

**THE IMPACT OF MOBILE PHONE USAGE ON YOUTH MICRO ENTERPRISE  
DEVELOPMENT IN EMBAKASI SOUTH IN NAIROBI, KENYA.**

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## DECLARATION

This research project is my own original work and to the best of my knowledge has not been presented for the award of a degree in any other university.

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This project has been submitted to the University of Nairobi for examination with my approval as the supervisor.

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## **ABBREVIATIONS AND ACRONYMS**

AEP &TC - East African Post and Telecommunications Corporation

CERN- European Organization for Nuclear Research

CWC - Cable& Wireless Company

DIP - Department of Information Technology

EAC - East African Corporation

EU - European Union

GOK - Government of Kenya.

ICT - Information Communication Technologies.

ICTA- Information Communication Technologies Authority.

IEBC - Independent Electoral and Boundaries Commission

ILO - International Labor Organization.

ITU - International Telecommunication Union.

KP&TC - Kenya Posts and Telecommunications Corporation.

OECD- Organization for Economic Co-operation and Development.

PEOU - Perceived Ease of Use

PU- Perceived Usefulness

SMS - Short Message Service.

TAM - Theory of Technology Acceptance

TCIP- Kenya Transparency and Communications Infrastructure Project

UN - United Nations

UNDP - United Nations Development Programme.

WPAY - World Programme of Action for Youth.

YEDF - Youth Enterprise Development Fund.

## ABSTRACT

ICT use has proven to be efficient and reliable in the economic development of any nation. High level of unemployment and improper use of ICT has increased the need to sensitize the youth on ways in which they can make proper use of ICT to develop economically. This study aimed at assessing the impact of mobile phone usage on youth micro enterprises development in Embakasi South. The study was guided by specific objectives: To find out the current pattern of mobile phone use among youth entrepreneurs; To find out the mobile applications and services that support youth entrepreneurship; To explore how mobile services and applications are being used by youth entrepreneurs to develop their businesses; To find out the effectiveness of mobile phones in growth of youth Micro enterprises. This study applied two theories; participatory model and the Technology Acceptance Model (TAM) which was extended to include other external factors to help predict user acceptance of the mobile phone technology in micro enterprises. The study adopted a descriptive survey design and targeted a population of the youth in Embakasi South Constituency. A sample of 336 youth entrepreneurs were taken as respondents using stratified random sampling. This study utilized a questionnaire with open and close ended questions, an interview guide to collect primary data from a key informant and a FGD guide to collect data from focus groups. Analysis of quantitative data involved the generation of descriptive statistics while qualitative data was analysed using thematic analysis. Bar charts, pie charts, and tables were employed to represent the data for interpretation. The findings indicate that many youths are using the mobile phone to run their businesses and benefitting from the technology that comes with the mobile phone with over 90% of the respondents owning mobile phones. Youth entrepreneurs are using mobile services and applications very often to run their businesses with 239 respondents out of 300 indicating using the phone in business. Mobile application like Facebook, WhatsApp and OLX were being used to market goods cheaply and faster. Calling and SMS services were also used to make communication easier between clients and entrepreneurs. The use of the mobile phone was found to be effective in business transactions using mobile payment methods that were found to be convenient, faster, easier to use, less costly as compared to other transaction methods. Despite the challenges that may have been encountered with the use of the mobile phone, the results here provide clear support to the idea that the mobile phone has a positive impact on youth microenterprise development with 217 out of 239 respondents indicating that the mobile phone has had a positive impact on their micro enterprises hence effective. The study concluded that the youth are increasingly adopting the mobile phone in their businesses meaning that mobile phone technology is playing a big role in micro enterprise development. The mobile phone is an effective tool of communication in youth micro enterprise development. The study recommends further research to be carried out to find out how mobile phone impacts on micro enterprises across the country, including rural areas. Mobile service providers should ensure there are enough agents based at the community level to cater for their clients. A study should be done to show how other forms of ICT contribute to the economic development of the communities.

## **CHAPTER ONE: INTRODUCTION**

### **1.0 Introduction**

This chapter provides an overview of the background that will enable an in depth analysis of the study phenomena. It also highlights the main objectives that further interrogate the underlying assumptions with a view to addressing the gaps.

The use of ICT in many countries has proved to be efficient and reliable in the economic development of the country. ICT applications have made some countries in the West make improvements in both productivity and quality in manufacturing, agriculture, communication, health sectors among others. The growth of ICT sector has played a significant role and still has untapped potential to generate additional jobs and employment to a growing youthful population. ICT has had a number of benefits to many countries that use it, Kenya being one of them. With new technology, productivity is increased as some activities will be speeded up, quality and accuracy is guaranteed as machines are capable of producing the same standard of product over and over again, reducing human error and therefore reducing waste or errors. Through new technology such as email and Video-conferencing, communications are improved within a business and also to external customers. Communication between branches or even between countries will be improved. The 2006 national ICT policy emphasizes on the development, deployment and exploitation of ICTs to aid development of other sectors of the economy. This will in turn provide growth in other sectors of the economy such as micro enterprise business in Kenya.

High level of unemployment among the youth and improper use of ICT has increased the need to sensitize the youth on ways in which they can use ICT properly to develop their micro enterprises and in turn improve their livelihoods since they form the larger part of the population that use ICT. Running a business in Kenya has proved to be expensive considering a number of factors such as time and money. High cost of communication and advertising a business in mainstream media has increased the need for youth entrepreneurs to adopt cost effective ways to develop their businesses i.e. through mobile phones. The mobile phone is no longer just a tool to communicate to one another but has become a business tool itself.

According to a fact sheet prepared by the International Telecommunication Unit (ITU) and UN-Habitat in 2012, the youth are an underestimated but growing force on the international stage. Almost half the world's population is under the age of 25. Youth employment is in crisis according to the International Labour Organization, which estimates that some 75 million are out of work as of 2012. A report on the 101st Session of the International, Labour Conference, Geneva, 2012 indicates that in 2012 close to 75 million young people worldwide were out of work, of which many have never worked, with many more millions mired in low productivity and insecure jobs and that persistent youth unemployment and underemployment carry very high social and economic costs and threaten the fabric of the societies (ILO, 2012).

This study looked at ICT as a facilitator of development in reference to youth microenterprises in Embakasi South region of Nairobi County, Kenya. It attempted to add to our understanding of how ICTs do and do not facilitate economic development. It examined mainly the mobile phone as a communication technology. As the most rapidly diffused information and communication technology (ICT) in history, the mobile phone has justifiably been singled out for substantial research attention (Katz, 2008). The number of Kenyans using new forms of communication has increased rapidly in recent years, with mobile telephony providing the biggest gauge of penetration of new technologies. Ownership of mobile phones has risen from just 40,000 in 2000 to nearly 20 million (Ipsos, 2013, ITU, 2014). Although phenomenal, the mobile sector still has room for growth as just 34 per cent of the population has access to mobile phone services. The study sought to learn more about the impact ICTs has on microenterprise owned by the youth of Embakasi South region. In this study, microenterprises were chosen as a variable because they are the major sources of income, jobs, manufacturing and services in developing countries (Liedholm, 2001; Nichter and Goldmark, 2005). Micro-enterprises make a wide range of goods in small workshops, engage in trading and retail activities and provide a wide range of services.

Information Communication Technologies can be used by the youth to provide an environment that fosters the economic development of the community through microenterprises. ICTs transcend borders enabling the communication between young people from every corner of the world, helping in the promotion of dialogue and mutual understanding. It is important then that international cooperation in regards to the transfer of technology is fostered.

## **1.1 Background of the Study**

This study was carried out in Nairobi County, Embakasi South Constituency. According to the 2009 National Census, Nairobi County has a Total Population of about 3,138,369 with 1,462,803 (47%) being youths of age 18-35. Founded by the British in 1899 as a simple rail depot on the railway linking Mombasa to Uganda, the town quickly grew to become the capital of British East Africa in 1907, and eventually the capital of the newly independent Kenyan republic in 1963. Nairobi is now one of the most prominent cities in Africa, both politically and financially. Home to thousands of Kenyan businesses and over 100 major international companies and organizations, including the United Nations Environment Programme (UNEP) and the main coordinating and headquarters for the UN in Africa and Middle East, the United Nations Office in Nairobi (UNON), Nairobi is an established hub for business and culture (County Edition, 2013). The Nairobi Stock Exchange (NSE) is one of the largest in Africa and the second oldest exchange on the continent. It is Africa's fourth largest exchange in terms of trading volume, capable of making 10 million trades a day. Embakasi South constituency is constituted of Pipeline, Imara Daima, Kwa Njenga, Kwa Reuben and Kware areas, has a population of 201,042, (National Census Report, 2009).

The youth being the largest percentage of Kenya's population play a big role in the development of the society; however a large number of youth of the youth of Kenya, being unemployed or having insecure jobs have resorted to criminal activities therefore undermining the development of the country. The youth include the largest percentage of those people with access to ICT. This means that the development of the community through ICT can be fostered by the young people effectively. ICT has helped people mobilize, collaborate and have a voice where there was none before. It has brought people together in response to social concerns (UN, 2012).

The World Programme of Action for Youth (WPAY) to the Year 2000 and beyond highlighted the importance of improving Internet access and to increasing information technology literacy at large. According to WPAY (2000), effective use of ICT strengthens youth engagement. Information and communications technology (ICT) and infrastructures are growing in importance as a part of everyday business and interaction. This process can be enhanced by removing barriers to universal. ICT has enormous potential to expand access to quality education, to boost literacy and universal primary education and to facilitate the learning process

itself, thus laying the groundwork for the establishment of a fully inclusive and development-oriented information society and knowledge economy that respects cultural and linguistic diversity. Youth have a particular interest and ability with regard to modern technology. ICT can empower youth by providing them with the opportunity to overcome the barriers of distance and socio-economic disadvantage. Through the Internet, for example, young people can have access to information on a range of issues that directly affect them, including health, education and employment. This information can be used to improve the quality of life of youth and their communities. This process can be facilitated if Governments, civil society, the private sector, families, youth-led organizations and other groups work together to open up avenues for a cultural and social exchange among young people. Governments can also capitalize on the interest of the young in ICT to alleviate poverty. For example, youth can become engaged not only in the use of ICT, but also in the development and engineering of locally relevant software design and hardware. ICT offers new ways to address the needs of youth with disabilities who cannot access traditional sources of information and employment. Vulnerable groups of the population can capitalize on ICT to make a better connection with society and advance their education and employment opportunities (Angel et al., 2015; UN, 2007).

For more than a decade, it has been clear that Kenya is facing a worsening employment crisis (Gray, 1991; ILO, 1986; Wamuthenya, 2010). In spite of a growing labor force, public sector hiring has slowed and formal private growth stagnated. Increasingly, attention has turned to the microenterprise sector as a provider for employment (Gray, 1996). Micro enterprises are the major source of income, jobs, manufacturing and services in developing economies (Mead & Liedholm, 1998). They make a wide range of goods in small workshops, engage in trading and retail activities.

Embakasi South Constituency is an electoral constituency in Kenya. It is one of the constituencies in Nairobi County with a population of 201,042 (IEBC, 2009). This constituency was initially part of the larger Embakasi Constituency before the latter was split in 2012 into four constituencies: Embakasi North, Embakasi South, Embakasi West, Embakasi East and Embakasi Central. Embakasi South consists of five wards namely: Imara Daima, Kwa Njenga, Kwa Reuben, Kware and Pipeline. The constituency has a total population of 201,042- majority of them being the youth- sharing approximately 12Km<sup>2</sup> area (Census Report, 2009; IEBC, 2009). A



larger part of this area consists of informal settlements. All Wards except Imara Daima which occupies 3.9km<sup>2</sup> are mainly informal settlements characterized by poor housing, sanitation and drainage coupled with high poverty levels. Employed youth in the area are mainly casual laborers in the industries located along Mombasa Road and Industrial Area. According to YEDF (2012), the self-employed youth in this constituency are mainly involved in micro and small businesses such as vegetable vending, selling second-hand clothes and shoes, water vending, running food kiosks, garbage collection and carpentry.

## **1.2 Statement of the problem**

ICT is growing significantly hence becoming part of the lives of its users. The youth form the biggest group of people using ICT one way or another (Njogu, 2013; ICT Policy, 2006) and are constantly immersed in the new communication technologies. The new communication technologies can however be the subject and object of a crime (Savona, 2004) hence undermining the development of a community. According to a report by the Joint Research Centre Institute for Prospective Technological Studies, EU Commission, 2009, the youth tend to misuse ICT mostly through privacy and security issues such as electronic identity theft, predators on the internet, cyber bullying and/or using ICT to record and spread violence. They can also have obsessive and "addictive" attachment to ICT, social networking sites and videogames which drives them to reduce the time they could devote to other developmental activities in favor of staying connected.

Kenyan police arrested 77 Chinese nationals on suspicion of running a cybercrime center from homes in an upmarket area of the capital, Nairobi late 2014 (Daily Nation, 3rd December, 2014, The Guardian, 5<sup>th</sup> Dec. 2014). It was believed that the gang had been preparing to hack the country's communication systems. According to the Daily Nation newspaper dated 3<sup>rd</sup> December, 2014, equipment capable of infiltrating bank accounts, Kenya's M-Pesa mobile banking system and cash machines were discovered after a series of raids. This is a clear indication that ICTs are objects and subjects of criminal activities which threaten the economic development of the community. There is need to highlight how the communication technologies can be used effectively especially among the youth, who are majority users of technology, to engage economic activities that will improve their livelihood and that of the nation at large.

According to International Labor Organization (ILO), meeting in Geneva at its 101st Session, 2012, the youth are an underestimated but growing force on the international stage. Youth employment is in crisis according to the ILO, which estimates that some 75 million are out of work as of 2012. That accounts for 41% of the total global unemployment. This study intends to look the significance ICT has on microenterprises owned by the youth to foster their economic development hence alleviating poverty.

### **1.3 Objectives of the Study**

#### **1.3.1 General Objective of the Study**

The general objective of this research is to examine the impact of Mobile phone usage on youth microenterprise development in Embakasi South region, Nairobi County.

#### **1.3.2 Specific Objectives**

- i. To find out the current pattern of mobile phone use among youth entrepreneurs in Embakasi South.
- ii. To find out the mobile applications and services that support youth entrepreneurship in Embakasi South.
- iii. To explore how mobile services and applications are being used by youth entrepreneurs to develop their businesses in Embakasi South.
- iv. To find out the effectiveness of mobile phones in growth of youth Micro enterprises in Embakasi South.

### **1.4 Research Questions**

- i. What are the current patterns of mobile phone use among youth entrepreneurs in Embakasi South?
- ii. What are mobile applications and services that support youth entrepreneurship in Embakasi South?
- iii. How are youth entrepreneurs in Embakasi South using mobile phones services and applications to run their businesses?
- iv. How effective is the mobile phone in growth of youth Micro Enterprises in Embakasi South?

## **1.5 Justification**

This study sought to facilitate a better understanding of the role played by the mobile phone as a form of ICT to promote and develop businesses. The youth, who are considered to be the largest group of ICT users, may acquire information on how they use the mobile phone to their advantage to make their micro enterprises thrive. It may give youth entrepreneurs' insights on how best to develop their business at a reduced cost and time. The youth entrepreneurs will also be aware of other mobile phone applications they can use to increase their product visibility hence bridging digital divide. This study will also help curb unemployment among the youth as they will use it to understand better how to make income through use of the mobile phone instead of using them to do criminal activities related to it.

At the time of the study, there are also limited materials on the topic; therefore this study will also be useful to other researches who may be interested in pursuing this subject.

## **1.6 Significance of the study**

This study is important to mobile phone companies, academicians and policymakers because it presents an understanding of ICTs and it also gives a degree of the influence the usage of mobile phones has on microenterprises. The findings of this study can be used to formulate policies that would enhance the performance of the micro enterprises and by extension job creation. Academicians can use the study to identify areas of further research as there are scarce resources available on this subject.

## **1.7 Limitation, Scope of the Study**

This study only assessed the usage of the mobile phone as an entity of ICT in developing youth micro enterprises. It also looked at any other services that can be accessed through the mobile phone by the entrepreneurs. Any other form of ICT e.g. Computers, Radio were excluded from the study; however the internet was included in cases where the mobile phone being used is able to access the internet. The study also focused majorly on youth entrepreneurs as the youth are considered to be the majority users of ICT. Any other entrepreneur outside the youth bracket was not considered in study research.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.0 Introduction**

Information Communication Technologies is an umbrella term for hardware, software and resources used to generate, transmit or store communication messages. They include the mass media (radio, television, film) and digital technologies such as computers, the internet and telephone (Ilavarasan&Levy, 2010).

### **2.1 History of ICT**

The history of ICT originates from humble beginnings, which include the abacus. The abacus is thought to have been originally invented 3000 years before the birth of Christ. Revisions to its use/design continued for many years e.g. 500 BC a bead and wire version is developed in Egypt. Early versions of the calculator were gradually replacing this primitive method of mathematics. In 1624 Wilhelm Schickard built the first four-function calculator-clock at the University of Heidelberg, thus heralding a new era (Juliussen, 1996).

