

**EFFECT OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)
ON TAX ADMINISTRATION IN FEDERAL INLAND REVENUE SERVICE JOS,
PLATEAU STATE**

BY

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ZARIA, NIGERIA**

NOVEMBER, 2016

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**A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE
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FACULTY OF ADMINISTRATION,
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ZARIA, NIGERIA**

NOVEMBER, 2016

Declaration

I declare that the work in this dissertation entitled EFFECT OF INFORMATION AND COMMUNICATION TECHNOLOGY ON TAX ADMINISTRATION IN FEDERAL INLAND REVENUE SERVICE JOS, PLATEAU STATE has been carried out by me in the Department of Public Administration. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this Dissertation was previously presented for another degree at this or any other institution.

Rotkang Roselyn DIMLONG

Date

Certification

This dissertation entitled EFFECT OF INFORMATION AND COMMUNICATION TECHNOLOGY ON TAX ADMINISTRATION IN FEDERAL INLAND REVENUE SERVICE JOS, PLATEAU STATE by Rotkang Roselyn Dimlong meets the regulation governing the award of the Degree of Master of Science in Public Administration of the Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literacy presentation.

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Dedication

I dedicate this work to my little Angel Nathan Kikkinan Sheddy Dimang aka Prof., our special gift from God! For his resilience throughout the period of this study .May the Lord almighty keep him to fulfill his glorious destiny according to God's divine purpose for his life in Jesus name.

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All glory and praise to My Father, the Lord Almighty, who is my Helper, Restorer and Great Provider. You are indeed worthy of my praise forever and ever. I wish to express my profound gratitude to my two supervisors Dr. Ibrahim Adamu and Dr. Faruk Abubakar for the time and sacrifice they made to read, correct and guide this work to completion despite their tight schedules. My gratitude also goes to the MSc. Coordinator, Dr. Idris Musa for his guidance and support. May the Lord Almighty reward you.

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Abstract

Over the years, tax administration in Nigeria has been plagued with several limiting factors such as weak administrative lapses and weak administrative facilities like the evidence of manually compiled database of tax payers. ICT was however identified as a solution to addressing most of the limiting issues of tax administration. The study examines the effect of ICT on tax administration in FIRS, Jos. The Technology acceptance Model(TAM by Davis, 1989) was used to underpin the study. The study adopted survey research design, where both primary and secondary data were used. The primary source of data were questionnaires and interviews while secondary data was obtained from “FIRS Guage”: A quarterly publication of FIRS, Handbook of FIRS among others. Quantitative data was analyzed using frequency counts and percentages, while chi-square was used to test the hypotheses. Data generated through interview was analyzed qualitatively. The study established that there are adequate ICT infrastructures in FIRS, Jos. The study also revealed that ICT capacity of staff of FIRS is adequate as all 70 staff of FIRS have been trained on basic ICT skills. From findings of the study, we therefore concluded that ICT has enhanced performance in revenue administration by reducing human error and processing times, providing readily accessible data for tax officers and facilitating better decision making by tax authorities. Hence the study recommended among others that FIRS should ensure an improved ICT infrastructure which includes completion of the fibre-optic network project, because without a robust ICT infrastructure, the modernization project would not be achievable.

Table of Contents

Title page	-	-	-	-	-	-	-	-	-	i
Declaration	-	-	-	-	-	-	-	-	-	ii
Certification	-	-	-	-	-	-	-	-	-	iii
Dedication	-	-	-	-	-	-	-	-	-	iv
Acknowledgment	-	-	-	-	-	-	-	-	-	v
Abstract	-	-	-	-	-	-	-	-	-	vi
Table of contents	-	-	-	-	-	-	-	-	-	vii
List of Tables	-	-	-	-	-	-	-	-	-	x
List of Figures	-	-	-	-	-	-	-	-	-	xii
List of Appendix	-	-	-	-	-	-	-	-	-	xiii

CHAPTER ONE INTRODUCTION

1.1	Background to the Study	-	-	-	-	-	-	-	-	1
1.2	Statement of the Research Problem	-	-	-	-	-	-	-	-	4
1.3	Research Questions	-	-	-	-	-	-	-	-	5
1.4	Objectives of the Study	-	-	-	-	-	-	-	-	5
1.5	Research Hypotheses	-	-	-	-	-	-	-	-	6
1.6	Significance of the Study	-	-	-	-	-	-	-	-	6
1.7	Scope and limitation of the Study	-	-	-	-	-	-	-	-	8
1.8	Definition of Key Concepts	-	-	-	-	-	-	-	-	9

CHAPTER TWO

LITERATURE REVIEW AND THEORITICAL FRAMEWORK

2.1	Introduction	-	-	-	-	-	-	-	-	11
2.2	Literature Review	-	-	-	-	-	-	-	-	11
2.2.1	Concept of Information and Communication Technology (ICT)	-	-	-	-	-	-	-	-	11
2.2.2	Concept of ICT Infrastructure-	-	-	-	-	-	-	-	-	13

2.2.3	Concept of ICT Capacity-	-	-	-	-	-	-	15
2.2.4	Concept of ICT Utilization-	-	-	-	-	-	-	17
2.2.5	Concept of Taxation	-	-	-	-	-	-	18
2.2.6	Concept of Tax Administration	-	-	-	-	-	-	19
2.3	Review of Empirical Studies	-	-	-	-	-	-	21
2.4	Theoretical Framework	-	-	-	-	-	-	24

**CHAPTER THREE
RESEARCH METHODOLOGY**

3.1	Introduction	-	-	-	-	-	-	28
3.2	Research Design	-	-	-	-	-	-	28
3.3	Sources and Methods of Data Collection	-	-	-	-	-	-	28
3.4	Population of the study-	-	-	-	-	-	-	29
3.5	Sample Size	-	-	-	-	-	-	30
3.6	Sampling Technique	-	-	-	-	-	-	30
3.7	Administration of Instrument	-	-	-	-	-	-	31
3.8	Method of Data presentation and Analysis	-	-	-	-	-	-	31

**CHAPTER FOUR
OVERVIEW OF TAX AUTOMATION BY FEDERAL INLAND REVENUE
SERVICE**

4.1	Introduction	-	-	-	-	-	-	33
4.2	Modernization Projects by Federal Inland Revenue Service	-	-	-	-	-	-	33
4.3	ICT Facilities used for operation and service delivery in FIRS, Jos-	-	-	-	-	-	-	39
4.4	The New Structure of Federal Inland Revenue Service (FIRS)	-	-	-	-	-	-	43
4.5	The Design and Implementation of Tax in Nigeria	-	-	-	-	-	-	45
4.5.1	Tax Policy	-	-	-	-	-	-	46
4.5.2	Tax Laws	-	-	-	-	-	-	46
5.5.3	Issues and Challenges of Tax System in Nigeria	-	-	-	-	-	-	47

**CHAPTER FIVE
DATA PRESENTATION AND ANALYSIS**

5.1	Introduction	-	-	-	-	-	-	-	51
5.2	Presentation of Data and Analysis	-	-	-	-	-	-	-	51
5.3	Summary of Major Findings	-	-	-	-	-	-	-	66

**CHAPTER SIX
SUMMARY, CONCLUSION AND RECOMMENDATION**

6.1	Summary	-	-	-	-	-	-	-	70
6.2	Conclusion	-	-	-	-	-	-	-	72
6.3	Recommendations	-	-	-	-	-	-	-	73
	REFERENCES	-	-	-	-	-	-	-	76
	APPENDICES	-	-	-	-	-	-	-	

List of Tables

Table 4.1	Annual summary of collection from year 2007-2015FIRS;						
	Targets Vs Performance by Tax	-	-	-	-	-	38
Table 5.1:	Case Processing Summary	-	-	-	-	-	51
Table 5.2:	Response to Questionnaire	-	-	-	-	-	52
Table 5.3:	There are adequate computers available to attend to corporate taxpayers						
	Complaints on tax administration in FIRS, Jos	-	-	-	-	-	52
Table 5.4	Web Portal Network for e-filing of tax is always available for corporate						
	Taxpayers to conveniently remit their taxes	-	-	-	-	-	53
Table 5.5	Corporate tax payers now find it easy to remit their taxes online as the						
	process of tax payment and is very friendly,	-	-	-	-	-	54
Table 5.6:	Cross tabulation between There are adequate computers available to						
	attend to corporate taxpayers Complaints on tax administration in FIRS,						
	Jos* Corporate tax payers now find it easy to remit their taxes online as						
	the process of tax payment is very friendly,	-	-	-	-	-	56
Table 5.7:	Chi-Square Tests	-	-	-	-	-	57
Table 5.8:	The staff of FIRS possess the required ICT skills necessary	-	-	-	-	-	58
Table 5.9:	The staff of FIRS posses the required ICT skills necessary * Corporate						
	tax payers now find it easy to remit their taxes online as the process						
	of tax payment is very friendly, and timely Cross tabulation	-	-	-	-	-	60
Table 5.10	Management of FIRS has established willingness on the part of staff						
	and corporate taxpayers by creating a climate of cooperation,						
	also demonstrating the benefits of the automation	-	-	-	-	-	61
Table 5.11	Chi-Square Tests	-	-	-	-	-	62
Table 5.12	Corporate tax payers use the automated payment platforms to remit						
	their taxes online	-	-	-	-	-	63
Table 5.13	Corporate tax payers use the automated payment platforms to remit						
	their taxes online * Corporate tax payers now find it easy to remit their						
	taxes online as the process of tax payment is very friendly, Cross						
	tabulation	-	-	-	-	-	65
Table 5.14:	Chi-Square Tests	-	-	-	-	-	66

List of Figures

Figure 2.1	Technology Acceptance Model	-	-	-	-	24
Figure 4.1	The Automation is expected to cover all identified tax processes	-	-	-	-	35

Abbreviations

FIRS	-	-	-	-	-	Federal Inland Revenue Service
ICT	-	-	-	-	-	Information and Communication Technology
TIN	-	-	-	-	-	Tax Payer Identification Number
TAM	-	-	-	-	-	Technology Acceptance Model

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

In recent times, the incessant militancy in the Niger Delta and falling global price of crude oil and oil revenue shifted the attention of the government and major stakeholders in Nigeria to other sources of revenue generation. One of the ways the government generates revenue is through taxation. Taxation is a system used to raise money for the purpose of government by means of contributions by individual persons or corporate bodies. Tax administration therefore involves all the principles and strategies adopted by any government in order to plan, impose, collect, account, control and coordinate the process of taxation (Ogbonna 2010).

Again, Governments and organizations worldwide are increasingly recognizing the need to facilitate access to public services through information exchange using Information and Communications Technology (ICT). The role of information and communication Technology (ICT) has been growing in the economic and social life in the 21st century. It is now a fact as evidenced by developments from many countries that ICT as a sector can contribute greatly to the national GDP of a nation and that ICT, acting as an enabler, can result in improved market competitiveness of a nation's products and services (Uvaneswaran & Mellese, 2016). ICT can impact positively on governance and other sectors of the economy. It can effectively assist international economic integration, improve living standards, narrow the digital divide and improve biodiversity utilization and management. According to Adamu (2001), Information and communication technology (ICT) has become very important to national growth and development. The adoption of ICT requires a business environment encouraging open competition, trust and

security, interoperability and standardization and financial resources (Uvaneswaran & Mellese, 2016). This requires the implementation of sustainable measures to improve access to the Internet and telecommunications infrastructure and increase ICT literacy, as well as development of local Internet-based content. Thus, ICT has been employed in many sectors of the Nigerian economy such as pensions, land registry, security administration, public financial management and tax administration.

Information and communication technology involves sending and receiving messages through electronic devices such as web portals, internet, intranet, telnet and telecommunication. The recent globalization of information and communication technology has made business organizations, companies, individuals and government parastatals change from the manual way of communication to electronic means. With the advent of information and communication technology, it became imperative for tax administrators to take advantage of the emerging capabilities created by Information and Communication Technology to enhance tax administration. With the expansion in scope of operations and growth of businesses in the Nigerian economy, the Nigerian tax system embarked on several reforms geared towards enhancing tax administration. Some of the reforms include organizational restructuring of the Federal and State authorities, the enactment of a National Tax policy, reforms in funding, legislation, tax payer education, human capacity building and automation of Tax administration. In its bid to simplify and ease tax payment process and increase revenue generation, the Federal Inland Revenue Service (FIRS) launched the electronic filing (e-filing) platform. Prior to automation of tax administration, there used to be a time when payment of tax was diverted or converted at the collecting banks, reconciliation of accounts took an inordinate amount of time due to manual processes and a time when taxpayers had to carry enormous amounts of cash in order to fulfil their tax obligations (Usman 2013).

Presently, the Federal Inland Revenue Service (FIRS), Jos is one of the agencies charged primarily with the responsibility of accessing, collecting and accounting for the various taxes to the federal government of Nigeria. It is saddled with the responsibility of collecting all forms of taxes within its jurisdiction, promoting civic responsibility, patriotism by citizens and corporate social responsibility by corporate citizens. However, In order for technology to be adopted successfully in an organization, any E-government initiative must ensure that it has sufficient resources, adequate infrastructure, management support, capable Information Technology (IT) staff and effective IT training and support. Therefore, for the implementation of ICT to enhance efficiency in tax administration, it involves changes at different levels such as adequate availability of ICT infrastructures, ICT capacity or skills and ICT utilization by corporate taxpayers.

