EFFECT OF MOBILE TELECOMMUNICATION ON ECONOMIC ACTIVITIES IN KABBA-BUNU LOCAL GOVERNMENT AREA OF KOGI STATE

BY

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A THESIS SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, AHMADU BELLO UNIVERSITY, ZARIA, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER DEGREE IN GEOGRAPHY.

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Declaration

I declare that the work in this thesis entitled "Effect of mobile telecommunication on the economic activities in Kabba-Bunu Local Government area of Kogi State" has been carried out by me in the Department of Geography, Ahmadu Bello University, Zaria. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this thesis was previously presented for another degree or diploma at this or any other Institution.

…… ……. ……..

Elizabeth Ajoke Olubo Signature Date

Certification

This thesis entitled "EFFECT OF MOBILE TELECOMMUNICATION ON ECONOMIC ACTIVITIES IN KABBA-BUNU LOCAL GOVERNMENT AREA OF KOGI STATE" by Elizabeth Ajoke OLUBO meets the regulations governing the award of the degree of Masters of Science in Geography of Ahmadu Bello University, and is approved for its contribution to knowledge and literary presentation.

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Dedication

This research work is dedicated to the Almighty God, the Infinite, Infallible, Incorruptible, Immutable, Invisible, Immortal, Incomprehensible, for being my ALL IN ALL and also to my immediate family.

Acknowledgement

I give all the glory to the Almighty God, the Ancient of Days, the I AM that I AM, the Lord of lords and the King of kings for everything He did for me before, during this course and is still doing now. To Him alone be all the glory.

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I equally appreciate my husband, Mr. Olubo, J.G. for his support and understanding all through, my children Glory, Godwin and Gracious for bearing with my absence. I am also indebted to the Owohunwas for all their financial and moral supports.

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Abstract

This study investigates the effect of mobile telecommunication on the economic activities in Kabba-Bunu Local Government Area of Kogi State. The problem of study is to examine how the advent of mobile phones has improved the scope of business transactions, how it has helped to improve inter-relationship between the sellers and the buyers and how the various attributes of the people, and their location (rural or urban) influence their use of GSM in transacting business in Kabba-Bunu LGA of Kogi State. The specific objectives of the study are to: identify the various ways the people of Kabba-Bunu LGA, carried out their business transactions over space before the advent of mobile telecommunication in the area; assess the differential effects of gender, level of education, type and location of business on the effectiveness of use of mobile telecommunication in business transactions and examine the constraints to the effective use of mobile telecommunication in business transactions in the study area. The Data were obtained from both primary and secondary sources. Ten (10) settlements were purposively selected across the Local Government Area to form the sample points while a total number of 384 copies of questionnaires were administered. The questionnaires were based on issues such as bio-data of the respondents, the type and location of business, how the respondents were carrying out their business before the advent of mobile telephone, the various problems faced then, the year they started using GSM and the various ways GSM has made business easier and better for them. The study reveals that before the advent of mobile telecommunication, the people of Kabba-Bunu LGA were taking their wares personally to their customers majorly. The study equally reveals that more males are into business than the females in the study area and that higher percentage of the males are more educated as compared to the females, and the more educated the people, the more they made use of mobile telephones for their businesses. Moreso, the people in the urban center make use of mobile telephones more than those in the rural areas for the purpose of running their businesses. The result also shows that the advent of mobile phone has greatly influenced business transactions positively in the local government area. However, certain constraints were discovered in the usage of mobile telephone for the running of business in the study area. These are: fluctuations in network services, high cost of recharging and incessant power failure by the Power Holding Corporation of Nigeria. The study equally reveals the willingness of the people to improve upon their usage of mobile telecommunication for the purpose of running their businesses. ANOVA was used to test the relationship between gender, level of education, type and location of business, and the effective usage of GSM. Based on the findings, it is recommended that the various service providers should improve on their various services in t the study area, the government should equally help with better power supply in the study area and finally, efforts should be made by both network providers and the government to subsidize the tariffs charged on mobile telecommunication subscribers.

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Every growing economy requires a comprehensive and efficient telecommunication system to enable sustainable growth and development (Aliyu, 2010). Humans convey information through a variety of methods: speaking, telephones, email, blogs, television, art, hand gestures, facial expression, and body language. Communication can occur instantaneously in closed, intimate settings or in large public forums or on the internet. However, all forms of communication require the same basic elements: a speaker or sender of information, a message, and an audience or recipient. The sender and recipient also share a common language or means of understanding each other for communication to be successful.

The world is fast becoming a global village and a major driver of this process is communication of which telecommunication is key. Telecommunication is the transmission of information, over significant distances, for the purpose of communicating messages.

Mobile telecommunication is a communication network (either public or private) which doesn't depend on any physical connection between two communication entities and have the flexibility to be mobile during communication. The current Global System for Mobile communication (GSM) and Code Division Multiple Access (CDMA) offer mobile telecommunication. Global System for Mobile communication will be the focus of this study.

Kabba town is the headquarters of Kabba-Bunu Local Government area of Kogi State. The fact that Kabba is the headquarters of Kabba-Bunu LGA makes it a centre of both commercial and administrative activities. As a result, some of the dwellers are farmers, while others are civil servants and some engage in tertiary activities such as trading, transport and services. For effective transactions between the various economic activities prevalent in Kabba/Bunu LGA there is the need for a very efficient means of communication and this is offered by the mobile telecommunication services.

The benefits of mobile telecommunication are numerous. Balogun (2000 in Aliyu, 2010) is of the opinion that GSM facilitates economic development as it provides easy trade between Nigeria and her foreign partners in the world. Even at home, it plays a significant role in communicating government programmes and encourages investment opportunities.

The mobile telecommunications sector continues to offer unprecedented opportunities for economic growth in both developed and developing markets, and mobile services have become an essential part of how economies work and function. In developed markets, recent years have has changed consumer expectations for wireless services products and has transformed the way in which people connect and work, which has the potential to further impact economic development. Mobile telephony has transformed the way in which consumers and businesses operate in developing markets. As fixed lines often remain undeveloped and unavailable to the majority of the population in developing markets, mobile services have often become the universal providers of communication services (GSMA 2012).

The usage of GSM has greatly reduced rural-urban movements (that is, travelling physically) as people with GSM "travel to cities" without boarding a vehicle. The introduction of GSM has the potential for reducing crime because accessibility to phone services ensures quick calls to security operations when the need arises (Aliyu, 2010).

In the health sector, the advent of GSM has greatly enhanced the exchange of information, especially in Nigerian teaching hospitals. Communication between the wards such as for patient referrals from one ward to another, physicians not present can be reached on their mobile phones if there is an emergency. Some doctors post their phone numbers on a wall in their ward. Also for consultation, when physicians need a second opinion they contact their colleagues for consultation via the mobile phone. Health care professional use their mobile phones to get materials or equipment into a particular ward or room (Bayo, Eyitope and Bimbo, 2003).

1.2 STATEMENT OF THE RESEARCH PROBLEM

Information and communication technology has brought a lot of changes to most sectors, public and private alike (Adamu, 2009). Most literature on telecommunication points to the importance of mobile telecommunication in accelerating the development of such area where the study is carried out. Telecommunication has been claimed to have a positive effect on economic development since it drastically decreases transaction costs and accelerates the diffusion of knowledge (Heli, Kaisu and Anni, 2011).

The GSMA Development Fund Top 20 conducted a research on the economic and social impact of mobile communications in developing countries in 2008, and the summary was that the

positive implications of landline telecoms infrastructure and, more recently, of mobile communications on economic growth in the developed world have long been acknowledged, with numerous studies analysing the issue. Now that most of the developed world has reached high penetration levels of mobile phones, both current growth patterns and future projections suggest that virtually all of the mobile industry's new customers in the coming years will come from developing countries. In fact, as of 2007, there were more mobile customers in developing countries than in the entire developed world (ITU 1999).

What impact are mobile phones having on developing countries and are user experiences and overall impacts unique or similar to those of developed countries? While it might seem intuitive to just extrapolate from the results of earlier studies in developed countries, the developing world is in fact leap-frogging the developed world when it comes to mobile communication and its many uses. The implications of this technology on daily life in developing countries appear to be more far-reaching than they were in the earlier developed country rollouts. For example, studies have demonstrated that mobile technology is driving improvements in social links, the creation of social capital, improved market information flows and productivity, as well as increases in GDP and Foreign Direct Investment (The GSMA Development Fund Top 20, 2008). It was therefore recommended in these studies that additional researches be conducted to expand evidence and knowledge, particularly with respect to basic economic studies, prospective applications and the needs of users around financial services in developing countries. Nigeria is one of the developing countries where further research on the impacts of mobile telecommunication is recommended. Taking Kabba-Bunu Local Government Area in Nigeria as

a case study will help expand the evidence and knowledge about the impact of GSM on the economy and society.

Similarly, Sridhar and Sridhar (2004) investigated the relationship between telecommunications and economic growth using data from 28 developing countries. The study finds that there is a positive impact of fixed lines and a significant impact of mobile phone penetration on national output. The impact of telecommunications penetration on total output is found to be significantly higher for developing countries than for OECD countries.

Bakare and Gold (2011), investigated the impact the Global System for Mobile Telecommunication (GSM) has made on the provision of employment opportunities; income of the masses and transaction cost of various economic activities of the masses. Linear regression analytical techniques were used for data analysis. The study made use of primary data obtained from 1,000 respondents from 20 selected communities in Ilorin metropolis in Kwara State, Nigeria, through the administration of questionnaires. The purposive sampling method was also employed in the study with a sample unit. The outcome of the empirical investigations shows that Global System for Mobile Communication has contributed positively to the economic situations of Nigeria and has served as source of income and employment to many Nigerian youths. The study found that GSM business had reduced production cost of doing business in terms of traveling and transaction cost. The findings of the study suggested the need for Nigerian Communication Commission (NCC) and the Federal Government of Nigeria to provide the necessary economic infrastructure (particularly power supply) to the GSM operators in order for them to deliver efficient services and to be able to reduce their charges.

However, to the best of the researcher's knowledge none of the previous studies has been carried out in Kabba-Bunu LGA neither considered the possible effects which the demographic, economic and educational characteristics of the people, the types and location of businesses could have on their use of mobile phones and on economic activities. The problem of the present study is to examine how the advent of mobile phones has improved the scope of business transactions, how it has helped to improve inter-relationship between the sellers and the buyers and how the various attributes of the people, and their location (rural or urban) influence their use of GSM in transacting business in Kabba-Bunu LGA of Kogi State. Moreso, this research is aimed at addressing the following research questions:

1. How were the people in Kabba-Bunu LGA carrying out their business transactions before the advent of mobile telecommunication in the area?
2. What are the differential effects of gender, level of education, type and location of business on the effective use of mobile telecommunication in business transaction?
3. What are the constraints to the effective use of mobile telecommunication in business transactions in the study area?

1.3 STUDY AIM AND OBJECTIVES

The aim of the study is to examine the effect of mobile telecommunication on the economic activities of Kabba-Bunu Local Government Area of Kogi State.

The specific objectives are to

i. identify the various ways the people of Kabba-Bunu LGA, carried out their business transactions over space before the advent of mobile telecommunication in the area;

ii. assess the differential effects of gender, level of education, type and location of business on the effectiveness of use of mobile telecommunication in business transactions
iii. examine the constraints to the effective use of mobile telecommunication in business transactions in the study area.

1.4 SCOPE OF THE STUDY

The scope of the study in terms of content is the several effects of Global System for Mobile telecommunication on business transactions (of the Kabba-Bunu LGA). The study will focus on business enterprises such as, the sales of pharmaceutical products, farm produces, provisions, food stuffs, electrical appliances and building materials. The spatial scope of the study is the whole of Kabba-Bunu Local Government Area of Kogi State in order to capture the rural-urban differential in the use and impact of GSM in the study area.

1.5 JUSTIFICATION OF THE STUDY

The use of mobile phone has soared and has greatly replaced the unreliable service of Nigeria Telecommunications Limited (NITEL) in that telephone services of NITEL were restricted to a few individuals and organizations because of limited coverage and cost of acquiring the services. However, with the introduction of mobile telecommunication networks and the fact that there exists stiff competition among the various networks, economic activities and transactions are better carried out with the use of mobile telephones. It is hoped that the findings of this study will help both individuals and companies to improve on the use or better still maximize the opportunity offered by mobile telephones to improve their businesses.

