks' ICT Facilities in Nigeria

In the assertion of Accad (2004), it was pointed out that, poor infrastructural development in Nigeria forms the main source of challenges for commercial banks in their effort to fully utilize ICT in rendering quality services to their customers. In this research, three factors are identified by banks employees' respondent to be the worst factors that tend to limit customers usage of their banks' ICT facilities in table 15. Similarly, in table 13, customers' respondents show also a higher response for same factors. Similarly, table 8, also shown that some bank customers encounter difficulty when using their banks ICT facilities.

6.2 Conclusion

ICT has become an effective tool for rendering quality services to customers especially in banking industry (Oluyemiadeosun, 2006). Nigeria commercial banks are not left out in the trends of ICT usage in rendering quality service to their customers and attracting new ones.

The customers of commercial banks in Nigeria are increasingly getting aware of the benefits of using ICT in banking services, for this reason the customers of the commercial banks selected for this study have shown preference in their choice of usage of ICT facilities deployed by their banks. According to the concept of CFS being followed in this study, automated teller machine, an ICT facility being deployed by banks under this study is more used and preferred by the individual customers, base on this finding, ATM is the critical success factor that the banks need to deploy to different strategic locations where they can be used by their customers as at when they need its services.

Regarding the internal customers preference, the findings show that they prefer to use branch networking, therefore Nigeria commercial banks will have to networked more branches as this is considered a basic CFS by the internal customers .But for the banks' corporate customers, the respondents show a higher preference for branch networking, therefore the critical success factor the banks' corporate customers is branch networking also.

Going by contingency theory principle, branch networking is the prevailing innovation that banks corporate customers and internal customers prefer to always make use of while transacting business. It is therefore very important for Nigerian commercial banks to improve on their current networking ICT facilities and install new ones for a wider coverage so as retain their corporate customers and attract new ones and to ensure customers do no longer experience difficulty with the ICT facilities.

The study also shows that there are differences in what the CFS are based on the gender of the respondents. The female customers of the banks prefer to use internet banking more often during the course of their transactions but the male customers prefer to use automated teller machine. Consequently, to the bank female customers, the critical success factor is internet banking and to the male it is automated teller machine (ATM). From the responses gotten from bank employees, it shows that the critical success factor for female bank employees is mobile banking and for the male employees it is branch net working.

The contingency situation regarding the preference of ICT facilities of the studied banks based on customers' gender differs; this is an indication that Nigerian commercial banks should deploy all ICT facilities under consideration in this study so as to be able to meet the needs of their customers.

Despite the obvious benefits derivable from using ICT in banking services, there are some factors considered by customers as worst limiting factors that tend to hinder their full utilization of their banks' ICTs in Nigeria. The followings are identified by bank customers to be the worst factors affecting their usage of banks' ICT:

1. Low Internet Connectivity
2. Security
3. Epileptic Power Supply.

The quick technological changes in the environment in which banks operate has created a contingency situation which is leading to a higher demand for internet, security and constant power supply, in order to ensure customer satisfaction and rendering of quality service, commercial banks in Nigeria have taken the initiatives of designing their website to be user friendly, hiring well trained security personnel, installing modern day security gadgets and purchasing of power plants for supply of constant power to keep their ICT facilities working without interruption. Despite these initiatives taken by the banks, the responses from the respondents' indicate that more is needed to be done in order for them to be able to make full utilization of their banks ICTs without restrictions.

6.3 Recommendation

The greatest ambition of Nigeria as a nation is to become one of the biggest world economies by 2020; this is a realizable dream if the banking subsector of her economy is empowered. The government of Nigeria should embark on massive infrastructural development in the areas of internet availability, security and power availability, when these are done her much desired economic growth and development will be realized.

For future researches, an extensive research is needed; both quantitative and qualitative that will prove numerically and otherwise the CFS of ICT usage in Nigerian commercial banks.

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Personal Messages

Fred Omorowa

Kelvin Onowu

Mark Eguavoen

Appendix



Swedish University of Agricultural Sciences
Faculty of Natural Resources and Agricultural Sciences
Department of Economics, Uppsala, Sweden.

The Critical Success Factors of Information and Communication Technology usage in Nigeria Commercial Banks (A case of selected banks).