According to Usman (2013), a sensitization workshop was held in Federal Inland Revenue Service, Jos to ascertain the readiness of FIRS' Information and Communication Technology. Also, the Federal Inland revenue Service, Jos office was renovated and updated with ICT infrastructures such as computer systems, reliable UPS and web portal networks in all offices for staff. In a study among Uganda Local governments by Kyakulumbye, Muhenda & Namanya (2009), ICT Infrastructure is alleged to be very vital in promoting organizational support. Carlio (1998) in a similar study showed there was a strong positive relationship between available ICT infrastructure and ICT Utilization. ICT skill set is also very important as the software and hardware cannot completely drive themselves without human intervention for best practices in maintaining, monitoring and controlling activities in order to ensure accuracy, consistency and reliability of results. Also, according to Usman (2013), a sensitization workshop was held to assess staff knowledge of basic use of computers, selected software application, training needs and perception of Information and Communication Technology. Staff of Federal Inland

Revenue Service, Jos were trained on the basic ICT skills and software application. Another key variable of this study is Corporate tax payer's utilization which implies Technology Adoption. This refers to the rate of usage of a particular technology by consumers when it is introduced. Some reasons however can affect the usage or adoption of a particular system which include readiness, security concerns and level of education. Furthermore, according to Usman (2013), Corporate tax payers were sensitized about the recent automation of tax processes through organized meetings, conferences, media jingles, tax auditors and workshops at FIRS, Jos.

It is against this backdrop that this study seeks to examine the effect of information and communication technology on Tax Administration in Federal Inland Revenue Service.

1.2 Statement of Research Problem

The Federal Inland Revenue service, Jos is charged primarily with the responsibility of accessing, collecting and accounting for the various taxes to the federal government of Nigeria. Over the years, tax administration in Federal Inland Revenue Service, Jos has been plagued with several limiting factors such as weak administrative lapses and administrative facilities like the evidence of a manually compiled database of tax payers. Manual compilation involves the use of files/ folders for data storage. When records are stored in this manner over a long period of time, retrieval of such records may prove to be very difficult and this results in situations such as tax evasion, tax avoidance, lack of adequate records, corruption and mismanagement on the part of the tax officials, inability to identify all taxable persons and lack of effective mechanism in place to prosecute cases of tax evasion. (Ayodeji, 2013). However, ICT has been identified as a solution to addressing most of the limiting issues of tax administration. The modernization of tax administration using Integrated Tax Administration System (ITAS) is aimed at enabling taxpayers to file their tax returns electronically, pay their taxes online, get instant credit

for withholding taxes deducted on their income, generate tax clearance certificates and communicate with the FIRS local tax office through the “message centre”. In spite of the adoption of ICT as an institutional measure in tax administration, the problem of poor tax administration still persists. In Plateau State, corporate taxpayers have not fully embraced the use of Information Technology for tax administration and do not take advantage of the available ICT platforms to remit their taxes. The fundamental question is that, has the application of ICT enhanced performance of tax administration in Federal Inland Revenue Service, Jos? This is the central problem which the research intends to investigate.

1.3 Research Questions

The study seeks to answer the following questions;

- i. How does availability of ICT infrastructure affect tax administration in Federal Inland Revenue Service, Jos?
- ii. How does ICT capacity of staff affect tax administration in Federal Inland Revenue Service, Jos?
- iii. How does corporate taxpayer’s utilization of ICT affect tax administration in Federal Inland Revenue Service, Jos?

1.4 Objectives of the Study

The primary objective of this study is to examine the effect of Information and Communication Technology (ICT) on Tax Administration in Federal Inland Revenue Service, Jos. Other objectives are to:

- i. Examine how availability of ICT infrastructure affects tax administration in Federal Inland Revenue Service, Jos
- ii. Ascertain how ICT capacity of staff affects tax administration in Federal Inland Revenue Service, Jos

- iii. Examine how corporate taxpayer's utilization of ICT affects tax administration in Federal Inland Revenue Service, Jos

1.5 Research Propositions

The following propositions were tested

Proposition 1: Availability of ICT infrastructure does not affect Tax Administration in
Federal Inland Revenue Service, Jos

Proposition 2: ICT capacity of staff does not affect Tax Administration in Federal Inland
Revenue Service, Jos

Proposition 3: Corporate tax payer's utilization of ICT does not affect Tax Administration
in Federal Inland Revenue Service, Jos

1.6 Significance of the Study

Many studies have been conducted to explore the challenges of adaptation and implementation of ICT in public sectors, especially in the developing countries. For example, a study carried out by Chatama (2013) on the impact of ICT on Taxation: a case of large taxpayer department of Tanzania Revenue Authority. The study was limited to the administration of tax in Tanzania and they focused on how the use of ICT modernized tax administration procedures at Large tax payer department in Tanzania. Likewise the study by Abiola & Asiweh (2012), on the Impact of Tax Administration on Government Revenue in a Developing Economy. The study looked at tax administration in a general perspective as it affects developing countries as a whole and did not suggest practical solutions for Nigeria to strengthen its tax enforcement machinery, therefore, the study has no clear practical implications for tax practitioners in Nigeria.

In another study on 'Impact of ICT on Tax Administration in Nigeria by Efunboade (2014), the study examined the overall effectiveness of ICT on tax administration in Nigeria. Findings of the research revealed the extent of utility of ICT to a tax

administration's core operations but ignored key variables as ICT infrastructures and ICT capacity.

However, this study examines the effect of Information and communication technology on tax administration in Federal Inland Revenue Service Jos, Plateau state. This study is unique because it looks at the effect of Information and communication Technology on tax administration in Federal Inland Revenue Service Jos, Plateau state and no such study was ever carried out in the area of tax administration in relation to the activities of Federal Inland Revenue Service Jos, Plateau State.

Furthermore, this study is significant because effective implementation of information technology in tax administration will be of immense benefit to tax authorities, especially in Federal Inland Revenue Service, Jos. The effective use of information technology will invariably reduce work hours, enhance efficiency and reduce opportunities for corrupt practices in the system. Also, importance of acceptance and full application of information technology in tax administration cannot be over-emphasized as ICT is a veritable tool for revenue administration due to its benefits of transparent transactions, blocked loopholes, easy transactions, simplified tax filing and ease of tax collection. Findings of this study could also be used to develop a broad picture of the dimensions of tax administration that have the potential to be supported, enhanced, or constrained by the use of ICT.

Also, tax administration has become a concern of global significance as it is a major source of revenue for government. Therefore the significance of this study cannot be overemphasized. The researcher is also fully aware that new innovations as a result of ICT are continuing to emerge and the adoption and usage of ICT is changing business processes, thus, findings of the study reveals the contemporary ICT innovations that were

recently launched in FIRS to enhance tax administration in Nigeria. This to the researcher's knowledge was never mentioned in any of the empirical studies reviewed. Again, based on the findings of this research, tax payers will be enlightened to take advantage of the recent automation of tax administration and the available tax payment portals in Nigeria, for their convenience.

Finally, the findings of this research are expected to be useful to the researchers, academicians and students, interested readers and other institutions in making further research in the area of the use of ICT in tax administration. In addition, it would serve as a source of reference by making contribution to the knowledge and understanding of the concept, nature and characteristics of ICT and Tax administration.

1.7 Scope and Limitation of the Study

This study examines the effect of information and communication technology on tax administration in Federal Inland Revenue Service, Jos. It is clear that Federal Inland Revenue Service has uniform structures and programs in all the 36 states of Nigeria but this work focused on Federal Inland Revenue Service, Jos Plateau. This choice is based on the fact that FIRS Jos is a major revenue collecting branch of the agency and is ranking the biggest business hub in the entire North East Region. According to FIRS classification, Plateau state office was placed under the North East region in order to further boost revenue collection in that geographical area. The period of study covered between 2010 and 2015. The period was selected because according to the Federal Inland Revenue Service handbook on "Taxation Reform in Democratic Nigeria", in 2010, FIRS obtained approval from the Federal Executive Council for the full implementation of Integrated Tax Administration System (ITAS) using ICT which enabled FIRS to procure, install and implement the complete automation of tax processes. The period was

selected also because it was matured enough to study a programme that came into being four years earlier.

Also, according to the Federal Inland Revenue handbook on “Taxation Reform in Democratic Nigeria” the first step towards restructuring Federal Inland Revenue Service was to make tax administration a function of Information and Communication Technology. ICT was also identified as a solution to addressing most the challenges of tax administration in FIRS, Jos.

However, the study is done only on one organization, Federal Inland Revenue service and is limited to the activities of Federal Inland Revenue Service Jos, Plateau state, thus, the study might lack the general applicability in other public organizations. Also, considering the size of Federal Inland Revenue Service in Nigeria as a geographical area, a population sample of relevant groups from Plateau state were used to generalize findings.

1.8 Definition of Key Concepts

1.8.1 Information and Communication Technology (ICT): Mary and Cox (2007) defines ICT as electronic and computerized devices associated with human interactive materials that enable the user to use them for wider range of service delivery and in addition to personal use. ICT involves the use of electronic devices such as web portals, internet, inters witch, telnet and telecommunication for sending and receiving messages and used for tax administration.

1.8.2 ICT Infrastructures: Perrison and Sunders (2006) defines ICT infrastructure as everything that supports the flow and processing of information in an organization, including hardware, livewire, software, data and network components. ICT infrastructure refers to the composite hardware, software, network resources and services required for the existence, operation and management of an enterprise IT environment. It allows the

organization to deliver IT solutions and services to its employees, partners and/or customers and is usually internal to an organization and deployed within owned facilities.

1.8.3 ICT Capacity: According to Matachi, (2006), the term capacity refers to the skills, knowledge, relationships, values and attitudes among many other attributes such as health and awareness that enable countries, organizations, groups and individuals to carry out functions and achieve their development objectives over time. Therefore, ICT capacity is said to refer to ICT skills, knowledge, relationships, values and attitudes that enable an individual or an organization carry out ICT functions and achieve their development objectives over time.

1.8.4 ICT utilization: According to Yusuf 2005, ICT utilization is the presentation and distribution of instructional content through web environment or systems offering an integrated range of tools (stand-alone computer instruction, CD ROM amongst others) to support learning and communication.

1.8.4 Tax Administration: Ogbonna (2010) states that Tax administration consists of the tax authorities and the organs of tax administration that are charged with the responsibility of implementing the tax laws in accordance with the set guidelines. Tax administration involves all the strategies and principles adopted by any government in order to plan, impose, collect, account, control and coordinate personnel charge with the responsibility of taxation. It also includes the effective use of tax revenue for efficient provision of necessary social amenities and facilities for the tax payers..

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

The problem of poor tax administration and how to tackle it has become increasingly one of the top issues of discussion when it comes to increasing revenue generation by the government. Various individuals have made a lot of researches on the issue under different dimensions and indeed a lot of literatures have been documented in the area. This section therefore intends to review the available literature on the subject matter as well as discussing the Theoretical Framework that guide the research.

2.2 Literature Review

In this study, effort was made on critical review of the concept of Information and Communication Technology, ICT Infrastructures, ICT Capacity, ICT utilization and Tax administration. Scholarly works were reviewed to give a broader view of the subject matter under study

2.2.1 Concept of Information and Communication Technology

Miken Exchange on Education Technology (1999) defines ICT as computer based tools used by people to work with the information and communication processing needs of an organization. It encompasses the computer hardware and software, the network and several other devices (video, audio, photography, camera etc) that convert information text, images, sound, motion and so on into common digital form. Information and Communication Technology (ICT) according to Mary and Cox (2007) are electronic and computerized devices associated with human interactive materials that enable the user to use them for wider range of service delivery and in addition to personal use. This clearly implies that ICT involves the use of electronic devices that need human input and

command to operate. This also brings about the advantages of information delivery through technological means.

Collins (2005) defines information and communication technology as an application of practical science to industry, commerce, technical method, skills and knowledge. This definition of ICT is limited as it does not clearly bring out the main purpose of which is to transmit representation of information signals between remote locations.

As defined by Yusuf (2005), ICT is computer and its network which widens the potential of communication possibilities in the form of text, data, voice and video images. This definition does not clearly bring out the advantages of inter-connectivity system used in acquiring, storing, manipulating, controlling, displaying, transmitting and receiving of information through the internet facilities. ICT is the digital processing and utilization of information by the use of electronic computers. It comprises the storage, retrieval, conversion and transmission of information (Ifueko 2011). Moll (1983) defines ICT as the various technologies which are used in the creation, acquisition, storage, dissemination, retrieval, manipulation and transmission of information.

However, ICT has no universal definition as the ‘the concepts, methods and applications involved in ICT are constantly evolving on an almost daily basis. The broadness of ICT covers any product that will store, retrieve, manipulate, transmit or receive information electronically in a digital form for example personal computers, digital television, email, robots. All the definitions share a similar notion that information is generated and shared. They also assert that such information must be digital or electronic. The definitions generally do not restrict Information and Communication Technology to only computers they mention telecommunications equipments such as mobile phones, printers, scanners etc.

Information and Communication Technology is a general term that describes the process of creating, modifying, storage and transmission of information in different formats between humans and machines using different electronic technologies to achieve a result or an outcome. Also ICT is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them such as video conferencing and distance learning.

2.2.2 Concept of ICT Infrastructure

Perrison and Sanders (2006) defines ICT infrastructure as everything that supports the flow and processing of information in an organization, including hardware, livewire, software, data and network components. ICT infrastructure refers to the composite hardware, software, network resources and services required for the existence, operation and management of an enterprise IT environment. It allows the organization to deliver IT solutions and services to its employees, partners and/or customers and is usually internal to an organization and deployed within owned facilities. According to Zakareya and Zahir (2005), ICT Infrastructure compose of hardware and software that will provide secure electronic services to citizens. For example Local Area Network (LAN), reliable server and internet connection.