CHAPTER TWO

CONCEPTUAL FRAMEWORK AND LITERATURE REVIEW

2.1 INTRODUCTION

This chapter deals with conceptual framework where views of different scholars about the concept applicable to the study were considered and relevant literature reviewed.

2.2 CONCEPTUAL FRAMEWORK

2.2.1 The Concept of Communication

The term “communication” has Latin roots; the term that is commonly use today comes from *communicare*, which means to make common or impart (Williams, 1985; Peters, 1999). While the concept of *communicare* persists in the way we commonly think of communication, the term has also lent itself to many other uses and practices over the past several centuries. Since appearing in the English Language, the term “communication” has been used to represent means of physical connections such as roads and railways, the media industry (Williams, 1985).

The current definitions of 'communication' as recorded in the Oxford English Dictionary are classified into three categories:

1) Senses relating to an affinity or association i.e. interpersonal contact, social interaction, association among others.
2) Senses relating to the imparting or transmission of something i.e. transmission or exchange of information, knowledge, or ideas, by means of speech, writing, mechanical or electronic media among others.
3) Senses relating to access i.e. accessibility like road, rail network.

Dance (1970) clarify the concept of communication by outlining three points of "critical conceptual differentiation" . First, Dance considered level of *observation* or abstractness. Some definitions of communication are broad (and thereby inclusive) while other definitions are more restrictive (and thereby narrow). Second, definitions of communication can differ on the dimension of *intentionality;* some definitions include only purposeful messages while others do not impose this restriction. Finally, conceptualizations of communication differ in terms of *normative judgment*; some definitions include a statement of communicative success or effectiveness while others do not.

Although, there are different concept of communication by various scholars as discussed above, however, for this research work, communication is define as a process of transmission or transfer of messages (information) from a source (encoder) to a destination (decoder) through a medium (channel).

2.2.2 Telecommunication

Telecommunications is a universal term that is used for a vast range of information-transmitting technologies such as mobile phones, land lines and broadcast networks. It refers to the exchange of information by electronic and electrical means over a significant distance. A complete telecommunication arrangement is made up of two or more stations equipped with transmitter and receiver devices. A single co-arrangement of transmitters and receivers, called a transceiver, may also be used in many telecommunication stations. Telecommunications devices include telephones, telegraph, radio, microwave communication arrangements, satellites and the Internet.

In telecommunications, data is transmitted in the form of electrical signals known as carrier waves, which are modulated into analog or digital signals for transmitting information. Analog modulation such as that used in radio broadcasting is an amplitude modulation. Digital modulation is just an updated form of this.

2.2.3 Mobile Telephony

Telephony is a form of telecommunication primarily intended for the exchange of speech (CCIT, 1992). The telephony service provides users with the ability for real-time two-way speech conversation via the network. Mobile telephony is different from traditional telephony in two ways: – The access network, i.e. local loops in traditional telephony, is a radio network. The network is designed to allow each subscriber to move over a distance exceeding the radio range of the mobile telephone unit, even during a conversation – Mobile operators cooperate in order to make it possible for subscribers to "visit" other networks while they keep their phone number.

2.3 LITERATURE REVIEW

2.3.1 Historical background of mobile telecommunication in Nigeria

According to Bakare and Gold (2011), the development of telecommunication in the world began in the 1830s. The first commercial electrical telegraphy was constructed by Sir Charles Wheastone and Sir William Forthergill Cooke (Ajayi, 2008), and they both viewed their device as 'improvement on the existing electromagnetic telegraphy' (International Telecommunication Union (ITU, 1999). Samuel Morse independently developed another version of electrical telegraphy that he unsuccessfully demonstrated on 2nd September, 1837. Thereafter, Alfred Vail developed another version of the technology and this was successfully demonstrated on 6th

January, 1838. The first transatlantic telegraphy cable allowing transatlantic telecommunication for the first time was successfully completed on 27th July, 1866. Alexander Bell invented the conventional telephone in 1876 and the first commercial telephone services were set-up in 1878 and 1879 in both New Haven and London (ITU,1999).

Further development of telecoms in the world was prompted by the need to provide seamless telecommunications throughout Europe. In the 1980s, analogue mobile telephony grew rapidly as operators found it increasingly difficult to interconnect the various networks in Europe. On the basis of this, a study group called "Group Special Mobile" was formed and was tasked to provide a standardized system for mobile telephony, which was realized seven years later. In the year 1990, there were only 11 million subscribers worldwide. But the introduction of digital services in the early 1990s, combined with competitive service provision and a shift to prepaid billing, spurred rapid growth in demand.

Nigeria has not been left out of the race for rapid development of telecommunication, although the journey to success in the milieu had been long and tortuous. The development of telecommunications facilities in Nigeria began in 1886 when a cable connection was established between Lagos and London by the colonial administration (Adegboyega, 2008). From the very beginning, it was clear that the introduction of telephone services in the country was not induced by economic or commercial motives. It was not meant to enhance economic growth. Rather, it was originally developed as a tool for colonial subjugation. For this reason, by 1893, government offices in Lagos were provided with telephone service, which were later extended to Ilorin and Jebba in the hinterland. A slow but steady process of development in the years that followed led

to the gradual formation of the nucleus of a national telecommunication network (Ajayi, 2008). However, as the European mercantile activities gained a foothold in the country, the first commercial trunk telephone service was established to link Itu and Calabar in 1923. Between 1946 and 1952, a three channel line carrier system was commissioned between Lagos and Ibadan and was later extended to Oshogbo, Kaduna, Kano, Benin and Enugu, thereby, connecting the colonial office in London with the commercial centers in Nigeria (Adegboyega, 2008; Ajayi, 2008). In those early days, services were primitive and the coordinated pegboard switching system was used. This later progressed to manual switchboards of different sizes, shapes, and capacities until stronger exchanges were installed into the national network at Lagos Island, Ikeja, Ebute Meta, Apapa and Port Harcourt between 1955 and 1960.

The telegraphy service also witnessed a parallel development, from telegraph delivery by way of manual coordinated pegboard switching to the use of Morse code for telex switching. By 1960, a manual telex exchange of sixty subscriber lines were in service in Lagos. All the above efforts were essentially aimed at improving internal telephone services in Nigeria. At independence in 1960, with a population of roughly 45 million people, the country only had about 18,724 phone lines for use. This translated to a tele-density of about 0.5 telephone lines per 1000 people. The telephone network consisted of 121 exchanges of which 116 were of the manual (magneto) type and only 5 were automatic. Between independence in 1960 and 1985, telecoms services become commercialized. The old P & T department under the Ministry of Communications became separated and Nigeria External Telecommunications Limited (N.E.T) was created to take care of external telecoms services while the old P&T handled internal network (Bakare and Gold, 2011).

By January 1985, the erstwhile P & T department was merged with NET to form Nigeria Telecommunication Limited (NITEL), a government-owned limited liability company.

The goal of establishing NITEL was to harmonize the planning and coordination of the internal and external communications services, rationalize investments in telecommunication development and provide accessible, efficient and affordably services. NITEL, the only national monopoly operator in the sector, was synonymous with epileptic services and bad management which made telephone under it to be unreliable, congested, and expensive and customer unfriendly. According to Ajayi (2008), the years 1992 to 1999 was tagged as the partial liberalization era, when government embarked on market–oriented, partially liberalizing the Nigerian telecommunication sector via Nigeria Communications Commission (NCC) Decree 75 of 1992. The reforms include separation of the policy-making body from industry regulator and networks operators/service providers, and licensing of network operator service providers which began in 1996. Despite the huge potentials offered by the Nigerian telecom market, progress was slow due to political uncertainties and perceived policy inconsistencies as NITEL still continued to retain monopoly power over voice telephony in both national and long distance international calls (Ajayi, 2008). Adegboyega (2008), and Ndukwe (2008), both argued that this period was dominated by chaotic, hopeless and frustrating circumstances. The Network was bad, there was weak infrastructural base, huge unmet demand, concentration of lines in selected urban centers, slow growth of subscriber base as well as limited investment.

The Nigeria's telecom sector witnessed a major revolution in 2001 with the granting of the global system for mobile telecommunication (GSM) license to providers. The target of National

Economic Empowerment and Development Strategy (NEEDS) and the Nigerian Communication Commission (NCC) for the telecommunication sector include attainment of tele-density (number of telephone lines in relation to population) of 1.25 by the year 2008. Prior to this, Nigeria maintained an unenviable record as the world's third lowest, after Mongolia and Afghanistan, with a tele-density of 0.73% before 1999 (Okereocha, 2008). This was essentially achieved with the advent of mobile telecommunication (GSM) that has resulted in a dramatic increase in the total number of lines from 866,782 in 1999, to over 60 million lines, in year 2008 out of which GSM operators accounted for 57, 622, 901 lines, fixed line operators accounted for 2,537,504 code division multiple access, CDMA, operators connected 780,938 lines (Ndukwe, 2008). This recent drive in telecom reform policy initiatives has made noticeable impacts on Nigeria (Bakare and Gold, 2011).

2.3.2 Telecommunication and Economic Growth

The link between telecommunication and economic growth has been studied widely by researchers in recent years seeking to connect the nexus between telecommunication and economic growth. For instance Ricketts (2002) opines among other things that telecommunications aid coordination of information flow, provide opportunities for increasing the efficiency of interaction and coordination, and in this manner influence the success of economic activities**.** Economic activities require significant levels of interaction and coordination in order for them to be conducted successfully and efficiently.

Alleman, Hunt, Michaels, Rapport and Taylor (2004) on the other hand asserted that a modern telecommunication infrastructure is not only essential for domestic economic growth, but also a prerequisite for participating in increasingly competitive world markets and for attracting new

investments. Generally, telecommunication and its ancillaries contribute to economic growth through: Increasing productivity across all sectors; facilitating market expansion beyond borders to harvest economies of scale; lowering costs of and facilitating access to services, notably in administration, education, health and banking; providing access to research; development of ICT products and services; contributing to better governance, a prerequisite to growth, through increased participation, accountability and transparency.

The use of telecommunication services provides positive externalities, enhancing creativity, learning and problem-solving skills. Its impact in the short-run can be felt on employment while in the long-run, it is the interaction among connectivity, access, network security, capability/skills, market structures and firm governance, as well as the regulatory and facilitation environment, certainly determines whether firms from developing countries can participate effectively and efficiently in the information economy and compete in global e-marketplaces.

Studies of telecommunications development on economic growth in the developed economies reported positive relationships between telecommunications and economic growth (Jipp, 1963; Hardy, 1980; Moss, 1981; Saunders *et al.*, 1994; Lichtenberg, 1995; Greenstein and Spiller, 1996). However, not many studies have been carried out in this topic in the sub-saharan Africa. Also, the studies investigated the relationship between telecommunications and economic growth without considering its impact on economic growth, and the direction of causality between telecommunications development and economic growth. Although telecommunications development has been found to be one of the factors that affect economic growth, its contribution

has varied between countries at different stages of development. Additionally, studies indicate that the contribution of telecommunications to economic growth is not independent of the level of telecommunications development see (Roller and Waverman, 1996; Karner and Onyeji, 2007).

For instance, Karner and Onyeji (2007) examined the contribution to economic growth of private telecommunications investment in 14 African countries and 13 countries in Central and Eastern Europe (CEE) for the period 1999 to 2005. Their regression results indicate that the contribution is positive but insignificant. They argue that this may be due to the relatively low level of telecommunications infrastructure in the selected countries, which diminishes the effectiveness of private investment in telecommunications.

In another dimension, Roller and Waverman (1996) examined the impact of investment in telecommunications infrastructure on the GDP of 21 OECD countries and 14 developing or newly-industrialized non-OECD countries between1970 and 1990 and find that the impact may not be linear: it is greater in OECD countries than it is in non-OECD countries and in countries that have reached "critical mass", that is, the number of main telephone lines exceeds 40 per 100 persons.

Similarly, Sridhar and Sridhar (2004) investigate the relationship between telecommunications and economic growth using data from 28 developing countries. The study finds that there is a positive impact of fixed lines and a significant impact of mobile phone penetration on national output. The impact of telecommunications penetration on total output is found to be significantly

higher for developing countries than for OECD countries. This agrees with the outcome of a study by Waverman *et al.* (2005) who found that mobile telephony has a positive and significant impact on economic growth.

