

**THE ADOPTION OF MOBILE VIRTUAL NETWORK OPERATORS BY
EQUITY BANK IN KENYA**

BY

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DECLARATION

This research project is my original work and has not been submitted for examination to any other university.

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This research project has been submitted for examination with my approval as the University Supervisor.

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DEDICATION

I would like to dedicate this project to my dad and mum Mr. and Mrs. John Owino for their unwavering support and love throughout my education and life.

TABLE OF CONTENT

DECLARATION.....	ii
ACKNOWLEDGEMENT.....	iii
DEDICATION.....	iv
TABLE OF CONTENT.....	v
LIST OF TABLES.....	viii
ABSTRACT.....	x
ABBREVIATIONS.....	xi
CHAPTER ONE: INTRODUCTION.....	1
1.1 Background of the study.....	1
1.1.1 Mobile Virtual Network Operators.....	2
1.1.2 Equity Bank.....	5
1.2 Statement of the problem.....	6
1.3 Research Objectives.....	8
1.4 Value of the study.....	8
CHAPTER TWO: LITERATURE REVIEW.....	10
2.1 Introduction.....	10
2.2 Theoretical foundation.....	10
2.3 The Concept of MVNO.....	12
2.4 Drivers of MVNOs.....	15
2.5 Benefits.....	16

2.6 Challenges.....	17
2.7 Empirical Literature on drivers of MVNO Adoption	18
2.8 Conceptual Framework.....	21
CHAPTER THREE: RESEARCH METHODOLOGY	22
3.1 Research Design.....	22
3.2 Data Collection	22
3.3 Data analysis	23
CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION	24
4.1 Introduction.....	24
4.2 Response Rate.....	24
4.3 Demographic Information.....	25
4.3.1 Gender of the Respondents	25
4.3.2 Age of the Respondents.....	26
4.3.3 Highest level of education.....	27
4.3.4 Learning about Equitel Services	27
4.3.5 Mobile operator simcard actively used	29
4.4 Extent of usage of the Equitel Services	30
4.5 Benefits of using Equitel to customers	31
4.6 Challenges affecting the adoption of Equitel.....	33
4.7 Equitel Services Used	34
4.8 Inferential Statistics	36

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS ...	39
5.1 Introduction.....	39
5.2 Summary of findings.....	39
5.3 Conclusions.....	40
5.4 Recommendations of the study.....	42
5.5 Limitations of the study	43
5.6 Suggestions for further studies.....	44
REFERENCES.....	45
Appendix 1: Questionnaire	47

LIST OF TABLES

Table 4.1: Response Rate.....	25
Table 4.2: Highest Level of Education	27
Table 4.3: Learning about Equitel Services	28
Table 4.4: Usage of Equitel Services	30
Table 4.5: Benefits of using Equitel to Customers	31
Table 4.6: Challenges affecting Adoption of Equitel	33
Table 4.7: Equitel Services Used	35
Table 4.8: Model Summary	37
Table 4.9: ANOVA.....	37
Table 4.10: Regression Coefficients	38

LIST OF FIGURES

Figure 2.1: Types and Differences of MVNO Players	14
Figure 2.2: Conceptual Framework	21
Figure 4.1: Gender of the respondents	25
Figure 4.2: Age Bracket.....	26
Figure 4.3: Mobile operator simcard actively used	29

ABSTRACT

The adoption of Equitel MVNO met challenges since the award of license to three MVNOs by Communications Authority of Kenya. One of the Mobile Network Operators, Orange Kenya wrote to CAK complaining about an oversight on rules of engagement and parameters on how mobile operators should do business with MVNOs. The High Court of Kenya stopped the launch of Equitel thin SIM card following a case presented by Legal Advice Centre which claiming that the Communications Authority of Kenya gave the go ahead for the launch of the technology before a comprehensive assessment was done on its security risks. However, Communications Authority of Kenya and Central Bank of Kenya then went ahead and gave Equity the go ahead to roll out the thin SIM card technology saying that no major security complaints had been reported. The data required was collected from primary sources or from secondary sources Equity Bank (Kenya) Ltd. The researcher used questionnaire to collect data from respondents. The questionnaire had different questions majorly covering the factors that have enhanced and inhibited mobile banking services and challenges encountered for adoption of MVNO. The study observes that adoption of MVNO offers a lucrative opportunity for financial institutions and its potential is yet to be fully exploited. There are a number of factors that that either hinder or propel adoption of MVNO, bearing in mind that the operating environment is also not static but evolving. The study therefore concludes that financial institutions should therefore come up with mobile banking strategies, products and solutions. Such strategies will offer competitive edge to banks in an industry dominated by MVNO. This study is geared towards Equity bank customers who are currently using MVNO whose needs are seen to vary from other customer segments.