Mechanical versions of the calculator followed in the years to come. Calculators as we know them couldn't have existed until 1780, when Benjamin Franklin discovered (through experimentation) electricity. The 1st general purpose computer was designed by Charles Babbage around the year of 1833. In 1855 George and Edvard Scheutz built a practical model based on Babbage's original designs. The 1st electronic calculator (named the Z1) was built by KonradZuse in 1931 (Randell, 1973). In the year of 1940 at Bell Labs, the Complex Number Calculator was tested and then demonstrated. This is thought to have been the first digital (pulse wave rather than analogue wave run) computer.

Quickly approaching the computers that we use today, 1971 was the year that the Intel Corporation released the 1st microprocessor (the Intel 4004.) Macian E. Hoff was thought to have been the leader of the project. The PC as we know it today was created by IBM and released during 1981. Apple introduced its PC alternative, the Macintosh, during 1984. It features a GUI (Graphical User Interface) which gave the IBM PC's DOS (text-based) run system stiff competition due to its usability and professional software (Rangarajan, 2014).The World Wide Web was developed by Tim Lee in 1991, and CERN also created the 1<sup>st</sup> Web

Server. The Pentium chip was included in PCs for the first time in 1993 signaling the end for the 486. There was officially World Internet Connectivity as of 6/15/95

ICT matters in during the pre-colonial era in Kenya were governed by Cable & Wireless Company (CWC) which provided telecommunication services to all British Colonies (Tyler et al. 1999). After attaining in independence, the control of these services was taken over by the East African Post and Telecommunications Corporation (AEP &TC) and the East African External Telecommunication Company Ltd (EXTELCOMS) in 1964. The former handled domestic and regional calls under the East African Corporation (EAC) while the latter handled international communication still under the CWC. Kenya bought 40% of the shares owned by CWC in 1971 and renamed the entity KENEX-TEL (Tyler et al. 1999). When the EAC collapsed in 1997, Kenya formed its own internal communications system known as the Kenya Posts and Telecommunications Corporation (KP&TC). The enactment of the Kenya Communication Act was done in 1998 after the government published the telecommunications and postal policy guidelines to liberate the telecommunication industry. The act also established the Communications Commission of Kenya; now Communications Authority of Kenya which is the watchdog of the industry. ICT issues continued to be based on various legislation; The Science and Technology Act cap250 of 1977, The Kenya Broadcasting Corporation Act of 1988 and The Kenya Communication Act of 1998. These legislations however proved to be inadequate to handle the issues of convergence, e-commerce and e-government. The government then developed an ICT regulatory framework and policy in 2003 however the draft did not reach the public domain. In 2004, an impetus to develop the ICT policy in Kenya came from Kenya ICT Policy project and eventually the government published its ICT policy in January 2006.

### **2.1.1 The National ICT Policy**

The Kenya National ICT Policy developed by the Ministry of Information and Communications in 2006, articulates the government's policy objectives and strategies for information technology, broadcasting, telecommunications, postal services, radio frequency spectrum and universal access. The policy's vision is to create a prosperous ICT driven Kenya and its mission is to improve the livelihoods of Kenyans by ensuring the availability of accessible, efficient, reliable and affordable ICT services. Murungi (2011) states that the policy was developed during the tenure of the Economic Recovery Strategy, the blueprint for national development that was the

successor to the Kenya Vision 2030. It aimed at achieving a number of targets by the year 2015; to increase the number of mobile subscribers from 4 million to 10 million, to expand the international internet hand width from 69Mbps to 1Gbps.

Murungi (2011) and Mahesh (2008) outline the objectives of the National ICT Policy as follows; To develop a legal and regulatory framework for broadcasting, encourage a competitive efficient broadcasting industry; To develop a licensing framework for the broadcasters and for the allocation of frequencies; To ensure the development of broadcasting services that reflects a sense of Kenyan identity, character and cultural diversity; To promote diversity in ownership and control of broadcasting services; To promote fair competition, innovation and investment in broadcasting.

The national ICT policy provided an incentive for Kenyan based participation and investment in the broadcasting and telecommunications through equity ownership of licensed operators. The then Minister for Information and Communication, Hon. Mutahi Kagwe, published policy guidelines in 2007 on ownership in telecommunication service providers. Under the guidelines, it was provided that any firm licensed to provide telecommunications services shall have at least 20% Kenya equity ownership while the equity participation of listed companies would continue to be regulated by the Capital Market Authority.

### **2.1.2 Current ICT status in Kenya**

ICTs continue to grow in different forms across the globe to address socio-economic factors in various countries. However there are still gaps and governments put up measures to address the digital divide in their countries. For example, according to Berry & Katz (2014), in recent years, India's economy transformed as a result of the rapid growth seen in IT sector. However, as of 2004 many of its citizens all still lacked access to ICT mainly due to geographical barriers. A computer Literacy & training program was put up through the partnership of IBM and the Department of Information Technology (DIP) in West Bengal- a state in Eastern India that depends on agriculture-to implement the same IT work force-training program that the corporation had deployed in countries such as Venezuela, China & Egypt.

The Kenyan government has also made remarkable steps to bridge digital divide by endorsing various ICT initiatives around the country. Global Technology giant Huawei Technologies

(Kenya) Co. Ltd in collaboration with the Ministry of Information & Technology on 8<sup>th</sup> December 2014 sent-off the first beneficiaries of the "Huawei Seeds for the Future" Internship program. The program which is aimed at up skilling top engineering students drawn from various local universities with the requisite ICT skills and providing them with the opportunity to learn and apply the latest technologies, saw nine students travel to china for training on Chinese culture, language and innovative ICT technologies and interaction with top IT specialists at the Huawei University (ICTA, 2014).

Other ICT Initiatives and projects ongoing in Kenya include the Laptop Programme, Digital Inclusion Projects (Pasha Centres/Digital Villages, Wezesha Initiative), Information Security and Other Initiatives (Konza Technology Park, zero-rated taxes on imported ICT hardware, eGovernment, Skills Programmes).

### **2.1.3 Digital Inclusion Projects**

#### **2.1.3.1 Pasha Centres (Digital Villages)**

In 2010, the government rolled out an initiative that will diffuse ICT know-how to the rural and marginalized areas to address regional disparities (Berry and Katz, 2014). Entrepreneurs, who run Digital Villages, are awarded loans in a competitive process, which they repay over a period of time. These Pasha Centre's provide a host of services to the public via computers connected to the internet, or by using and marketing other ICT-enabled applications. Digital villages are e-centers that provide a suite of services to the public via computers connected to the internet, digital cameras, printers, fax machines and other communication infrastructure (ICTA, 2010).

#### **2.1.3.2 Wezesha Initiative**

The objective of this initiative, launched in 2010, was to provide a financial incentive towards purchasing a laptop for registered university students (Kenya ICT Board, 2010). The laptop initiative was funded by the World Bank and implemented by the Kenya ICT Board / ICT Authority under the Kenya Transparency and Communications Infrastructure Project (TCIP), as part of a component to implement the Computers for the Communities Initiative. This laptop initiative was known as 'Wezesha'; a Swahili word that means 'to enable'. The project however came to an end in 2011 (Safaricom KE, 2011).

### **2.1.3.3 Information Security**

The Government through the Ministry of Information & Communication is working on the Kenya National Cyber security Framework (GoK, 2014). This is the Cyber security Masterplan that will provide the Government of Kenya (GoK) with a national-level plan to defend and secure its digital infrastructure, as well as recommend minimum cyber security standards for the country's private networks. The government is also in the procurement process for Implementation of Public Key Infrastructure (PKI). This project will result in the set-up of Root CA which will facilitate the use of digital certificates. The government is building capacity for the Kenya Computer Incidence Response Team, Coordination Center (KE-CIRT/CC). The KE-CIRT/CC is critical in the coordination of computer related incidences in the country (GoK, 2014).

### **2.1.3.4 Konza Technology Park**

As part of the Vision 2030 Flagship Programmes, the Government of Kenya through the Ministry of Information and Communication aims to set up a technology park at Konza. This project commenced in 2009 with the procurement of a 5,000 acre site, 60kms south east of Nairobi. The ground breaking ceremony was held by H.E. Mwai Kibaki on 23 January 2013. It is anticipated that the first phase of Konza City will create over 17,000 direct and indirect jobs. It is planned that the Tech city will host a BPO park, Science Park, Convention centre, mega mall, hotels, international schools, and world class hospitals, Championships Golf Course, Financial District, High Speed Mass Transportation and Integrated Infrastructure (South, 2012; Gibson, 2011).

The main objective of developing an ICT park is to enable to job creation as well as being an avenue to provide the necessary environment to attract investment (South, 2012). It is part of a wider scheme to position Kenya as the region's technology hub, using development to entice more companies to set up base in the country.

### **2.1.3.5 EGovernment**

The launch of e-Government services in Kenya is one of the main priorities of the Government of Kenya towards the realization of national development goals and objectives for Wealth and Employment Creation, as outlined in the Kenya Vision 2030. The e-Government Programme was launched in June 2004 (Mahesh, 2008). It has since committed itself towards achieving an



effective and operational e-Government to facilitate better and efficient delivery of information and services to the citizens, promote productivity among public servants, encourage participation of citizens in Government and empower all Kenyans (Adera & Waema,2011; Adu &Amoah, 2014).

## **2.2 Opportunities brought about by ICT**

ICT plays an array of roles in the development of the country with communication technologies being applied in areas such as the education sector, health and businesses enterprises. ICT has an increasingly significant influence on China's national economy and social life as the share and importance in the national economy of industries involving ICT has gradually advanced year by year (Berleur &Avgerou, 2005). This means that ICT has so much potential in elevating the economic status of a nation by fighting against activities that undermine the economic growth of a country. Over the years Kenya has been crippled with unemployment. The youth being the largest percentage of Kenya's population play a big role in the development of the society; however a large number of youth of the youth of Kenya, being unemployed or having insecure jobs have resorted to criminal activities therefore undermining the development of the country. The youth also include the largest percentage of those people with access to ICT (Njogu, 2013). This means that the development of the community through ICT can be fostered by the young people effectively. ICT has helped people mobilize, collaborate and have a voice where there was none before. It has brought people together in response to social concerns (UN, 2012).

The World Programme of Action for Youth (WPAY) to the Year 2000 and beyond highlighted the importance of improving Internet access and to increasing information technology literacy at large. According to WPAY (2000), effective use of ICT strengthens youth engagement. Information and communications technology (ICT) and infrastructures are growing in importance as a part of everyday business and interaction. This process can be enhanced by removing barriers to universal. ICT has enormous potential to expand access to quality education, to boost literacy and universal primary education and to facilitate the learning process itself, thus laying the groundwork for the establishment of a fully inclusive and development-oriented information society and knowledge economy that respects cultural and linguistic diversity. Youth have a particular interest and ability with regard to modern technology. ICT can empower youth by providing them with the opportunity to overcome the barriers of distance and

socio-economic disadvantage (UN, 2007). Through the Internet, for example, young people can have access to information on a range of issues that directly affect them, including health, education and employment. This information can be used to improve the quality of life of youth and their communities. This process can be facilitated if Governments, civil society, the private sector, families, youth-led organizations and other groups work together to open up avenues for a cultural and social exchange among young people. Governments can also capitalize on the interest of the young in ICT to alleviate poverty. For example, youth can become engaged not only in the use of ICT, but also in the development and engineering of locally relevant software design and hardware. ICT offers new ways to address the needs of youth with disabilities who cannot access traditional sources of information and employment. Vulnerable groups of the population can capitalize on ICT to make a better connection with society and advance their education and employment opportunities (Angel et al., 2015; UN, 2007).

For more than a decade, it has been clear that Kenya is facing a worsening employment crisis (Gray, 1991; ILO, 1986; Wamuthenya, 2010). In spite of a growing labour force, public sector hiring has slowed and formal private growth stagnated. Increasingly, attention has turned to the microenterprise sector as a provider for employment (Gray, 1996). Micro enterprises are the major source of income, jobs, manufacturing and services in developing economies (Mead & Liedholm, 1998). They make a wide range of goods in small workshops, engage in trading and retail activities. The government has initiated various steps to ensure unemployment is curbed especially among the youth. The presidential Committee on Unemployment (1982/83) report and Sessional Paper No. 2 of 1985 on unemployment identified the major causes of unemployment in Kenya as rapid growth of labor force, low economic growth rate, job selectiveness among the unemployed, skill imbalance, inappropriate technology, among others (Njogu, 2013). Efforts to curb unemployment among the youth can be seen through the establishment of the Youth Enterprise Development Fund (YEDF) in 2006 to facilitate investment in micro, small and medium enterprises.

According to a report by the International Telecommunication Union, "Digital Opportunities: Innovative ICT Solutions for Youth employment-2014", the increasing adoption of ICTs in everyday life, and the growing market place for digital goods and services, are creating opportunities for youth to find employment that transcend traditional paradigms. The way young

people find and carry out work is changing. Instead of limiting themselves to the local newspaper, youth around the world browse web-based job listings to find work. Those with limited access to the internet carry out their job searches in telecentres, libraries, cybercafés and many are even finding and carrying out work via their mobile devices. The global increase in the use of mobile technologies is playing a key role in expanding employment opportunities for youth. Great potential for employment growth derives from a demand for services enabled by mobile phones. Young people can now find and carry out work, launch their entrepreneurial endeavors and even get paid via their cell phones. Mobile financial services such as Safaricom's M-PESA are making it easier for young people to receive payment for services rendered and to launch their own entrepreneurial endeavours. Given the growth in mobile phones, there is a lot of interest in mobile applications and how the emerging "app economy" might generate new employment opportunities for young people around the world.

The mobile phone is a wireless communication device that offers myriad of services including; real time verbal conversations, short text messages (SMS), internet communications and currently money remittance services across East Africa (Muhoro, 2009).

### **2.3 Mobile telephony in Kenya.**

Mobile telephony has become the most important mode of telecommunications in Developing Countries, thus in Africa indeed. For a large part of the population mobile telephony results an affordable friendly technology, while internet access is a reality for many businesses and public institutions, but it is still an expensive technology restricted to individuals with higher levels of education and incomes.

In the last ten years the ICT community has witnessed the explosive growth of mobile telephony in Africa. Nowadays, mobile phone has become the first communication technology having more users in Developing Countries than in the Developed ones; in particular, looking at the mobile subscriber numbers, Africa is showing the highest growth rate worldwide. At the end of 2007 the number of mobile users in Africa has gone beyond 225 million, double the number registered just two years before and almost ten times with respect to 2000 and with respect to the number of fixed-lines (ITU, 2007-2008). This phenomenon regards also Kenya, where the number of mobile subscriber has grown in five years from 2 million to more than 9 million at the end of 2006 (ITU, 2007; Okome and Newell, 2014).

Mobile telephones were first introduced in the Kenyan market in 1992 (UN Information Economy Report, 2007), but the real diffusion of this technology and of affordable services started in 1999 when the Communications Commission of Kenya (CCK), now Communications Authority of Kenya, was established and the newly privatized company Safaricom and Airtel Kenya (previously known as KenCell Communications) were licensed by CCK to provide mobile services. On one hand, the two major operators currently providing mobile connectivity in Kenya are Safaricom and Airtel. These two operators have covered gradually the majority of the populated areas, and they are still continuing in this trend of growth. On the other hand, Telkom Kenya (CDMA 2000) is a fixed operator.

Most mobile phone users in Kenya subscribe to prepaid services rather than postpaid services and purchase SIM cards before they incur phone usage fees. Goggin (2014) notes that Kenyan mobile phone services have been described as communication media used to bond social capital. Carriers have provided airtime sharing services such Airtel's Me2U and Safaricom's Sambaza, for a long time. Other than socially binding users, the major mobile service providers, Safaricom and Airtel Kenya, also offer a wide range of services that economically benefit the subscribers.

### **2.3.1 Mobile phone service providers in Kenya**

#### **2.3.1.1 Safaricom**

Safaricom was set up in 1997 and became a joint venture vehicle between Telekom Kenya and the Vodafone Group in 2000 (Safaricom KE, 2015). Previous researchers on Mobile Telephony in Kenya such as Luca Manica (2014) and Ochieng (2014) found out that Safaricom offers mobile voice services using GSM-900 and GSM-1800 technologies. It launched GPRS services in July, 2004, and Enhanced Data Rates for GSM Evolution (EDGE) services in June, 2006.

#### **2.3.1.2 Airtel**

Bharti Airtel Limited is one of India's leading private sector providers of telecommunication services, delivering mobile broadband and telephony, and enterprise services to more than 19.74 million customers (Kapoor et.al, 2011). Celtel, now Airtel Kenya, won a GSM-900 licence in January 2000 and launched services in August of the same year. The company launched under the KenCell brand and took on the Airtel banner in November, 2004.

### **2.3.1.3 Telkom Kenya (CDMA 2000)**

Telkom Kenya, the fixed-line operator in Kenya, launched fixed wireless services based on CDMA-2000 technology in the 800MHz frequency band in July 2007. Telkom Kenya offers these services using a licence, which allows it to offer wireless telephone services within a restricted area. However, because the CDMA 2000 devices are small in comparison to mobile handsets, users have actually been using the service as a mobile substitute (Telcom Kenya, 2015). This move attracted the opposition of Safaricom and Airtel, who argued that Telkom Kenya was offering mobile services in the absence of an adequate licence. Since excise duty only applies to services offered by operators owning a mobile licence, this meant that Telkom Kenya was able to offer much reduced prices compared to those of GSM operators.