Going further, Cronin, Colleran, Herbert and Lewizky (1993) attempted to determine the causal relationship between telecommunications and economic growth. The study revealed a bidirectional relationship between telecommunications infrastructure and economic growth in the United States. A causality analysis carried out by Madden and Savage (1998) also confirms a bidirectional relationship between telecommunications investment and economic growth in CEE countries. Chakraborty and Nandi (2003) study indicated a bidirectional relationship between teledensity and GDP in both the short run and the long run in 12developing countries in Asia. When these countries are divided into two groups with a high and low degree of privatization, respectively, the causality is bidirectional only for those countries in the former group.

Cieslika and Kaniewsk (2004) confirm a positive and statistically significant causal relationship between telecommunications infrastructure and income at the regional level in Poland and finds that the causality runs from the former to the latter. Yoo and Kwak (2004) found a bidirectional relationship between information technologies investment and economic growth in South Korea over the period 1965-1998. A more recent study carried out by Wolde-Rufael (2007) also finds a bidirectional relationship between the two in the United States over the period 1947-1996.

However, Shiu and Lam (2008) found a unidirectional relationship from GDP to telecommunications development in China. Causality in the opposite direction, that is, from telecommunications to economic growth, is found only in the affluent eastern region, but not in the low-income central and western provinces.

According to Qiang (2009) in a recent World Bank analysis to test the impact of telecommunications penetration on economic growth rates at country-level of 120 countries shows that for every 10% point increase in the penetration of mobile phones, there is an increase in economic growth of 0.81% points in developing countries, *versus* 0.60 percentage points in developed countries. The study also found that all information and communications technologies promote growth more effectively in developing countries than in developed ones. This is because telecommunications services help improve the functioning of the both the public and private sectors. These issues were more acute in developing economies than in developed ones. Therefore, developing countries gain more by resolving some of them through better access to telecommunications (Qiang, 2009). What is clear from these studies is that little effort has been made in previous studies to connect how telecommunication growth leads to economic growth in key economies in the African region.

A series of studies have found a link between mobile penetration and economic growth. Mobile phones have improved communication, social inclusion, economic activity and productivity in sectors such as agriculture, health, education and finance. Mobile telephony has transformed the way in which consumers and businesses operate in developing markets. As fixed lines often remain undeveloped and unavailable to the majority of the population in developing markets,

mobile services have often become the universal providers of communication services. Total mobile penetrations has more than doubled in all regions of the world since 2005, which can be attributed to numerous factors including a fall in handset and usage cost and an improvement in service quality and network coverage (GSMA 2012).

As telecommunication markets mature, mobile phones in Africa are evolving from simple communication tools into service delivery platforms. This has shifted the development paradigm surrounding mobile phones from one that simply reduces communication and coordination costs to one that could transform lives through innovative applications and services. (Aker and Mbiti, 2011).

According to Aker and Mbiti, 2011, five potential mechanisms through which mobile phones can provide economic benefits to consumers and producers in Sub-Saharan Africa were identified. First, mobile phones can improve access to and use of information, thereby reducing search costs, improving coordination among agents and increasing market efficiency. Second, this increased communication should improve firms' productive efficiency by allowing them to better manage their supply chains. Third, mobile phones create new jobs to address demand for mobile-related services, thereby providing income-generating opportunities in rural and urban areas. Fourth, mobile phones can facilitate communication among social networks in response to shocks, thereby reducing households' exposure to risk. Finally, mobile phone-based applications and development projects—sometimes known as "m-development"—have the potential to facilitate the delivery of financial, agricultural, health and educational services.

2.3.2 Significance of Mobile Phones

2.3.2. 1 How Mobile Phones can Reduce Search Costs and Improve Markets

Examples of imperfect and asymmetric information abound in markets in sub-Saharan Africa. As a result, households and firms use numerous avenues to search for information in a variety of areas: input prices, output prices, jobs, potential buyers and sellers, natural disasters, new technologies, politics, and the status of friends and family members. Traditional search mechanisms include personal travel, radio and, to a much lesser extent, landlines, letters, newspapers and television. Of these, personal travel has often been the most common mechanism used—primarily due to limited access to other alternatives. In Niger, for example, 89 percent of grain traders surveyed preferred obtaining price information by visiting weekly grain markets, rather than listening to the weekly radio program (Aker, 2008). However, personal travel requires transport and opportunity costs, which can be relatively high with a combination of long distances and poor roads.

The rollout of mobile phones in sub-Saharan Africa over the past decade has introduced a new search technology that offers several advantages. First, mobile phones greatly reduce search costs. While mobile phones require an initial fixed cost, the variable costs associated with their use are significantly lower than equivalent travel and other opportunity costs. In Niger, for example, an average trip to a market located 65 kilometers away can take 2-4 hours roundtrip, as compared to a two-minute call. Using a local daily wage of 500 CFA francs ($1 U.S.) per agricultural laborer in Niger, mobile phones reduce search costs by 50 percent as compared with personal travel. Mobile phones can also allow people to obtain information immediately and on a regular basis, rather than waiting for weekly radio broadcasts, newspapers or letters.

Furthermore, rather than being passive recipients of information, mobile phones allow individuals and firms to take an active role in the search process, enabling them to ask questions and corroborate information with multiple sources.

Finally, mobile phones are more accessible than other alternatives in terms of cost, geographic coverage and ease of use. While radios can be used across all segments of the population, they generally provide a limited range of information. Newspapers are primarily concentrated in urban areas, are expensive and are inaccessible to illiterate populations. Access to other search mechanisms, such as fax machines, e-mail and internet, is similarly low. On the average, less than 4.2 percent of the African population has access to internet (ITU, 2009).

Examining the impact of mobile phones on grain markets in Niger, Aker (2010) finds that the introduction of mobile phones reduces dispersion of grains prices across markets by 10 percent. The effect is stronger for those market pairs with higher transport costs, namely, those that are farther apart and linked by poor quality roads. The effect is also stronger over time, suggesting that there are networks effects similar to those found by Brown and Goolsbee (2002). While the effect is smaller in magnitude as compared by Jensen (2007), it is perhaps more surprising, because grains are storable commodity. The primary mechanism through which mobile phones improves market efficiency is a change in traders' (middlemen) marketing behavior: grain traders operating in mobile phone markets search over a greater number of markets, sell in more markets and have more market contacts as compared to their non-mobile phone counterparts (Aker, 2008).

Aker (2008) also finds that the introduction of mobile phones is associated with increased trader and consumer welfare. The introduction of mobile phones led to a reduction in the intra-annual coefficient of variation, thereby subjecting consumers to less intra-annual price risk. Mobile phones also increased traders' welfare, primarily by increasing their sales prices, as they were able to take advantage of spatial arbitrage opportunities. The net effect of these changes was an increase in average daily profits, equivalent to a 29 percent increase per year.

However, the impacts of mobile phones upon farmers' welfare were not measured. Muto and Yamano (2009) similarly estimated the impact of mobile phone on agricultural markets in Uganda, focusing on farmers' market participation rather than market efficiency. Using a panel dataset on farm households between 2003 and 2005, they found out that mobile phone coverage is associated with a 10 percent increase in farmers' probability of market participation for bananas, although not maize, thereby suggesting that mobile phones are more useful for perishable crops. This effect was greater for farmers located in communities farther away from district centers. While the authors do not empirically explore the specific mechanisms behind their results, they suggest that improved access to price information reduced marketing costs and increased farm-gate prices, increasing productive efficiency. Mobile phones should similarly reduce search cost in labour markets. Labour market search theory predicts that a reduction in search costs should increase workers' reservation wage, increase the job arrival rate, and reduce unemployment. Mobile phones should therefore decrease the equilibrium dispersion of wage offers and could potentially increase equilibrium wages and productivity if they raise the reservation match quality both employers and workers (Autor, 2001).

Klonner and Nolen (2008) assess the effect of mobile phone coverage on rural labour market outcomes in South Africa. Similar to other countries in sub-Saharan Africa, South African labour markets are characterized by low wages, high rates of under- and unemployment and significant search costs. To address the endogenous placement of mobile phone towers, the authors use topographical data as an instrument for tower placement. They find that the introduction of mobile phone coverage is associated with a 15 percent increase in employment, with most of the effect due to increased employment by women. They also find a significant shift in occupational patterns: with the availability of mobile phone coverage, employment shifts away from agricultural occupations, with no significant shifts between self-employment and wage-employment.

2.3.2.2 How Mobile Phones can Improve Coordination among Firms

Information technology has the potential to increase productivity growth in Africa, especially of small-scale firms. In the literature from industrialized countries, Litan and Rivlin (2001) found that the internet improved management efficiency of U.S. firms. By improving communication between firms and their suppliers, mobile phones can enable firms to manage their supply chains more effectively, streamline their production processes and engage in new activities (Hardy, 1980; Roller and Waverman, 2001). This would reduce stock-outs and interruptions in production, which are of particular concern for small-scale firms in rural areas with limited supply options. While there are no empirical studies of the impact of mobile phones on supply-chain management in Africa, qualitative research in South Africa and Egypt suggests that mobile phones were associated with increased profits, significant time savings and improved communication with suppliers for small-scale firms (Samuel, Shah, and Handinham, 2005).

2.3.2.3 How Mobile Phones can Generate Additional Employment

One of the most direct economic impacts of mobile phones in Africa is through job creation. With an increase in the number of mobile phone operators and greater mobile phone coverage, labor demand within these sectors has increased. For example, formal sector employment in the private transport and communications sector in Kenya rose by 130 percent between 2003 and 2007 (CCK, 2008), suggesting that mobile phones have contributed to job creation.

The mobile phone sector has also spawned a wide variety of business and entrepreneurship opportunities in the informal sector. While we would expect job creation in any new growth sector, many of these employment opportunities are directly related to the specific business strategies of mobile phone companies in Africa. For example, because most Africans use pre-paid phones (or "pay as you go"), mobile phone companies had to create extensive phone credit distribution networks in partnership with the formal and informal sector. Thus, small shops that have traditionally sold dietary staples and soap now sell mobile phone credit (airtime), particularly in small denominations. Young men and women are often found selling airtime cards in the streets. Numerous small-scale (and often informal) firms have also opened shops to sell, repair and charge mobile handsets, either using car batteries or small generators. In the early years of mobile phone usage, entrepreneurial individuals started businesses to rent mobile phones, especially in rural areas. While Klonner and Nolen (2009) suggested that mobile phone coverage has been successful in generating employment opportunities, to date, there have not been studies examining the impact of mobile phones on both formal and informal job creation.

2.3.2.4 How Mobile Phone Can Reduce Risk

Sub-Saharan Africa is an inherently risky environment. Covariate shocks, such as natural disasters, conflicts and epidemics, routinely affect households. Kinship ties play both important social and economic functions in African society, specifically in creating informal insurance networks, increasing access to credit and savings and reducing risk (Grimad, 1997; de Weerdt and Dercon, 2006). At a basic level, mobile phones improve communications among members of a social network both within a country and across international boundaries. The reduction in communication costs can increase the speed of information flows within the network, thereby allowing them to respond better to shocks. Mobile phones also allow households to obtain information about potential shocks, allowing them to use such information to make planting and harvesting decisions, which can have important effects on yields (Rosenzweig and Binswanger, 1993). Finally, improved communications among members of a social network can also affect social learning, which can in turn influence the rate of technology adoption, especially of cash crops (Bandiera and Rasul, 2006; Conley and Udry, 2010). Existing economic evidence on the impacts of mobile phones and social networks is limited, but this has been extensively discussed in the field of sociology (de Bruijn, Nyamnjoh, and Brinkman, 2009).

2.3.2.5 How Mobile Phones Can Provide Services and Innovative Development Projects

The potential for using mobile phones as a tool for economic development has not gone unnoticed by African governments, donors, mobile phone companies and non-governmental organizations. An emerging trend is the development of mobile phone-based services and products that go beyond basic voice calls and text messaging. While these services have often focused on entertainment applications ("apps") in wealthier countries, these applications are

providing opportunities for disseminating agricultural price information, monitoring health care and transferring money in poorer countries. Some mobile-based services are being provided entirely by the telecommunications sector, some entirely by the public sector, and some a partnership between the two.

2.4 CONSTRAINTS OF MOBILE PHONE USAGE

Over the years, there had been broad agreement among scholars that the adoption and use of mobile telephony has positive economic effect even though estimates of these effects vary. However, some scholars have identified certain constraints to its effective usage. Among which are Haruna, Jamilu, Abdullahi and Murtala (2013) , identified high cost of subscription charges, poor quality of mobile phone , accessories, and power problems. In line with this Aigbeakaen, Sanusi and Ndayi (2007) identified network coverage and financial as the major constraint. Likewise Seini, Anna and Bimbika (2012) opined that rural areas have grid – supplied electricity.