Techopedia (2015) explains IT infrastructure to consist of all components that somehow play a role in overall IT and IT-enabled operations or developing customer IT or business solutions as follows;

- i. Hardware: Servers, computers, data centers, switches, hubs and routers etc
- ii. Software: Enterprise resource planning (ERP), customer relationship management (CRM), productivity applications and more.

- iii. Network: Network enablement, internet connectivity, firewall and security.
- iv. Meatware: Human users such as network administrators (NA), developers, designers and generic users with access to any IT appliance or service are also part of an IT infrastructure, specifically with the advent of user-centric IT service development.

According to Kyakulumbye, Muhenda & Namanya(2009), in a study among Uganda local governments added in their findings that ICT infrastructure is alleged to be very vital in promoting organizational support. Carlopio(1998), also carried out a similar study in South Africa to investigate the factors that influence school level ICT adoption using the theory planned behavior. Their results revealed that there was a strong, positive relationship between available ICT infrastructure and ICT utilization in schools.

Forth and Mason (2004) highlights the following as ICT infrastructures in organization: standalone computers networked or interconnected computers, remote access, electronic data interchange, Internet, websites, intranet and extranet.

Iwu (2003) categorized ICT facilities available in organizations as follows:

- i. **Sensing technologies:** these equipments gather data and translate them into form that can be understood by the computer. These include sensors, scanners, keyboard, mouse, electronic pen, touch or digital boards, barcode sensors or readers, voice recognition system, etc.
- ii. **Communication technologies:** These equipments enable information to be transferred from the source to user. It also tries to overcome natural barriers to information transfer like speed and distance some of these include: facsimile machines (fax), telecommunication system, telephone, electronic mail, teleconferencing, electronic bulletin boards, etc.

- iii. **Display Technologies:** These are output devices that form the interface between sensing, communication and analyzing technologies and human user. They include: computer screen, printers, television, etc.
- iv. **Analysis technologies:** These are the technologies that help in the investigation or query of data, analysis and in depth query for answers for simple to complex phenomena in research procedures. A complete set of a computer system could be a micro, mini, mainframe or super scamper.
- v. **Storage Technologies:** These technologies facilitate the efficient and effective storage of information in a form that can be easily accessed. They include: magnetic tapes, disks, optical disks cassettes, etc.

2.2.3 Concept of ICT Capacity

The term capacity refers to the skills, knowledge, relationships, values and attitudes among many other attributes such as health and awareness(Matachi, 2006) that enable countries, organizations, groups and individuals to carry out functions and achieve their development objectives over time. Therefore, ICT capacity can be said to refer to ICT skills, knowledge, relationships, values and attitudes that enable an individual or an organization carry out ICT functions and achieve their development objectives over time.

Kyakulumbye, Muhenda & Namanya(2009), in a study among Uganda local governments suggested that it is very important for an organization to determine its employee's knowledge or skills of ICT because such knowledge or previous experiences may influence the organization's decision in adopting and utilizing ICT.

The definition of ICT capacity adopted by the recent ICT skill for Life Curriculum incorporated a concept of 'purposeful use' which is very intuitive. Capacity building is the establishment of conditions that will allow individuals to engage in the process of learning and adapting to change. Such conditions include providing infrastructure,

maintenance of ICT equipment and training of personnel. Today, everyone needs a basic understanding of ICT and how to make productive use of it. Staff of organizations therefore needs the prerequisite ICT skills to be able to provide ICT mediated instruction to the benefit of the customers. The acquisition of basic computing skills can be achieved through incidental learning provided the learners are given access to a suitable computing facility, with entertaining and motivating content and some minimal (human) guidance.

ICT literacy skill is the ability to use tools of information and communication technology to;

- i. Define ones information problem clearly
- ii. Access information efficiently
- iii. Evaluate the reliability, authority and bias of sources
- iv. Organize and synthesizes ones information with the best ICT tools available in order to use it effectively and responsibly.
- v. Communicate one's new ideas and especially with the appropriate ICT tools available.

Carvin (2000) developing from a definition of basic literacy distinguishes a number of elements of relevant new literacy, including

- i. **Technological Literacy:** the ability to utilize common ICT tools including hardware, software and internet tools like search engines
- ii. **Information Literacy:** the skills to ascertain the veracity, reliability, bias, timeliness and context of information.
- iii. **Adaptive Literacy:** The willingness to learn new tools and to apply previous ICT learning to new situation.

2.2.4 Concept of ICT Utilization

According to Yusuf(2005), ICT utilization is the presentation and distribution of instructional content through web environment or systems offering an integrated range of tools (stand-alone computer instruction, CD ROM amongst others) to support learning and communication. Utilization is the use of tool by its nature. It is also the optimum and proper use of a tool. Therefore, ICT utilization is the update and accurate use of ICT to increase utility and value.

Bamiro and Liverpool(2002) observed the utilization of ICT and computer has already invaded and dominated organizations in the developed world, while in Nigeria it has been painfully slow. Akin to this is the report that no real effort has been made in ICT development both at individual and corporate levels and that most universities still process results manually (the Guardian Editorial, 2006). More so, most lecturers are yet to acquire the requisite ICT skills and where opportunities exist for them to do so, they shun because of the phobia they have developed over the ICT. Lecturers can only pass on skills and ideas to their students if they themselves are masters of their trade (Bamiro & Liverpool, 2002) The limitations of utilization of ICT can result from factors such as dependency, less preparation, over use, senseless use and negligence of basic skills. According to (Aniebonam, 2008), Studies have confirmed that lack of computer skills exists among faculties at universities in Nigeria. As such, they are unable to incorporate the benefits of computer technology in their teaching, research and service to the university community. Less than 12 percent of the Nigerian academic curricula have digital content.

However, the development of ICT in the last two years show that most organizations and institutions now have access to a wide variety of ICT facilities, materials, and texts to improve their content knowledge and instructional pedagogy.

2.2.5 Concept of Taxation

The government of Nigeria like others in different parts of the world has legislative powers to impose on its citizens any form of tax and at whatever rate it deems appropriate. However, it is important to explain what taxation means in order that the term 'tax' may not be confused with other forms of exactions such as fines, fees and penalties. Soyode and Kajola(2006) defines tax as a compulsory exaction of money by a public authority for public purpose and taxation as a system of raising money for the purpose of government by means of contributions by individual persons or corporate body. The Oxford Advanced Learners Dictionary defines tax as, "money that has to be paid to the government so that it can pay for public services." Also Black Law Dictionary defines tax as; "monetary charge imposed by the government on persons, entities or property levied to yield public revenue." In other words, it would be appropriate to say that a tax is a financial charge or other levy imposed upon a tax payer (individual or legal entity) by a state or a functional equivalent of a state such that failure to pay is punishable by law. Thomas Cooley in "The Law of Taxation" defines tax as; "enforced proportional contributions from persons and property, levied by the state, by the virtue of its sovereignty, for the support of government and for all public needs." According to Winfry (1964), tax is regarded as a compulsory payment imposed on the public by an authority (federal, state or local government). Nworji (2000) also defines tax as a compulsory levy by government (federal, state or local) on the profit, income, wealth or consumption (e.g. sales or VAT) of an individual or estate through trustee or executor and corporate organization (registered under the Companies Allied Matters Act of 1990).

Agbetunde(2004) defines tax as; a compulsory levy imposed by the government through its agents on its subjects or his property to achieve some goals. It is paid "quid pro qui"

i.e. without expecting something specific in return. Taxation is also a compulsory imposition of levy within a society on individuals, organizations, companies, goods and services (Igwe-Kalu, 1998). In simple terms, taxation is a compulsory contribution levied by a sovereign power on the incomes, profits, goods, services or properties of individuals or corporate persons, trusts and settlements, which when collected, are used for carrying out government functions.

Summing up definitions of tax as offered by various other sources, Ayua (1999), concludes that the most important thing is the pecuniary burden laid upon individuals or persons or property to support the government and it is a payment exacted by legislative authority.

Taxation is a powerful tool of economic reform and a major player in every economy of the world. It is never static but should reflect current realities prevailing in the economy. Essentially, every tax must have the following basic concept and attributes,

- i. It must be backed by law for it to be enforceable
- ii. It must be legally levied by government upon income of persons, investment, property, trustees, and profit of companies
- iii. It must be a system of compulsory payment by individuals and companies to relevant internal and internal revenue authorities at the federal, state or local government levels.
- iv. The payment should be in monetary term, it must be payment for which there is no direct benefit or specific reward from the government to the tax payer.
- v. It must be for fiscal purposes.

2.2.6 Concept of Tax Administration

Tax administration involves all the strategies and principles adopted by any government in order to plan, impose, collect, account, control and coordinate personnel charge with

the responsibility of taxation. It also includes the effective use of tax revenue for efficient provision of necessary social amenities and facilities for the tax payers. Tax administration therefore consist of the tax authorities and the organs of tax administration (Ogbonna 2010) that are charged with the responsibility of implementing the tax laws in accordance with the set guidelines. The Nigerian tax laws define tax authority to mean the Federal Inland Revenue service, state board of internal revenue or the local government revenue committee. Practice guidelines and new letters are published by FIRS and joint tax boards from time to time to address interpretation issues and making of clarification where necessary (Azubuike 2010). Tax administration exists to ensure compliance with the tax laws. This administrative dimension of taxation has long been recognized by tax administrators especially those working on tax policy in developing countries.(Alm 1999). Over the years, there has been failure of tax administration in Nigeria due to lack of equity, certainty, convenience and poor motivation of tax officials. Other factors are improper planning, ineffective monitoring, weak control, fraudulent practices, unqualified and ill equipped manpower and public discouragement due to misuse of tax revenue by government (Ogbonna 2010). It is helpful to view the tax implementation process as a production function in which input eg. material, personnel, information, laws and procedures are used to produce output eg. government revenue, tax payer equity and social welfare. This suggests a range of input that government can pursue to increase at least one tax administration output. However, an equally important aspect is the desirability of this policies or their impact on equity and welfare. One has to bear in mind that tax policies and tax administration are interrelated spheres (Siehl 2010) Measures designed to improve tax administration should help achieve the objectives of tax policies effectively. It is also expected in the design of tax policy; attention should be paid to the tax administrative constraint to ensure its success. The general acknowledgement is that

both tax policy and tax administration affect the productivity of the tax system for instance a tax legislation which provides for several complex exemptions and deductions and multiple tax rates is difficult to efficiently administer and compliance by tax payers will not be not easy, the simplification of the tax system is generally emphasized in tax reform (Ifueko 2012).

According to Siehl (2010), tax policy directly affects the cost and the organization of tax administration. In addition, the capacities of tax administration influence the way tax policy is implemented, thus both areas tax policy and tax administration will have to be taken into consideration otherwise the proper functioning of the overall system is affected. For this reason, the tax system should be aligned to the administrative and legal prerequisite of the respective country.

2.3 Review of Empirical Studies

Chatama (2013), studies on the impact of Information and Communication Technology on Taxation: the case of Large Taxpayer Department of Tanzania Revenue Authority. The study examines how the use of ICT has modernized Tax administration procedures and improved revenue collection at Large Taxpayer Department of Tanzania Revenue Authority. The findings of the research revealed that ICT was introduced for facilitating maintenance and timely access of records and fast processing of return so as to remove postal delays, minimize operational costs, curb cheating and plug revenue loss. Although the study has contributed to body of knowledge, it however was limited to the process of tax administration in Tanzania only, as such, its findings may not be applicable to other countries, like Nigeria. The study also focused on how ICT modernized tax administration procedures at Large tax payer department in Tanzania ignoring the micro and small tax offices in tax administration.

Another study by Abiola and Asiwah (2012) on the Impact of Tax Administration on Government Revenue in a Developing Economy – A Case Study of Nigeria. The study looks at the Nigeria Tax administration and its capacity to reduce tax evasion and generate revenue for development desire of the populace. The study made use of 121 online survey questionnaires containing 25 relevant questions. The findings of the study reveals that increasing tax revenue is a function of effective enforcement strategy which is the pure responsibility of tax administration and the findings also pointed that Nigeria lack enforcement machinery which include adequate manpower, computers and effective postal and communication system. However, the study did not suggest practical solutions for Nigeria to strengthen its tax enforcement machinery, therefore, the study has no clear practical implications for tax practitioners.

In a research by Onyije and Opara (2013) on Information and Communication Technologies (ICT):A Panacea to Achieving Effective Goals in Institutional Administration. The study examined the use of Information and Communication Technology (ICT) by institutional administrators for effective administration. The study stated the need for effective use of ICT by institutional administrators in maintaining and controlling, according to policies laid down by the governing bodies of the institution. Findings of the research revealed various ICT resources used for effective institutional administration. It also revealed the extent of utility of ICT to a tax administration's core operations but ignored key variables as ICT capacity in terms of ICT skills, values, relationship, knowledge and attitudes.

Gurama and Mansor(2015)study on tax administration problems and prospect. The study examined the problems and prospect of Gombe state board of internal revenue service. The findings of the research revealed the problems identified include poor staffing, lack

of facilities, poor record keeping and poor conducive environment. The findings also shows that insufficient public awareness, lack of training, poor working condition, poor remuneration and lack of motivational incentives are among the issues that lead to low tax generation. The study recommends the need to employ competent and qualified staff with background knowledge of accounting and tax discipline. However, the study focused mainly on board of internal revenue Gombe state and the problems identified in the state cannot be generalised as challenges faced by other tax administration agencies such as the Federal Inland Revenue Service, Jos.