The company, as at June 2011, has a customer base of approximately 2,800,000 customers on GSM, fixed and CDMA wireless platforms with a country-wide presence (Telcom Kenya, 2015).

### **2.4 Development of Micro enterprises.**

One of the best known scholars of Development and Communication, Everette Rogers, defined development as a widely participatory process of social change and material adjustment for the majority of the people through gaining their greater control over their environment (Rogers, 1975). Development over time has applied different communication approaches. Some of the oldest approaches to development, according to Okigbo (1996), are; Extension and Community development method that was basically oriented to rural development with agents travelling village to village providing the rural communities with useful information on how to implement new ideas; Localized mass media method which was very much media oriented laying its emphasis on interacting with people and on establishing local media channels to provide access for the people. The subject referred to as communication several years ago has undergone radical changes in meaning. Then, communication in Africa meant transportation and not human interaction (Blake, 1979). The meaning of communication has grown into an entirely new discipline (Okigbo, 1996) where new technologies are now embraced in development communication. One key point noted from different researches is that participation enhances development and that involvement of individuals in one way or another act as a wheel to run the development process in any setting. Kenya has not been left behind in

embracing new technologies to economically develop and today micro enterprises are among sectors that make use of ICT to grow.

According to Gray (1996) and Kapoor et al. (1997), micro enterprises are those with 10 or fewer workers. In countries such as the United States of America, small businesses and entrepreneurships make significant contributions to the economy. Small businesses employ close to 50% of the American workforce and produce over 40% of the gross national product (GNP). Gray (1996) also notes that small businesses and entrepreneurships make up the centrepiece of the American free enterprise economic system. Many policy makers in developing countries increasingly at the urging of international bodies such as IMF, are adopting free enterprise mechanisms.

The micro enterprise sector in Kenya consists of approximately 910,000 micro enterprises, employing more than 2 million individuals (Kenya Government, 1992 a). Roughly three-quarters of the enterprises are located in rural areas, while the remaining fraction of the enterprises is located in in urban areas. Micro enterprises in Kenya can be found in markets, backyards, vacant lots and side street work rooms. Men and women supply the everyday needs of local people.

A survey conducted by Wolf (2001) in South Africa, Kenya and Tanzania indicated that the importance of the micro enterprise sector is particularly apparent in terms of its ability to provide employment for those of working age. Gray (1996) agrees with this noting that in providing goods and services, enterprises are part of a chain linking those that provide production inputs all the way through to those who deliver the finished products to the final customer.

The Kenyan government recognizes the importance of micro enterprises and the role played by the informal sector in the country's economy (Gray,1996; Muiruri, 2010; Munyua 2008). Employment projections for the year 2000 indicate that 75% of all new jobs created in urban areas will be in the informal sector and that 50% of all rural employment will be non-farm sectors. According to Gray (1996), these estimates underlie the importance of micro enterprises ad informal sector development in Kenya as the major generator for employment and growth today and in the future. It is this recognition of the importance of this sector that prompted the

government to produce Sessional paper no.2 of 1992 on Small Enterprise and Jua Kali Development in Kenya. This document which has now been adopted in the Development Plan 1994-1996, outlines the government's policy on the development of the small enterprise and jua kali sector in Kenya.

It is within this context that the institutions of higher learning are called to play their as a source of new ideas and innovations and as a disseminator of new technologies.

#### **2.4.1 Problems faced by young entrepreneurs**

Young entrepreneurs face a number of challenges, according to the 2002 Youth Employment Summit-Australia. In the summit, "Generating youth employment through information and communication technologies: best practice examples and strategies", it was noted that entrepreneurship is not an easy option and is best suited to those with the necessary skills and acumen. Some of these skills can be acquired, even via the Internet; however, some skills such as risk taking and self-confidence may be more deep seated. Young people starting their own businesses are likely to experience a range of problems. Many of these problems apply to anyone starting a new enterprise but some problems are related to the youthful age of the entrepreneur. Young people are likely to have limited business networks and contacts compared with older people (Njogu, 2013). Both Njogu (2013) and Hewitt (2011) agree that the youth also are likely to have fewer financial resources as they have had less time to accumulate personal savings or acquire property. They may also experience age discrimination from customers, suppliers or finance lenders.

Other problems commonly encountered are managing cash flow, especially dealing with bad debts and late payments; and coping with stress, especially without the support of friends who understand the demands of self-employment. Once under way, problems can arise with managing the expansion of the business such as working out how to employ the right staff and managing other people for the first time.

#### **2.5 How youth entrepreneurs are using the mobile phone in their micro enterprises.**

In the United States, a study carried out by Grant and Kiesler (2002) found that workers at the Carnegie Mellon University became attached to their mobile phones a few months after acquiring them for work purposes and began to see them as personal possessions. Numerous

studies also indicate the spread of mobile phones leads to more employment opportunities and expands the range of business activities for example through resale of airtime in Africa (Wright,2004) and refurbishing of handsets in Indonesia (Barendgret, 2005). According to Castelles et. Al, (2007) it is now routine for small shop owners in Chinese cities or individuals throughout Europe to distribute cards that show their mobile phone numbers. This makes it possible for customers to access their goods and services with ease.

Ksherti (2014) notes that one of the important uses of mobile phones in developing countries has been in information search activities. Farmers and small business owners utilize the information gathered via mobile phones to eliminate or reduce the role of intermediaries in the value chain or to lower the risk of their profit margins being squeezed by larger firms or firms from developed countries. For example, groups of small farmers in remote areas of Cote d'Ivoire share mobile phones so they can follow hourly fluctuations in coffee and cocoa prices in the international market. Thanks to mobile phones, farmers can choose to sell their crops when worldwide prices are favorable. Ksherti (2014) also notes that mobile phones have enabled small business owners in developing countries to promote their products and communicate with their customers effectively.

As a survey demonstrates, in Egypt and South Africa there was a significant rise in the use of mobile telephony among small businesses between 1999 and 2004 (Samuel et al. 2005).

**Table 2.1: Increase in mobile phone and fixed line subscriptions among small businesses in South Africa and Egypt, 1999-2004 (%).**

	1999		2004	
	Mobile	Fixed-line	Mobile	Fixed-line
South Africa	34	52	89	60
Egypt	11	45	85	80

Source: Samuel et al. 2005.



Not only did the mobile phones increased at a much faster rate but the percentage of mobile subscription also surpassed that of fixed line telephony in both cases as shown in Table 2.1 above.

While observing that micro entrepreneurs in Rwanda made two-thirds of their mobile calls for personal reasons, Donner (2004) nevertheless argues that the mobile phone enhances the reach and to be reached by business partners, suppliers and customers. Mobile phones were used to establish new business contacts especially with people outside Kigali (Castelles et al. 2007). Donner (2007) also finds that mobile ownership increases income of micro enterprises in Rwanda by increasing communication and enriching social networks. Molony (2006) also finds that mobile phones are used by micro entrepreneurs in Tanzania to manage reputation while creating virtual offices.

Micro entrepreneurs also use mobile phones to access services offered by financial institutions e.g. Mobile banking. M-banking uses mobile telephony to undertake financial transaction such as the storage of value in an account via the handset, the ability to convert cash in and out of the stored value account and ability to transfer funds between accounts (Donner, 2007). Mobile banking provides the possibility of addressing two key barriers to financial inclusion: affordability and physical availability.

The majority of the micro businesses in Kenya operate in the informal sector (GOK, 1999) with most of them being sole proprietorships or family businesses usually employing less than five people. They are involved in small semi-organized and sometimes unregulated activities that are mainly concentrated in urban as well as in some parts of the rural areas. The business functions are usually conducted by the owner or manager in market stalls, open-yards, and residential houses and on undeveloped open grounds. According to a study done by Marion Mbogo (2010) on the impact of mobile payments on the success and growth of micro businesses, she found that many of these micro business operators do not have bank accounts while those who do, find the bank accounts cumbersome to operate as they have to leave their businesses unattended in order to conduct transactions in a bank.

The diffusion of mobile telephony in the African countries and, indeed, in Kenya has created opportunities of development where mobile phones have become tools mainly

aimed to facilitating communication, business or creating job opportunities. Micro entrepreneurs are making use of various services accessed on the phone-mobile payment, SMS services, internet services- to run their businesses. Penetration of the cell phone is high among Micro and Small Enterprises in Kenya; Munyua and Mureithi (2008) found in an industrial cluster in Nairobi that 93.8 per cent of the entrepreneurs owned cell phones, in contrast to 29.7 per cent who used fixed lines.

## **2.5.1 Mobile phone services and applications used by youth micro entrepreneurs**

### **2.5.1.1 Mobile payment/banking;M-PESA system/ Mshwari/ Airtel Money.**

M-PESA is an m-banking application that facilitates branchless banking via the mobile phone. It targets the unbanked, prepaid segments of the population and was officially introduced onto the Kenyan in March 2007 by Safaricom (Avgerou et.al, 2008, p.288). The account setup uses existing mobile technology: a customer selects from a short menu on the cell-phone screen, which features options including "send money" and "withdraw cash". The person receiving the transfer on his or her phone can visit an M-PESA agent or participating ATMs to pick up the money. M-PESA agents, spread in all the country, are also instructed to get the deposited cash. The sending customer does not need to have a bank account, but registers with Safaricom for an M-PESA account. Every M-PESA customer has an associate M-PESA account, separated from his airtime credit. All the transactions are done through the simple SMS mean protected by a personal PIN-number, both at the customer and at the agent side. The M-PESA system is simply accessible from the menu of the common handsets, after the replacement of the old SIM card with an SIM card with the M-PESA menu. Many M-PESA services are free, other are charged but with relatively very small rates with respect to the bank commissions. A similar service is also offered other mobile operators such as Orange Money and Airtel Money.

M-Shwari is the revolutionary new banking product for M-PESA customers that allows them to save and borrow money through their phone while earning interest on money saved. Mshwari gives M Pesa customers an opportunity to save as little as Ksh.1 and earn interest on their saving balance. This cash is moved into the savings account via M-PESA. It also enables customers to access micro credit product (loan) of a minimum of Ksh.100 any time and receive your loan instantly on your M-PESA account (Safaricom, 2015). M-Shwari' now has 3.6 million active customers with Kshs 4.0 billion in deposit and Kshs 1.2 billion worth of loans

issued per month with Non-Performing Loans (NPLs) at 2.7% (Safaricom Annual Report, 2014).

Formerly Zain Zap, Airtel Money is the second largest mobile money system in Kenya. Prior to its acquisition, Zain was focused on creating a "cashless society" whereby any number of needs could be met via mobile money. Airtel Money is a Mobile Commerce service, launched September 2011 that allows a subscriber to access services that include: transferring money from mobile phone to another mobile phone recipient, any time within Kenya, topping up your mobile phone with airtime or another customer's mobile phone, accessing and managing your bank account, paying utility bills as well as buying goods and services (Equity Bank, 2015).

#### **2.5.1.2. SMS services**

In many cases the SMS services are widely use for the simplicity of the service they provide. For example, Kenya Agricultural Commodity Exchange (KACE) launched SMS-based information service, SokoniSMS4 for farmers to receive market prices from markets in Kenya. The farmers are automatically charged of 7 KES per SMS. This service enables farmers to receive market prices in various market centers through their mobile phones (OECD, 2009). Equipped with this information, farmers are able to determine the most profitable market to transport products.

#### **2.5.1.3 Internet Services**

The mobile phone has evolved in features as compared to the traditional mobile phone that only served the purpose of messaging, making and receiving calls. Today, a significant number of mobile phones come with internet enabled features that allow users to access the internet as much as they would use cyber cafes. With access to the internet being possible on the mobile phone, micro entrepreneurs can use various features such as WhatsApp, OLX and Jumia mobile application to promote their businesses.

WhatsApp Messenger is a cross-platform mobile messaging app which allows you to exchange messages without having to pay for SMS. WhatsApp Messenger is available for iPhone, BlackBerry, Android, Windows Phone and Nokia. App developers understand the need for communication in our lives, and that's why every day we discover a new messaging app on different app stores. The number of WhatsApp active users has increased from 200 in 2013 to

600 million users in 2014 (Azam, 2014). The application has proven to be extremely useful for every business, marketers and business owners who have been looking for the perfect way to use WhatsApp to communicate with their clients. Even though using WhatsApp for customer interaction is not widely spread in America and UK, many e-commerce companies around the world have tested this method and had great results.

## **2.6 Effectiveness of using the mobile phone in youth Micro Enterprises**

Mobile phones are useful in virtual financial systems and their use is expanding exponentially. A 2010 UN study found that cell phones are one of the most effective advancements in history to list people out of poverty and micro enterprises are beginning to flourish in developing nations (Hamilton, 2013). According to Miller and Horst (2006), cellphones are effective tools in entrepreneurship as people are able to find out about supplies and competition in far more efficient ways.

Previous research on the contribution of the mobile phone to the Kenyan economy by Naftal Waburi (2009) found that the cell phone saves on time. How? He noted that communication has many roles which include exchanging ideas, interactions, consultations and information transmission. In social relationships, the cell phone has helped people to be in touch by providing reliability, convenience and security. Individuals can stay connected at any time of the day or night without having to go out and look for a telephone booth where they may expose themselves to insecurity. This therefore goes without saying that the mobile phone becomes a convenient tool in saving so much time that would have been otherwise used in search of a communication tool other than the cell phone. Waburi (2009) also found out that on some occasions an employee had to disrupt business by moving out to make calls from telephone booths prior to the mobile phone. Such actions often interrupted the work flow of business through inefficiency and reduced output through lost time. The mobile phone now curbs such tendencies and allows for efficient work flow. Miller and Horst (2006) and Munyua (2008) also reckon that work that requires mobility is no longer tied to an office in order remain in touch. Individuals can maintain control of their businesses even when they are not physically present. A research done by Munyua and Mureithi (2008) on Kenyan women entrepreneurs revealed that the mobile phone had indeed affected the effectiveness and efficiency of women owned businesses. Their study showed that for most Kenyans, the choice of owning a mobile phone rather than a landline is

affected by many factors such as user perception of convenience and affordability of the mobile phone. Ability to communicate anywhere, anytime, subsequent faster sales of products, among other perceived benefits influenced an entrepreneur's choice to use a cellphone. Most of the respondent in the Munyua and Mureithi (2008) study felt that the use of the mobile phone had improved their business performance. A study done by Wambari A. P. Mwaura (2009) on "mobile banking in developing countries (a case study on Kenya)", also found that the mobile phone is an effective tool in growth of business. Mobile phones provide technological services that reduce costs; increase income and increases reach ability and mobility. They can help to extend social and business networks and they clearly substitute for journeys and, for brokers, traders and other business intermediaries (Donner 2005, Hughes & Lonie 2007).

### **2.6.1 Challenges of using the mobile phone in business.**

The uncontrolled usage of ICTs in workplaces has many disadvantages that impede the progress of work. Many employees use companies' computers for dubious purposes. In addition, they may surf the Internet during office hours. Therefore, employees may not perform the work required of them in the limited time available. Caplan (2006) explains that cyber loafing and personal web use may inhibit productivity. The use of a computer in the workplace sometimes leads to a downturn in employee performance and productivity. Unsecure mobile phones have become a common problem for employees due to digital criminals. They target employees' mobile phones by using newly developed programs. These programs can bypass mobile phone security to steal important information and tamper with the contents of the phone. Moreover, these digital criminals can send the data to their computers or to other mobile phones. According to Dibben (2009), if the users responded, the criminals could then access phone users' personal data and send it elsewhere. Thus, hackers attack users' mobile phones using new software to take important information.

### **2.7 Theoretical Framework**

Theoretical framework, derived from existing theories, refers to a set of interrelated concepts, definitions and propositions that presents a systematic view of the phenomena by specifying relations among variables (Sevilla et al. 1992). It is the abstract, logical structure of meaning that guide the development of the study.

### **2.7.1 Participatory Model.**

Development communication can be traced through various literatures by various scholars. In the 1950s and 1960s, it was generally greeted with enthusiasm and optimism. Development was defined as economic growth (Servaes & Malikhao, 2008). Building on Daniel Lerner's influential 1958 study of communication and development in the Middle East and Wilbur Schramm's 1964 study on the role of media for national development, communication researchers assumed that the introduction of media and certain types of educational, political, and economic information into a social system could transform individuals and societies from traditional to modern (Servaes, 2008). Participation stands out as key element in facilitating development processes according to various scholars. Everette Rogers (1976) echoes that development is a widely participatory process of social change in a society. Newer perspectives also argue that development will accelerate mainly through active involvement in the process of the communication itself (UN, 2005; Servaes & Malikhao, 2008). This is advocated for in the participatory model; for development to be facilitated, the community's participation is important. The participatory model, based on ideas from Paulo Freire's (1970) *Pedagogy of the Oppressed*, focuses on community involvement and dialogue as a catalyst for individual and community empowerment. It stresses the importance of cultural identity of local communities and of democratization and participation at all levels -international, national, local and individual. It points to a strategy, not merely inclusive of, but largely emanating from, the traditional 'receivers'. Paulo Freire (1983) refers to this as the right of all people to individually and collectively speak their word. In order to share information, knowledge, trust, commitment, and a right attitude in development projects participation is very important in any decision-making process for development. Suffice to say that any form of communication that is introduced to the people is bound to be accepted or rejected depending on different aspects. The subject referred to as communication several years ago has undergone radical changes in meaning. Then, communication in Africa meant transportation and not human interaction (Blake, 1979). The meaning of communication has grown into an entirely new discipline (Okigbo, 1996) where new technologies are now embraced in development communication. Today, development can be seen to be facilitated through use of new technologies that foster social and economic growth of the community. These new technologies allow for interaction between users; youth entrepreneurs and their clients. Micro entrepreneurs form a social circle where they use

technologies such as the mobile phone to share idea, receive and send information. Micro entrepreneurship carried out with the help of the mobile phone requires participation of various entrepreneurs to share information and knowledge about goods and services being sold and participation of potential customers in sharing information about services and goods being sold by entrepreneurs. Participatory model brings out inclusion among the youth and among the youth and clients as a catalyst to the development of their enterprises and by extension, the development of the community. This is seen through the youth entrepreneurs networking and sharing information.