Dear Sir/Ma,

I am a student of above named University; I am conducting a research on the topic specified above.

I am requesting for your participation in my survey by answering my questionnaire, the research is done in fulfillment of award of Master degree by the University.

Strict confidentiality of all information is guaranteed as they will only be used for research purpose.

Thank you.

Yours faithfully,

Kelvin Omorowa.



Swedish University of Agricultural Sciences
Department of Economics
Bo Öhlmér

28 June 2011

To whom it may concern

Certificate

Kelvin Omorowa is writing his Master Thesis entitled "Critical Success Factors of the Application of Information and Communication Technology in Nigeria Commercial Banks" as part of a Master programme at the Swedish University of Agricultural Sciences. He will need information from managers, employees and customers of Nigerian Commercial Banks as a basis for his thesis, and we would be very grateful for assistance in collecting this information. Thank you for your assistance.

Uppsala 2011-06-28

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Questionnaire to Bank Manager.

1. What is your gender? Please tick (✓)

Male

☐

Female

☐

2. Which of the under listed represents the time duration that you have been an employee of this Bank. Please tick (✓)

1-2years

☐

3-4 years

☐

5-6years

☐

7-8years

☐

3. What is the average investment of your bank on ICT banking facilities between 2008 and 2010? Please tick (✓)

N250 Million and above

☐

N 180 Million

☐

N 150 Million

☐

N120 Million

☐

4 Was the government policies favourable to your bank's deployment of ICT facilities? Please tick (✓)

Yes (2) ☐

No (1) ☐

5 If your answer to question 4 above is yes, what are these government policies, please List in the space provided.

(3)

(2)

.....

6. Please tick (✓) which of the ICT banking facilities are considered to be of basic importance to the success of your bank.

Automatic Teller Machine (7) ☐

Branch Networking (6) ☐

Internet Banking (5) ☐

Mobile Banking (4) ☐

Internet Banking (3) ☐

Telephone Banking (2) ☐

Electronic cards (1) ☐

Others

7. Please tick (✓) which of the ICT banking facilities has the highest rate of deployment to different locations or branches of your bank. Please tick (✓)

Automatic Teller Machine (7)	<input type="checkbox"/>
Branch Networking (6)	<input type="checkbox"/>
Internet Banking (5)	<input type="checkbox"/>
Mobile Banking (4)	<input type="checkbox"/>
Internet Banking (3)	<input type="checkbox"/>
Telephone Banking (2)	<input type="checkbox"/>
Electronic cards (1)	<input type="checkbox"/>
Others	

8. Which of the under listed represents the top most contribution of ICT in your banking operation. Please tick (✓) as appropriate

Increased bank's profit.	<input type="checkbox"/>
Increased Customers	<input type="checkbox"/>
Increase in the bank's share price	<input type="checkbox"/>
Increase in the bank's share price	<input type="checkbox"/>
Increase in the bank's share price	<input type="checkbox"/>
Reduction of queues in the banking hall	<input type="checkbox"/>
Others	

9. In what ways has the deployment of information and communication technology in the banking services of your bank affected the marketing of your bank's products. Please list in the space below.

- (3).....
- (2).....
- (1).....

10. In what way has the use information and communication technology in your banking services enhance the competitiveness of your bank in Nigeria banking sector? Please tick (✓) as appropriate.

Increase in speed and accuracy

☐

Increase in branch network

☐

Increased in both corporate and individual customers

☐

Increase in bank services and products

☐

Others

11. Environmental sustainability is currently a global issue, and for this reason many corporate organization strive to be environmentally sustainable in their operations. Did your bank consider the environment in its decision to deploy ICT facilities in its operations. Please tick (✓)

Yes (2)

☐

No (1)

☐

12. If your answer to question 11 is yes, then what is the current environmental policy of your bank? Please tick (✓)

- | | |
|--|--------------------------|
| Granting loans only to finance projects that are not environment polluting (4) | <input type="checkbox"/> |
| Using only bio diesel for the bank's generators (3) | <input type="checkbox"/> |
| Reduction in the consumption paper (2) | <input type="checkbox"/> |
| Recycling of waste (1) | <input type="checkbox"/> |
| Others | |

The deployment and use of ICT facilities in your bank has led to an increase in the demand for ICT specialist to occupy the various ICT related positions.