In the study on ‘Impact of ICT on Tax Administration in Nigeria by Efunboade (2014), the study examined the overall effectiveness of ICT on tax administration in Nigeria. Findings of the research revealed the extent of utility of ICT to a tax administration’s core operations in Nigeria but failed to mention other key variables such as ICT infrastructures and ICT skills.

It was observed therefore that the above studies were related to the topic under study because they all focused on information and communication technology and tax administration. However, this study is different from these other reviewed studies as it looks at the effect of Information and Communication Technology on Tax Administration in Federal Inland revenue Service Jos, Plateau state in carrying out the function of assessment, collection, enforcement and litigation of taxes. This study also attempts to fill the existing gaps identified in the above reviewed empirical studies.

This study identifies poor tax administration as the major challenge of the Nigerian tax system and suggests measures to improve the use of ICT to enhance tax administration in Federal Inland Revenue Service, Jos. This will no doubt impact on the amount of revenue generated by government and will further guide the government. This study will

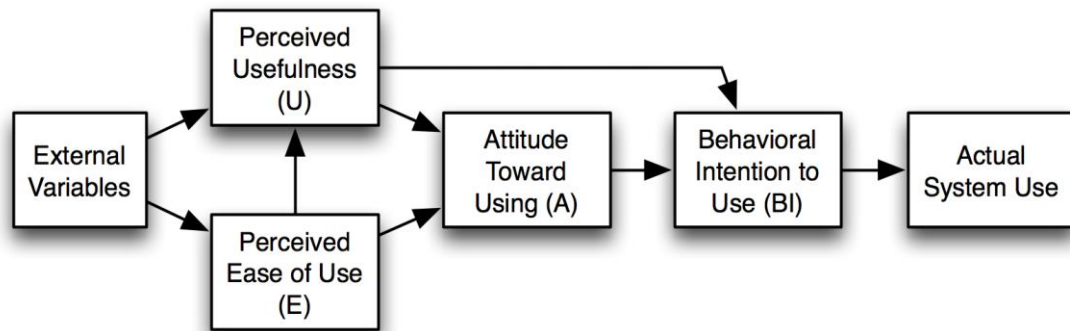
also contribute to the existing body of knowledge in the area of ICT and tax administration.

2.4 Theoretical Framework

The theory adopted for this study is the Technology Acceptance Model (TAM) proposed by Davis (1989). TAM is an information systems theory that models how users come to accept and use a technology. Davis (1989) presented a theoretical model aiming to predict and explain Information and Communication Technology usage behavior, that is, what causes potential adopters to accept or reject the use of information technology. This model however implies that emerging information technology cannot deliver improved organizational effectiveness if it is not accepted and used by potential users. Technology Acceptance Model is one of the most successful measurements for computer usage effectively among practitioners and academics(Kamel 2004).According to this model, technology adoption is a function of a variety of factors including Relative advantage and Ease of use. The two particular beliefs addressed by Technology Acceptance Model are;

- ✚ Perceived usefulness(PU): Prospective user's subjective probability that using a specific application system will increase his or her job performance within an organizational context
- ✚ Perceived ease of use (PEOU) : Degree to which the prospective user expects the target system to be free of effort

Figure 2.1 Technology Acceptance Model



Source: Technological Acceptance Model (TAM) by F D Davis (1986)

Perceived usefulness (PU) and Perceived Ease of Use (PEOU) scales are as follows;

❖ Perceived usefulness

- Work more quickly
- Job Performance
- Increased productivity
- Effectiveness
- Makes job easier
- Useful

❖ Perceived ease of use

- Easy to learn
- Clear and understandable
- Easy to become skillful
- Easy to use
- Controllable
- Easy to remember

Technology Acceptance Model(TAM) aims at studying how individual perceptions affect the intentions to use information technology as well as the actual usage. TAM suggests that when users are presented with a new technology, a number of factors determine their decision about how and when they will use it. The attitude toward adoption will decide the adopter's positive or negative behavior in the future concerning new technology. Perceived usefulness which is "the degree to which a person believes that using a particular system would enhance his or her job performance" and perceived ease of use refers to "the degree to which a person believes that using a particular system would be free of effort" (Davis, 1989).

Technology Acceptance Model(TAM) is relevant to this study as the theoretical framework considering the fact that successful implementation of Information and Communication Technology depends largely on the adopter's positive or negative behavior concerning new technology. TAM explains two theoretical constructs, perceived usefulness and perceived ease of use as the fundamental determinants of a technology system use and predicts attitudes toward the use of the system. The factors involving successful implementation of ICT on tax administration in Federal Inland Revenue Service, Jos as identified in this study which are availability of ICT infrastructures, ICT Capacity in terms of ICT skills, knowledge, values, attitudes and relationships and ICT Utilization depend largely on the user's willingness and attitudes towards using the new technology. The constructs of Technological Acceptance Model which are perceived usefulness and perceived ease of use relates to the variables in this study and could also be seen as some of the elements that form the entire process of the ICT implementation in tax administration. The key issues addressed by this study which led to the adoption of ICT in tax administration by FIRS could be best explained by this theory. The application of ICT in tax administration by FIRS was based on the Organization's perception that

ICT would increase productivity, job performance, effectiveness, and would make work easier and quick.

The theoretical constructs of TAM also affect the performance of ICT as an institutional measure in tackling the problem of poor tax administration in Federal Inland Revenue Service, Jos. As relates to this study, ICT implementation at Federal Inland revenue Service, Jos largely depend on the attitudes and perception of the staff of FIRS, Jos and Corporate taxpayers towards the perceived usefulness of the automation process of tax administration. Technology Acceptance Model (TAM) sees the user's willingness to use the system as very critical to the success of the system. The attitude and perception of the staff and entire organization towards the automation of tax administration will determine their willingness to support the process. Based on their perception of the entire new technology process, the organization would be willing to acquire the required ICT infrastructures and the new skills and knowledge required to operate the system, thus leading to successful implementation. According to TAM, Users' beliefs and attitudes is also a major determinant to a successful implementation of ICT. In this study the successful implementation of ICT in tax administration also depend largely on corporate taxpayer's utilization of ICT. The Utilization by corporate taxpayers is largely influenced by their attitudes and perception of the ease of use of the system. Corporate taxpayers are prone to effectively utilize the tax administration process using ICT if they perceive the system as being easy to use, easy to learn, easy to remember clear and understandable, easy to become skillful and controllable. In other words, taxpayers will be effectively utilize the process of tax administration if the process of tax registration, tax payment and accounting is very friendly, accurate, complete and timely. Thus, the adoption of this model is very relevant in carrying out a study on the subject matter.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the methodology adopted in the course of the study under the following headings; Research Design, Sources of data, population, sampling technique, sample size and method of data analysis.

3.2 Research Design

This research adopts a survey research method in which information is obtained from a sample of respondents. The research is designed to examine the effect of ICT on Tax Administration in FIRS, Jos. In doing this, variables that relate to the use of ICT in Tax administration were carefully assessed. These variables include ICT Infrastructures, ICT Capacity and ICT Utilization by Corporate Taxpayers.

3.3 Sources and Methods of Data Collection

For the purpose of this study, data were generated from both primary and secondary sources;

3.3.1 Primary Source: The primary sources of data used include questionnaire and interview to obtain first hand information.

i. Questionnaire: The questionnaire for this research comprise of both open ended and close ended questions for easy coding, tabulation and subsequent analysis. The questionnaires were administered to the staff of FIRS, Jos and registered corporate taxpayers at FIRS, Jos. The questionnaire method was used because of its reliability in providing required information. It is also economical as it permits wider coverage at a

minimum cost. A total of 364 questionnaires were administered for the purpose of this study.

ii. Interview: This research also used structured interview. Face-to-face interview was conducted with some of the staff of FIRS, Jos. Interview sessions were conducted with the Head, ICT department, Assistant Manager Tax, Assistant Manager Administration and Finance and Assistant manager Human resources. The structured interview questions were contained in an interview schedule so as to ensure adherence to the guide. The staff were interviewed on issues such as availability of ICT Infrastructures, ICT Capacity of staff and Corporate Taxpayers' utilization. The method was used because of its importance in complementing questionnaire method and it provides supplementary information on the respondents and the situations which may not necessarily be generated using questionnaire alone. In addition, it clarifies some of the responses given in the questionnaire and verifies some of the answers given in the questionnaire which appeared doubtful on the basis of data collected and on-the-spot assessment carried out.

3.3.2 Secondary Data: The study explored secondary source of data, this includes;

The "Guage" a quarterly publication of the Federal Inland Revenue Service of 2007 to 2015 and the Handbook of the Federal Inland Revenue Service. Other forms of secondary data explored were magazines, scholarly articles, text books, unpublished research materials, Websites and other related materials. The secondary data is utilized as a basis for comparison with the primary data gathered.

3.4 Population of the study

The population for this study cuts across tax administrators and registered corporate tax payers in Jos, Plateau state. This consists of 70 members of staff of the Federal Inland Revenue Service (FIRS) Jos and 2440 registered corporate tax payers at Federal Inland Revenue Service, Jos. Therefore, the total population of the study is 2510.

3.5 Sample Size

The objective of the research is to draw inference from a population in order to make generalization on the target population. However, because of large population, in most studies researchers hardly study the entire population. Therefore sample is always drawn from the population. In this study, the use of Yamane formula was employed to determine the sample size.

The sample size was determined using the Yaro Yamane's formula:

$$n = 1 + \frac{N}{N(e)^2}$$

Where:

n= sample size

N= population

1=constant

e = level of significance (5%)

$$n = 1 + \frac{2510}{2510 (0.05)^2}$$

$$n = 345$$

Source: Yamane T. (1967)

3.6 Sampling Technique

For the purpose of this research, the sampling technique adopted was the stratified random sample. The reason for the adoption of this technique is to provide room for every member of the chosen sample of the two respondents which are the staff of FIRS, Jos and

registered corporate taxpayers at FIRS, Jos have equal chance of participation in the representation of the study.

For the purpose of the interview, the purposive sampling technique was adopted. The choice of the purposive sampling technique in this study is premised on the fact that, primary data required for this study especially interview can be best provided by staff of the selected departments of Federal Inland Revenue Service, Jos.

3.7 Administration of Instrument

A total of three hundred and sixty four(364) questionnaires were administered. The questions on the questionnaires are expected to elicit responses from the respondents about the availability of ICT infrastructures, ICT skills and corporate taxpayers utilization of ICT. The responses were measured using five points likert scale of strongly agree, agree, undecided, disagree and strongly disagree.

While a total of four(4) respondents were interviewed. The respondents were drawn from members of staff of Federal Inland Revenue Service, Jos. These representatives were selected purposively to represent the staff of Federal Inland Revenue Service. The focal point of the interview is to access information on the effect of ICT on Tax administration in Federal Inland Revenue Service, Jos.

3.8 Method of Data presentation and Analysis

In this study, both the qualitative and the quantitative methods of data analysis were employed. Two types of analyses were carried out on the data collected as follows; descriptive statistics analysis using frequency tables and simple percentages in analyzing and interpreting the data collected. Inferential statistical tool of analysis of Pearson Chi-square

was used via the use of Statistical Package for Social Sciences (SPSS) version 21.

The Chi square is a statistical test commonly used to compare observed data with data we would expect to obtain according to a specific hypothesis. It is a means of answering questions about data existing in the form of frequencies rather than as a score or measurement along some scale and is calculated as thus:

$$\chi^2 = \sum \frac{(F_o - F_e)^2}{F_e}$$

Where F_o = observed frequency

F_e = expected frequency

Degree of freedom (df) = $(C-1)(R-1)$

Where C = number of columns

R = number of rows

Source: (Ojo, 2003)

In order to calculate the expected frequencies, cross tabulation was done using SPSS package. However, the decision rule in using the X^2 distribution for testing hypothesis is as follows:

Decision Rule

The study rejects the null hypothesis at 0.05 level of significance if the X^2 value (i.e. Calculated value) exceeds the critical value. On the other hand, if the critical value exceeds the calculated value, the study accepts the hypothesis.

CHAPTER FOUR

OVERVIEW OF TAX AUTOMATION BY FEDERAL INLAND REVENUE

SERVICE

4.1 Introduction

In this chapter, a brief discussion of the Modernization project on Tax automation by Federal Inland Revenue Service was made. Effort was made to discuss the Integrated Tax administration System (ITAS). In addition, we attempted discuss of the ICT facilities used for operation and service delivery in FIRS, Jos, the New Structure of Federal Inland Revenue Service [FIRS] and the Design and implementation of Tax in Nigeria. It should however be pointed out that FIRS has a uniform structure and operational pattern in all the 36 states of the federation, as such, our discussion on the issues under study is applicable to the study area.

4.2 Modernization Projects by Federal Inland Revenue Service

According to Eze(2010), the enactment of the Federal Inland Revenue Service Establishment Act(FIRSEA) 2007 acted as a catalyst that spurred the rapid and dramatic changes embarked upon by the Federal Inland Revenue Service. Beginning from 2007, calculated measures were taken to refocus and reengineer the agency to reposition it for enhanced tax administration, modernization projects continued to make progress as approvals were gotten from the Federal Executive Council (FEC). Since the beginning of the reforms in 2004, projects such as Integrated Tax Administration System(ITAS), Vat automation, CAC integration, SAP/HR, SAP Finance and Accounts Solution, I-SHARE were conceived

The first step in restructuring FIRS was to make tax collection a function of ICT. In addition, all the various VAT offices and the area tax offices (ATOs) were lumped together and renamed integrated tax office (ITOs).