### **2.7.2 Technology Acceptance Model (TAM)**

Earlier studies have indicated that technology can be incorporated in the success and growth of business; A study carried out by Ben Muli (2013) on the impact of smartphone applications on SMEs in Nairobi and Mbogo's study (2010) on the Impact of Mobile Payments on the Success and Growth of Micro-Business: The Case of M-Pesa in Kenya showed that mobile phones can positively impact on the development of businesses. These earlier studies however focused on the impact of smartphone applications on Medium Enterprises and Mobile payment respectively. This study focuses on the impact mobile phones have on youth micro enterprise development and applies the Technology Acceptance Model (TAM). TAM is a theoretical model that explains how youth entrepreneurs have come to accept and use technology (Davis, 1989).

TAM, proposed by Davis in 1989, was based on the Theory of Reasoned Action (TRA). TRA is a model for the prediction of behavioural intention, spanning predictions of attitudes and predictions of behaviour. The subsequent separation of behavioural intentions from behaviour allows for explanation of limiting factors on attitudinal influence (Ajzen, 1980). The Theory of Reasoned Action was developed by Martin Fishbein and Icek Ajzen (1975, 1980). Behavioural intention measures a person's relative strength of intention to perform behaviour. Attitude consists of beliefs about the consequences of performing the behaviour multiplied by his or her evaluation of these consequences (Fishbein & Ajzen, 1975).

TAM model suggests that when youth entrepreneurs are presented with a new technology, a number of factors influence their decision about how and when they will use it. These factors are; Perceived usefulness (PU) defined by Davis (1989) as the degree to which a person believes that using a particular system would enhance his or her job performance; Perceived

ease of use (PEOU) defined as the degree to which a person believes that using a particular system would be free from effort (Davis, 1989). TAM has been widely used to predict user acceptance and use based on perceived usefulness and ease of use (Ndubisi & Richardson, 2002). Consequently, TAM has been chosen as the appropriate model and has been extended to include other external factors such as accessibility of the mobile services, cost, convenience, security, perceived satisfaction and actual usage of the mobile phones.

Perceived ease of use (PEOU) and Perceived usefulness (PU) are considered to be the primary determinants for adopting and using a new technology. A research on " The Impact of Mobile Payments on the Success and Growth of Micro-Business: The Case of M-Pesa in Kenya" (Mbogo, 2010) noted that these two primary variable, PEOU and PU are influenced by other external variables such as security concerns, cost, convenience, and satisfaction (Lu, Yu, Liu and Yao, 2003; Wunderlich, 2009; Wang, 2014). Perceived ease of use directly affects perceived usefulness and both determine the user's attitude towards use, (behavioural intention to use -BIU) and eventually to the actual use of the system (Viehland and Leong, 2007).

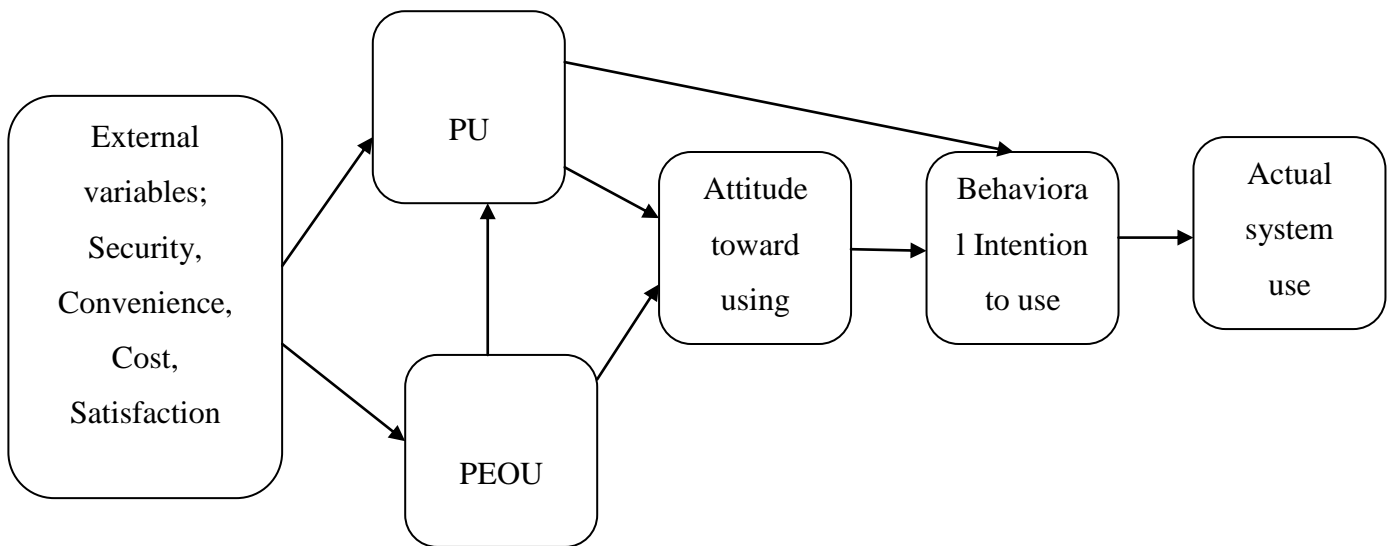
The following components of TAM act as factors that influence the adoption, acceptance and use of mobile phones in youth micro enterprises;

#### **2.7.2.1 Perceived Usefulness, PU.**

Among the many variables that may influence system use, previous research suggests two determinants that are especially important. First, people tend to use or not use an application to the extent they believe it will help perform their job better. This variable can be referred to as Perceived Usefulness (PU). PU is defined as the extent to which a person believes that using a particular system will enhance his job performance (Davis, 1989). There is extensive research in the IS that provides evidence of the significant effect of perceived usefulness on usage intention (Davis et al., 1989, Venkatesh & Morris, 2000). An individual evaluates the consequences of their behaviour in term of perceived usefulness and base their choice of behaviour on the desirability of their perceived usefulness. Therefore, perceived usefulness will influence the intention of the youth entrepreneurs to accept and adopt the use of the mobile phone in their businesses.



TAM posited the PU not only affects the intention to use indirectly through affecting attitude but also affects intention to use directly. Many researchers reaffirmed that PU is an important indicator for technology acceptance (Davis, 1993). In mobile service context, perceived usefulness is how well the mobile services can integrate in the daily activities for micro entrepreneurs (Wang, 2014). When this belief increases the intention to use mobile phone services also increases (Kleijnen et al., 2004). With the help of the mobile phone a youth entrepreneur can perform transaction through the bank at anytime and anywhere. Once a youth entrepreneur feels that the mobile services are beneficial to his/her life and business, then s/he will positively be influenced to use the services as they are deemed useful (Wang, 2014).



**Figure 2.1: TAM Model 1(Davis, F. D., Bagozzi, R. P., and Warshaw, P. R., 1989)**

### 2.7.2.2 Perceived Ease of Use, PEOU.

Perceived Ease of Use refers to the degree to which a person believes that using a particular system would be free of effort (Davis, 1989). Davis (1989) further states that effort is a finite resource, an application perceived to be easier to use than another is more likely to be accepted by users. Within the context of this research, ease of use can be defined as the expectation mobile phone users- micro entrepreneurs- have regarding the effort required to use e.g. mobile advertising messages (Gil-Lafuente, Gil-Lafuente & Merigo-Lindahl, 2012). Due to the technical and interactive characteristics that mobile phone present as opposed to other media, such as television or magazines, the experience of consumers in mobile advertising is different from the experience of advertising in other media. On a mobile device, the main difficulties

will be the navigation problems of handheld devices. Even though the mobile services can be accessed anywhere at any time, a youth entrepreneur will fail to understand the usefulness of the system if it's complex and difficult to use (Wang, 2014). Uhelkar (2009) and Wang (2014) both agree that a mobile phone has to be easy to use for the entrepreneur for him or her to find it useful. This also applies to the services accessed through the mobile phone e.g. mobile banking.

### **2.7.2.3 Accessibility.**

Mobile phone services have to be easily accessible to youth entrepreneurs for them to be useful to them. Pagani (2004), states that accessibility -ability to reach the required services- is one of the main advantages of mobile payment services. Small and micro businesses are among the greatest beneficiaries of mobile services such as M-Pesa mobile payment. As 2013, there were 81,025 M-Pesa agents spread throughout the country offering the mobile payments service (Safaricom Annual report, 2013/2014). The micro-business operators go to the bank less often and spend more time running their businesses. Equally, many unbanked Kenyans can now receive or send money wherever they are in the country (Omwansa, 2009). Majority of the micro business operators are familiar with the use of the mobile payment services as they are easy to use and require no formal training before use. The mobile payment providers' agents are well distributed and easily accessible to the micro business owners for support of their services in Kenya.

### **2.7.2.4 Cost.**

The cost of the mobile phone also influences a youth entrepreneur's choice to use a particular phone or service. One will go for a phone that is affordable and consequently subscribe to services that are affordable for them. The transaction costs of carrying out transactions using the mobile phone technology are lower than those of banks and money transfer companies (Omwansa, 2009). The cost of a payment transaction has a direct effect on consumer adoption if the cost is passed on to customers (Mallat 2007). Transaction costs should be low to make the total cost of the transaction competitive. Mbogo (2010), in her study on the impact of mobile payments on micro enterprises, found that the cost of the mobile payments should be affordable to most of the micro business operators and far below what the banks normally charge for their bank transactions. There are many different mobile handsets which are easy to

operate and have the functionalities required for the mobile payment technology. Micro entrepreneurs also find it cheaper to advertise their products using mobile applications such as WhatsApp and OLX considering that the mobile data bundles provided by mobile service providers are affordable. According to the Safaricom annual report (2014), data usage per customer grew by 16.1% while average price per MB declined by 14.1%. This means that micro entrepreneurs with internet enabled phones are able to access mobile phone applications like whatsapp in their business activities. Airtel Kenya also lowered its rates by introducing the Airtel unlimiNET bundle. Airtel UnlimiNET is designed to enable Airtel customers remain connected to their social and professional networks all day without worrying about MBs running out and at a low cost, (Airtel Kenya CEO Adil El Youssefi, 2015).

#### **2.7.2.5 Convenience.**

The mobile phone is proving to be convenient through the services that can be accessed by the young entrepreneurs. The efficiency and real time tracking of information makes using the mobile phone in marketing products much easier than other advertising. It is able to reach a much wider audience due to the nature of mobile devices and how people use them. This proves to be very convenient for young entrepreneurs to run their businesses especially using mobile payment services. Njenga (2009) states that although the mobile phone balances may seem low, the fact that there are balances proves that there is storage which can be perceived as acceptance of deposits. This is a significant indication of the high value placed on the convenience associated with the use of the mobile payment services. Omwansa (2009) states that a lost or stolen mobile phone does not mean catastrophe as no one can access an M-Pesa account without a correct personal identification number (PIN). He further explains that in a country where majority of people have no bank accounts, M-Pesa provides both convenience and safety. People walk around with their virtual money knowing they can withdraw cash any time at a minimal fee. In a mobile environment, it is necessary to have perceived security and trust in the vendors and the payment system. (Siau, et al., 2004; Mallat, 2007).

#### **2.7.2.6 Security.**

Security and safety of mobile payment transactions is one of the primary concerns for users (Nam, Yi, Lee and Lim, 2005; Wang, 2014; Wunderlich, 2009). They state that safety represents no delay, no transaction incompleteness and no private information disclosure

during payment transactions. The use of the PIN and secret code for mobile transactions enhances the security and privacy issues. Key requirements for any financial transaction in an electronic environment should include confidentiality, authentication, data integrity and non-repudiation (Shon & Swatman, 1998). Other security factors important to the users are anonymity and privacy, which relate to use policies of customers' personal information (Jayawardhena & Foley, 1998; Shon & Swatman, 1998; Mallat, 2007).

#### **2.7.2.7 Satisfaction**

Personal experiences for a lot of people indicate that the current technology is user friendly and previous studies of the adoption of mobile payments show that it is the usability, usefulness, speed and convenience of the service itself that counts (Pagani, 2004). Safaricom's Annual Report for Year 2008/2009 showed that by end of March 2009, there were over 6.175 million registered M-Pesa customers with an average of 11,580 new registrations per day representing a growth of 198% from the previous year (Annual Report 2008/2009). This indicates the wide usage and satisfaction that the existing customers have reported which in turn has influenced new customers to take up the services. Personal experiences on the use mobile phone can also influence other micro entrepreneurs to consider using the mobile technology in their business.

#### **2.7.2.8 Actual system use.**

The rapid spread of the mobile phone usage in Kenya means that the number of mobile users exceeds by far the number of banked people. Mobile phones offer easy communication and the current mobile payment services, M- Pesa facilities have reduced the average transaction costs for the consumer (Vaughn, 2009). The Safaricom Annual Report 2013/2014 shows that the number of subscribers using MPesa grew by over 2 million, bringing the total number of registered MPesa users to 19.3 million as of the year 2014. This indicates that M-Pesa mobile payment is reaching the unbanked (Vaughn, 2009). The ITU also indicated growth in mobile subscription in Africa had gone beyond 225 million (ITU, 2007-2008). This phenomenon regards also Kenya, where the number of mobile subscriber has grown in five years from 2 million to more than 9 million at the end of 2006 (ITU, 2007; Okome and Newell, 2014).

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.0 Introduction**

This chapter outlines a description of the research design, sampling techniques, population of the study, data collection methods and data analysis procedures that will be used to carry out this study. According to Leedy (1993) research methodology is an operational framework within which the facts are placed so that meaning may be seen more clearly. This chapter highlights the research design that will be used in the study. It also covers the population, sampling techniques, research instruments, data collection procedures and data analysis technique.

### **3.1 Research Design**

According to Sekaran (2010), a research design is a plan, structure and strategy of investigation conceived so as to obtain answers to research questions. A good research design has a clearly defined purpose, and has consistency between the research questions and the proposed research method (Mugenda & Mugenda 2003). To find out the impact of the mobile phones on youth micro enterprise development in Embakasi South constituency, the research design used was the descriptive survey. Gay (1976) defines descriptive survey as involving collection of data in order to test hypotheses or answer questions concerning the current status of the subject of the study. The major purpose of a descriptive survey is the description of the state of affairs as it is, as it exists at the present (Kumar, 2008). The study therefore sought to find out how the mobile phone is being used by youth entrepreneurs in Embakasi South and how it impacted on their businesses.

### **3.2 Location of Study**

This study was conducted in Embakasi South constituency. This constituency was initially part of the larger Embakasi Constituency before the latter was split in 2012 into four constituencies: Embakasi North, Embakasi South, Embakasi West, Embakasi East and Embakasi Central. Embakasi South consists of five wards namely: Imara Daima, Kwa Njenga, Kwa Reuben, Kware and Pipeline. The constituency has a total population of 201,042 (majority of them observably youth) sharing approximately 12Km<sup>2</sup> area (Census Report, 2009; IEBC, 2009). A larger part of this area consists of informal settlements. All Wards except Imara Daima which occupies 3.9km<sup>2</sup> are mainly informal settlements characterized by poor housing, sanitation and drainage

coupled with high poverty levels. Employed youth in the area are mainly casual laborers in the industries located along Mombasa Road and Industrial Area. According to YEDF (2012), the self-employed youth in this constituency are mainly involved in micro and small businesses such as vegetable vending, selling second-hand clothes and shoes, water vending, running food kiosks, garbage collection and carpentry.

### **3.3 Target Population**

Wright and Sim (2000) define target population as the collection of cases in which the researcher is ultimately interested in and to which he or she wishes to make generalizations. The study targeted youth entrepreneurs. According to the Kenyan constitution, a youth is one aged between ages of 18-35yrs. There are approximately 1,121 registered youth entrepreneurs in Embakasi South Constituency (YEDF Status Report, 2012). To establish how the mobile phone impacts on the youth micro enterprises, a sample of these youths was used to give information on the impact the mobile phone has had on their businesses.

#### **3.3.1 Sampling Design**

A sample is a segment of the population selected to represent the population as a whole (Kombo, 2006). It is representative and allows the researcher to make accurate estimates of the thoughts and behaviour of the population.