ABBREVIATIONS

CA	-Communication Authority of Kenya
CBK-	-Central Bank Of Kenya
FSD	-Financial Sector Deepening
GSM	-Global Systems for Mobile
GSMA	- Global Systems for Mobile Association
HMNO	-Host Mobile Network Operator
ICT	-Information and Communication Technology
ITU	-International Telecommunication Union
MNO	-Mobile Network Operator
MVNO	-Mobile Virtual Network Operators
NFP	-Network Facilities Provider
NSE	-Nairobi Securities Exchange
OECD	-Organization for Economic Co-operation and Development
OFTA	-Office of Telecommunications Authority of Hong Kong
SIM	-Subscriber Identity Module
SME-	-Small and Medium Enterprises
SMS	-Short Messaging Service
USSD	-Unstructured Supplementary Service Data
UTAUT	-Unified Theory of Acceptance and Use of Technology
2G	-Second Generation
3G	-Third Generation
4G	- Fourth Generation
5G	- Fifth Generation

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

The telecommunication industry worldwide has grown over the years with the advent of mobile phones. Half of the world population now has a mobile phone up from one in every ten people in the year 2005, representing global mobile phone penetration of 50%, GSMA (2015). Diffusion and the adoption of mobile phones have been faster than landlines, computers and the internet (Duarte & Pedro 2006). Penetration of internet is normally slower and less than mobile phones because with time people tend to own more than one handset. This growth has been catapulted by the acquisition of the high capacity licenses by major telecommunication companies. Third generation (3G) technology will deliver telecommunications services, such as fax, voice and Internet, across the globe.

The first ever 3G network got launched in Japan in 2001 (ITU, 2005). 3G Today (2007) disclosed that there were roughly 425 million third generation technology mobile phone users across the globe at 2006. Some OECD countries such as Italy, Sweden, Luxembourg and Czech Republic have high mobile penetration of over 100%. This means mobile cellular phones exceed the number of people in such countries. ITU recorded about 6.8 billion mobile phone subscription in 2012 compared to approximately 6 billion a year earlier. Globally, mobile phone adoption is getting close to 100 per cent and the market saturation is approaching. The recorded growth rates in telecommunication industry have fallen to the lowest levels in both developing and developed countries. Mobile penetration stood at 96 per cent globally, 128 per cent in developed countries and 89 per cent in developing countries (ITU, 2012). Until 2014, all

the mobile service providers in Kenya were Host Mobile Network Operators (HMNO) licensed under the Network Facilities Provider (NFP) which has rights for owning of spectrum (CA, 2014).

According to the Communication Authority of Kenya (CA), 2012-2013 annual report, there were four mobile cellular subscribers in Kenya as at 2013. In March 2014 the Communications Authority said that it would approve the request by Airtel Kenya Networks Ltd and Safaricom Ltd to purchase the assets of one Kenya's telecommunication company, Essar Telecom. The deal was finally approved with Airtel acquiring Essar Telecom's mobile subscribers and their contracts as well as GSM licenses while Safaricom acquired core infrastructure located in several 453 sites with their associated agreements. Safaricom also acquired ground leases for Essar's infrastructure, the Essar Data Centre amongst other assets. This left only three host mobile cellular services providers in the Kenyan telecommunication industry. These mobile operators use the second generation (2G), third generation (3G) as well as the fourth generation (4G) technologies to provide voice, data and value added services such as unstructured supplementary service data (USSD) ,short messaging service (SMS), etc. They also provide mobile banking which rides on top of the value added services.

1.1.1 Mobile Virtual Network Operators

Several scholars and authorities have argued that there is no universal definition of mobile virtual network operators "MVNO" (Justus, 2006). According to the ITU (2004) a mobile virtual network operator is a mobile operator that provides mobile services

without having a radio frequency license. The MVNO does not have to be a telecom or mobile cellular services company. OFTA (2002), the Hong Kong Telecommunication regulator, describes an MVNO as “an entity that provides telecommunications services to customers through interconnection with and access to radio communications infrastructure of a mobile Network Operator (MNO)”. In the United Kingdom, Oftel (1999), now Ofcom defined an MVNO as an operator offer customers mobile cellular services without having to own its airtime”. Over time, MVNOs have evolved in the way they operate leading to new definitions but the main difference between mobile network operators (MNOs) and MVNOs is that MVNOs lease radio spectrum from the licensed mobile network operators. Patrick (2001) stipulated that a mobile virtual network operator can have its fully owned network code and in most occasions with its own branded SIM card.

According to the Communications Authority of Kenya (2014), an MVNO provides all kinds of mobile telephony services to its subscribers using the facilities of an already existing and well established mobile network operator (MNO) under the Network Facilities Provider, also known as Host Mobile Network Operator. These mobile cellular services include registration of customers, billing, issuance SIM cards, and customer care without holding a spectrum license. The MVNOs are given own mobile numbering system and operate as independent entities.