- **The Integrated Tax Administration System (ITAS)**

In December 2010, the Federal Inland Revenue Service obtained approval from the Federal Executive Council to procure, install and implement the Integrated Tax administration System (ITAS). FIRS embarked on the Integrated Tax Administration System (ITAS) project in 2013 and its implementation is aimed at re-engineering and automating FIRS's core tax processes through the use of technology which will ultimately simplify taxpayer compliance and increase revenue generation. ITAS has about nine modules amongst which are Project FACT, the Joint Tax Board Tax Identification Number and the oil and Gas module. It involves Business Process Reengineering, Systems Development, Change Management and automation of Finance and Accounts Functions such as Tax clearance verification, Tax refund application software and contact management centre.

The ITAS solution procurement and installation involves the deployment of the Standard Integrated Government Tax Administration Solution (SIGTAS) and hardware infrastructure. The aim of the project is to automate all core processes around registration, payment, assessment, debt and credit management, audit and investigation, case management and returns filling. ITAS enables taxpayers to file their tax returns electronically, pay their taxes online, get instant credit for withholding taxes deducted on their income, generate tax clearance certificates and communicate with the FIRS local tax office through the "message centre". The Integrated Tax Administration System (ITAS) is a suit of programs specifically developed to support the automation of the tax administration system function.

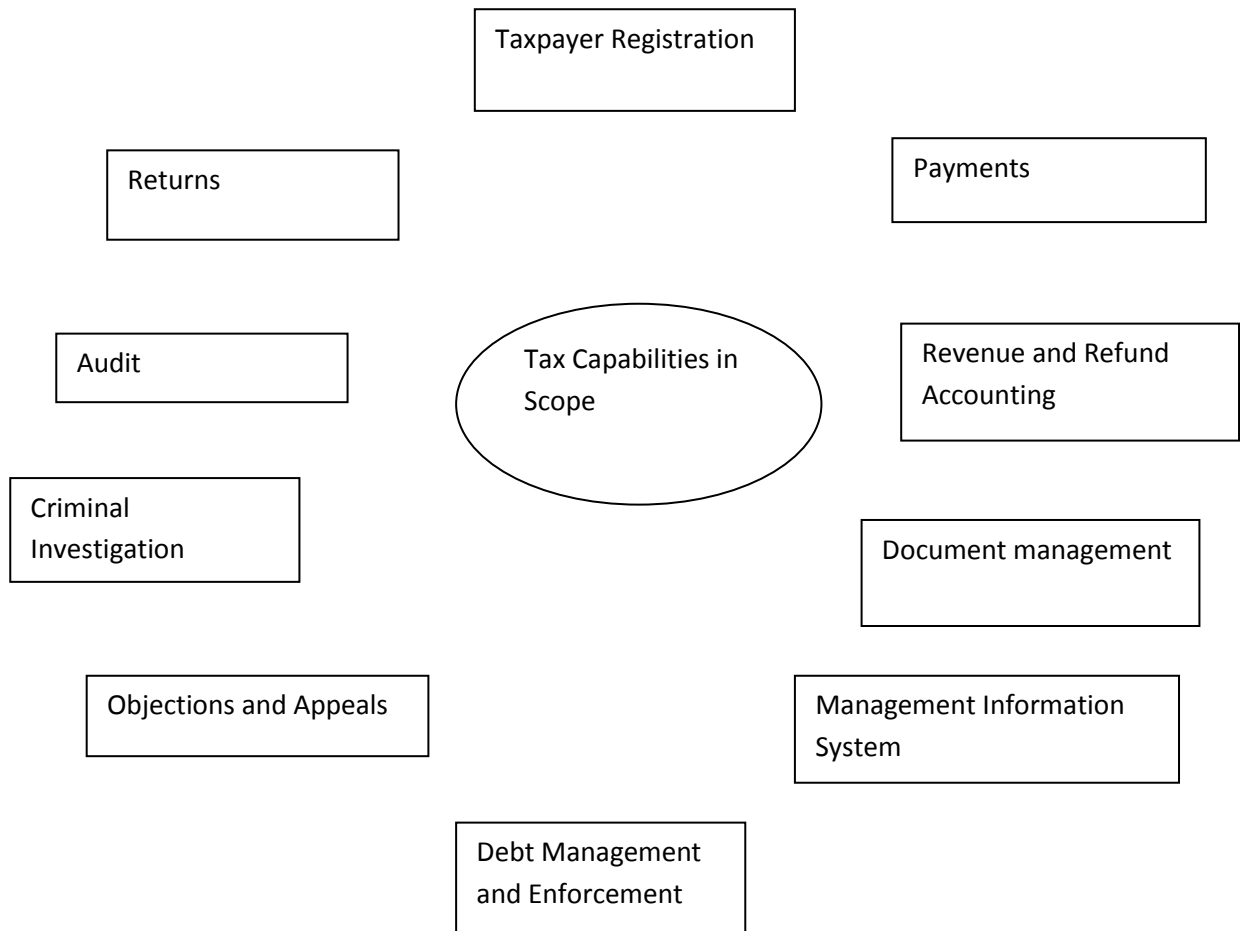
- **TIN (Taxpayer Identification Number) Project:** According to the past Ag. Executive Chairman of Federal Inland Revenue Service, Alhaji Kabir M. Mashi, FIRS has found a

way to identify all taxable persons and monitor their compliance by issuing a number to all taxpayers known as unique tax identification Number (U-TIN) this is done in a manner so that no two persons can have the same number. TIN is an electronic system of tax identification, involving the assignment of a computer-generated unique identifier called “TIN Number” to every taxable person in Nigeria. This project helps in the development of National Tax Database linking all relevant properties, assets, bio data and biometric details (fingerprints) of the taxpayers to ensure highest accuracy of identity uniqueness. Precautionary measures such as Disaster recovery and contact management centers are put in place to ensure minimal downtime and outright failure of the project. It is now compulsory for any individual, corporate entity, registered organizations and group of people that want to carry out vital operations such as opening of Bank Account and award of contract to have TIN which will reduce to the barest minimum the incidence of tax evasion.

- **Project FACT** (Factual Accurate Complete Timely) is an integrated electronic system of tax registration, tax payment and accounting. According to the FIRS Handbook, under the automation of key processes, Project FACT (Friendly, Accurate, Complete and Timely) was conceived and implemented for the purpose of automating tax collection. Under the new system, taxpayers pay directly into collecting banks, which in turn, remit to the lead banks, which then transmit the funds to the Central Bank of Nigeria. With the aid of appropriate software technology, the whole process is monitored real time by the Tax Revenue Accounting Department. This system has replaced the old system which was prone to abuse because tax payments were frequently done by way of negotiable instruments. In addition to tax collection, other processes such as finance, procurement, human resources and payroll administration, which, because of the manual nature, were prone to abuse, are also being automated to ensure system integrity. The Records

Management and Document Tracking, RMDT, was introduced in 2006 to tackle the challenges that hampered efficient handling of records in FIRS which in turn impacted negatively on FIRS ability to meet stakeholders' needs and expectations.

Figure 4.1 The automation is expected to cover all identified tax processes as shown below:



Source: Guage: A quarterly publication of the Federal Inland Revenue Service October to December, 2014

According to Usman (2013), automation of tax administration has enhanced performance in revenue administration by reducing human error and processing times, providing readily accessible data for tax officers, promoting voluntary compliance thereby minimizing tax evasion and facilitating better decision making by tax authorities. The use of Information and Communication Technology on tax administration in FIRS has provided an enhanced and more efficient revenue collection method that guarantees improved revenue accounting and reconciliation processes. According to Ifueko Omoigui Okauru, the past Executive chairman FIRS during her opening address at the 2011 corporate planning retreat, that beginning from 2007, calculated measures were taken by FIRS to refocus and re-engineer the agency to reposition it for enhanced tax administration. Policies were developed to guide the Service transition from an agency immersed in the traditional Civil Service to one that operates with the speed, skill, tools and service orientation of a 21st century agency and the modernization projects continued to make progress. According to her, in 2010 FIRS was able to deliver on its core mandate of tax revenue collection, attaining both the government and FIRS set targets.

For instance, in 2010, the government set a collection target of N2.197 trillion while FIRS in-house target was N2.707 trillion for the year ended December 2010. The service collected a total of N2.843trillion from January to December 2010. The amount collected for the twelve months represented a remarkable improvement when compared with the actual collection of N2.197 trillion as against N1.9trillion set target for 2009.

Table 4.1 shows a summary of consolidated annual collection of FIRS from 2007 to 2014.

**ANNUAL SUMMARY OF CONSOLIDATED COLLECTION OF FEDERAL
INLAND REVENUE SERVICE (FIRS) FROM YEAR 2007-2015
TARGETS Vs PERFORMANCE BY TAX**

YEAR	TARGET =N=Billion	ACTUAL =N=Billion
2007	1,753.3	1,846.9
2008	2,274.4	2,972.2
2009	1,909.0	2,197.6
2010	2,507.3	2,843.6
2011	3,639.1	4,628.5
2012	3,635.5	5,007.7
2013	4.47	4.51
2014	4,086	4,392
2015	4,572	3,741

Source- FIRS Guage, 2007-2015

The table above shows a consolidated summary of tax collection by the Federal Inland Revenue Service, from 2007 to 2015. The table shows that revenue generation by FIRS have been on an upward trend and has improved tremendously yearly from 2007 till 2014. A progressive increase was recorded in revenue collection through these years. For the past years, FIRS has maintained a tradition of meeting and surpassing the federal government revenue collection target (ikosun, 2010). Though there was a decline in revenue generated in 2015, the reason gathered from this study was based on the fall of oil revenue in the country. Findings of this study reveal that modernization of tax

administration is one of the factors that led to an increase in revenue generated by FIRS, over these years.

4.3 ICT facilities used for operation and service delivery in FIRS, Jos are:

a. The Computer

Computer can be referred to as the backbone, nucleus or hub of ICT application. Owoyemi (2001) coined it in two different ways as:

1. An electronic machine that can accept data, process the data and supply result as we want it.
2. An electronic machine that operates according to instruction the user or maker gives it, these instructions are called programs. In virtually all ICT applications, the computer is interfaced with other devices in order to function effectively.

The above definition points out clearly that computer is capable of producing result the way a user will want it and also performs operation using defined code of instructions. The use of computers in Federal Inland Revenue has eased tedious manual operations performed by the service providers thereby saving time and improves efficiency. Oketunji (2000) has identified the following as the available technologies in most organizations: personal computer application, CD-ROM searching, Tele facsimile, Networks, Electronic copying, Email and internet.

b. Internet

Internet is an abbreviation for international network. It is a worldwide network of computers and people built upon state of the art technology. The internet makes it possible for thousands of dissimilar physical networks that is not connected to one another and that use diverse hardware technologies to connect and operate as a single communication system. There are locations of

various types of information on computer system linked to the internet. It is an important tool for global on- line services.

c. Video Conferencing

Through video conferencing, people at different locations in the world could be allowed to hold meetings. Afolabi (2000) describes video conferencing as a means of linking up two or more remote computers, all of which have a small camera attached which enables the participants to see each other, to speak to each other and in some systems, to be able to start and send documents through the linked computer. FIRS use this service for meetings with officials of other branches to make new and important decisions that will benefit users

d. Electronic Mail (E-mail)

This medium can also be used to send and receive mails. This is commonly and widely used with the internet facilities. E-mail is very useful for sending messages to and from remote areas with enhanced network. E-mail is basically a medium used for both internal and external communication and correspondence. FIRS usually send confirmation mails to customers who pay revenue, communicate new services or changes made in service provision and also use email to disseminate information among staff of the organization.

e. Networks

This is a system of interconnected computers for sharing information and resources. Owoyemi (2001), this may involve two or more computers in a single office or several computers in different units across an organization or across the country. The networks include the local area network (LAN) and wide area network (WAN). With computer network, federal Inland Revenue

service staff can access and share information in different locations and download for users' needs.

f. Storage media

The hard disk of computer has a defined storage capacity and there comes the need to have an additional storage media which can be married to the computer to facilitate access and use. The following have been identified as the premised storage media.

i. Magnetic disk

It is a storage media in which data are stored by means of magnetized spots on hard disk. These include:

Hard disk: The hard disk also known as Winchester disk, it is a thin steel platter with an iron oxide coating. In large system multiple hard disk are mounted together on vertical shaft. They are used by organizations for public documentation as described by Oketunji (2007). The following were pointed out as the advantages of using hard disk: they are very reliable; cheap and economical as they don't spoil in time and don't require special preventive maintenance; very quiet when it is in operation and it is compact in size. Once data have been recorded on a magnetic disk they may be read in definite number of time and remain on disk until they are written over; they are capable of reading and writing data sequentially or directly which makes them flexible, disk pack provide capability for easy removal and portability."

Floppy disk: floppy disk can be described as removable magnetic disk primarily used with microcomputer. The most common standard size is 3.5 inch and 5.25 inch disk that are made of polyester film with magnetic oxide coating.

Optical disk Although relatively new entrance into the storage arena, optical disk have been used for music video and audio recordings for some times. This includes: CD-ROM, Write Once Read Many (WORM) and erasable optical disk (EOD). CD-ROM is used for imaging, reference, and database application with massive amount of data for multimedia. The data cannot be altered or changed, WORM allows user to write data once and cannot be erased but can be read indefinitely. The EOD combines optical and magnetic technology such that you can read and write. It is used for education, reference and entertainment.