Stratified random sampling was used in this study. Stratified random sampling method was preferred in this study because it led to selection of a representative sample from each of the business categories run by the youth; Vegetable vending, Second hand clothes, Second hand shoes, Salons and Food kiosks. The use of stratified random sampling gave each item in each group an equal chance of being selected. Simple random sampling was used to select representatives from each stratum.

#### **3.3.2 Sample Size**

A sample size is a selection of elements, members or units from a population. An ideal sample is one that provides a perfect representation of a population (Blaikie, 2009). According to Mugenda and Mugenda (2003), 10% -30% of the accessible population is enough. The respondents therefore were 30% of the total population of 1,121 of youth entrepreneurs in Embakasi South i.e. 336 respondents. 4 focus groups from four wards and an informant from

Pipeline ward were interviewed. This was because it was difficult to get more number of youths at one point to give information whereas some of the youths found in groups were rowdy.

### **3.4 Data collection instruments**

Yin (1994) listed six sources of evidence for data collection in the case study protocol: documentation, archival records, interviews, direct observations, participant observation and physical artefacts. This study used both qualitative and quantitative data collection methods. Semi structured questionnaires were be used to collect quantitative and qualitative data for they have advantages over other types of research instruments in that they are cheap, do not require as much effort to prepare and often have standardized answers that make it simple to compile data (Sekaran, 2010). The questionnaires also ensured confidentiality and anonymity for the respondents. Interview guides were also be used to collect data from focus groups and from a key informant.

### **3.5 Data Collection process**

This study utilized a questionnaire to collect primary data from youth entrepreneurs. The study used questionnaires as they have advantages over other types of research instruments in that they are cheap, do not require as much effort to prepare and often have standardized answers that make it simple to compile data (Sekaran, 2010).

The questionnaire consisted of both open and close ended questions. For the open ended questions, space was provided for relevant explanation by the respondent, thus giving them freedom to express their feelings. This method is considered effective to the study in that it created confidentiality.

The quantitative section of the questionnaire utilized both nominal and Likert type scale format to determine each of the variables. A 5 point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree was used as answers to statement questions. The Likert - type format was used because according to Kiess and Bloomquist (2008), the format yields equal - interval data, a fact that allows for the use of more powerful statistical tools to be used to test hypotheses.

Youth entrepreneurs were requested to participate in the research at the location of their businesses. If the entrepreneur agreed, then the research assistant issued a questionnaire and

waited for it to be filled. This aimed at minimizing loss of the questionnaires. The study used 336 entrepreneurs as sample respondents however there was only a response rate of 98.2 % as only 330 questionnaires were usable. According to Sekaran (2006), a response rate of 30% is regarded as most acceptable for a research therefore this means that the response rate for this study was good. Youth entrepreneurs were also interviewed from four focus groups from Pipeline, Imara Daima, Kware and Mukuru kwa Njenga wards. Only one focus group was interviewed in each ward as locating the youth in groups doing businesses proved difficult. Data from focus groups and from key informant; a supplier/retailer was collected in form of verbal responses which were noted down during the interview.

### **3.5.1 Testing validity of the research Instruments.**

Saunders et al. (2007) define validity as the extent to which data collection method or methods accurately measure what it is intended to measure. Validity is used to check whether a questionnaire is measuring what it purports to measure (Patton, 2002). Validity is the best available approximation to the truth or falsity of a given proposition or conclusion. To improve on the validity of the instrument, the study sought for the opinion the researcher's supervisor. Mugenda and Mugenda (2003) contend that the usual procedure in assessing the content validity of a measure is to use a professional or expert in a particular field. A pilot study was also done to evaluate the efficacy of the proposed survey instrument in which questionnaires were issued to 36 respondents; 10% of the target sample. According to Gray and Airasian (2000), it is common to use 10-20% of the target sample to administer a pilot study. The purpose of the pilot study was to address any ambiguous or unnecessary questions that should be modified for clarity or eliminated prior to administration of the principal study.

### **3.6. Data analysis**

Data analysis refers to examining what has been collected in a study and making deductions and inferences (Kombo, 2006).

The qualitative and quantitative data obtained through survey questionnaires and analysed using both qualitative and quantitative data analysis methods. The completed questionnaires were serialized, coded and cross checked to ensure quality control. The data records were then entered into SPSS and tested for normality. Analysis of quantitative data involved the generation of descriptive statistics such as frequencies and percentages. Descriptive statistics



consists of procedures used to summarize and describe the important characteristics of set measurements (Mendenhall, Beaver & Beaver, 2013). The frequencies and percentages generated were used to describe respondent organization and also describe the study findings.

Qualitative data was analysed using thematic analysis whereby main themes were first identified then organized into the following categories: Usefulness of the mobile phone, Ease of use of the mobile phone, convenience of the mobile phone, Easy accessibility to other services, security, satisfactory use of the mobile phone, challenges encountered while using the mobile phone and counter-measures. Bar charts, pie charts, and tables were employed to represent the data for interpretation.

## **CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND INTERPRETATION.**

### **4.0. Introduction**

The general objective of this research is to examine the impact of Mobile phone usage on youth microenterprise development in Embakasi South region. The findings gathered sought to answer the following research questions: What are the current patterns of mobile phone use among youth entrepreneurs in Embakasi South?; What are mobile applications and services that support youth entrepreneurship in Embakasi South?; How are youth entrepreneurs in Embakasi South using mobile phones services and applications to run their businesses?; and How effective is the mobile phone in growth of youth Micro enterprises in Embakasi South? The findings were gathered from the 336 entrepreneurs drawn from Embakasi South region. This chapter presents and discusses the findings in line with the above research questions.

### **4.1 Demographic Information.**

#### **4.1.1 Gender distribution of respondents.**

This study sought to establish the gender distribution of the respondents. The total number of the respondents was 330. 48% of the respondents were male while 62% were female. The findings indicate that women have become more entrepreneurial as compared to their male counterparts in Embakasi South. Previous researches have indicated that the entrepreneurial activity rate among men is higher as compared to women. For example a study on women's entrepreneurship in Finland indicted that entrepreneurial activity of men peaks that of women (Bush et al., 2006). The United Nations, (2002), also noted that in most transition countries the number of women entrepreneurs is lower than that of men. Studies carried out in Kenya have also hinted that women entrepreneurs are fewer than men, attributing the lack of entrepreneurial culture among Kenya women to lack of confidence and self-belief, lack of strong and relevant networks and starting up enterprises without adequate prior preparations (Mutuku et al., 2006). However, this study differs with these previous findings. Women entrepreneurs are now increasing in number as more respondents indicated being female in Embakasi South Constituency.

#### **4.1.2 Age bracket of respondents.**

This study sought to establish the age distribution of the respondents. Table 4.1 below summarizes the findings.

**Table 4.1: Age bracket of respondents.**

<b>Item</b>	<b>Frequency</b>	<b>%</b>
18-24 years	91	28
25-30 years	112	34
31-35 years	127	38
<b>Total</b>	<b>330</b>	<b>100</b>

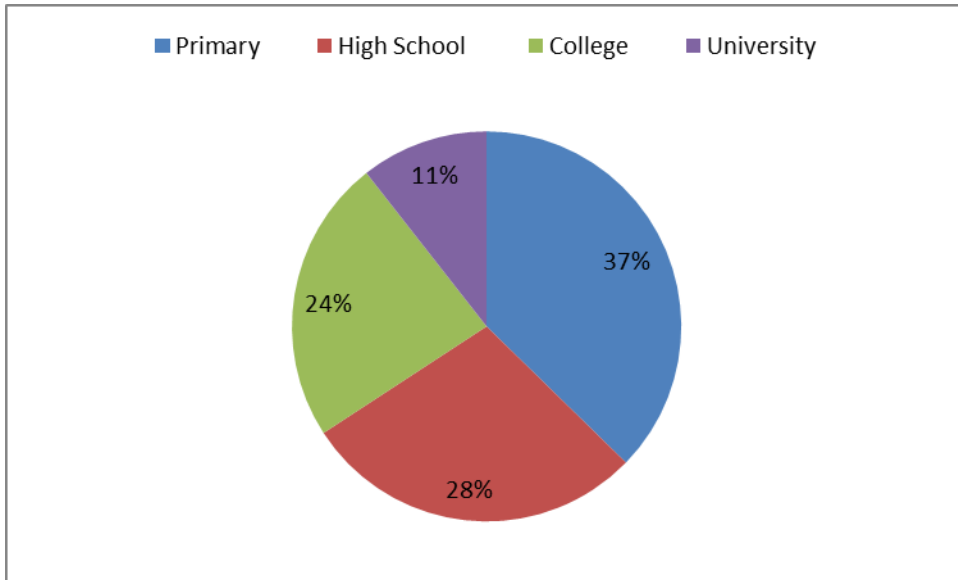
**Source: Researcher (2015)**

28% of the respondents were in the age bracket of 18 to 24 years, 34% were in the age bracket of 25 to 30 years while 38% of the respondents were in the age bracket of 31 - 35 years old. Most members of the focus groups interviewed indicated being in the age bracket of 25-33 years of age. Previous study has indicated that most youths between 15-25 years of age have micro enterprise businesses as a form of earning some money at the same time, those who do not have are enthusiastic about starting one (South, 2012). This study however found out that the youth 18-24 years of age took micro entrepreneurship as a part time activity whereas for youth aged over 30 years of age, micro enterprises were their main sources of income and a full time job.

#### **4.1.3 The level of education of respondents.**

This study sought to establish the level of education attained by the youth entrepreneurs. Figure 4.1 below shows a summary of the findings.

**Figure 4.1: The level of education of respondents.**



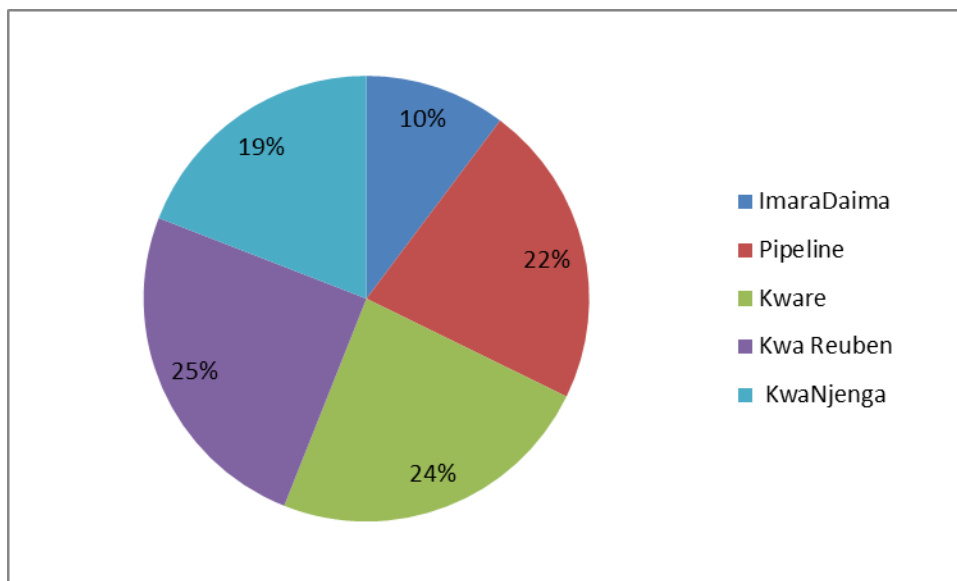
**Source: Researcher, 2015.**

Respondents were asked to indicate their level of education attained; figure 4.1 above, shows that 37% of the respondent had attained only the primary level of education, 28% of the respondent had reached high school, 24 % had college level education, while only 11% of the respondents were university graduates. Perez-Ortiz et al., (2015) state that education is a factor that positively influences entrepreneurship, with better educated countries showing higher level of entrepreneurial intentions. According to Teferra, (2013), entrepreneurial success in Kenya is affected by inadequate education and basic business skills. This study found that majority of the respondents, 37%, had only attained primary level of education. In reference to previous studies, these entrepreneurs risk facing challenges that require advanced education skills to tackle. They may not know how to expand their networks or access financing from financial institutions due to education level barrier.

#### **4.1.4 Respondent distribution by ward.**

This study sought to establish the distribution the youth entrepreneurs by ward. Figure 4.2 below shows a summary of the findings.

**Figure 4.2: Respondent distribution by ward**



According to the data on figure 4.2 above, 25% of the respondents who were the majority were the residents of Kwa Reuben ward in Embakasi constituency, 24% were from Kware, 22% were from Pipeline, 19% were from Kwa Njenga, 10% of the respondents were from Imara Daima. Imara Daima is characterized by residents in the middle class as opposed to those in Kwa Reuben slum. From the focus groups discussion, the study found out that most people living in Imara Daima had regular sources of incomes as opposed to those in Kwa Reuben, Kwa Njenga and Kware slums. Living condition in these slum areas are tough hence more youths opt to engage in micro entrepreneurship in order to earn a living. The poor living conditions can also be seen from poor housing in the area where the dwellers live in shacks mostly and single rooms. This findings agree with previous research that found that much like other settlements across Nairobi, Mukuru kwa Njenga nad Mukuru kwa Reuben are an overcrowded, unplanned, sprawl of shanty dwellings and commercial premises. Houses in the two settlements are mostly single roomed dwellings built from rusted corrugated iron sheets and in some cases lacking paved floor (Wouters et al. 2015). The differences in living conditions between the wards explain why most youths in Kwa Reuben, Kwa Njenga and Kware have micro enterprises as their main source of income.

#### 4.1.5 Type of micro enterprise business run by youth entrepreneurs.

This study sought to establish the type of micro enterprise business run by youth entrepreneurs in Embakasi South. Table 4.2 below shows a summary of the findings.

**Table 4.2: Distribution of respondents by type of Microenterprise business**

<b>Item</b>	<b>Frequency</b>	<b>%</b>
Second hand clothes	42	12.7
Second hand shoes	34	10.4
Vegetable vending	61	18.5
Food kiosks	48	14.5
Salon	41	12.4
Others	104	31.5
<b>Total</b>	<b>330</b>	<b>100</b>

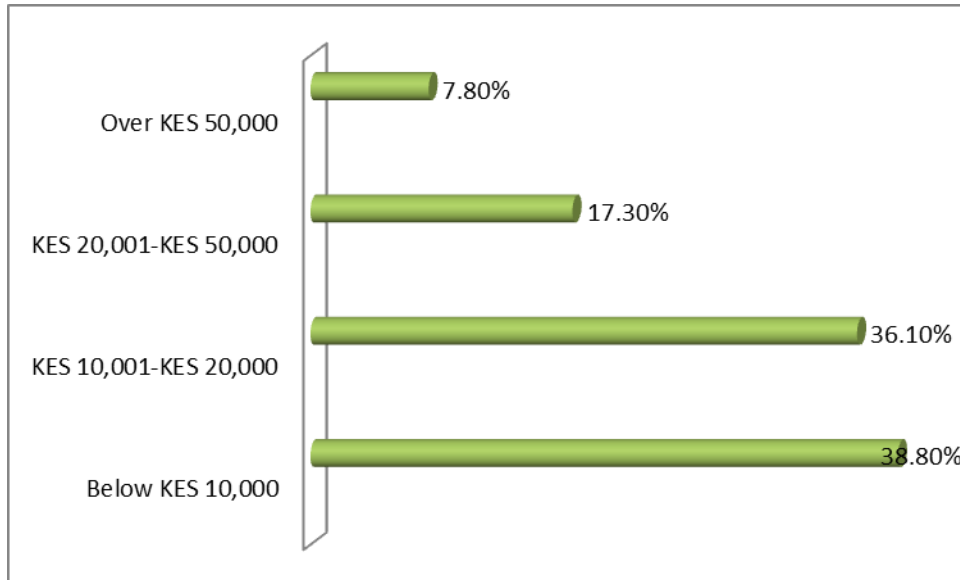
Source: Researcher (2015)

The findings indicate that 18.5% of the entrepreneurs were vegetable vendors, 14.5% operated food kiosks, 12.7 % sold second hand clothes, 12.4% operated salons, while 10.4% sold second hand shoes. Majority of the entrepreneurs who accounted for up to 31.5% mentioned other business engagement such as vehicle repair workshops, Car wash, barber shops, carpentry workshops, chemists and tailoring shops. These findings go hand in hand with the YEDF 2012 Status Report that highlighted Second hand clothes, vegetable vending, food kiosks, bodaboda business and Car wash as main micro enterprise businesses in Embakasi South.

#### 4.1.6 Youth entrepreneurs estimated monthly income.

This study sought to establish the youth entrepreneurs estimated monthly income. Figure 4.3 below shows a summary of the findings.

**Figure 4.3: Distribution of respondents by estimated monthly income**



Source: Researcher (2015)

The finding presented in figure 4.3 above indicates that 38.8% of the entrepreneurs had a monthly income of below KES 10, 000, 36.1% had an income ranging between KES 10,001 to KES 20,000, 17.3% had a monthly income ranging between KES 20,001 to KES 50,000, while only 7.8% of the entrepreneurs had a monthly income of over KES 50,000. David Mwarabu, a key informant indicated that he made over KES 50,000 per month from the sales of sandals. Most of the respondents who indicated having a monthly income of less than 10,000/= were pre entrepreneurs. These are entrepreneurs had been in the business for a shorter period and lack the networking that their fellow entrepreneurs who have been in the business longer have. According to Chinguta (2002), these entrepreneurs need advice, role models and access to finance to thrive like the rest. This then means that entrepreneurs earning less than KES 10,000 are beginners with less networking and experience hence the lower income.