- | | |
|---------|--------------------------|
| Yes (2) | <input type="checkbox"/> |
| No (1) | <input type="checkbox"/> |

13. Which of the under listed has best been affected by the deployment and of ICT in your bank as corporate organization. Please tick (✓)

- | | |
|---|--------------------------|
| Organizational culture (5) | <input type="checkbox"/> |
| Organizational strategy (5) | <input type="checkbox"/> |
| Organizational objectives and marketing goals (5) | <input type="checkbox"/> |
| Organizational mission (5) | <input type="checkbox"/> |
| Organizational vision (5) | <input type="checkbox"/> |
| Others | |

14. Which of these social factors was or were taken into consideration by bank in the decision to deploy and use ICT facilities? Please tick (√).

The level of education of the people (5) ☐

Spoken language (4) ☐

The consumer's attitudes toward the new products and services (3) ☐

The level of employment of the people (2) ☐

The religious affiliation of the people (1) ☐

Others

Questionnaire to Bank Employees.

1. What is your gender?

Male ☐

Female ☐

2. Which of the under listed represents the time duration that you have been an employee of This bank

1-2years ☐

3-4 years ☐

5-6years ☐

7-8years ☐

Others

3. In the list of ICT facilities been deployed and used by your bank, which of them will you say is most important for the success of your bank?

Automatic Teller Machine (7) ☐

Branch Networking (6) ☐

Internet Banking (5) ☐

Mobile Banking (4) ☐

Internet Banking (3) ☐

Telephone Banking (2) ☐

Electronic cards (1) ☐

Others -----

4. Please state the reasons for your choice in question three above.

(3)

(2)

.....

5. Please state the ways in which the application of information and communication technology in your bank operations has impacted on your job.

(3)

.....

(1).....

6. As an employee in this bank, which of the listed ICT facilities represent the most used facility by you bank's individual customers?

Automatic Teller Machine (7)

Branch Networking (6)

Internet Banking (5)

Mobile Banking (4)

Internet Banking (3)

Telephone Banking (2)

Electronic cards (1)

7. As an employee in this bank, which of the listed ICT facilities represent the most used facility by your bank's corporate customers?

Automatic Teller Machine (7)

Branch Networking (6)

Internet Banking (5)

Mobile Banking (4)	<input type="text"/>
Internet Banking (3)	<input type="text"/>
Telephone Banking (2)	<input type="text"/>
Electronic cards (1)	<input type="text"/>

8. Your bank has a number of products, which of these products will you say has better been enhanced by your bank's information and communication technology in terms of patronage. Please list these products

(3).....

(2).....

.....

9. In the performance of your daily duties during your office hour, how will you rate the impact of information and communication technology on your speed and accuracy? Please tick (✓) which of the option best describe the impact.

Awful	(1)	<input type="text"/>
Poor	(2)	<input type="text"/>
Reasonable	(3)	<input type="text"/>
Good	(4)	<input type="text"/>
Excellent	(5)	<input type="text"/>

10. Will you say the deployment of information and communication technology in your bank's operation has drastically reduced the burden of your routine duties? Please tick (✓) which one applies.

Yes, it has.	(3)	<input type="text"/>
--------------	-----	----------------------

No, it has not. (2)

Not sure. (1)

11. If your answer to question (10) is yes, please state in what ways the deployment of information and communication technology in your bank operation has drastically reduced the burden of your routine duties in the bank.

(3).....
.....

(2).....
.....
.....
.....

12. If your answer to question (10) is No, please state in what ways the deployment of information and communication technology in your bank operation has added to the burden of your routine duties in the bank.

(3).....
.....

(2).....
.....

(1).....
.....

13. What challenges has the deployment of information and communication technology in your bank operations posed to you as an employee in the bank. Please state the challenges in the spaces below.

(3)

.....
(2).....

.....

.....

.....

14. How did you overcome the challenges? Please states in the spaces bellow how you overcame the challenges.

(3).....

.....

(2).....

.....

.....

.....

15. What is the average time it takes to attend to a customer with the used of ICT facilities? Please tick (√) which one applies.