What makes optical disk an attractive storage medium for public organizations is that the life expectancy of data stored is approximately three times the shelf life of magnetically recorded information. It also has enormous storage capacity 10-30 times that of magnetic media. In terms of cost effectiveness, the optical disk is ideal for storing large volume of information or data. Its shortcoming is that once data has been burnt on the disk, it is there forever and it cannot be written over.

Magnetic tape

It is an older device that is also important for storage of large volume of information in public organizations. Their principal advantages are that, it is very inexpensive, that is, relatively stable and can store very large volume of information. It is a reliable technology ideal for back up storage for other more volatile form of memory. Their disadvantages are that it stores data sequentially and is relatively low in speed compared with other technology.

Other ICT facilities available in federal inland revenue service include digital cameras, scanners, printers, photocopiers, microforms, package games and simulations, television for the use of video cassette and video disc.

4.4 **The New Structure of Federal Inland Revenue Service [FIRS]**

According to Ogungbesan (2015) the Ag. Executive chairman of FIRS, in realisation of the need to constantly strive for efficiency and higher performance and the drive for delivering continuous and sustainable flow of revenue to government, the management team of FIRS carried out a review of the organisational structure. According to him the amended structure is aimed at ensuring that every officer of the Service is assigned a job schedule with clearly agreed performance criteria. The new structure retains the five (5) group arrangements with the inclusion of the office of the Senior Special Assistant (SSA) which will be responsible for the supervision and coordination of all direct reports to the Executive Chairman. The five groups are;

- a. Domestic Taxes Group (DTG)
- b. Compliance Support Group (CSG)
- c. Enforcement Support Group (ESG)
- d. Modernisation Support Group (MSG)
- e. Support Services Group (SSG)

A. Domestic Taxes Group (DTG): Tax operation activity is now to be organised around the FIRS regional administrative arrangement and placed under Domestic Taxes Group (DTG). Each region is headed by a director who from time to time provides general oversight function to tax offices as well as offer strategic and logistic support to all officers within his or her jurisdiction. The tax office's function is restricted to activities relating to registration, returns and payment processing, filling and debt enforcement, tax payer assistance and tax accounting processes. By this arrangement, tax audit and debt management activities are no longer to be performed in tax offices and this as said will to a large extent protect and guarantee the independence of tax auditors.

- B. The compliance Support Group (CSG)** will oversee functions relating to tax Advisory /rulings, tax audit, taxpayer services and policy and programmes monitoring. All tax audit offices across the country will henceforth report the outcome of audit activities directly to the coordinating director/compliance support through director/audit. The newly created special tax audit (STA) will also report its activities through the director audit. Regarding compliance monitoring in tax offices, only the policy and programmes monitoring staff will be permitted to conduct visits to tax offices for the purpose of monitoring staff compliance with approved internal control codes and guidelines. In relation to tax payer services, all the seven regional tax payer service offices created are to manage tax payers education/ enlightenment services within their respective regional jurisdiction, while tax information development and publication will be handled at the headquarters level by the director/tax payer services who in addition to his duties will also supervise the regional taxpayer service supervisors, who will in turn oversee the implementation of tax payer delivery services and assistance at the tax office level.
- C. The Enforcement Support Group (ESG)** will oversee the function relating to tax investigation, debt management and enforcement, legal services, international taxation and the compliance research/ intelligence. The director/ investigation will have his office located in Lagos and will supervise the expected merger of the Northern and Southern service bureau of TISED into a single office with respect to debt enforcement activities, regional debt supervisors will pursue the recovery of all outstanding debts which are in existence for more than sixty days and report directly to CD/Enforcement support group through director/debt management. Also, the activities of the process audit monitoring unit of TISED are to be

transferred to the newly created compliance research and intelligence department. The newly created international tax department will supervise transfer pricing policy and audit activities, develop BEPS operational policies for Nigeria and promote tax information exchange requirements

D. The Modernization Support Group (MSG) will continue to coordinate all modernization initiatives alongside the development of information and communication technology to facilitate prompt tax delivery services. There will be a merger of the functions of project management offices for tax and non tax project and the new director/PMO will henceforth drive all modernization initiatives within the FIRS for process efficiency and higher performance. In addition, the planning, reporting and statistics functions will be coordinated by the group.

E. The office of the Senior Staff Assistance (SSA) has been created to provide support to the acting EC/FIRS through supervision and coordination of all activities of the direct report to the chairman. The SSA will oversee the functions of internal audit, bank collection, monitoring and tax reform which are to be separately managed by divisional heads under the revenue assurance department. The SSA will be expected to handle other duties as may be assigned or delegated by the acting EC/FIRS

4.5 The Design and implementation of Tax in Nigeria

The tax system in Nigeria is like a tripod made up of the tax policy, tax laws and tax administration. All of these are expected to work together to achieve the economic growth of the nation.

4.5.1 Tax policy

Tax policy provides a set of guidelines, rules and modus operandi that will regulate Nigeria's tax system and provide a basis for tax administration in Nigeria (James and Moses 2012). This makes it the main crux of the tax system in other words, the design of the tax system. Tax policy formulation in Nigeria is the responsibility of the Federal Inland Revenue service (FIRS), customs, Nigeria National Petroleum Corporation (NNPC), National population commission (NPC) but under the guidance of the National assembly. Nigerian tax policy up to 2010 was a varied mix of legislation, judicial pronouncement, budget speeches, committee reports and international treaties (Ifueko 2012). The national tax policy -an outcome of the 2002 study group of the Nigerian tax system provides the objectives to be achieved and the principles to be adhered to at all times in the Nigerian tax system. The 2002 study group on the Nigerian tax system identified the need for the national tax policy to redress the imbalance and shortcoming in the Nigerian tax system. Such a policy was envisaged to;

1. Serve as a means of enforcing foreign direct investment
2. Consolidate several documents into a single document for easy reference.
3. Blend various opinions on taxes of different kinds as well as the issues surrounding those opinions.
4. Provide direction and focus on general tax practice

4.5.2 Tax Laws

This is the embodiment of rules and regulations relating to tax revenue and the various types of tax in Nigeria. Sources of Nigeria's tax laws are laws of the federal Republic of Nigeria. Annual budget, finance and appropriation acts, circulars and practices of revenue service, English and common laws, customs and tradition and judicial proceedings. This is the legal instrument of fiscal policy derived from adopted tax policy. Once a tax policy

is adopted by the government and expressed formally on paper, it will be translated into law to make it effective. This tax law is crafted by the lawyers reflecting the tax policy. After the drafting, it will be enacted or decreed as the case may be). This enactment will legalize government action in implementing her objective. Tax laws are interpreted and clarified in the court by lawyers and judges. Tax law is a very complex issue because the terms used may have different meanings and interpretations, more so, tax, itself, is dynamic. Based on this, extra caution is required in drafting tax to avoid confusion, inconsistency and contradiction. The Laws are mainly the creation of the National assembly or military decrees and include:

- i. Personal income Tax Act(PITA) CAP P8 LFN 2004
- ii. Company Income Tax Act (CITA) CAP 60 LFN 1990
- iii. Petroleum Profit Tax Act (PPTA) 2007
- iv. Value Added Tax (VAT) Act No 102 LFN 1993
- v. Capital Gains Tax Act CAP 411 LFN 1990
- vi. Stamp Duties Act CAP 411 LFN 1990
- vii. Education Tax Act No 7 LFN 1990
- viii. Withholding tax
- ix. National Information Technology development Levy (NITDA)
- x. Nigerian Social Investment Trust Fund (NSITF)

4.5.3 Issues and Challenges of Tax System in Nigeria

The Nigerian tax system even though has been employed to achieve basic economic objectives is basically structured as a tool for revenue generation. Tax laws are consistently being reviewed with the aim of repealing obsolete provisions and simplifying

the main ones. Despite these improvements, there are still a number of contentious issues that require urgent attention. Some of which are highlighted below (Ariyo 1997)

1. **Poor Tax Administration.**- Tax administrators and individual agencies suffer from limitations in manpower, money, tools and machinery to meet the ever increasing challenges and difficulties. Given that efficient tax administration is a feature of a good tax system, the machinery for administration must be suitably designed. Tax administration should have fittingly trained staff and materials and financial resources to effectively enforce tax compliance. The predominance of support staff and insufficiency of tax professionals in tax offices does not augur well for the country.
2. **Structural Problem in the Economy**- The potential for maximizing the benefits of taxation is constrained by structural problems in the economy. The predominance of the informal sector constituting more than 60% of the country's economy enables most domestic production to circumvent tax especially VAT. Since operations in the informal sector are rudimentary without adequate record keeping, tax assessments are difficult to make. Tax administrators often resort to estimates that are prone to a wide margin of error or open to tax evasion opportunities. Ariyo (1997) points out that the proportion of self employed relative to the total working population is substantial, yet authorities have not devised appropriate means of collecting taxes from this group. In fact the self employed or informal sector activities are grossly untapped.
3. **Multiplicity of Tax**- A major problem facing the country's tax system is the issue of multiple taxes. Individuals and corporate bodies complain about the ripple effects associated with the duplication of tax. This problem arose from some state's complain about the mismatch between their fiscal responsibilities and fiscal

powers or jurisdiction. To compensate, some states took the initiative of levying certain taxes which has led to arbitrariness, harassment and even closure of businesses. The exact number of taxes levied on businesses seems to vary significantly between various states and local governments throughout Nigeria and businesses may be subject to as many as 100 different taxes, charges, fees and levies and in some instances taxed for the same event or asset that are levied by the three tiers of government.

4. Paucity of Data Base- Taxation has been the oldest government activity since the country's unification in 1914 so one would expect tax statistics to be readily available. This is however not the case as many organizations including tax authorities/tax offices have serious failure in data management.
5. Complexity of Tax Laws- Tax language and tax laws are codified, complex and difficult for the common taxpayer to understand and some cases are problematic even for literate officials. In addition to lack of understanding, many tax payers are unaware of the existence of certain taxes and the penalties for non compliance.
6. Corruption- Corrupt tax practices by tax personnel have reduced the confidence and trust of the tax taxpayers in discharging their civic duty. Corruption is prevalent in the administration of taxes and duties. Until very recently, it was common place to collect tax payment partly on behalf of one's self and partly for the government. Evaders prefer to bribe officials rather than pay taxes. Tax assessors collude with taxpayers in connection with assessments, tax enforcement are not taken against tax defaulting VIP's and the so called untouchables in the country, the rich who control about 90% of the economy in most cases pay very little or nothing as tax and there are some government officials that earn respectable incomes but are exempted from tax.

7. Activities of the Underground Economy- The hidden or underground economy is usually taken to mean undeclared economic activity. The major issue is how the tax authorities will tackle hidden economy covering:
 - a. Businesses that should be registered to pay tax but are not and
 - b. People who work in the hidden economy such as the rural areas with difficult terrain and pay no tax at

8. Over dependence on oil revenue- Nigeria has for several decades depended on oil revenue as the main source of government revenue. This means that Nigeria is almost a mono-cultural economy and derives on average more than 83% of her national income from oil and gas revenue. This is a burning issue and a serious challenge that needs to be addressed by the Nigerian government to ensure that the economy is put in its proper perspective. Other sources of energy and income can hold up to sustain the economy.

CHAPTER FIVE

DATA PRESENTATION AND ANALYSIS

5.1 Introduction

In chapter, data collected through primary and secondary sources are presented and analyzed. Data collected through the questionnaire were presented in tables and analyzed using frequency counts and percentages. The data from questionnaire were measured on a five-point Likert scale and further interpreted using descriptive statistics. Based on the presentation, analysis and interpretation of data, the hypothesis postulated were tested using chi-square. The data collected through interview conducted and secondary data were analyzed using content analysis to complement the response from the questionnaire. These data were used to further substantiate the hypotheses tested. Also in this chapter, the major findings of the study are summarily highlighted.

5.2 Presentation of Data and Analysis

The result obtained from the questionnaire are presented and interpreted sequentially. Data analysis is done in order to show the number of responses and their corresponding percentages. A total of three hundred and sixty four (364) questionnaires were distributed for administration, which formed the basis and sample size of the study.

Table 5.1: Case Processing Summary

Cases	N	%
Valid	357	98.08
Excluded ^a	7	1.92
Total	364	100.0

Source: SPSS 21 Output

Table 5.2: Response to Questionnaire

	Frequency	Percent	Cumulative Percent
Retrieved	357	98.08	98.08
Not Retrieved	7	1.92	1.92
Total	364	100	100

Source: Field survey, 2015

Table 5.2 shows the response rate of the 364 copies of the questionnaires administered in the course of this research. Out of that number, 357 were retrieved while 7 were not retrieved. This means that the analysis of primary data is based on 98.08% rate of response.

TEST OF HYPOTHESIS 1

Ho: Availability of ICT infrastructure does not affect Tax Administration in Federal Inland Revenue Service, Jos

H1: Availability of ICT infrastructure does affect Tax Administration in Federal Inland Revenue Service, Jos

TABLE 5.3: There are adequate computers available to attend to Corporate taxpayers' complaints on tax administration in FIRS, Jos.

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agreed	215	59.1	59.1	59.1
Agreed	94	25.8	25.8	84.9
Undecided	23	6.3	6.3	91.2
Disagreed	2	.5	.5	91.7
Valid Strongly Disagreed	23	6.3	6.3	98.0
Total	357	98	98	
Missing system	7	2.0	2.0	2.0
Total	364	100	100	100

Source: Field Survey, 2015

Table 5.3 shows the frequency of the responses of the respondents on the question asked about available computer systems at FIRS, Jos. The question asked was “there are adequate computers available to attend to Corporate taxpayers’ complaints on tax payment in FIRS, Jos”. 215 (59.1%) strongly agreed, closely followed by 94 (25.8%) who agreed. Other determinants are undecided with 23(6.3%) responses, disagreed and strongly disagreed with 2 (.5%) and 23 (6.3%) responses respectively.