#### **4.1.7 Youth entrepreneurs' duration in business.**

This study sought to establish the duration that youth entrepreneurs have been in business. Table 4.4 below shows a summary of the findings.

**Table 4.3: Distribution of respondents by length of time in business**

<b>Item</b>	<b>Frequency</b>	<b>%</b>
Below 1 year	93	28.2
1-3 year	128	38.8
3-5 year	62	18.8
Over 5 year	47	14.2
<b>Total</b>	<b>330</b>	<b>100</b>

**Source: Researcher (2015)**

Respondents were asked to indicate the duration they have been carrying out their businesses. Table 4.3 above presents distribution of respondents by length of time in business. Majority of the respondents of up to 38.8% of the entrepreneurs had been in business for a period ranging between 1 to 3 years, 28.8% had been in business for less than 1 year, 18.8% had been in business for a period ranging between 3 to 5 years, while 14.2% of the entrepreneur had been in business for more than 5 years.

## **4.2: Pattern of mobile phone use among youth micro entrepreneurs**

### **4.2.1 Mobile phone ownership among youth entrepreneurs.**

This study sought to find out the level of mobile phone ownership among youth entrepreneurs. 91% of the respondents i.e. 300 owned a mobile phone, whereas 9% of the respondents said they did not own a mobile phone. According to these findings it is clear that the respondents in this study samples have overwhelmingly high levels of access to the mobile phone. These findings are corroborated by Njogu, (2013) who noted that mobile phone ownership in Kenya has grown rapidly and the technology is playing an important role in reducing poverty. Penetration of the cell phone is high among Micro and Small Enterprises in Kenya; Munyua and Mureithi (2008) found in an industrial cluster in Nairobi that 93.8 per cent of the entrepreneurs owned cell phones, in contrast to 29.7 per cent who used fixed lines.



#### 4.2.2 The type of mobile phone owned by youth entrepreneurs.

This study sought to establish the type of mobile phones owned by youth entrepreneurs. Table 4.4 below shows a summary of the findings.

**Table 4.4: Distribution of respondents by the type of mobile phone owned**

Item	Frequency	%
Smartphones	209	70
Feature phones	91	30
<b>Total</b>	<b>300</b>	<b>100</b>

**Source: Researcher (2015)**

In reference to table 4.4 above, 70% of the entrepreneurs owned smart phones while, 30% owned feature phones. These finding prove that the Kenyan smartphone market continues to experience substantial growth. The combination of a strong economic climate and increasing internet and mobile connectivity has created a favorable competitive landscape which has brought more brands and cheaper devices to the market that are affordable to youth entrepreneurs. According to Amoah (2014), currently the use of smartphones has become widespread and is the force of the new development of mobile banking service. This however doesn't rule out that feature phones are also essential in mobile banking because of respondents who owned feature phones admitted to being able to access mobile banking. Amoah also noted that the smartphone market is set to grow in Africa with Middleton (2011) having predicted that over 15% of mobile connections in Kenya will be via smartphones by the end of 2016.

#### 4.2.3 Inclusion of mobile phones in youth micro entrepreneurship.

This study sought to establish whether youth entrepreneurs used their mobile phones to run their businesses. Up to 80% of the entrepreneurs who owned mobile phones indicated that they used their mobile phone for business services, while only 20% said they did not used their for business services. Respondents from focus groups also indicated that they have used the mobile phone at some point in their businesses to connect with their suppliers and clients. These finding

indicate a large number of entrepreneurs have embraced the mobile phone technology because they find it useful in their business. This can be corroborated by numerous studies that have also indicated the spread of mobile phones leads to more employment opportunities and expands the range of business activities for example through resale of airtime in Africa (Wright,2004) and refurbishing of handsets in Indonesia (Barendgret, 2005). According to Castelles et. Al, (2007) it is now routine for small shop owners in Chinese cities or individuals throughout Europe to distribute cards that show their mobile phone numbers. This makes it possible for customers to access their goods and services with ease. The same can be said about the entrepreneurs in Embakasi South who admitted that they use the mobile phone in their business allowing their customers to access their services with ease.

#### **4.2.4 Mobile phone service mostly used by the youth to run micro enterprises.**

This study sought to establish the mobile phone services mostly used by youth entrepreneurs to run their businesses. Table 4.5 below shows a summary of the findings.

**Table 4.5: Mobile phone service mostly used by the youth to run micro enterprises.**

<b>Item</b>	<b>Frequency</b>	<b>%</b>
SMS	13	5.44
Calls	29	12.13
Both	197	82.43
Total	239	100

**Source: Researcher (2015)**

Respondents were asked to state the mobile phone services they used mostly to run their businesses. The findings presented in table 4.5 above indicates that 82.43% of the entrepreneurs who used their mobile phones for business services made use of both SMS and calling services, 12.13% used the calling service while 5.44% used SMS to run their businesses. This shows that although majority of the youth use the mobile to both SMS and Call, a bigger number prefers calling as opposed to texting. Some of the respondents in focus groups also noted that calling was a preferred service because they could get instant response whereas texting at times delayed

the process of communication. This shows that the youth entrepreneurs consider the mobile phone to be an efficient tool of communication with their clients. Ksherti (2014) also noted that mobile phones have enabled small business owners in developing countries to promote their products and communicate with their customers effectively.

#### 4.2.5 Frequency of Mobile phone usage among youth entrepreneurs.

This study sought to establish the frequency of mobile phone usage among youth entrepreneurs. Table 4.6 below shows a summary of the findings.

**Table 4.6: Frequency of Mobile phone usage among youth entrepreneurs.**

Item	Very often		Often		Sometimes	
	Freq.	%	Freq.	%	Freq.	%
Call customers n=52	8	15.4	32	61.5	12	23.1
Call suppliers n=131	59	45.0	38	29	34	26
SMS customers n=17	6	35.3	8	47	3	17.8
SMS suppliers n=39	28	71.8	11	28.2	0	0

**Source: Researcher (2015)**

15.4% and 45.0% of the entrepreneurs who used their mobile phones to call their customers and suppliers respectively indicated that they did so *very often*. The findings also indicate that of those entrepreneurs who used their mobile phone to send SMS to their suppliers and customers respectively, were 71.8% and 35.3% and did so *very often*. 17.8% of the respondents said they sometimes used their mobile phones to SMS their customers.

These findings indicate that the mobile phone technology is most diffused among micro entrepreneurs as previous researches have shown with the youth being the majority users of technology (Njogu, 2013; ICT Policy, 2006). Micro entrepreneurs are making use of various services accessed on the phone-mobile payment, SMS services, and internet services- to run their businesses. Safaricom recorded an increase in performance of messaging services driven by increased usage of affordable SMS bundles and SMS based promotions (Safaricom Audit Report, 2014). This is a possible explanation for entrepreneurs using SMS to communicate with their clients.

### **4.3: Mobile phone services and applications that support youth micro entrepreneurship.**

#### **4.3.1 Mobile service provider subscribed to by youth entrepreneurs.**

This study sought to establish the mobile service provider subscribed to by youth entrepreneurs. Table 4.7 below shows a summary of the findings.

**Table 4.7: Mobile service provider subscribed to by youth entrepreneurs.**

<b>Item</b>	<b>Frequency</b>	<b>%</b>
Safaricom	170	56.7
Airtel	102	34
Orange	28	9.4
<b>Total</b>	<b>300</b>	<b>100</b>

Source: Researcher, 2015

In regards to mobile service provider, the finding presented in table 4.7 above indicate that majority of the respondents, 56.7% were subscribed to Safaricom, while 34% subscribed to Airtel while 9.4 % were subscribed to Orange. These findings indicate that Safaricom is the most popular network and according to respondents interviewed, this is because of the mobile payment method, MPesa, which is largely used among entrepreneurs. According to Safaricom's Audit Reports (2014), mobile penetration in Kenya stood at 76.9% with Safaricom recording the

largest share of customer base of 67.9%. According to Communication Authority’s third quarter sector statistics for the period between January - March 2014, Airtel Kenya had 5,251,087 users on its network while yuMobile had 2,557,630. During the period under review, Safaricom had 21,567,388 subscribers, accounting for 68 per cent market share while Orange Kenya had 2,453,898 subscribers, equivalent to 7.7 per cent market share.

#### **4.3.2 Mobile payment usage in youth micro enterprises.**

This study sought to find out whether youth entrepreneurs used mobile payment method in their businesses. 72.4% of the entrepreneurs who used mobile phone for business services said that they used mobile payment method, while 27.6% indicated that they did not use mobile payment method. This means that mobile payment technology has been largely adopted among youth entrepreneurs since they are able to access services offered by financial institutions. According to Donner (2007), mobile banking provides the possibility of addressing two key barriers to financial inclusion: affordability and physical availability hence beneficial to micro entrepreneurs.

#### **4.3.3 Mobile payment method subscribed to by youth entrepreneurs.**

This study sought to find out they type of mobile payment method youth entrepreneurs used in their businesses. Table 4.8 below shows a summary of the findings.

**Table 4.8: Mobile payment method subscribed to by youth entrepreneurs.**

<b>Item</b>	<b>Frequency</b>	<b>%</b>
M-Pesa	157	65.7
Airtel money	71	29.7
All the above	11	4.6
Total	239	100

Source: Researcher, 2015

As indicated in table 4.8 above, 65.7% of those entrepreneurs who used mobile phone payment used the M-pesa, 29.7% used Airtel money, while 4.6% used both M-pesa and Airtel money

platforms. These findings indicate that 72% of the respondents used mobile payments in their businesses; an indication that mobile payment is a preferred method of cash transaction as compared to direct banking method. A key informant, David Mwarabu (32), who supplies Maasai sandals to all parts of the country and even outside Kenya; Botswana, said his clients use MPESA to pay for the sandals supplied to them. This also, he said applies to his retail customers within and without Nairobi City. This can be attributed to the lower cost of transaction through the mobile phone. This is also in agreement with Omwansa (2009) who stated that the transaction costs of carrying out transactions using the mobile phone technology are lower than those of banks and money transfer companies. Earlier research by Mbogo (2010), in her study on the impact of mobile payments on micro enterprises, found that the cost of the mobile payments are more affordable to most of the micro business operators and far below what the banks normally charge for their bank transactions. In March 2013, Safaricom reported that M-Pesa had 15.2 million customers compared to 14.9 million in March 2012, while revenues from M-Pesa stood at Ksh10.43 billion in March 2013, an impressive year on year growth of 32 percent. This further confirms that MPesa is the most popular mobile payment method used by youth entrepreneurs.

#### **4.3.4 Youth entrepreneurs' access to internet services.**

This study sought to find out whether youth entrepreneurs accessed the internet on their phones. Up to 76.7% of 300 entrepreneurs who had mobile phones had access to the internet, as compared to 23.9% who said they did not access the internet. Earlier studies have indicated that entrepreneurs seeking to go online through their mobiles also face other significant hurdles. The lowest-end mobile phones do not have Internet browsers, although it is also increasingly true that the second-least expensive level of mobiles is Internet-ready (Bothra, 2006). The large number of youths who access the internet can also be attributed to the notably lower prices in data bundles from their mobile subscribers; according to the Safaricom annual report (2014), data usage per customer grew by 16.1% while average price per MB declined by 14.1%, as well as other benefits that come with accessing the internet on the mobile phone such as Facebook and WhatsApp for marketing their products.

#### **4.3.5 Applications accessed on the mobile phone by the youth and used to market products.**

This study sought to find out the type of applications the youth accessed on the mobile phone to market products. Table 4.9 below shows a summary of the findings.

**Table 4.9: Applications accessed on the mobile phone by the youth and used to market products.**

<b>Item</b>	<b>Frequency</b>	<b>%</b>
WhatsApp	89	37.2
OLX	42	18
Facebook	108	45.2

Source: Researcher, 2015

As shown above, up to 45.2% of the entrepreneurs who used mobile phone for business services accessed Facebook application on their mobile phones. The study also indicates that 37.2% of those entrepreneurs accessed WhatsApp on their mobile phones products while 18 % accessed OLX mobile phone applications. It is clear that entrepreneurs are now actively using the applications on their mobile phones to advertise/market their products. This can be attributed to the affordability of the mobile phone services as opposed to high cost of advertising through mainstream media. The youth have been said to be using social media for their own personal reasons like announcing relationship statuses, accessing pornographic material (Subramanyam &Smahel, 2011) and to upload personal photos and maintain contact with friends (Chan, 2010), however, this study proves otherwise. The youth are now using the internet, especially social media to develop economically.

#### **4.4: Youth entrepreneurs' usage of mobile phone services and applications in product marketing.**

##### **4.4.1 Youth entrepreneurs' usage of mobile phone applications in product marketing.**

This study sought to find out how the youth used the mobile phone applications to market products. Table 4.10 below shows a summary of the findings.

**Table 4.10: Youth entrepreneurs' usage of mobile phone applications in product marketing.**

<b>Item</b>	<b>Frequency</b>	<b>%</b>
Post on Facebook	178	74.47
Advertise on whatsapp	38	16.31
Upload photos on OLX	23	9.62

Source: Researcher, 2015

In reference to table 4.10 above, 9.62% of those entrepreneurs who accessed mobile phone application marketed their products on OLX, 16.31% marketed their products on WhatsApp while the majority, 74.47% marketed their products on Facebook as shown in the figure 4.4 below. David Mwarabu, a maasai sandals supplier and retailer in Pipeline also indicated having initially posted his merchandise on Facebook where he got his first clients. He then used WhatsApp constantly to communicate with his clients who he said were based in Botswana, Kisumu and Nairobi. Mwarabu noted that he has been using the mobile phone for the past six years in his business adding that his clients also rely on Facebook and WhatsApp to place orders whereas they use MPesa to pay for the services he gives. The figure 4.5 below shows how he used WhatsApp to market and to sell his goods. Some respondents from focus groups who didn't access the internet pointed that they found it difficult to easily market their products as compared to their counterparts who had could access Facebook, WhatsApp. These respondents said at times they had to rely on their friends who have internet enabled phones to help them advertise their goods. They even have to go to cyber cafes if they wanted to upload pictures of Facebook.





Figure 4.4: Youth entrepreneurs' usage of Facebook to market products.

Source: Researcher (2015)

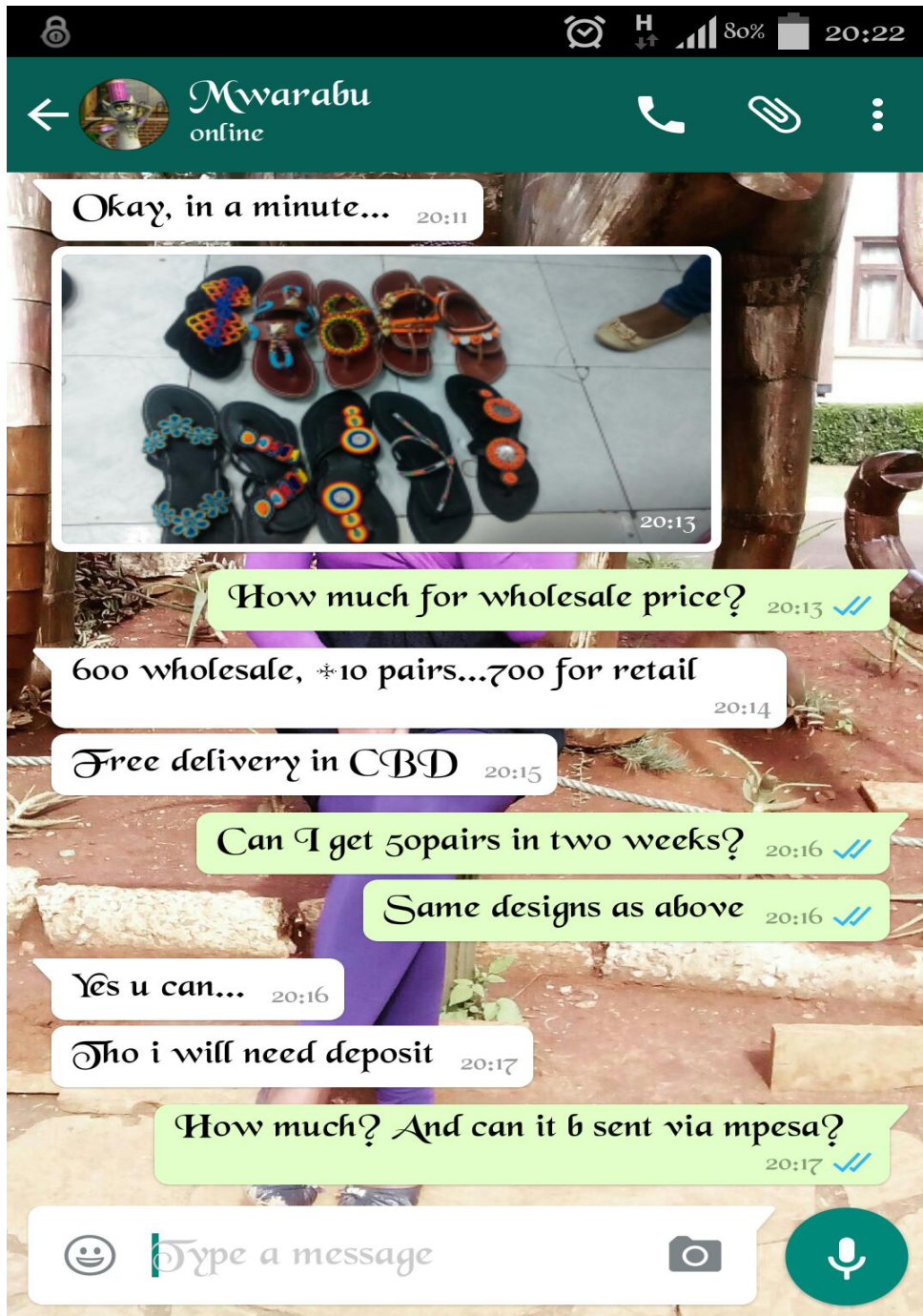


Figure 4.5; Youth entrepreneurs' usage of WhatsApp in businesses.