The review of available literature have established the role played by mobile telecommunication to economic development but none of such studies had been carried out in Kabba-Bunu Local Government Area of Kogi State. Thus, in order to expand evidence and knowledge, particularly with respect to basic economic studies, prospective applications and the needs of users around financial services in developing countries, this study was carried out.

CHAPTER THREE

STUDY AREA AND METHODOLOGY

3.1 INTRODUCTION

This sub section discusses the study area of the research work. The geographical setting and history of the area were discussed. Further explanations of the relief, weather and climate, population and socio-economic activities as well as telecommunication development in Local Government Area are discussed here.

3.2 STUDY AREA

3.2.1 Location and Size

The area under study lies between latitude $7^0\ 30''$and $8^0\ 30''$ N and longitude $6^0\ 00''$ and $6^0\ 30''$ E. It shares common boundary with East Yagba to the North-West, Ijumu to the South-West, Lokoja to the North-East, and Okehi to the South (Fig. 3.1).

3.2.2 Geology and Reliefs

According to Clayton (1958), there are two major land surfaces: the stable and the erosional land surfaces. The stable, which he sub divided into African and Niger lateritic plains, consist of level or undulating plateau surface at about 1,200ft for the African lateritic plains and over 759ft for the Niger lateritic plains. Both surfaces are characterized by smooth rounded inselbergs which particularly are numerous in the area.

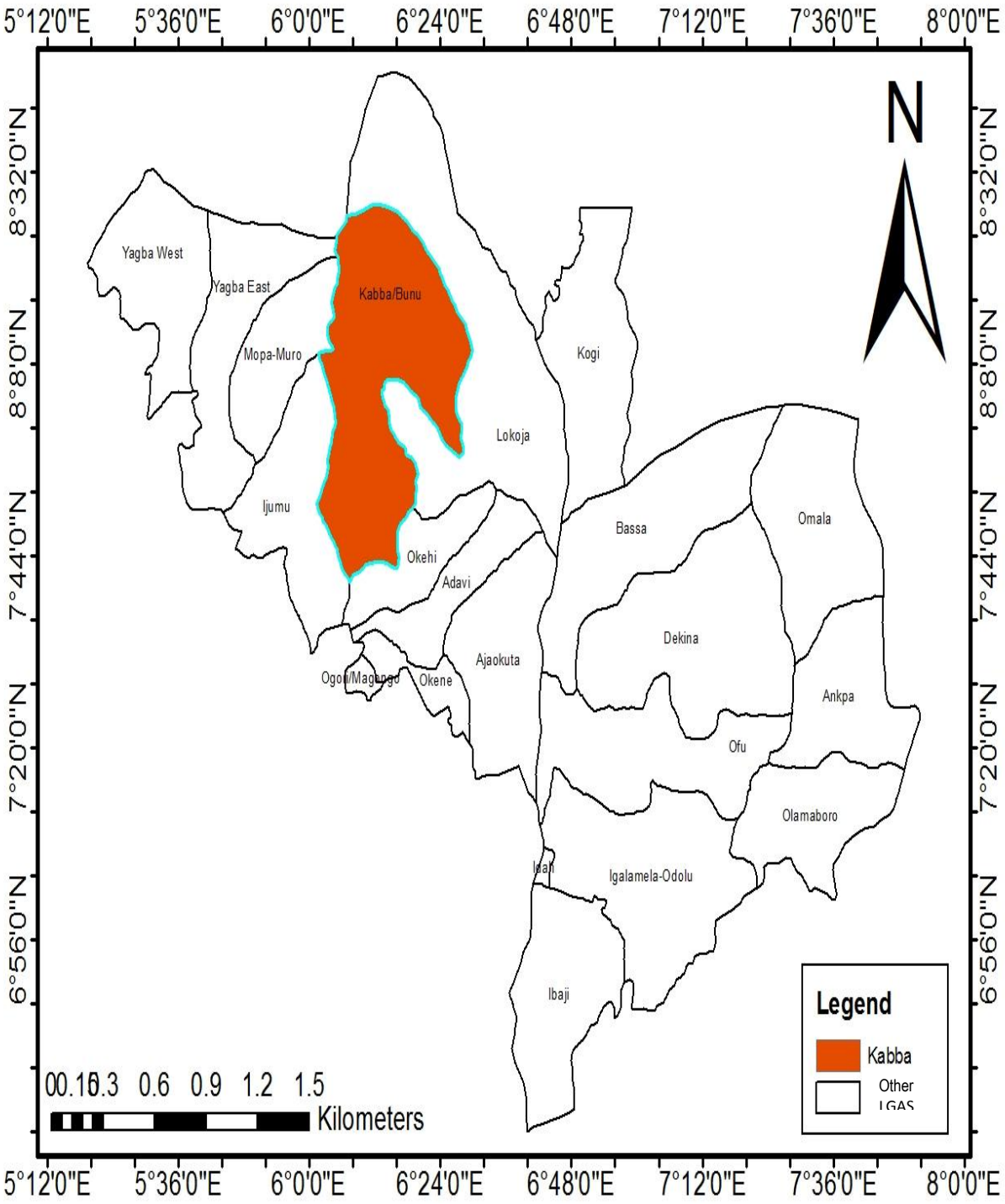


Fig 3.1: Map of Kogi State Showing Kabba – Bunu LGA
Source: Land and Survey Department, Lokoja.

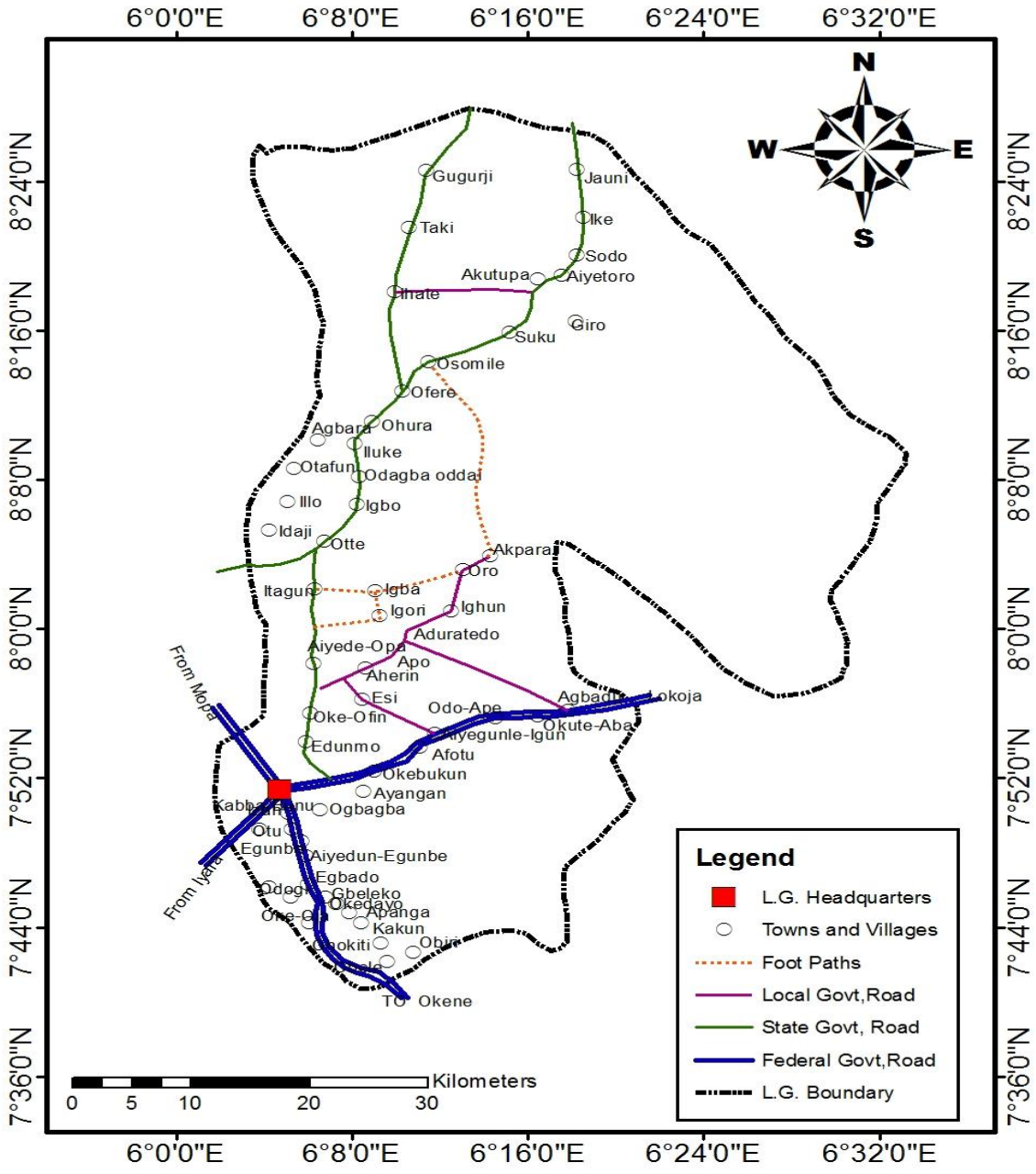


Fig 3.2: Map Kabba – Bunu LGA
Source: Land and Survey Department, Lokoja.

3.2.3 Weather and Climate

The area is well watered with an average annual rainfall of 1,397mm, although there were exceptional cases when the average dropped to 1048mm (1958) and 1,107.7mm (1964) while in 1957, the annual was 1,963.7mm (Fashagba, 1970). The rainy season begins in late March, with maximum precipitation occurring towards the end of the rainy season and is followed almost immediately by drought condition. September is the wettest month with over 203.2mm of rain, but in November, the area is already so dry that all parts receive less than 25.4mmm of rain.

The dry season, which lasts from November to early March, is usually a period of high temperatures (36.7^0C in the day) and intense heat. At this time of the year, farming activities come almost to a standstill, the rivers and streams dry up and water for domestic use become very scarce. The cold harmattan from the North east comes during the dry season, and usually has the effect of reducing the relative humidity from 80% during the rainy season to about 60%.

3.2.4 Drainage

Generally, the area is a well drained plain. River Osee being the only notable river, although brooks occur (in Kabba district), while in Bunu area, rivers like Pameranko and Ejjin exist (Fashagba, 1970, Maliki 1975).

3.2.5 Soils and Vegetation

The soils of the area typically consist of about 0.46m of grayish-buff, slightly clayed loam and over laying vesicular or pisoliticiron stone (Fashagba, 1970). According to Clayton 1958, the soils are mostly skeletal, consisting of pale-brown to orange brown sands or grits with much

quartz stones interspersed with pockets of sand wash. At the scarp foot, the soils vary with the composition of the parent rock. At the uplands, soils are coarse and gravely, Fadama lands exist along parts of the rivers.

In addition, there are soils containing concretionary iron stone gravel and heavier dark-coloured fadama, locally called "Ipoto" soils underlaid by a pale mottled silty horizon. These soils and swampy "Akuro" (fadama) lands provide large areas for growing early yams, maize and various types of vegetables as the "Akuro" normally contains some metres of water held up by the clayey soils.

The vegetation pattern of the area falls to that of the southern Guinea Zone. This vegetation has been greatly interfered with through man's activities in form of annual bush firing for games, cultivation, indiscriminate cutting down of trees for fuel and overgrazing.

3.2.6 Population and Socio-Economic Activities.

The population of Kabba-Bunu LGA is given as 145,446 in the 2006 national population census. There are 57 villages in the Local Government Area with Kabba being the Headquarters.

Like many other Yoruba areas, agriculture plays a dominant role in the economy of the people. It serves as both primary and secondary occupation of the majority particularly those in the rural areas.

The farming system is one of root crops mixed with grains. Yam is the staple food of the people. Other crops include cassava, guinea corn, maize, beans, rice, cashew nuts, bananas and vegetables.

Livestock plays a very minor role in the rural economy of the people. Small animals such as goats, sheep as well as chickens are kept in nearly every compound. Trade equally plays a role in the economic life of the people. The major articles of trade are agricultural products, wears, building materials, provisions, pharmaceutical products, electrical and electronic materials and the likes that are majorly sold in Kabba town.