From the interview report with the head, ICT department of Federal Inland Revenue Service, Jos, he said that with the recent automation of tax administration, Federal Inland Revenue Service Jos was adequately equipped with over 70 computers for all staff and reliable UPS. He said that these computers are used by staff of FIRS Jos to attend to both internal and external correspondences, emails and customer’s complaints

TABLE 5.4 Web portal network for e-filing of tax is always available for Corporate taxpayers to conveniently remit their taxes

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agreed	23	6.3	6.3	6.3
Agreed	35	9.6	9.6	15.9
Undecided	13	3.6	3.6	19.5
Disagreed	200	54.9	54.9	74.4
Valid Strongly	86	23.6	23.6	98
Disagreed	357	98	98	
Total	7	2.0	2.0	2.0
Missing system	364	100	100	100
Total				

Table 5.4 shows the frequency of the responses of the respondents on Web portal Network for e-filing of tax is always available for Corporate taxpayers to conveniently remit their taxes 23 (6.3%) strongly agreed, followed by 35 (9.6%) who agreed. Other determinants are undecided with 13(3.6%) responses. However, 200 (54.9%) disagreed and 86(23.6%) strongly disagreed. This result implies that majority of the respondents do not agree to the fact that web portal network is always available for corporate taxpayers to remit their taxes.

However, it was revealed from the interview report with the Head, ICT department at Federal Inland Revenue Service, Jos that the major reason for the shortage of network could be traced to the non completion of the fibre-optic network project by the Federal Inland Revenue Service. Though he said that the project is being given top priority by management of FIRS as without a robust network, the modernization project cannot be achieved.

TABLE 5.5: Corporate tax payers now find it easy to remit their taxes online as the process of tax payment is very friendly

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agreed	134	36.8	36.8	36.8
Agreed	156	43.0	43.0	79.8
Undecided	42	11.5	11.5	91.3
Disagreed	9	2.5	2.5	93.8
Valid Strongly disagreed	16	4.3	4.3	98.0
Total	357	98.0	98.0	
Missing system	7	2.0	2.0	
Total	364	100	100	100

Source: Field Survey, 2015

Table 5.5 above shows the frequency of the responses of the respondents on Corporate tax payers now find it easy to remit their taxes online as the process of tax payment is very friendly. 156(43.0%) agreed, closely followed by 134 (36.8) who strongly agreed.

Other determinants are undecided with 42 (11.5%) responses, disagreed and strongly disagreed with 9 (2.5%) and 16 (4.3%) responses respectively.

TABLE 5.6: Cross tabulation between There are adequate computers available to attend to Corporate taxpayers' complaints on tax administration in FIRS, Jos. ICT facilities are readily available to support the automation of tax administration in FIRS* Corporate tax payers now find it easy to remit their taxes online as the process of tax payment is very friendly.

			Corporate tax payers now find it easy to remit their taxes online as the process of tax registration, tax payment and accounting is very friendly, accurate, complete and timely					Total
			Strongly agreed	Agreed	Undecided	Disagreed	Strongly disagreed	
ICT facilities are readily available to support the automation of tax administration in FIRS	Strongly agreed	Count	82	111	19	3	0	215
		Expected Count	80.7	93.9	25.3	5.4	9.6	215.0
	Agreed	Count	38	34	10	6	6	94
		Expected Count	35.3	41.1	11.1	2.4	4.2	94.0
	Undecided	Count	8	4	11	0	0	23
		Expected Count	8.6	10.1	2.7	.6	1.0	23.0
	Disagreed	Count	0	2	0	0	0	2
		Expected Count	.8	.9	.2	.1	.1	2.0
	Strongly Disagreed	Count	6	5	2	0	10	23
		Expected Count	8.6	10.1	2.7	.6	1.0	23.0
	Total	Count	134	156	42	9	16	357
		Expected Count	134.0	156.0	42.0	9.0	16.0	357.0

Table 5.6 shows the cross tabulation for the ICT facilities are readily available to support the automation of tax administration in firms and corporate tax payers now find it easy to remit their taxes online as the process of tax registration, tax payment and accounting is very friendly, accurate, complete and timely

Table 5.7: Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	138.693 ^a	16	.000
Likelihood Ratio	89.847	16	.000
Linear-by-Linear Association	40.685	1	.000
N of Valid Cases	357		

Table 5.7 is the chi square result for the first hypothesis. $\chi^2= 138.693$, with 16 degrees of freedom and a p-value of 0.000 at 5% (0.05) level of significance.

Decision Rule: From the above results, since the p-value is less than the level of significance, we reject the null hypothesis and accept the alternative hypothesis and to conclude that; Availability of ICT infrastructure does affect Tax Administration in Federal Inland Revenue Service

TEST OF HYPOTHESIS 2

Ho: ICT capacity of staff does not affect Tax Administration in Federal Inland Revenue Service, Jos.

H1: ICT capacity of staff does affect Tax Administration in Federal Inland Revenue Service, Jos.

Table 5.8 The staff of FIRS possess the required ICT skills necessary

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agreed	64	17.6	17.6	17.9
Agreed	190	52.2	52.2	69.8
Undecided	55	15.1	15.1	84.9
Disagreed	36	9.9	9.9	94.8
Strongly disagreed	12	3.2	3.2	98.0
Total	357	98.	98.0	
Missing system	7	2.0	2.0	2.0
Total	364	100	100.0	100

Source: Field Survey, 2015

Table 5.8 shows the frequency of the responses of the respondents on the staff of FIRS possess the ICT skills necessary. From the output, 190 (52.2%) agreed, closely followed by 55 (15.1%) who are undecided. Other determinants are strongly agreed with 64 (17.6%) responses, strongly agreed and strongly disagreed with 36 (9.9%) and 12 (3.2%) responses respectively.

When interviewed, the staff of Human resource department at Federal Inland Revenue Service, Jos said that since the commencement of reforms of 2004, new focus was given to training. He said that with the recent modernization of tax administration at Federal Inland Revenue Service, regional ICT training centers were established in its eight regional offices. The aim of this is to adequately train all staff of FIRS on required ICT skills to operate the modernized tax administration processes. He however said that all 70 staff of Federal Inland Revenue Service, Jos were trained on required basic ICT skills. They were also trained on the modernized tax process of tax administration.

TABLE 5.9: The staff of FIRS posses the required ICT skills necessary * Corporate tax payers now find it easy to remit their taxes online as the process of tax payment is very friendly Cross tabulation

			Corporate tax payers now find it easy to remit their taxes online as the process of tax registration, tax payment and accounting is very friendly, accurate, complete and timely					Total
			Strongly agreed	Agreed	Undecided	Disagreed	Strongly disagreed	
The staff of FIRS posses the required ICT skills necessary	Strongly agreed	Count	31	21	8	4	0	64
		Expected Count	24.0	28.0	7.5	1.6	2.9	64.0
	Agreed	Count	42	99	15	3	1	160
		Expected Count	60.1	69.9	18.8	4.0	7.2	160.0
	Undecided	Count	50	19	16	0	0	85
		Expected Count	31.9	37.1	10.0	2.1	3.8	85.0
	Disagreed	Count	11	15	3	2	5	36
		Expected Count	13.5	15.7	4.2	.9	1.6	36.0
	Strongly disagreed	Count	0	2	0	0	10	12
		Expected Count	4.5	5.2	1.4	.3	.5	12.0
	Total	Count	134	156	42	9	16	357
		Expected Count	134.0	156.0	42.0	9.0	16.0	357.0

The table above shows the cross tabulation for the staff of FIRS posses the required ICT skills necessary and Corporate tax payers now find it easy to remit their taxes online as the process of tax registration, tax payment and accounting is very friendly, accurate, complete

Table 5.10 Management of FIRS has established willingness on the part of staff and corporate taxpayers by creating a climate of cooperation, also demonstrating the benefits of the automation

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agreed	196	54	54	54
Agreed	100	27.4	27.4	81.4
Undecided	2	0.5	0.5	81.9
Valid Disagreed	29	7.9	7.9	89.8
Strongly disagreed	30	8.2	8.2	98
Total	357	98	98	
Missing system	7	2	2	2
Total	364	100	100	100

Table 5.10 shows the frequency of the responses of the respondents on Management of FIRS Jos has established willingness on the part of staff and corporate taxpayers by creating a climate of cooperation, also demonstrating the benefits of the automation .From the output, 196 (54%) strongly agreed, 100(27.4%) Agreed. Other determinants are strongly disagreed with 30 (8.2%) responses, disagreed 29 (7.9%)and undecided 2(0.5%)

Table 5.11: Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	246.731 ^a	16	.000
Likelihood Ratio	133.857	16	.000
Linear-by-Linear Association	29.744	1	.000
N of Valid Cases	357		

The table above is the chi square result for the second hypothesis. $\chi^2= 246.731$, with 16 degrees of freedom and a p-value of 0.000 at 5% (0.05) level of significance.

Decision Rule: From the above results, since the p-value is less than the level of significance, we reject the null hypothesis and accept the alternative hypothesis and to conclude that; ICT capacity of staff affects Tax Administration in Federal Inland Revenue Service, Jos.

TEST OF HYPOTHESIS 3

Ho: ICT utilization by Corporate Tax payers does not affect Tax Administration in Federal Inland Revenue Service, Jos.

H1: ICT utilization by Corporate Tax payers does affect Tax Administration in Federal Inland Revenue Service, Jos

TABLE 5.12: Corporate tax payers use the automated payment platforms to remit their taxes online

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agreed	168	46.1	46.1	46.1
Agreed	131	36.0	36.0	82.1
Undecided	37	10.2	10.2	92.3
Disagreed	6	1.6	1.6	93.9
Valid Strongly disagreed	15	4.1	4.1	98.0
Total	357	98.0	98.0	
Missing system	7	2.0	2.0	2.0
Total	364	100	100	100

Source: Field Survey, 2015

Table 5.12 above shows the frequency of the responses of the respondents on Corporate tax payers efficiently utilizes the automated payment platforms to remit their taxes online. From the output, 168 (46.1%) strongly agreed, closely followed by 131 (36.0%) who agreed. Other

determinants are undecided with 37(10.2%) responses, disagreed and strongly disagreed with 6 (1.6%) and 15 (4.1%) responses respectively.

The interview report with the Assistant Manager tax in FIRS Jos revealed that the automation of tax administration has greatly improved tax payer convenience as taxpayers can now access their accounts online and pay their taxes at the comfort of their homes, however she said that corporate taxpayer's utilization of these ICT facilities for tax administration is low. This implies that corporate tax payers do not effectively utilise the ICT facilities and tax administration portals available for tax administration. The Integrated Tax Administration System (ITAS) for tax administration enables taxpayers to file their tax returns electronically, pay their taxes online, get instant credit for withholding taxes deducted on their income, generate tax clearance certificates and communicate with the FIRS local tax office through the "message centre" but tax payers do not take advantage of the available ICT platform to remit their taxes. The reason for this she said predicated on the fact that most corporate taxpayers are ICT illiterates and lack basic training on ICT. As a result they tend to distance themselves from any computer related activity. This finding clearly relates to the theory adopted by this study which is the Technology Acceptance Model. According to TAM, Users' beliefs and attitudes is a major determinant to a successful implementation of ICT. In this study the successful implementation of ICT in tax administration also depend largely on corporate taxpayer's utilization of ICT. The Utilization by corporate taxpayers is largely influenced by their attitudes and perception of the ease of use of the system.

ABLE 5.13: Corporate tax payers use the automated payment platforms to remit their taxes online * Corporate tax payers now find it easy to remit their taxes online as the process of tax payment is very friendly, Cross tabulation

			Corporate tax payers now find it easy to remit their taxes online as the process of tax registration, tax payment and accounting is very friendly, accurate, complete and timely					Total
			Strongly agreed	Agreed	Undecided	Disagreed	Strongly disagreed	
Corporate tax payers efficiently utilize the automated payment platforms to remit their taxes online	Strongly agreed	Count	88	68	10	2	0	168
		Expected Count	63.1	73.4	19.8	4.2	7.5	168.0
	Agreed	Count	36	73	16	5	1	131
		Expected Count	49.2	57.2	15.4	3.3	5.9	131.0
	Undecided	Count	10	12	14	1	0	37
		Expected Count	13.9	16.2	4.4	.9	1.7	37.0
	Disagreed	Count	0	3	2	1	0	6
		Expected Count	2.3	2.6	.7	.2	.3	6.0
	Strongly disagreed	Count	0	0	0	0	15	15
		Expected Count	5.6	6.6	1.8	.4	.7	15.0
Total	Count	134	156	42	9	16	357	
	Expected Count	134.0	156.0	42.0	9.0	16.0	357.0	

The table above shows the cross tabulation for the Corporate tax payers efficiently utilize the automated payment platforms to remit their taxes online and Corporate tax payers now find it easy to remit their taxes online as the process of tax registration, tax payment and accounting is very friendly,

Table 5.14 Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	391.202 ^a	16	.000
Likelihood Ratio	167.501	16	.000
Linear-by-Linear Association	136.544	1	.000
N of Valid Cases	357		

The table above is the chi square result for the second hypothesis. $\chi^2= 391.202$, with 16 degrees of freedom and a p-value of 0.000 at 5% (0.05) level of significance.