#### 4.4.2 How mobile payment services are being used by the youth entrepreneurs.

This study sought to find out how the youth used mobile phone payment methods in their businesses. Table 4.11 below shows a summary of the findings.

Table 4.11: How mobile payment services are being used by the youth entrepreneurs.

<b>Item</b>	<b>Frequency</b>	<b>%</b>
To make cash transfers to the bank and vice versa	29	12.1
To pay for products from suppliers	212	88.7
To receive payment from clients	150	62.8
All of the above	71	29.7

Source: Researcher, 2015

The findings in table 4.11 above, indicates that, among those entrepreneurs who used mobile payment, 88.9% used the platform to pay for products from suppliers, 62.8% to receive payment from clients, 29.7% used the platform for both payment for products from suppliers and receiving payment from clients, while only 12.1% of those entrepreneurs who used mobile payment used it to make cash transfers to the bank and vice versa. These findings show that the youth entrepreneurs actively use the mobile payment method to pay for supplies from their suppliers as well as receive payment from their clients. This was attributed to the convenience, affordability and ease of use of the mobile phone. The respondent noted that with mobile payment, a lot of time is saved as compared to doing direct bank transactions. The cash is also secure with the use of the mobile payment as the youth entrepreneurs do not have to handle cash directly. These findings agree with previous research where mobile banking provides the possibility of addressing two key barriers to financial inclusion: affordability and physical availability hence beneficial to micro entrepreneurs (Donner (2007). The micro-business operators are able to transact payments directly with their customers and suppliers through a mobile phone in the palm of their hands without necessarily going through a bank (Anuradi, Tyagi and Raddi, 2009) and without having to leave their business premises.

#### **4.5. Challenges of using the mobile phone in micro enterprises by the youth.**

This study sought to find out how the challenges the youth encounter while using the mobile phone in their businesses. Table 4.12 below shows a summary of the findings.

**Table 4.12: Challenges of using the mobile phone in micro enterprises by the youth.**

<b>Item</b>	<b>Frequency</b>	<b>%</b>
Difficulty in transaction in case of loss of the phone	150	62.8
Mobile phone money transfer Fraud	29	12.1
Poor network / system failure	212	88.9
Lack of/inadequate credit	71	29.7
Sending money erroneously to a wrong number	27	0.1
Failure of clients to respond	46	19.2
Battery failure	157	65.7
Poor knowledge of mobile application	27	0.1

Source: Researcher, 2015

The findings in table 4.12 above further indicates that, among those entrepreneurs who used mobile payment, up to 88.9% indicated that challenge when using mobile in their business emanated from Poor network / system failure, 65.7% mentioned battery failure, 62.8% indicated that they experienced difficulty in transaction in cases where they lose their mobile phones, 29.7% mentioned lack of/inadequate credit, 12.1% mentioned mobile phone money transfer fraud, while 0.1% of the entrepreneurs said that poor knowledge of the mobile application and sending money erroneously to a wrong number were the challenges they faced when using mobile phone in their business. These finding confirm that any technology used has its own risks and the mobile phone is not excluded. Caplan (2006) further explains that cyber loafing and personal web use may inhibit productivity. This could be witnessed where a mobile phone user uses working hours to surf through the internet for personal gains. Caplan (2006) also noted that unsecure mobile phones have become a common problem for employees due to digital criminals. This likely explains cases of mobile money transfer fraud. Dibben (2009) also notes that hackers

could use mobile phones using new software to take important information from the users therefore posing a risk to their business.

#### **4.5.1 Measures taken by youth entrepreneurs to overcome challenges faced while using mobile phones in businesses.**

This study sought to find out how the countermeasures used by youth entrepreneurs to handle the challenges encountered while using the mobile phone in their businesses. Table 4.13 below shows a summary of the findings.

**Table 4.13: Measures taken by youth entrepreneurs to overcome challenges faced while using mobile phones in businesses.**

<b>Item</b>	<b>Frequency</b>	<b>%</b>
Exercise caution generally	80	89.9
Keep your pin number a secret	119	49.8
Use Okoa jahazi if one lacks money	29	12.1
Ensure that you have hard cash in case of system failure	27	0.1
Register a new SIM card and change the password in case of fraud	94	33.7
SMS in case there is no enough airtime on phone to make a call	46	19.2

**Source: Researcher, 2015**

89.9% of the entrepreneur indicated that they exercised general caution in overcome their challenges when using mobile in their business, 49.8% said that they kept their pin number a secret, while 33.7% said they would register a new SIM card and change the password in case they experience mobile money transfer fraud. The findings further indicates that 19.2% of the entrepreneur said that they would send a short message if they had no enough airtime on phone with only 0.1% indicating that they ensured that they have hard cash in case of system failure in

mobile payments method. Most respondents indicated that they exercise general caution such as keeping their mobile phone information private, keeping their pin numbers private to curb fraud cases. These findings are corroborated by Safaricom (2015) where the service provider urged Mpesa users to keep their PIN secret and should choose a combination that is easy for them to remember, but difficult for others to guess. It also advised users not to share their M-Pesa PIN with anyone, not even Safaricom staff.

#### **4.6. Effectiveness of the mobile phone in running youth microenterprises.**

##### **4.6.1: Level of Satisfaction with the services received from mobile service providers.**

This study sought to establish the level of satisfaction of youth entrepreneurs with the services received from mobile service providers. Table 4.14 below shows a summary of the findings.

**Table 4.14: Level of Satisfaction with the services received from mobile service providers.**

<b>Item</b>	<b>Frequency</b>	<b>%</b>
Very satisfied	24	10.4
Satisfied	201	84.5
Dissatisfied	9	3.9
Very dissatisfied	5	2.2
<b>Total</b>	<b>239</b>	<b>100</b>

Source: Researcher, 2015

While only 10.4% of the respondents said that they were very satisfied with the cost of service they got from their mobile service provider; up to 85.5% said they were satisfied. The findings also indicate that 3.9% were dissatisfied with the cost of service they got from their mobile service provider, while 2.2% said they very dissatisfied. The findings show that most respondents were satisfied with the services they get from their service providers. These can be corroborated by the increase in customer base of various mobile service providers. The Communications Authority of Kenya published its statistical report for the three months ended 31 December 2014, in which it revealed that the total number of mobile subscriptions rose to

33.63 million from 32.77 million the previous quarter and 31.31 million at end-2013 (CA, 2015). Safaricom accounted for the lion's share of total wireless customers (67.4%, 22.66 million), followed by Airtel Kenya, which acquired the subscriber base of Essar Telecom (yu) during the quarter, with a market share of 22.6%. The acquisition boosted the Indian-owned cellco's total customers from 5.40 million at the end of September 2014 to 7.61 million three months later (Safaricom Annual Report, 2014 & CA, 2015). The market's smallest network operator, Telkom Kenya (Orange), reported 3.63 million wireless users at end-2014 (a share of 10.0%), up from 3.02 million the previous quarter. Mobile data subscriptions rose from 13.09 million to 16.34 million over the twelve-month period, with Safaricom accounting for 11.8 million, followed by Airtel with 2.4 million and Orange with 2.2 million.

#### **4.6.2: Rating of the mobile phone services provided.**

This study sought to establish how youth entrepreneurs rated the services received from mobile service providers. Table 4.15 below shows a summary of the findings.

**Table 4.15: Rating of the mobile phone services provided to youth entrepreneurs.**

<b>Item</b>	<b>Frequency</b>	<b>%</b>
Very good	14	5.9
Good	210	87.9
Fair	15	6.2
<b>Total</b>	<b>239</b>	<b>100</b>

Source: Researcher, 2015

As shown in the table 4.15 above, the study findings indicates that, while only 5.9% of the respondents rated services provided on the phone by their mobile service provider as very good, up to 87.9% said the service was good and 6.2% rating the service as fair. The increased number of subscribers means that the users were happy with the services received. This can be reflected in Communications Authority of Kenya report of May 2<sup>nd</sup>, 2015, where its statistical report for the three months ended 31 December 2014 revealed that the total number of mobile subscriptions

rose to 33.63 million from 32.77 million the previous quarter and 31.31 million at end-2013 (CA, 2015).

#### **4.6.3: Type of cash transaction method used by the youth entrepreneurs.**

This study sought to establish the type of cash transaction method used by the youth in their micro enterprises. Table 4.16 below shows a summary of the findings.

**Table 4.16: Type of cash transaction method used by the youth entrepreneurs.**

<b>Item</b>	<b>Frequency</b>	<b>%</b>
Direct Bank transactions	26	10.88
Mobile payment method	45	18.83
All of the Above	150	62.76
Others	18	7.53
Total	239	100

Source: Researcher, 2015

In reference to the table, 18.83% of those who used mobile phone for business service used mobile payment, 62.76% used both mobile payment and direct bank transactions, 7.53% used other transactions such as cash on delivery, while 10.88% used direct bank transactions. This finding corroborate earlier studies that indicate that, the use of the mobile phone to provide financial services to the “unbanked” of the developing world has achieved considerable prominence on the international development agenda (Comminos et al., 2008;infoDev, 2006; Ivatury & Pickens, 2006; Porteous, 2006).

#### **4.6.4: Youth preference of mobile payment over other modes.**

This study sought to establish whether the youth preferred using mobile payment over other modes of payment.



The findings indicate that 95.82% of the respondents who used the mobile phone for business service considered using the mobile payment method to be better than direct bank transactions while only 4.18% preferred direct banking method. This means that mobile payment method is more convenient for the entrepreneurs as compared to direct banking. Respondents from interview guide said they saved a lot of time by doing transactions using mobile payment whereas those who did not own a phone/ use a phone in their business said they spent a lot of time queuing in the banking halls just to make cash deposits or withdrawals. The respondents who used mobile payment method, M-pesa, said they were able to access the agents anywhere at any time to make transactions whereas transactions through the bank were limited to the banks working hours. Pagani (2004), states that accessibility -ability to reach the required services- is one of the main advantages of mobile payment services.

#### **4.6.5: Advantages of mobile payment methods over other modes.**

This study sought to establish the advantages of using mobile payment over other modes in youth micro enterprises. Table 4.17 below shows a summary of the findings.

**Table 4.17: Advantages of mobile payment methods over other modes.**

<b>Item</b>	<b>Frequency</b>	<b>Cumulative %</b>
Convenient	150	62.8
Time saving	35	15
Less risky because the money is not in cash to be stolen	22	9.3
Easy to use	16	6.7
Faster	14	6.2

Source: Researcher, 2015

62.8% of the respondents said that they consider using the mobile payment method to be better than direct bank transactions because it was convenient, 9.3% said it was less risky because the money is not in cash to be stolen i.e secure, 6.2% said it was faster, 19.2 said that it was easy to use, while 15% said they consider using the mobile payment method to be better than direct bank transactions because it was time saving. This findings show that mobile phone services are interactive, cohesive, reliable, convenient, readily adaptable, and secure. The transaction costs of carrying out transactions using the mobile phone technology are lower than those of banks and money transfer companies (Omwansa, 2009). This is a possible explanation why the entrepreneurs consider mobile payment to be better than direct banking. The respondents also consider mobile payment to be more secure as opposed to carrying hard cash to the bank. The main use of mobile technology is to make business communication easier and reliable. One of the respondents said his phone makes me him safer and confident. The entrepreneurs also noted that they felt safer depositing their income to their banks through the mobile phones rather than walking to the bank with cash in hand. This is in agreement with Omwansa (2009) who stated that in a country where majority of people have no bank accounts, M-Pesa provides both convenience and safety.

#### **4.6.6: The level of agreement on the effectiveness of mobile phone usage.**

This study sought to establish the effectiveness of using mobile phones in youth micro enterprises. Table 4.18 below shows a summary of the findings.

**Table 4.18: The level of agreement on the effectiveness of mobile phone usage.**

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	%	%	%	%	%
Using a mobile phone in my business has helped me save on time	0	0	5.5	30.3	64.2
My work has been made easier with the use of the mobile phone in my business.	0	0	3	79.4	17.6
I am able to market more of my products using the mobile phone.	0	0	4	9.1	87
I prefer doing cash transactions via the phone as opposed to direct banking.	0	0	0	3.3	96.7
The security of my business is guaranteed with the use of mobile phone to do transactions.	0	34	21	26	18.5
Using the mobile phone in running a micro enterprise business is cost effective as compared to other methods.	0	4.8	11.2	71.8	12.1
The mobile phone has impacted positively in the development of my business.	0	3	5.2	26	65.8
Using the mobile phone to run my business has made me count losses in my business.	0	84.5	12.7	2.7	0

Source: Researcher, 2015

Over 90% of the respondents agreed that using the mobile phone has helped them save on time while using the mobile phone in their business. A significant percentage of the respondents also agreed that their work has been made easier and that they are able to market more of their products since they began using the mobile phone in their micro enterprises. 28% cited that the security of their businesses is guaranteed with the use of the mobile phone, however, 34% disagreed citing various challenges and risks that come with technology. Despite the various challenges encountered by various respondents in using the mobile phone, over 60% agreed that the use of the mobile phone has impacted positively on their micro enterprises.

According to the respondents interviewed, mobile phones have enabled most of the entrepreneurs to establish close contact with their customers, who in turn found it easy to establish when the entrepreneurs were at their business premises. The phone has helped the entrepreneurs most in dealing with day-to-day operations relating to their products. This has greatly supported them in areas of logistics, distribution, receiving of materials and

communicating with clients. They are able to make orders even when not at their business premises thus making the mobile phone to be a convenient tool in running their businesses. The phone also enables them to notify their clients to collect products when ready or of changes in purchase orders. The respondents interviewed also said that they were able to get new clients through the mobile phone hence making the mobile phone to be a useful tool to them. These findings concur with Miller and Horst (2006), who said that cellphones are effective tools in entrepreneurship as people are able to find out about supplies and competition in far more efficient ways.

The mobile phone is not only used as a tool of communication but also for advertising. One respondent said this has simplified their efforts to venture into new markets. The entrepreneurs were also able to contact new customers through their phones. The mobile phone also enabled them to call numbers obtained from advertisements by potential customers requiring them to tender hence extending their business networks. The mobile phone enabled them to monitor daily operations at their business premises. They were also able to monitor cash flow through their cell phones (especially when not at the business premises). The study findings indicate that mobile phone use by youth entrepreneurs enables new business contacts and amplifies existing social relationship. According to one respondent, he still felt in control when away from his business or families, provided he as in phone contact.

These findings collectively indicate that the mobile phone is a convenient, easy to use and useful technology to use in youth micro enterprises. In agreement with Ksherti (2014), who noted that mobile phones have enabled small business owners in developing countries to promote their products and communicate with their customers effectively, the youth entrepreneurs in Embakasi South noted that the mobile phone has helped them develop their businesses despite the challenges that come with it. They said that they were able to market their products widely, get more clients, save on time and also do faster cash transactions using the mobile phone.

The above findings agree with Theory of Technology Acceptance Model which suggests when youth entrepreneurs are presented with a new technology, a number of factors influence their decision about how and when they will use it (Davis, 1989). These factors are Perceived usefulness, Perceived ease of use as well as security concerns, cost, convenience, and satisfaction (Lu, Yu, Liu and Yao, 2003; Wunderlich, 2009; Wang, 2014). Although 34% of the respondents

said that they cannot say for sure that the security of their cash flow is guaranteed by using the mobile phone, they however admitted that the mobile phone has proved useful to them in running their businesses noting that they find it to be useful and convenient. The respondents who said they owned feature phones admitted that they miss out on services such as Facebook and WhatsApp which they acknowledge benefits their colleagues to a great length.

## **CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

### **5.0 Introduction**

This study sought to assess the impact Mobile phone usage on youth microenterprise development in Embakasi South region, Nairobi County. To achieve this, this study was guided by specific objectives: To find out the current pattern of mobile phone use among youth entrepreneurs in Embakasi South, To find out the mobile applications and services that support youth entrepreneurship, To explore how mobile services and applications are being used by youth entrepreneurs to develop their businesses, To explore how mobile services and applications are being used by youth entrepreneurs to develop their businesses, To find out the effectiveness of mobile phones in growth of youth Micro enterprises.