As a result of the creation of states in 1991, many civil servants were deployed home which made room for the increment in the number engaged in civil services, yet this cannot be compared with those in the farming sector. The major civil service is teaching either in the primary or secondary schools, staff of the Kogi State College of Education Technical and ABU DAC. Others include health workers. There are those who work in LGA secretariat as administrators and politicians.

It should however be noted that majority of these civil servants engage in farming and or trade as their secondary occupations.

3.3 METHODOLOGY

This section discusses the reconnaissance survey, types and sources of the data using both primary and secondary data to gather information, instrument of data collection mainly through the use of questionnaires, sampling design and sample size and the methods of data analysis.

3.3.1 Reconnaissance survey

A reconnaissance survey of Kabba-Bunu LGA was carried out in order to acquaint the researcher with the study area. It was discovered that major commercial activities take place in Kabba town being the major urban centre while in the rural areas the sales of farm produce is predominant; other businesses are not as well represented as in Kabba town. Also, in Kabba town there are GSM network services like Mtn, Glo, Airtel and Etisalat while in the rural areas, hardly can there be two network services, and some villages have no network services at all.

3.3.2 Types of data required for the study

The types of data required to achieve the study objectives are:

i. gender, age and level of education of the people to be sampled
ii. types and location of businesses they are engaged in
iii. sources of patronage of the business
iv. How the respondents have being carrying out their business transactions before the advent of mobile telephones in Kabba-Bunu LGA.
v. The various problems or limitations faced with these methods of carrying out their business transactions before the use of mobile telephones.

vi. The year they started using GSM, the different networks they use, how many networks they subscribe to at once, how much they spend on GSM monthly, proportion of GSM expenses that is for business transaction

vii. The various ways the use of GSM has made business easier and better for them than before the advent of mobile telephone.

3.3.3 Sources of data

In an effort to achieve a better and meaningful result for this study, the researcher made use of both primary and secondary sources of data collections.

3.3.3.1 Primary source of data

A field survey using a questionnaire was carried out amongst the people in the sampled communities that made up Kabba-Bunu LGA to elicit the information required for the study. Respondents were asked about their age, sex, level of education, type of business engaged in, location of the business and how the location of business has affected their usage of mobile phones. Other information requested from the respondents included various question about the usage of mobile phones in running their businesses as well as the various problems confronting them in course of using mobile phones to run their businesses in order to get relevant information about the research objectives.

3.3.3.2 Secondary source of data

Secondary data were sourced through the documented materials such as textbooks, journals, magazines, conference papers and the internet. These materials formed the bulk of the literature

review which validates the fact that the research has rich theoretical and scientifically proven bases.

3.3.4 Sampling technique and sample size

The population of Kabba-Bunu LGA is given as 145,446 in the 2006 national population census. There are 57 villages in the Local Government Area with Kabba being the Headquarters. Most of the settlements in Kabba- Bunu LGA are yet to have mobile telecommunication services and also, they are mainly rural, therefore the settlements with at least one mobile telecommunication network and business transactions was purposively selected. While Kabba town represented urban settlement being the only urban centre in the LGA, the others represented rural settlements. Thus a total number of ten (10) settlements were used as sample points: nine are rural and one urban.

Settlements with at least one mobile telecommunication service and business transactions are:

1. Kabba
2. Kakun
3. Otu
4. Egbeda
5. Aiyede
6. Olle
7. Odo Ape
8. Oke- bukun
9. Oke Ofin
10. Edumo

Using Krejcie and Morgan (1970) sample size selection technique, 384 sample size was selected for detailed studies, whereas, purposive sampling method was used to select the respondents.

For the distribution of questionnaire per village, Yamane (1967) formula was used which is given as follows:

$$\frac{n \times ss}{N}$$

Where n = population of the sampled settlement
ss = total number of questionnaire to be distributed
N = the total population of the sample size

Table 3.1 Distribution of questionnaire per village

S/N	Name of Settlement	Type of Settlement	Population	No of Questionnaire
1.	Kabba	Urban	36,124	276
2.	Kakun	Rural	1,974	15
3.	Otu	Rural	952	7
4.	Egbeda	Rural	880	7
5.	Ayede	Rural	3,371	26
6.	Olle	Rural	2,289	17
7.	Odo Ape	Rural	1,724	13
8.	Oke Bukun	Rural	1,561	12
9.	Oke Offin	Rural	1,150	9
10.	Edumo	Rural	222	2
Total				**384**

Source: NPC (1998), 1991 Census: Locality Extract and Author's computation

3.3.5 Method of data analysis

The information and data obtained on the field through the use of questionnaires and documented materials were subjected to various descriptive and inferential statistical tools such as table and percentage for clarity and interpretation of information. The analysis of demographic and education characteristics of the respondents were carried out from the data collected from the questionnaire were based on simple statistics supported by series of tables showing percentage calculations of some variables. ANOVA was used to test the relationship between gender, level of education, type and location of business, and the effective usage of GSM. All data were coded into the SPSS statistical tool package.

To achieve objective i which is, identify the various ways the people of Kabba-Bunu LGA, carried out their business transactions over space before the advent of mobile telecommunication in the area, tables were used

For objective ii, which is, assess the differential effects of gender, level of education, type and location of business on the effectiveness of use of mobile telecommunication in business transactions, tables, bar charts and ANOVA methods of analysis were used.

While objective iii, which is, examine the constraints to the effective use of mobile telecommunication in business transactions in the study area, was achieved using tables and chart.

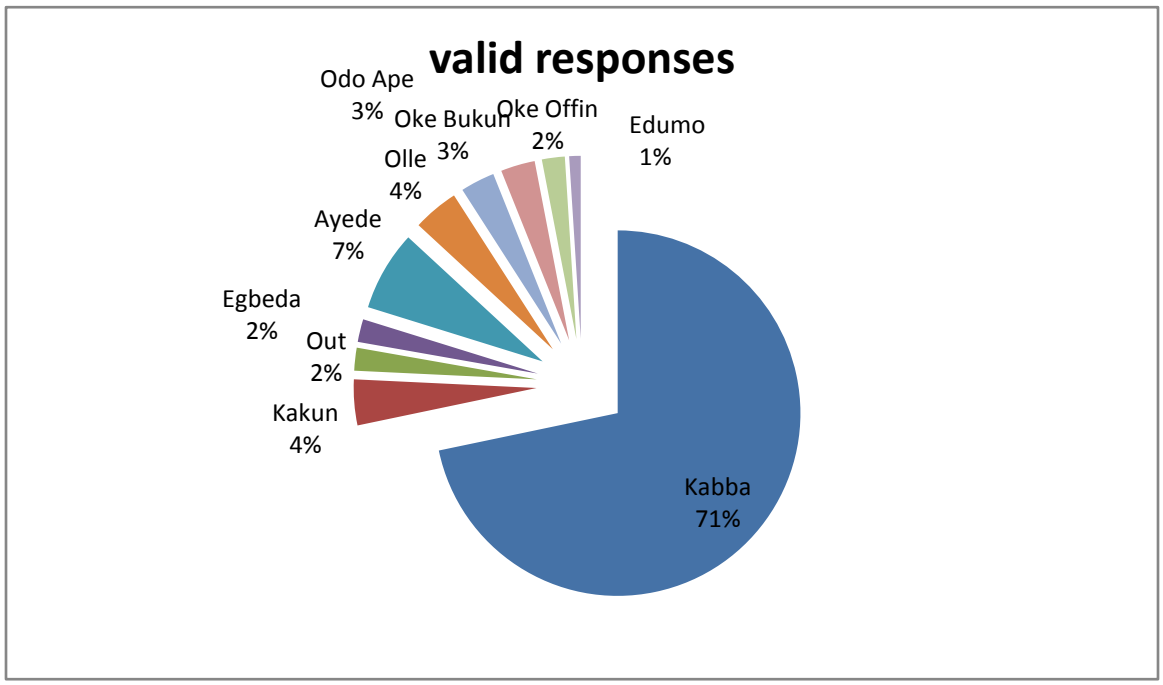
CHAPTER FOUR
DATA ANALYSIS AND DISCUSSION OF RESULT

4.1 INTRODUCTION

This section of the research work reveals the data obtained from the field survey as well as their analysis. The first aspect presents the response rate of the questionnaire administered to the respondents including their bio-data capturing fields such as age, educational status, gender and so on of the respondents. The second section of the questionnaire collected information in respect to the nature of the respondents business and its location as well as the effect of such business on sales turnover. Section three elicited information in respect to the effect of mobile telecommunication on the economic activities of Kabba-Bunu LGA, that is; has the coming of mobile communication improved upon sales turnover and enhanced business operation? If yes, how? This and many more would be analyzed in this chapter of the research.

The samples were drawn from the total number of business operators in Kabba-Bunu LGA of Kogi state. Legitimate business operators were issued questionnaires by the researcher which was designed in line with the objectives of the study. Descriptive statistics such as frequency, percentages, charts, and ANOVA analysis were used in analysing the data collected from the survey. Of the 384 copies of research questionnaire distributed to the sampled respondents resident in Kabba-Bunu LGA of Kogi state, 350 copies were completed and valid for analysis, representing approximately 91% of the total questionnaire in issue which is a significant proportion valid for analysis.

Figure 4.1: Proportional representation of rate of responses gathered



Source: Author's computation

The returned and valid copies were further scrutinized for errors, omissions, completeness and inconsistencies of which no addition to the initial 350 valid questionnaires was made.

4.2 BIO-DATA CHARACTERISTICS OF THE RESPONDENTS

The bio-data of the respondents are seen under this sub-section. Descriptive statistics was used to describe the trend occurring among the data collected from the field.

4.2.1 Gender and age of the Respondents

Business operation is a unisex occupation without gender restriction. Thus traders in all forms of businesses are males and females as presented in table 4.1

Table 4.1: Gender and Age Distribution

Gender	Frequency	Percentage	Age Distribution		
		%	20-30yrs	31-40yrs	above 40yrs
Male	196	56	96	85	0
Female	154	44	11	9	39
Total	350	100	107	94	39

Source: Author's Field Work (2014)

From table 4.1, out of the total sampled population, 96 and 85 males fell between 20-30 years and 31-40 years respectively while only 11 and 9 females fell within this age categories. This shows that a significant proportion of males in the sampled population are actively involved in businesses which can in turn significantly improve upon economic activities as based on economists' classification of population, 20 – 40 years form part of the active population to bring about a boom in the economy since they are vibrant and very active in production processes. While the remaining age category of 41 and above are inactive. The fact that more males are involved in business than females in the study area could be attributed to the types of business involved.

4.2.2 Educational Qualification of the Respondents

Education is a form of learning in which the knowledge, skills, values, beliefs and habits are acquired. Table 4.2 presents the educational status of the respondents.

Table 4.2: Educational qualification (by gender) of the respondents

Educational qualification	Male		Female	
	Frequency	Percentage (%)	Frequency	Percentage(%)
No formal education	20	5.7	31	8.9
Primary school education	54	15.4	52	14.9
Juiour secondary Education	30	8.6	20	5.9
Senior sch education	43	12.3	17	4.9
OND/HND/BSc/MSc	45	12.9	32	9.0
Others	4	1.1	2	0.6
Total	**196**	**56**	**154**	**44**

Source: Author's Field Work (2014)

Table 4.2 revealed that the population with the highest number of respondents is primary school. Moreso, it revealed that the males(56%) are more educated than the females (44%) as 20 males have no formal education, 54 have primary education, 30 have Junior secondary education, 43 have Senior secondary education, 45 have higher educational qualifications and 4 have others. When compared to the females, more are without formal education (31), 52 with primary education, 20 with Junior secondary education, 17 with senior secondary education, 32 with higher educational qualification and 2 with others. This shows that there is gender inequality in the study area as many females do not further their education but end up as full time house wives at the end of their primary education. Just few end up advancing their education.

4.3 LOCATIONAL ATTRIBUTES AND TYPES OF BUSINESS

The location of a business is very important to its success. The citation of a business either at urban or rural area determines its success based on the type of business.

4.3.1 Types and location of business.

The various business types considered in this research work are shown in table 6 for a better coverage of all the businesses being practiced in the LGA.