5 minutes (5) ☐

10 minutes (4) ☐

15 minute (3) ☐

20 minutes (2) ☐

minutes (1) ☐

Others

16.What is the average time it take to attend to a customer without the use of ICT facilities

15 minutes (5) ☐

20 minutes (4) ☐

25 minute (3) ☐

30 minutes (2)

35minutes (1)

Others

17. Do you think the use of information and communication technology in your bank has led to an increase in the number of customers your bank now has? Please tick (✓)

Yes, it has (3)

No, it has not(2)

Not sure if has(1)

18. If your answer to question 17 is yes, what do you think is the average number of new customers your banks receives per month? Please tick (✓) which one applies.

10 -15 (1)

20-25 (2)

30-35 (3)

40-24 (4)

More (5)

19. Which of the under listed will you consider to be the worst factor affecting the use of ICT facilities by your bank to render quality services to its customers.

Security (5)

Epileptic power supply (4)

Low internet connectivity (3)

Low Tele-density (2)

Scarcity of E-Workforce (1)

Others

Questionnaire to Bank Customers

1. What is your gender? Please tick (✓)

Male ☐

Female ☐

2. You are age between

18-35 ☐

36-45 ☐

46-60 ☐

Above 60 ☐

3. Which of the stated years best describe the period of time you have been banking? Please tick (✓)

2000-2001 ☐

2002-2003 ☐

2004-2005 ☐

2006- 2007 ☐

2008-2009 ☐

2010-2011 ☐

4. Are you aware that Nigeria commercial banks now make use of information and communication technology (ICT) in their banking operations? Please tick (✓)

Yes (2) ☐

No (1) ☐

5. If you answer to question 4 above is yes, which of the under listed ICT facilities are you familiar with? ? Please tick (✓)

Automatic Teller Machine (7)	<input type="checkbox"/>
Branch Networking (6)	<input type="checkbox"/>
Internet Banking (5)	<input type="checkbox"/>
Mobile Banking (4)	<input type="checkbox"/>
Electronic fund transfer (3)	<input type="checkbox"/>
Telephone Banking (2)	<input type="checkbox"/>
Electronic cards (1)	<input type="checkbox"/>

6. How often do you use the ICT facility or facilities that you are familiar with. Please tick (✓)

Every day (4)	<input type="checkbox"/>
Every week (3)	<input type="checkbox"/>
Every month (2)	<input type="checkbox"/>
Not at all (1)	<input type="checkbox"/>

7. Will you prefer to always carry out your banking transactions with a bank that uses information and communication technology in their operation or with a bank that does not. Please tick (✓)

Yes, I will (2)	<input type="checkbox"/>
No, I will not (1)	<input type="checkbox"/>

8. If your answer is yes in question 7, what are your topmost reasons for wanting to carry out all your transactions in a bank that uses ICT? Please tick (✓)

It is safe (4)	<input type="checkbox"/>
It is fast and efficient (3)	<input type="checkbox"/>
Access to one's account anywhere in the country (2)	<input type="checkbox"/>

No service charges (1) ☐

Others, please specify

.....

9. While using the ICT facilities of your bank, did you experience any challenge or difficulty?

Please tick (✓)

Yes (1) ☐

No (2) ☐

10. If you experienced any challenge while using the ICT facilities of your bank, please specify such challenges in the space provided below.

(3).....

.....

(2).....

.....

(3).....

.....

11. How did you overcome these challenges? Please specify in the space below.

(3).....

.....

(2).....

.....

(1).....

12. How often do you have access to the internet? Please tick (✓)

24 hours a day (6) ☐

9 hours a day, only during the day (5) ☐

9 hours a day, only during the night (4) ☐

5 hours a day irrespective of time	(3)	<input type="checkbox"/>
1 hour a day irrespective of time	(2)	<input type="checkbox"/>
No internet access	(1)	<input type="checkbox"/>

13. Which of the under listed limit your capability to use either automatic teller machine, branch networking, internet banking, mobile banking, telephone banking, electronic fund transfer or electronic cards. Please tick (√)

Security	(5)	<input type="checkbox"/>
Epileptic power supply	(4)	<input type="checkbox"/>
Low internet connectivity	(3)	<input type="checkbox"/>
Low Tele-density	(2)	<input type="checkbox"/>
Scarcity of E-Workforce	(1)	<input type="checkbox"/>

Others