### **5.1 Summary of key findings.**

#### **5.1.1 Pattern of mobile phone use among youth entrepreneurs.**

The findings indicate that many youths are using the mobile phone to run their businesses and benefitting from the technology that comes with it. 91% of the youth entrepreneurs owned a mobile phone whereas only 9% indicated not owning a phone. Of those youths that owned a mobile phone, 72.4% i.e. 239 of the entrepreneurs indicated that they used the mobile phone to run their businesses. A majority of those, 78.8%, used the mobile phone for both calling and SMS services very often.

#### **5.1.2 Mobile phone services and applications that support youth micro entrepreneurship.**

According to the findings, most entrepreneurs were subscribed to mobile payment methods with 65.7% indicating that they used M-Pesa, 29.7% used Airtel money whereas only 4.6% indicated using both Airtel money and M-pesa platforms. Up to 76.7% entrepreneurs had access to the internet on their mobile phones hence were able to access mobile applications such as Facebook (45.2%), WhatsApp (37.2%) and OLX (18%) to market their products. 23.9% of the respondents indicated not having access to the internet hence were unable to benefit from the services that come with the internet. Respondents from focus groups however indicated that they enjoyed the benefits of mobile payment methods i.e. convenience, ease of use, time saving. This is also corroborated by the key informant who admitted to having used Facebook and WhatsApp majorly to advertise and get clients from all parts of the country as well as Botswana.

### **5.1.3 How mobile services and applications are being used by youth entrepreneurs to develop their businesses.**

9.62% of those youth entrepreneurs who used the mobile phone to run their business marketed their products on OLX, 16.31% marketed their products on WhatsApp while the majority, 74.47 % marketed their products on Facebook. Youth entrepreneurs also used the SMS and Calling services and mobile payments to run their businesses. 82.43 % used both the calling and SMS service to interact with clients and suppliers. The study findings also indicate that, among those entrepreneurs who used mobile payment, 88.7% used the platform to pay for products from suppliers, 62.8% to receive payment from clients, 29.7% used the platform for both payment for products from suppliers and receiving payment from clients, while only 12.1% of those entrepreneurs who used mobile payment used it to make cash transfers to the bank and vice versa.

### **5.1.4 The effectiveness of mobile phones in growth of youth Micro enterprises.**

From the findings, the mobile phone proved to be useful, convenient, less costly, easy to use and therefore effective in running their businesses. Over 90% of the respondents indicated that they were satisfied with the services they got from their mobile service providers with less than 10% expressing dissatisfaction. 96.1% of the respondents noted that the mobile payment services were more effective than direct banking methods or keeping the money at home. This was because mobile payment was found to be convenient, time saving and secure as chances of hard cash being stolen were minimal, easy to use and faster. 62.8% said the mobile payment was convenient, 15% said it saved on time, 9.3% said it was secure when it came to handling their cash, 6.7% said the service was easy to use whereas 6.2% said it was faster than direct banking. Some respondents from focus groups interviewed also noted that using the mobile phone in general helped them save on time such that they were able to make orders for new supplies, call customers and monitor the progress of their businesses with their mobile phone without necessarily being physically present. According to the respondents interviewed, mobile phones have enabled most of the entrepreneurs to establish close contact with their customers, who in turn found it easy to establish when the entrepreneurs were at their business premises hence being a useful tool in their business.

The entrepreneurs however noted that they faced some challenges while using the mobile phone in their businesses. Some of the challenges mentioned by the youth entrepreneurs include; poor

network coverage, inadequate airtime, poor knowledge of using some mobile applications, sending money erroneously to wrong numbers and high cost of communication between networks. These challenges are dealt with differently by the entrepreneurs; they exercised general caution to deal with fraud, loss of phones whereas others said they opted to send short messages instead of calling to minimize the cost of communication across networks. Despite the challenges encountered, 60% of the respondents said they had seen positive changes in their enterprises since they started using the mobile phone to run their businesses.

These findings were gathered from 330 youth entrepreneurs in Embakasi South Constituency. A sample of 336 youths was as respondents using stratified random sampling. However a response rate of 98.2% was witnessed hence the 300.

## **5.2 Conclusion**

### **5.2.1 Pattern of mobile phone use among youth entrepreneurs.**

Youth are increasingly using mobile platforms to buy and sell goods. In this study, findings indicate that: found that, nearly everyone who owned or managed a microenterprise-regardless of sex-had a mobile phone. This means that mobile technologies are playing a role in entrepreneurship and enterprise development by: connection, access information in real-time via mobile phones to better manage small enterprises, enabling youth to access and organize timely and relevant information to support the development and management of small enterprises and helping youth connect with money-making opportunities, and local markets.

### **5.2.2 Mobile phone services and applications that support youth micro entrepreneurship.**

The study found that the youths are now actively using mobile applications such as WhatsApp, Facebook and OLX to broaden their business ventures. This indicates that the youth are now using technology to develop themselves and the community at large. As opposed to previous researches where technology has been misused over time, these findings indicate that the youth entrepreneurs in Embakasi South are now using social media to develop economically and not just waste time engaging in conversations that are not beneficial to them.



### **5.2.3 How mobile services and applications are being used by youth entrepreneurs to develop their businesses.**

The study found out that youth entrepreneurs are now marketing their products using mobile applications, i.e. Facebook, WhatsApp, OLX. This means that the cost of marketing using mobile applications is lower than mainstream media hence its adoption by youth entrepreneurs. Mobile phone service providers have also facilitated the growth of micro enterprises since the launch of mobile payment methods which are preferred by youth entrepreneurs in Embakasi South.

### **5.2.4 The effectiveness of mobile phones in growth of youth Micro enterprises**

Despite the challenges that may have been encountered with the use of the mobile phone, the results here provide clear support to the idea that the mobile phone has a positive impact on microenterprise income. These results are consistent with the recent broader research (Vodafone, 2009) showing that poor households in urban places increased the value of their economic activity, labour, or self-employment by using mobile phones. Also, Donner (2004) reported that mobile phones represent an important tool for income growth for urban micro entrepreneurs in Rwanda, a finding that was replicated subsequently among Indian urban small business owners as well. After a micro entrepreneur owns a mobile for at least two years, using his/her mobile for business purposes is more likely to be associated with greater microenterprise income (Donner, 2007).

Respondents said they did notice a difference between when they didn't have a phone and now that they have got one. They said that with the phone came efficiency, wider accessibility and easier business communication and transactions. Before the inclusion of the mobile phone, some respondents noted that they spent long hours queuing at the banks while making cash deposits at the bank, paid more money during transactions while withdrawing over the counter at the bank, had no affordable advertising platforms to market their products. 91% of the respondents indicated that the mobile phone had proved effective in running their business. This therefore means that the mobile phone positively impacted on the growth and development of youth micro enterprise development.

## **5.3 Recommendations.**

### **5.3.1 Academic**

1. Further research should be carried out to find out the mobile phone impacts on youth micro enterprises across the country, in different locations including rural areas since this study only focused on a small urban area in Nairobi.
2. It is recommended that further studies should be carried out to find out how business people outside the youth bracket are using the mobile phone to run their businesses.
3. It is recommended that a study should be done to show how other forms of ICT contribute to the economic development of the communities.

### **5.3.2 Policy**

1. It is recommended that different mobile service providers lower the communication cost across networks to allow for easy and cost effective interaction between users.
2. Mobile service providers should ensure there are enough agents based at the community level to cater for their clients. Respondents subscribed to Airtel Money indicated that they experience difficulty in accessing the agents.
3. Youth micro entrepreneurs should be educated on the other benefits of the phone other than mobile payment, mobile applications, such as mobile banking to benefit them in their businesses. Respondents mainly used the mobile payment methods to transfer cash. They should be educated more on the importance of banking their money using the mobile phone services such as MShwari.

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<https://www.itu.int/en/ITU->

[D/Statistics/Documents/publications/mis2014/MIS2014\\_without\\_Annex\\_4.pdf](https://www.itu.int/en/ITU-D/Statistics/Documents/publications/mis2014/MIS2014_without_Annex_4.pdf)

## APPENDICES

### APPENDIX I: LETTER OF INTRODUCTION.



**UNIVERSITY OF NAIROBI  
COLLEGE OF HUMANITIES & SOCIAL SCIENCES  
SCHOOL OF JOURNALISM & MASS COMMUNICATION**

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Email: [director-soj@uonbi.ac.ke](mailto:director-soj@uonbi.ac.ke)

P.O. Box 30197  
Nairobi,  
Kenya

OUR REF:  
YOUR REF:

DATE: August 13, 2015

**TO WHOM IT MAY CONCERN**

**RE: MALI, Bertillar Jev - K50/69653/2013**

This is to confirm that the above named is a bona fide student of the University of Nairobi's School of Journalism and Mass Communication registered for Master of Arts degree in Communication Studies.

Ms. Bertillar has completed her course work and is currently going to collect data for her research project leading to a Master of Arts Degree in Communication Studies.

Any assistance accorded to her will be highly appreciated.

**Ndung'u wa Munywe**  
Assistant Registrar  
School of Journalism & Mass Communication



NwM/dm

**APPENDIX II: CERTIFICATE OF FIELDWORK.**



**UNIVERSITY OF NAIROBI  
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Kenya

**REF: CERTIFICATE OF FIELD WORK**

This is to certify that all corrections proposed at the Board of Examiners' meeting held on 21-05-2015 in respect of M.A./Ph.D final Project/Thesis defence have been effected to my/sur satisfaction and the student can be allowed to proceed for field work.

Reg. No: K50/69653/2013

Name: MAH BERTILLAR JEY

Title: THE IMPACT OF ICT ON YOUTH MICRO ENTERPRISES IN EMBAKASI SOUTH: MOBILE PHONE USAGE AMONG YOUTH ENTREPRENEURS IN EMBAKASI SOUTH

Dr. S. S. S. S.  
SUPERVISOR

SIGNATURE

17/09/2015  
DATE

Dr. Samuel Siringi  
PROGRAMME COORDINATOR

SIGNATURE

20/09/2015  
DATE

Dr. Wambui Kariuki  
DIRECTOR

SIGNATURE/STAMP

30.9.15  
DATE



**APPENDIX III: CERTIFICATE OF CORRECTIONS.**



**UNIVERSITY OF NAIROBI  
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**REF: CERTIFICATE OF CORRECTIONS**

This is to certify that all corrections proposed at the Board of Examiners meeting held on 22/10/2015 in respect of M.A/PhD. Project/Thesis Proposal defence have been effected to my/our satisfaction and the project can now be prepared for binding.

Reg. No: K50/69653/2013

Name: BERTILLAR JEN MALI

Title: THE IMPACT OF MOBILE PHONE USAGE ON TOUTH MICRO ENTERPRISE DEVELOPMENT IN EMBARAKI SOUTH IN NAIROBI, KENYA.

DR. S. ORIASSO  
SUPERVISOR

[Signature]  
SIGNATURE

06/11/2015  
DATE

Dr Samuel Sirinyi  
M.A. COORDINATOR

[Signature]  
SIGNATURE

09/11/2015  
DATE

Dr Samuel Sirinyi  
DIRECTOR



SIGNATURE/STAMP

09/11/2015  
DATE

## APPENDIX IV: QUESTIONNAIRE TO RESPONDENTS

### Section A: Demographic Information

*You are requested to fill out your personal information in this section. Please tick only one response where applicable.*

1. Indicate your gender.

a) Male ( )

b) Female ( )

2. What is your age bracket?

a) 18-24 years ( )

b) 25-30 years ( )

c) 31-35 years ( )

3. Level of Education.

a) Primary ( )

b) High School ( )

c) College ( )

d) University ( )

e) Other ( )

4. Which ward do you come from?

a) ImaraDaima ( )

b) Pipeline ( )

c) Kware ( )

d) Kwa Reuben ( )

e) KwaNjenga ( )

5. Type of Micro enterprise business.

- a) Second hand clothes ( )
- b) Second hand shoes ( )
- c) Vegetable vending ( )
- d) Food kiosks ( )
- e) Salon ( )
- f) Other (specify) .....

6. What is your estimated monthly income?

- a) Below KES 10,000 ( )
- b) KES 10,001-KES 20,000 ( )
- c) KES 20,001-KES 50,000 ( )
- d) Over KES 50,000 ( )

7. How long have you been running your business?

- a) Less than 1 year ( )
- b) 1-5 years ( )
- c) Over 5 years ( )

**Section B: Pattern of Mobile phone use among youth micro entrepreneurs.**

8. Do you own a phone?

- a) Yes ( )
- b) No ( )

9. If so, what type of phone do you own?

- a) Smartphone ( )
- b) Other ( )

10. Do you use your mobile phone for business?

a) Yes ( )

b) No ( )

11. Which service do you use mostly to run your business?

a) SMS ( )

b) Calls ( )

c) Both ( )

12. How frequently do you use your mobile phone to:

	Very often	often	sometimes	rarely	never
Call customers					
Call suppliers					
SMS customers					
SMS suppliers					

**Section C: Mobile phone services and applications that support youth micro entrepreneurship.**

13. Which mobile service provider are you subscribed to?

a) Safaricom ( )

b) Airtel ( )

c) Other ( )

14. Do you use mobile payment methods in your business?

- a) Yes ( )
- b) No ( )

15. What mobile payment method are you subscribed to?

- a) MPesa ( )
- b) Airtel money ( )
- c) Other (Specify).....

16. Do you access internet service on your phone?

- a) Yes ( )
- b) No ( )

17. What applications do you access on your mobile phone to market your products??

- a) Whatsaap ( )
- b) Olx ( )
- c) Facebook ( )
- d) Other (specify).....

**Section D: How youth entrepreneurs are using mobile phone services and applications.**

18. Briefly explain how you use mobile phone applications (e.g. WhatsApp) to market your products.

.....  
.....  
.....  
.....

19. If you are subscribed to mobile payment services, what do you use these services for?



- a) To make cash transfers to the bank and vice versa ( )
- b) To pay for products from suppliers ( )
- c) To receive payment from clients ( )
- d) All of the above ( )
- e) Other.....

**Section E. Challenges of using the mobile phone in micro enterprises.**

20. What are the challenges that you face while using the mobile phone in your business?

.....  
 .....  
 .....

21. How do you overcome the challenge(s)?

.....  
 .....  
 .....

**Section F. Effectiveness of the mobile phone in running youth micro enterprises.**

22. Are you satisfied with the cost of the services you get from your service provider?

- a) Very satisfied ( )
- b) Satisfied ( )
- c) Dissatisfied ( )
- d) Very dissatisfied ( )

23. How do you rate the services provided on the phone by your mobile service provider?

- a) Very good ( )
- b) Good ( )
- c) Fair ( )
- d) Poor ( )
- e) Very poor ( ).

24. What transaction methods do you use for your business?

- a) Direct Bank transactions ( )
- b) Mobile payment method ( )
- c) All of the Above ( )
- d) Other

25. Do you consider using the mobile payment method to be better than direct bank transactions?

- a) Yes ( )
- b) No ( ).

Briefly explain your answer above.

.....

.....

.....

26. Please indicate your level of agreement with each statement by ticking.

Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Using a mobile phone in my business has helped me save on time					
My work has been made easier with the use of the mobile phone in my business.					
I am able to market more of my products using the mobile phone.					
I prefer doing cash transactions via the phone as opposed to direct banking.					
The security of my business is guaranteed with the use of mobile phone to do transactions.					
Using the mobile phone in running a micro enterprise business is cost effective as compared to other methods.					
The mobile phone has impacted positively in the development of my business.					
Using the mobile phone to run my business has made me count losses in my business.					

Thank you for your response.

## **APPENDIX V: FGD GUIDE.**

1. How do you communicate on business matters and which mode/tool for communication do you use?
2. Did you have a mobile phone when you started the business? If you had a phone, what were you using it for?
3. In which aspects of the business does the phone help you the most in business?
4. Do you use your mobile phone to communicate to staff in your business? If so what messages, how often and do you feel it gives you a sense of control?
5. Whom do you talk to the most when doing your business other than your staff? And what issues do you communicate?
6. What features do you use in mobile phone (e.g. WhatsApp, OLX, voice, sms etc) and where are the features specifically applicable?
7. Do the features give you the right contacts you need for business and what information would you want and are you able to access the information you need using these features?
8. What limitations do you find in using the mobile phone for official communications?
9. How has your business improved since you purchased your mobile phone?
10. How has the mobile phone contribute to this improvement?
11. Has your relationship with your customers changed because of using the mobile phone for business services? How?
12. Has the mobile phone given you freedom to conduct your business, network and communicate with other business people? How?
13. What is the difference between having a mobile phone and when you did not have one?
14. What factors do you find most difficult in using your phone?

**APPENDIX VI: INTERVIEW GUIDE FOR KEY INFORMANT.**

1. What type of business do you run?
2. Do you own a mobile phone?
3. Have you used your mobile phone to run your business?
4. If yes, what mobile phone services and applications have you used in your business? If No, how do you communicate with your clients?
5. For how long have you been using these services and applications?
6. Which mobile phone services/ applications do your clients prefer using?
7. Have you seen any improvement in sales by using the mobile phone?
8. To what extent do you find the mobile phone technology effective in your business?