Table 4.3: Types and Location of business

Location of Business	Building Materials sellers	Farm Produce sellers	Food Stuff sellers	Pharmaceuticals products sellers	Electronic Appliances sellers	Provision Sellers	Total
Kabba	55	18	62	20	43	52	250
Out	-	4	1	-	-	1	6
Kakun	-	10	2	-	-	2	14
Egbede	-	4	2	-	-	1	7
Olle	1	12	1	-	-	1	15
Edumo	-	2	-	-	-	-	2
Ayede	-	18	2	-	-	4	24
Oke Offin	-	6	1	-	-	1	8
Odo Ape	1	7	1	1	-	2	12
Oke Bukun	-	7	2	1	-	2	12
Total	57	88	74	22	43	66	350

Source: Author's Field Work (2014)

Table 4.3 shows the location and types of business. Out of the 350 respondents, 250 were from Kabba town, of which 67 engage in the sale of various food stuff, 55 persons are into the sales of building materials, 52 persons are provisions sellers, 43 engage in the sales electrical appliance, while 20 and 18 are into the sales of pharmaceutical products and farm produce. These figures are in sharp contrast with the responses from the rural areas where the highest respondents engage in the sales of farm produce. This shows that a significant proportion of the business types are situated in urban regions which accounted for a boost in sales turnover by virtue of the high population density in the urban region whereas the rural accounted for very few.

4.3.2 The location and running of business

The location of a business affects its running either positively or negatively. Thus while asked whether the location of business either in the urban or rural area affects the running of their business, 231 respondents representing 66% of the total population agreed that the citation of the business has positively affected the running of their business in that it boost sales turnover since it is situated in the town while 119 disagreed representing 34%. Their disagreement may be due to the citation of their business in rural area where the poor lives. This shows that the citation of businesses in urban regions significantly improves the performance of businesses the world over.

4.3.3 The location of business and the usage of mobile phones

The usage of mobile phones for the running of business is more prevalent in urban areas than in the rural areas as indicated by the responses gotten from this research work.

While asked if the location of business either in the rural or urban has affected the usage of mobile phones, 261 persons representing 74.6% agreed that the location of their business has effect on their usage of mobile phones while 87 disagreed with this fact. By virtue of the issuance of licences to telecommunication industries to operate in Nigeria, most participants in the industry installed their network satellites in urban regions and a hand full in rural settings. This shows how the effect of such installation is felt upon business usage of handsets to communicate. As it is well known that the coming of telecommunication networks has made the world a global village for business transactions, a significant proportion of the urban populace tend to benefit from this when compared with the rural poor. This agrees with Seini, *et al* (2012), who observed that "Despite these clear countrywide patterns, there were some interesting differences between urban and rural areas. For instance, although mobile phone penetration in rural areas is high, rural respondents reported using their phones less frequently than urban respondents. This may reflect limited service coverage, and perceived cost: more focus groups in rural areas expressed concern about the difficulty of obtaining a reliable service signal, and discussed the expense of using mobile phones." Likewise, Sridhar and Sridhar (2003) agreed that telecommunication has the potential to benefit urban areas.

4.3.4 Effect of location of business on mobile phone usage

The exact effect of mobile phone usage for the purpose of running business is very important for the growth of that business. Thus the respondents were asked what effect the usage of mobile phone has on their businesses.

Table 4.4: **Effect of location of business on mobile phone usage**

Effect	Frequency	Percentage (%)	Cumulative percentage
Increase in my purchases and sales	218	62.3	62.3
Decrease in my purchases and sales	59	16.9	79.1
Increase in the cost of running the business	73	20.9	100
Total	**350**	**100**	

Source: Author's field work 2014

Table 4.4 shows that the coming of telecommunication network has increased purchases and sales since 218 persons representing 62.3% agreed while 59 and 73 persons representing 16.9 and 20.9% respectively, said that it decrease purchases and sales and at the same time increases the cost of operation. This implies that the introduction of telecommunication into the Nigerian economy has to a great extent enhanced business activities in that it boost purchases and sales thereby resulting to increased profitability and increased Gross Domestic Products (GDP). The GSMA (2012), reports that, "mobile phones have improved communication, social inclusion, economic activity and productivity……."

4.3.5 Sources of patronage

The sources of patronage has to do with where the customers come from. Either from nearby villages, far or other locations.

Table 4.5: Sources of patronage

Source	Frequency	Percentage (%)	Cumulative percentage
Nearby villages	227	64.9	64.9
From far villages	60	17.1	82.0
Others	63	18.1	100.0
Total	**350**	**100.0**	

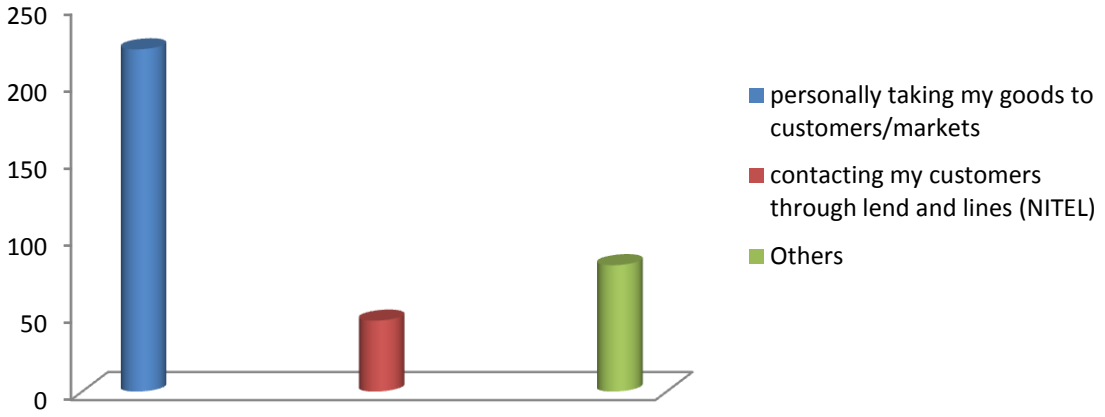
Source: Author's Field Work (2014)

Table 4.5 reveals that most of the respondents' customers come from the nearby villages to make purchases as indicated by 227 persons representing 64.9% of the sample size, 60 constituting 17.1% said from far villages while 63 representing 18% said from other places other than the local government. This implies that the advent of the introduction of telecommunication has brought about intra and inter-customer relationship which enhances productivity.

4.3.6 Means of running business before the advent of mobile phones

Before the advent of mobile phones, the people of Kabba-Bunu LGA had been into various types of business. Thus there is the need to know how they were carrying out their businesses before the introduction of mobile phones in the LGA.

Figure 4.2: Means of running business before the advent of mobile phone.



Source: Author's Field Work (2014)

The respondents, while asked how they were carrying out their businesses before the advent of mobile phones said that they personally take their goods to customers/markets through mobile means like lorries and this constitutes 63.4% of the sampled population, 46 persons representing 13.1% said they contact their customers via the use of landline while 23.4% said they use other means. It is obvious from this, that the advent of mobile telecommunication has eased business transaction from carrying goods about to just making calls. This is in agreement with Bakare and Gold (2011), who observed that "the introduction of GSM has reduced the need for physical contact……. Unlike before, many people will rather make a call first to confirm any appointment before they embark on the journey. Many businesses which were usually negotiated through direct physical contact or face to face are being carried out through GSM phone calls."

4.3.7 Problems faced before the usage of mobile phones

There were various problems or limitations associated with the running of business in the Local Government Area before the advent of mobile phones. The respondents were thus asked what problems they faced back then.

Table 4.6: Problems faced before the usage of mobile phones

Problems	Frequency	Percentage (%)	Cumulative percentage
No access to land line	82	23.4	23.4
Inability to contact my customers at will	268	76.6	100
Total	**350**	**100**	

Source: Author's Field Work (2014)

Most of the sampled respondents faced the challenge of inability to contact prospective customers at will as indicated by 268 persons representing a 76.6% proportion of the sample size while 23.4% said the basic challenges faced by them was inaccessibility to landline facilities. It is glaring and obvious that businesses weren't making enough profit by virtue of handicapped day-to-day sales made but by virtue of the advent of mobile telecommunication network, sales turnover increased thereby increasing profitability which end up solving some of the challenges faced by business people. Bakare and Gold (2011) observed that, "NITEL, the only national monopoly operator in the sector, was synonymous with epileptic services and bad management which made telephone then to be unreliable, congested, and expensive and customer unfriendly."

Thus most of the respondents could not contact their customers at will then through the landline phones.

4.4 ACCESS TO AND USAGE OF MOBILE TELEPHONE FOR THE PURPOSE OF BUSINESS

To have access to mobile telephones here is to have opportunity to, or means of using the mobile phones for the purpose of running business.

4.4.1 Access to a mobile phone

It is very important to know whether the people of the study area have opportunity to, or means of making use of mobile telephones for the purpose of running their businesses, thus the question was asked.

Table 4.7: Access to a mobile phone

Valid response	Frequency	Percentage (%)	Cumulative frequency
Yes	334	95.4	95.4
No	16	4.6	100
Total	**350**	**100**	

Source: Author's Field Work (2014)

As indicated by table 4.7 most business operators currently own a mobile phone for business transaction as indicated by 95.4% of the sampled population while 16 persons representing 4.6% have no access to mobile phones. This shows the necessity of mobile phone technology to the

sustainable growth and survival of business activities within the Nigerian economy. Seini, *et al* (2012), opines "that phones—in particular, mobile phones—have become a primary mode of communication across the country. The overwhelming majority of households had access to a mobile phone; four out of five survey respondents reported personally owning a mobile phone; and at the household level mobile phones appeared to be the most commonly owned electrical appliance. From 2008 to 2011, increasing numbers of households in both rural and urban areas obtained access to multiple (three or more) mobile phones." Likewise, Bakare and Gold (2010), observed that, "the introduction of GSM in Nigeria has actually revolutionalized information and communication sector and increased the accessibility and utilization of GSM among generality of Nigerians." Most of the respondents have access to, and also utilize mobile phones for the running of their businesses.

4.4.2 Year of commencement of GSM for business

There is the need to know when the respondents started using mobile phones for the purpose of running their business so as to measure the effect on their businesses.

Table 4.8: Year of commencement of GSM for business

Year	Frequency	Percentage	Cumulative %
2001-2010	261	76.9	76.9
2010-till date	81	23.1	100
Total	**350**	**100**	

Source: Author's Field Work (2014)

Table 4.8 shows that 269 persons representing a significant proportion of the population sample (76.9%) adopted the use of GSM for business activities immediately after the advent of mobile telecommunication network in 2002, while only 23% adopted its usage later. As opined by Bakare and Gold (2011), "The Nigeria's telecom sector witnessed a major revolution in 2001 with the granting of the global system for mobile telecommunication (GSM) license to providers". This allows most of the people in Kabba-Bunu LGA to have access to mobile phones for the purpose of running their businesses.

4.4.3 Availability of GSM networks.

For a better analysis of this research, there is the need to ask the respondents if GSM networks are available in the study area and the responses gotten showed that the GSM network has to a great extent circulated the urban region as indicated by 322 persons representing 92% of the total population while only 8% of the sample size said no. This shows that GSM networks have significantly spread round the economy. Total mobile penetrations has more than doubled in all regions of the world since 2005, which can be attributed to numerous factors including a fall in handset and usage cost and an improvement in service quality and network coverage (GSMA 2012).

4.4.4 Commencement of GSM networks in the study area.

GSM network coverage is fast growing in Nigeria. Some places have been covered, while there are many yet to be covered in the study area. Also the year of commencement of GSM network in the sampled settlements is not the same. So there is the need to ask when the network started operation. Majority of the respondents, 272 persons representing 77.7% said that the network started working between 2001-2010, while 22.3% said it kick started operation in 2011. This is

in agreement with Bakare and Gold (2012), who observed that "the Nigerian's telecom sector witnessed a major revolution in 2001 with the granting of global system for mobile telecommunication (GSM) license to providers".

4.4.5 First network made use of

In the sampled settlements, the networks that came first differs. This makes the usage to also differ, therefore there is the need to ask which one was first made use of for the purpose of running business.

Table 4.9: First network made use of

Network provider	Frequency	Percentage (%)	Cumulative percentage
MTN	250	71.4	71.4
GLO	83	23.7	95.1
Zain	17	4.9	100
Total	**350**	**100**	

Source: Author's Field Work (2014)

A significant proportion of the sampled population were users of MTN representing 71.4%, 23.7% of the populace commenced with GLO while Zain users were 4.9% of the population. This implies that the first network that gained ground in Nigeria was MTN due to its early commencement which has earned it wide popularity. MTN claims the first network to make a call in Nigeria on the 16th of May, 2011, Econet (Zain), however, claims to be the first GSM

Company to launch its services in Nigeria. Mojekeh (2008) observes that, "MTN, Nigeria's leading GSM Communication Service provider has the widest coverage in Nigeria."