Decision Rule: From the above results, since the p-value is less than the level of significance, we reject the null hypothesis and accept the alternative hypothesis and to conclude that; ICT utilization by Corporate Tax payers does affect Tax Administration in Federal Inland Revenue Service

5.3 Summary of Major findings

1. Findings of the study revealed that availability of ICT infrastructure affects tax administration in Federal Inland Revenue Service, Jos. The study however revealed that there are adequate ICT infrastructures in FIRS, Jos. There are adequate computer systems and UPS in the offices and the PCs are also linked to a local area network at the headquarters and the two main sites in Lagos and Port Harcourt office. There are also customized software, network and operating systems. This has enhanced tax administration in Federal Inland Revenue Service, Jos. Furthermore, the study showed

that network enablement or internet connectivity is a major challenge to the modernization of tax administration. The major reason for the shortage of network was traced to the non completion of the fibre-optic network project by the Federal Inland Revenue Service and without a robust ICT infrastructure, modernization projects such as the ITAS project embarked upon by FIRS cannot be achieved. It was revealed in this study that ICT infrastructure is everything that supports the flow and processing of information in an organization, including hardware, livewire, software, data and network components. The availability of ICT infrastructure in an organization allows the organization to deliver IT solutions and services to its employees, partners and/or customers and is usually internal to an organization and deployed within owned facilities. In order to implement an automated system of tax administration, it requires customized software since administration of taxes varies from border to border, Robust network and operating systems, Server computers, workstations/clients (desktops and laptops), network equipment etc. Typically, a standard IT infrastructure consists of hardware, software, Network, and meat ware. The number and sophistication of these equipments depends on the scope of the project. Thus, available ICT infrastructure in FIRS includes internet- connected desktop computers, institutional website, institutional functional email, departmental computers etc..

2. Findings of the study also revealed that ICT capacity of staff affects tax Administration in Federal Inland Revenue Service, Jos. The study showed that ICT capacity of staff of FIRS in terms of basic ICT skills, relationships, values and knowledge is adequate. It was revealed that all 70 staff of FIRS, Jos were adequately trained on basic ICT skills and the automation process. New focus was given to training in Federal Inland Revenue

Service since the commencement of 2004 reforms beginning with baseline competencies. Also to speed up ICT based trainings FIRS established regional ICT training centers in its eight regional offices. It was revealed also that before the commencement of reforms at FIRS in 2004, computer utilization ratio was about 15 staff to one computer. However, capacity building was identified as key to the success and sustenance of the reform process and was included as a strategic flank in the FIRS Modernization Plan. Also as at 2007, most staff had not gone for the basic Preliminary Inspectorate of Tax Course and the Executive officers course.

3. Another finding of the study revealed that corporate taxpayer's utilization of ICT facilities affects tax administration in Federal Inland Revenue Service. The study revealed that corporate taxpayer's utilization of ICT facilities for tax administration in Federal Inland Revenue Service is low. This implies that corporate tax payers do not effectively utilize the ICT facilities and tax administration portals available for tax administration. In relation to the theory adopted for this study, Technology Acceptance Model (TAM) which implied that emerging information technology cannot deliver improved organizational effectiveness if it is not accepted and used by potential users. The Integrated Tax Administration System for tax administration enables taxpayers to file their tax returns electronically, pay their taxes online, get instant credit for withholding taxes deducted on their income, generate tax clearance certificates and communicate with the FIRS local tax office through the "message centre". However from our findings, tax payers do not take advantage of the available ICT platform to remit their taxes. The reason for this finding predicates on the fact that most corporate taxpayers lack the basic knowledge on ICT. As a result they tend to distance themselves from any

computer related activity and are unable to utilize the benefits of computer technology. This also is a serious limitation to effective tax administration in Federal Inland Revenue Service.

CHAPTER SIX

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Summary

The study is titled “Effect of Information and Communication Technology on Tax Administration in Federal Inland Revenue Service Jos, Plateau state”. The primary objective of this study is to examine the effect of Information and Communication Technology on Federal Inland Revenue Service to find out if the application of ICT increases efficiency on tax administration. The introductory chapter provides a critical background to the study which gives a general overview of the subject matter. According to the study, Tax administration involves all the strategies and principles adopted by any government in order to plan, impose, collect, account, control and coordinate personnel charge with the responsibility of taxation. ICT involves sending and receiving messages through electronic devices such as web portals, internet, inters witch, telnet and telecommunication. In recent times, ICT have been employed in most sectors of the Nigerian economy such as tax administration, land registry, public financial management, pensions, social and security administration. If appropriately deployed, ICT can help facilitate crucial economic and social development objectives in all sectors and organizations.

The literature and empirical studies related to this study were critically reviewed. The concepts of Information and communication technology, ICT Infrastructures, ICT capacity, ICT utilization and Tax administration were reviewed. According to the views of Mary and Cox (2007), ICT are electronic and computerized devices associated with human interactive materials that enable the user to use them for wider range of service delivery and in addition to personal use. In the views of Ogonna 2010, tax administration consists of the tax authorities and the

organs of tax administration that are charged with the responsibility of implementing the tax laws in accordance with the set guidelines. Other scholarly works were reviewed. Empirical study of various research works was done and attempts were made to fill the existing gaps identified. The theory adopted for this study is the Technology Acceptance Model by Davis (1989). According to this model, technology adoption is a function of a variety of factors including Relative advantage and Ease of use. The research design used for this investigation is survey/descriptive research as contained in which information was obtained from a sample of respondents. This research strategy is considered necessary because of its ability to view comprehensively and in detail the major questions raised in the study. The total population for the study is 2510. The stratified random sample technique; probability sample was used and data were generated from both primary and secondary sources for this study. Data was analyzed using the Chi square via the use of Statistical Package for Social Sciences (SPSS) version 21.

Also an overview of the modernization project by Federal Inland Revenue Service was made. The Integrated Tax Administration (ITAS) was discussed. The implementation of ITAS is aimed at re-engineering and automating FIRS's core tax processes through the use of technology which ultimately simplifies taxpayer compliance and increases revenue generation. Some modules of ITAS such as Project FACT and the Joint Tax Board Tax Identification Number were discussed. In Chapter five data collected via the use of questionnaires and interviews were presented, analyzed, processed and interpreted and also issues of tax administration in Nigeria

Findings of the study reveal that the availability of ICT infrastructure for quality service delivery of tax administration in Federal Inland Revenue Service is adequate but the network connectivity is a major challenge, ICT capacity of some staff of FIRS in terms of skills,

relationships, values and knowledge is also adequate but corporate tax payer's do not utilize the ICT facilities available for tax administration.

6.2 Conclusion

Based on the findings of this research, we therefore conclude that the use of ICT in tax administration has increased the efficiency of tax administration as it makes tax payments to FIRS easy, convenient and secure which enables individuals and corporate organisations remit their taxes, thereby reducing the rate of tax evasion. From our findings, we also conclude that the main objective of automation of Tax administration by the Federal Inland Revenue Service is to create an efficient government agency which harnessed modern technology to improve its overall processes and provide taxpayers a hitch-free, hassle-free and easy experience with the tax authority. It was considered pivotal that tax payment process be modernised using the various tools offered by modern technology. These modernized payment channels will not only ease the payment of tax for the taxpayer but would also reduce incidences of tax evasion, tax avoidance and enhance the monitoring and accounting of revenue.

This study concludes that the use of ICT in tax administration has provided an enhanced and more efficient revenue collection method that guarantees improved revenue accounting and reconciliation processes in FIRS and has increased tax payer compliance thereby reducing the rate of tax evasion. Also ICT has provided a cost effective solution that is easily accessible, as multi channels have been provided for collections, thereby providing more convenient options and encouraging more people to pay their dues to the government. The modernised system will enable FIRS receive the taxes and other payments due to government in a more transparent manner as Leakages will be minimised.

6.3 Recommendations

Based on the findings of this study, in a revenue collection agency like the FIRS, quality service delivery is critical to success and in order to deliver quality service to taxpayers and operate an efficient and transparent tax system that optimizes tax revenue collection, we hereby recommend the following;

a. A robust ICT infrastructure:

Without a robust ICT infrastructure, modernization projects such as the ITAS project embarked upon by FIRS would not be achievable. FIRS should therefore ensure an improved ICT infrastructure which includes completion of the fibre-optic network project, provision of adequate computer systems and reliable UPS to all offices for staff. FIRS and all revenue authorities should set up IT departments at least with the minimum/basic IT structure. Competent staff with the required skills should be recruited and ICT should be included in its periodic training to cater for the upgrade and development of ICT professionals.

b. Regular Training of Staff and Taxpayers

We recommend that adequate manpower should be fittingly trained to enforce tax compliance and attend to challenges of tax administration and FIRS should ensure that regular training of staff and taxpayers should be given topmost priority to keep them abreast with the changes and reforms of the tax system as ICT knowledge areas are so dynamic that without continuous training, the personnel may lose touch with current trends in the industry. Strategic managers need to conduct a capacity building needs assessment in the organization to ensure ICT infrastructure put in place is of benefit to staff. FIRS should also implement regular ICT workshops, training, programs, seminars and conferences to raise ICT awareness. This will enable them acquire requisite skills necessary to operate the electronic changes from manual to

automate tax administration. FIRS should also ensure that taxpayers have the required ICT skills, machineries and a sound understanding of the tax laws to effectively operate the new tax processes. This also will greatly improve tax payer utilization of ICT facilities.

c. Sensitization of Tax Payers/ Checking the plaque of ignorance

Tax payers should be highly sensitized to take advantage of the business process re-engineering to file their tax returns from the comfort of their offices or homes at anytime within the required filling period thereby reducing the complexity, time and cost of paying taxes.

Top Management needs to offer timely communication in order to create awareness of the ICT innovations so that staff and taxpayers can utilize them. This can be done through regular workshops, training, programs, seminars and conferences to raise awareness. This will improve tax payer's utilization of ICT facilities.

d. Improving the Convenience of Taxpayer

In order to improve the convenience of tax payers, ensure quality service delivery as well as for effective enforcement, tax offices should be located in more locations or at least in every major town as the location of only one tax office, usually in the state capital in most states of the federation is not sufficient and it will be difficult to enforce tax obligation on businesses that operate in the sub urban areas from the state capitals and tax payers may find it inconveniencing to travel long distances to fulfil their tax obligations.

e. Taxpayer Enlightenment/Education on Tax Laws

Tax payers do not have a sound understanding of tax laws and the ease with which they can comply with the laws. This can be achieved by establishing a system through which the taxpayers and general public can obtain relevant information and knowledge about the tax laws and the tax administration system support in terms of quality services and the assistance they

may need to meet their tax obligations. The government should consciously through tax education and public enlightenment build in the people a culture of public awareness of tax laws and tax processes as the use of radio and television jingles is not adequate. A form of formal tax education should be introduced to the curricular of schools to ensure that tax payers have a sound understanding of the tax laws and the ease with which they can comply with the laws.

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APPENDIX

Department of Public Administration

Faculty of Administration

Ahmadu Bello University, Zaria

Kaduna

5th February, 2015

Dear Respondent,

This questionnaire is designed in partial fulfillment of the requirements for the award of Masters of Science (M.Sc.) in Public Administration on the research topic “Effect of ICT on Tax Administration in Federal Inland Revenue Service, Jos”.

I will be very grateful if you could spare some time to objectively answer the questions below. Any information you provide will be treated with utmost confidentiality and will be used solely for academic purpose.

Thank you.

Yours Sincerely,

Dimlong Rotkang Roselyn
(MSc/Adm/8020/13-14)

QUESTIONNAIRE

SECTION A :(Please tick as applicable)

Status: a. Tax administrator b. Tax payer

SECTION B: Please tick your response in the space provided

SA- Strongly Agree

A-Agree

UD- Undecided

D- Disagree

SD- Strongly Disagree

		SA	A	UD	D	SD
1.	There are adequate computers for staff of FIRS to attend to taxpayer's complaints on tax administration in FIRS Jos					
2.	Corporate tax payers have adequate access to ICT infrastructures to enable them remit their taxes electronically					
3.	Web portal network for e-filing of tax is always available for taxpayers to conveniently remit their taxes					
4.	Staff of FIRS Jos have access to emails to attend to intra mails and other external correspondence from corporate taxpayers					
5.	FIRS has adequate manpower that posses required ICT skills to attend to tax payers needs					

6.	Staff of FIRS are fittingly trained to handle the challenges of the automation of tax administration					
7.	The staff of FIRS possess the required ICT skills necessary					
8.	Management of FIRS has established willingness on the part of staff and corporate taxpayers by creating a climate of cooperation, also demonstrating the benefits of the automation					
9.	Corporate Taxpayers use the automated payment platforms to remit their taxes online					
10.	The level of ICT utilization by Corporate Taxpayers for tax administration is high					
11.	With the automation of tax administration, Corporate Taxpayers now promptly remit their taxes online					
12.	Corporate Taxpayers now find it easy to remit their taxes online as the process of tax payment is very friendly					

13. What are the major challenges of the recent automation of tax administration by FIRS?

14. Suggest measures to correct the challenges listed above

Interview Guide

1. Are there ICT infrastructures readily available to support the automation of tax administration in FIRS i.e. available computers, network, web portals and other network devices required for online transactions? Is the Web portal Network for e-filing of tax always available for taxpayers to conveniently remit their taxes?
2. Do corporate taxpayers have adequate access to ICT infrastructures to enable them remit their taxes electronically and do they efficiently utilize these portals?
3. Has any staff of FIRS, Jos been trained on ICT? If yes, how many staff?
4. Do the staff and corporate taxpayers possess the required ICT skills for the modernization project?
5. Do Corporate Taxpayers utilize these payment portals?