4.4.6 Number of networks subscribed to, for the purpose of business

As a result of differences in the quality of services provided by the various GSM network providers we have, many people subscribe to more than one at the same time for the purpose of running business. 208 persons representing 59.4% subscribed to 2 networks, 36.9% of the sample population subscribed to only one while 3.7% subscribed to none of the above networks. This implies that the nature of their business determines their subscription and at the same time the amount of satisfaction derived also determines the number of subscription. Aker and Mbiti (2011), agreed that "many individuals own several handsets or have multiple subscriber identity module (SIM) cards.''

4.4.7 Reason for subscription to more than one mobile network.

The fact that the various network service providers have variations in their services, a business man/woman will not rely on just one network for the purpose of his/her business, thus the question was asked why they subscribe to more than one mobile network.

Table 4.10: Rating the reasons for subscription to more than one mobile network.

Reason	Frequency	Percentage (%)	Cumulative percentage
Fluctuations in services	234	66.9	66.9
High tariff charges	76	21.7	88.6
Recharge cards not readily available	40	11.4	100
Total	**350**	**100**	

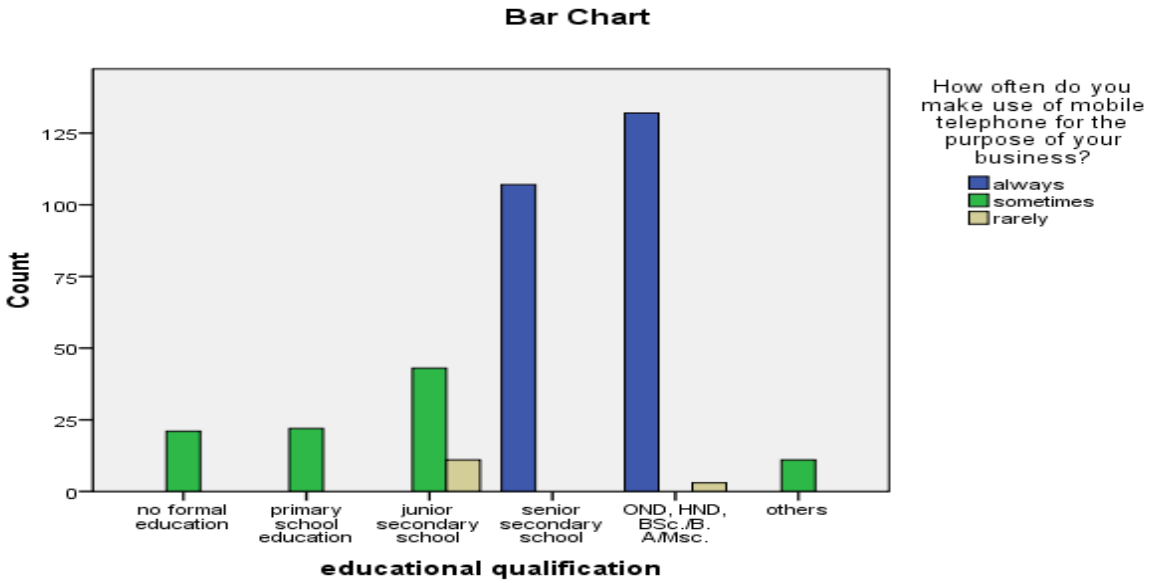
Source: Author's Field Work (2014)

Fluctuation in services happen to be the major reason why most entrepreneurs use more than one mobile network service as identified by 234 respondents constituting approximately 67% of the sample size, 22% of the respondents said high tariff charges by the service providers contribute to the reason why they implore the use of more than one mobile network service while 11% said recharge card are not readily available. Mokejeh (2008) observes, "High call costs, poor service quality, charge for terminated calls, fraudulent billing; successful loading of cards without the fund being available; fund being available but no access to the funds" as problems of GSM in Nigeria and as a result, many subscribers prefer more than one network.

4.4.8 Frequent use of mobile telephone for the purpose of business

The frequency at which the respondents make use of mobile phones for the purpose of running their businesses is very important for this research work as it helps to measure the effect of usage.

Figure 4.3: Frequent use of telephone for the purpose of business



Source: Author's field work (2014)

Most entrepreneurs in Kabba LGA frequently use mobile telephony for the purpose of their business may be for reason being that they need to achieve the ultimate goal of satisfying their customers and maintain good rapport as indicated by about 73% of the total responses gathered. Some said they sometimes and seldom use it as indicated by approximately 23% and 4% of the sampled responses respectively. Seini, *et al* (2012), opines "although mobile phone penetration in rural areas is high, rural respondents reported using their phones less frequently than urban respondents. This may reflect limited service coverage, and perceived cost: more focus groups in rural areas expressed concern about the difficulty of obtaining a reliable service signal, and discussed the expense of using mobile phones." Most of the respondents that use mobile phones

frequently for purpose of their businesses are those in the urban centre, those in the rural areas do not make use of phones frequently.

4.4.9 Monthly subscription for GSM.

it is quite imperative to know how much the people subscribe monthly for the purpose of running their businesses as this will help to assess how much they value the services of GSM networks for the purpose of their businesses.

Table 4.11: Monthly subscription for GSM.

Amount	Frequency	Percentage (%)	Cumulative percentage
N1,000 - N5,000	215	61.4	61.4
N5,000 – N10,000	63	18.0	79.4
Above N10,000	72	20.6	100
Total	**350**	**100**	

Source: Author's Field Work (2014)

Despite the achievements as indicated by the advent of mobile telecommunication in Nigeria, increased cost input has been attributed to its invention since most entrepreneurs had extraordinary spending ranging from N1000-N5000 as pointed out by approximately 61% of the respondents, 18% and 21% approximately have their cost input ranging from N5000-N10,000 and N10,000 and above. This has obviously brought about increased cost inputs which hitherto results into increased price burden borne by prospective buyers. Seini, *et al* (2012),states that "However, there was no evidence that people were substituting expenditure on essential items for

expenditure on phones, and most respondents limited the amount they spent on phones to no more than 1,000vt per month—approximately 2% of the mean monthly income across respondents."

4.5 EFFECT OF MOBILE PHONE ON BUSINESS

The effects of mobile telephone on business transactions are numerous; some are identified here, likewise the constraints or limitations to its effective use.

4.5.1 Communicating with customers through GSM at will

One of the major uses of GSM for the purpose of running business is the ability to communicate at will with the customers. Hence the question was asked to evaluate the usage of GSM.

Table 4.12: Communicating with customers through GSM at will

Valid response	Frequency	Percentage (%)	Cumulative percentage
Yes	275	78.6	78.6
No	75	21.4	100
Total	**350**	**100**	

Source: Author's Field Work (2014)

Table 4.12 shows that despite the challenges encountered by most entrepreneurs, they can still communicate with all their customers through GSM network at will as indicated by about 79% of the sampled respondents while 21% said no. This shows that the merits of telecommunication networks outweigh its shortcomings as Ricketts (2002) opines among other things that

"telecommunications aid coordination of information flow, provide opportunities for increasing the efficiency of interaction and coordination, and in this manner influence the success of economic activities**.** Economic activities require significant levels of interaction and coordination in order for them to be conducted successfully and efficiently."

4.5.2 Delivery of goods to customers with the aid of GSM.

Entrepreneur do not have to be physically present always before sales can be made. A call can be put across and business transactions made before goods are sent through various means of transportation to the buyers. The advent of telecommunication network has proven that the delivery of goods to customers by entrepreneurs does not need the physical presence of the supposed entrepreneur as indicated by approximately 70% of the sampled respondents in table 25. However, 104 respondents constituting 30% approximately disagreed with this assertion. Aliyu, (2010) agrees with this as he states "….The usage of GSM has greatly reduced rural-urban movements (that is, travelling physically) as people with GSM "travel to cities" without boarding a vehicle.'' The business transactions are made on phone while the goods are sent to the buyers on transit.

Table 4.13: Easy transaction of business with the use of GSM

Valid response	Frequency	Percentage	Cumulative percentage
Yes	213	60.9	60.9
No	137	39.1	100
Total	**350**	**100**	

Source: Author's Field Work (2014)

4.5.3 Easy transaction of business with the use of GSM

With the advent of telecommunication most business operators as indicated by over 61% of the total respondents approximately transact business easily with the use of GSM, while about 39% said they do not transact their businesses easily with GSM. This could be attributed to fluctuations in network services, high cost of recharging or NEPA failure. Aigbeakaen, *et al*, (2007), agrees that, "GSM introduction in Nigeria has eased the conduct of business activities including agricultural business with elimination of hitches in the communication system.''

4.5.4 Influence of GSM on entrepreneur-customer relationship.

The use of mobile network by the entrepreneur and the customers should bring about a change in the way they relate. Thus the need to ask whether it has enhanced a better relationship between them.

Table 4.14: Influence of GSM on entrepreneur-customer relationship.

Influence	Frequency	Percentage (%)	Cumulative percentage
Positively	334	95.4	95.4
Negatively	16	4.6	100
Total	**350**	**100**	

Source: Author's Field Work (2014)

More of the sampled respondents agreed that the advent of mobile telephony has positive influence on their customer-entrepreneur relationship as indicated by about 95% of the total

respondents sampled while only 5% approximately said it negatively influence their business. This shows that the advent of mobile telephony network has significant impact on entrepreneur-customer relationship. The GSMA (2012) reported that, "Mobile telephony has transformed the way in which consumers and businesses operate in developing markets. As fixed lines often remain undeveloped and unavailable to the majority of the population in developing markets, mobile services have often become the universal providers of communication services"

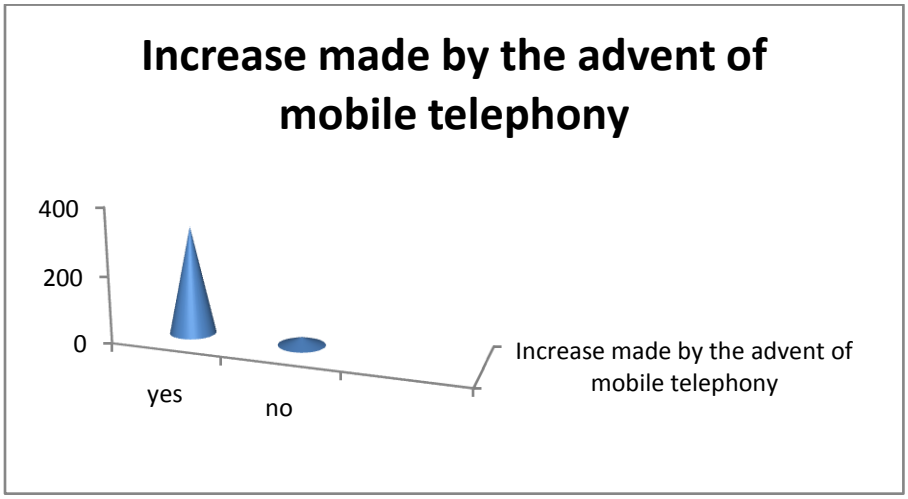
4.5.5 Mobile phone usage and increase in sales and patronage.

Mobile phone usage for business transactions can go a long way to determine the rate of patronage and sales, so it becomes very significant to verify from the respondents if there is an increase or otherwise in sales and level of patronage. A significant proportion of the sampled respondents undoubtedly agreed that mobile phone usage has to a great extent increased their patronage and sales turnover as indicated by approximately 97% of the total respondents while only 3% disagreed with this statement. By implication, it is worth saying that the advent of mobile telecommunication network has significantly impacted upon sales turnover by the incremental changes witnessed. Seini, *et al* (2012), reported a wide range of perceived benefits of increased access to mobile phones, including multiple commercial and financial benefits, connecting with social networks, and accessing key services and information.

4.5.6 The advent of mobile telephony and increase in profit

With the use of mobile telephones for running businesses, it is important to assess its effect on profit made by the businessman/woman. It is therefore relevant to ask if the usage of mobile telephone for the purpose of business has led to increase or decrease in profit.

Figure 4.4: Increase made by the advent of mobile telephone



Also, the birth of mobile telecommunication has obviously boosted profitability significantly by virtue of increasing sales turnover as indicated by approximately 93% of the sampled respondents while the remaining 7% disagreed with this assertion. This shows that increase witnessed in the business is attributable to the advent of mobile telephony.

4.5.7 Problems faced using GSM for business

Despite the numerous advantages of GSM usage for the purpose of running businesses, there are certain problems in its usage. Therefore the question was asked to assess the various problems faced by the users.

Table 4.15: Problems faced using GSM for business

Problem	Frequency	Percentage (%)	Cumulative percentage
Fluctuations in network services	237	67.7	67.7
High cost of recharging	72	20.6	88.3
Electricity power failure for charging phones	35	10.0	98.3
Others	6	1.7	100
Total	**350**	**100**	

Source: Author's Field Work (2014)

Fluctuation in network service delivery happen to be the head challenge faced by virtue of the advent of telecommunication networks by most entrepreneurs as pointed out by approximately 68% of our sampled respondents in Kabba LGA, 21% approximately indicated that its high cost of recharging while 10% and 2% approximately indicated electricity power failures and others. This shows that most entrepreneurs encounter fluctuation in network service delivery while transacting their business may be due to possibly network traffic jam basically which most Nigerians face today. Aigbeakaen *et al* (2007), opines that, "the major constraints in GSM use by farmers were network coverage and financial. All the farmers asserted that using GSM in farm business activities is worthwhile and a necessity." While Seini, *et al* (2012), observes that "few

rural areas had grid-supplied electricity, and thus had to rely on solar cells, batteries, and diesel generators, which can be costly to set up and operate. In such areas, fewer residents were able to charge their mobile phone batteries at home, and ownership of other electrical appliances such as televisions and computers was very limited."

4.5.8 Willingness to Improve usage of mobile telephone for better business transactions

With the improvement made by the mobile phone on business transactions, it becomes quite necessary to inquire if the respondents are willing to improve on its usage. By virtues of the significant impact of the advent of telecommunication network in business transactions, most business entrepreneurs have indicated interest in boosting their usage of mobile telephones for better transactions of their business as indicated by 348 respondents constituting approximately 99% of the sampled size while only 1% disagreed.

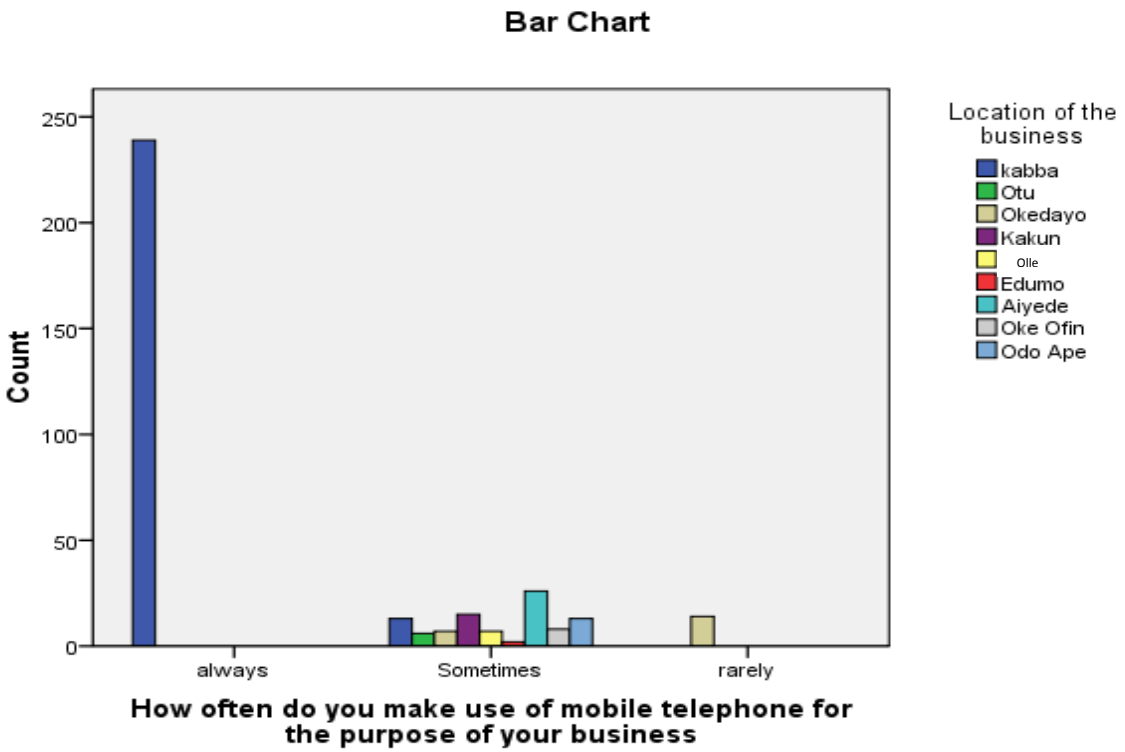


Figure 4.5 Frequent use of mobile phone and location of business

Model Summary[b]

Model	R	R-square	Adjusted R Square	Std. Error of the estimate	Changes statistics					Durbin – Watson
					R. Square Change	**F Change**	**df1**	**df2**	**Sig. F change**	
1	.751[a]	.565	.562	.36876	.565	224.916	2	347	.000	.161

a. predictors (Constant), educational qualification, gender distribution

b. dependent variable: How often do you make use of mobile telephone for the purpose of your business :

ANOVA[b]

Model	Sum of Squares	df	Mean Square	F	Sig
Regression	61.170	2	30.585	224.916	.000[a]
Residual	47.187	347	.136		
Total	**108.357**	**349**			

a**.** Predictors:(Constant), educational qualification, gender distribution

b. Dependent Variable: How often do you make use of mobile telephone for the purpose of your business?

Decision criteria

If p-value is less than 0.05 it means that there is differential effect of gender, level of education, type and location of business on the effective use of mobile telecommunication in business transaction.

If p-value is greater than 0.05 it means that there is no differential effect of gender, level of education, type and location of business on the effective use of mobile telecommunication in business transaction

Figure 4.5 and ANOVA result shows the variation in the data compared. A differential effect was witnessed in the variables being that the mean grew from 0.136 to 30.585% which indicates a more than proportional variation effect made by the learnedness of respondents considered here which accounts for a more usage of telephone for the purpose of their business thereby enhancing their business objectivity. The significant level of 0.000 is far lesser than the set

standard of 0.05 significance level with an f-changes put at 224.916. This shows that more educated males residing in the urban area make use of telecommunication facilities for the purpose of enhancing their business performance. Also, it shows that the differential effect of gender, level of education, business typology and location is quite significant on mobile telecommunication in business transaction.

CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

In this study, an attempt was made to analyze the effects of mobile telecommunication on the economic activities of the people of Kabba-Bunu Local Government Area of Kogi State, Nigeria. For the research to be carried out, both primary and secondary data were used. Questionnaires were.

5.2 SUMMARY

The study reveals that more males are involved in business more than females which could be attributed to the types of business involved. A higher percentage of males are also more educated than females. It was also revealed that the more the educational qualification of the respondents, the more they make use of mobile phones in the course of their various business transactions.

The study shows that before the advent of mobile telecommunication, the people of Kabba-Bunu Local Government area were taking their goods personally to their customers majorly. Only very few had access to the land line (NITEL). Thus in order to maintain entrepreneur-customer relationship, they had to be taking the goods their customers.

The result shows that the advent mobile telecommunication has greatly influenced business transactions positively, in the Local Government Area. It has increased their sales, their profits and better relationships with their customers have been enhanced as they do not need to be physically present before business transactions are made.

The study also reveals that the location of business (either in the urban or rural settlement) has influence on the usage of mobile telecommunications for the purpose of running the business. The people in the urban areas make use of mobile phones more than the rural dwellers.

However, certain constraints were discovered in the usage of mobile telecommunication for the purpose of running businesses in the study area. These are: fluctuations in network services, high cost of recharging, and incessant power failure by the Power Holding Corporation of Nigeria.

From the people's responses, it was observed that fluctuations in network services rated highest among the constraints and this makes most of the traders to subscribe for more than one network at a time for the purpose of running their businesses.

The research equally reveals the people's willingness to improve on their usage of mobile telecommunication for the purpose of their businesses. This is because most of the respondents have benefited immensely from the usage of mobile phones in running their businesses and this has helped to reduce transportation cost and some risks involved in business transactions like armed robbery attacks which are prevalent in the area.

5.3 CONCLUSION

In conclusion, this study has evaluated the effect of mobile telecommunication on the economic activities in Kabba-Bunu LGA of Kogi State. The study had revealed positive effect of mobile telecommunication on the economic activities of the people in the study area. It has revealed that there is differential effect of gender, location and type of business on mobile telephone usage and

has equally observed that fluctuation in network services is a major constraint to the effective usage of mobile telephone for business transactions. Therefore, there is a need for the various network providers to improve on their services and network coverage.

5.4 RECOMMENDATIONS

Based on the findings of the research, the followings are the recommendations suggested:

1. The various mobile network service providers (MTN, GLO, AIRTEL etc) should improve on their various services. This will help the business people to improve on their usage;
2. The government should equally help with better provision of power supply to the villages in particular and towns in general. This is because most of the rural areas are yet to have electricity supply. They only depend on nearby town for charging their mobile phones.
3. Finally, the researcher recommends that effort should be made by both network providers in partnership with the government to subsidize the tariffs charged by mobile telecommunication providers so as to encourage steadfast usage of such and at the same time bring about better returns on their business turnover.

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APPENDIX

QUESTIONNAIRE

AHMADU BELLO UNIVERSITY, ZARIA
FACULTY OF SCIENCE
DEPARTMENT OF GEOGRAPHY

Questionnaire on "the effects of mobile telecommunications on the economic activities of Kabba/Bunu Local Government Area of Kogi State"

Dear Sir/Ma,

This questionnaire is designed to help in assessing the effects of mobile telecommunication on the economic activities of Kabba-Bunu LGA. Kindly give accurate information. Your information will be treated confidentially.

1. Gender: a. Male ☐ b. Female ☐
2. Your age in years ……
3. Level of Education:
   a. No formal education ☐
   b. Primary school education ☐
   c. Junior Secondary School ☐
   d. Senior Secondary School ☐
   e. OND, HND, B.Sc./M.Sc. ☐
   f. Others ☐
4. Type of business engaged in ……
5. Location of the business……..
6. Has the location of your business (in the village or town) affected the running of the business? (a) yes (b) No

7. Has the location of your business any effect on your usage of mobile phones? (a) Yes (b) No
8. How? (a) increase my purchases and sales (b) decrease in my purchase and sales (c) increase in the cost of running the business
9. In what year did you start this business?
10. Where do your customers come from? (a)from within this town/village only (b) from nearby villages (c) from far villages
11. How were you carrying out your business activities before the advent of Mobile Phones?
    a. Personally taking my goods to customers/markets
    b. Contacting my customers through land lines (NITEL)
    c. others…….
12. What were the various problems you were facing then before the usage of mobile phones?
    (a) No access to land line
    (b) Inability to contact my customers at will
13. Do you have access to a mobile phone? (a) Yes (b) No
14. Which year did you begin to use GSM for your business…….
15. Are there GSM networks here? (a) YES ☐ (b) NO ☐
16. In what year did the networks begin to work? .....
17. Which network did you first make use of? ……
18. How many do you subscribe to at once for the purpose of your business? (a) none (b) 1 (c) 2 (d) 3

19. If more than one mobile network service, why? (a) fluctuation in services (b) high tariffs charges (c) recharge cards not readily available
20. How often do you make use of mobile telephone for the purpose of your business? (a) always (b) sometimes (c) rarely
21. How much do you spend on GSM monthly? (a) N1,000 – N5,000 (b)N5,000 – N10,000 (c) above N10,000
22. Are you able to communicate with all your customers through GSM at will?
    a. Yes
    b. No
23. What problems do you normally face using GSM for your business?
    a. Fluctuations in network services
    b. High cost of recharging
    c. NEPA failure for charging phones?
    d. Others… …….
24. With the use of GSM, delivery of your goods to your customers does not always need your physical presence. (a) Yes (b) No
25. Do you now transact your business easily with the use of GSM? (a) Yes (b) No
26. How has the advent of mobile telephony influenced your relationship with your customers? (a) positively (b) negatively
27. Has mobile phone usage increased your level patronage sales? (a) yes (b) no
28. The advent of mobile telephony has increased your profit. (a) Yes (b) No
29. To what extent has the use of GSM improved your business transactions?
    a. Very well

b. Not very well

c. Not at all

30. Will you improve on your usage of mobile telephone for better transaction of your business? (a) Yes (b) no.