Previous studies on MVNOs have shown the drivers for adoption of MVNO services include active and significant niche market segment and mobile cellular market, owning

the requisite infrastructure and regulatory guidelines (Hande et al, 2011; Annukka & Heikki, 2006). ITU's IMT-2000 standard for third generation has unlocked the ways that enable inventive products and services. Third generation technology networks cost a lot of money to acquire but provides high-capacity network which necessitated a pressing need to recoup the high licensing fees. Consequently most mobile Network Operators (MNOs) such as Sprint Nextel and British Telecom started searching for partners to utilize their excess network capacity and recoup some of their capital expenditures on high-stake licenses(Sangwon, 2008).

MVNOs have several benefits for the host operators, MVNO service providers and the telecommunication industry. Mobile network operators continue to serve their existing customers and sell wholesale services to MVNOs hence generating more dedicated revenues from their unutilized network capacity (Hande 2011; Livio et al 2011). MVNOs on the other end benefit by creating new revenue streams while deepening their brand and relationship with their customers in what Equity Bank CEO Dr James Mwangi (2014) described as giving their customers "Freedom and Control". For the regulators higher competition in the telecommunications industry inspires the development of MVNOs (Shin & Bartolacci, 2007) which is good for the market as consumers are presented with a variety of choices (Sangwon et al, 2008).

Adoption of MVNOs globally has met several challenges. First the regulatory frameworks are not very clear in most markets. Secondly, most host mobile network operators are facing challenges with network capacity and infrastructural investments

which are required for MVNO adoption. Most MNOs are also not comfortable with hosting MVNOs that offer similar services in the same market segment. MVNOs do issue their own SIM cards which can be normal SIM cards or thin SIMs. According to GSMA, Thin-Sim also referred to as Overlay SIM a tinny plastic that can be put on top of a normal SIM card in a mobile device. The thin SIM is normally overlaid over a primary SIM card. Equitel MVNO allows subscribers to use either normal SIM card or thin SIM.

1.1.2 Equity Bank

Equity Bank Limited was started as Equity Building Society (EBS) in 1984, initially providing mortgages for mostly low-income customers (Anna Duval 2014). It became a fully-fledged commercial bank in Kenya in the year 2004 and was listed in the Nairobi Stock Exchange (NSE) currently referred to as the Nairobi Securities Exchange (Capital Markets Authority, 2006). In the bank's evolution, it had focused mainly on Kenya's economically sidelined citizens; popularly called the "unbanked" population, who were previously not able to access formal sources of financing, such as banks, and all other financial organizations (Garth et al, 2007). Equity Bank has succeeded in building competitive advantages that can be further exploited to sustain and advance its growth into small and medium enterprises and corporate segment customers on top of the micro segment.

Equity bank currently has a presence in East and Central African countries including Tanzania, South Sudan, Uganda, Rwanda and Democratic Republic of Congo (Equity Bank, 2015). It has strong focus for robust branch network and alternative banking

channels such as agency banking, mobile banking, ATMs and Point of Sales to reach its over 8 million customers (CBK, 2014). In line with its strategy to demystify banking and reach out to low end customer segment, Equity Bank and Safaricom Ltd launched M-KESHO which was a virtual bank Account enabling customers to Equity bank account and Safaricom's M-PESA mobile money(FSD Kenya, Ignacio, 2007). The growth of the service would stall due to what World Bank (2012) described as failure of Safaricom and Equity Bank to agree on working modalities on profit sharing. Equity Bank continued to grow its digital channel and was awarded an MVNO license by The Communications Authority of Kenya in 2014 through its subsidiary Finserve Africa Ltd together with Zioncell Kenya and Mobile Pay Ltd of Tangaza Money. Later on in the same year Kenya Airways and Airtel Kenya reached an agreement to offer airline MVNO services (Airtel, 2014). This study will focus on Equitel MVNO because it's the only MVNO that is operational and currently has over 1.08 million customers (CA, 2015).

1.2 Statement of the problem

The adoption of Equitel MVNOs met challenges since the award of license to three MVNOs by Communications Authority of Kenya (2014). One of the Mobile Network Operators, Orange Kenya wrote to CAK complaining about an oversight on rules of engagement and parameters on how mobile operators should do business with MVNOs (MVNO Dynamics, 2014). Orange CEO Mickael Ghossein (2014) said that Orange was not opposed to MVNOs but rather sought clarification on specific issues such as a working framework guiding MNOs and MVNOs when entering into contracts. In Orange's view the license would cost MVNOs only USD(1,200) yet they would be

offering full range of Mobile services from voice, data, mobile money and SMS essentially competing with Mobile Operators(Ghossein, 2014). Further to this challenge, the High Court of Kenya stopped the launch of Equitel thin SIM card following a legal case championed by Legal Advice Centre (LAC) claiming that the Communications Authority of Kenya ratified the technology conducting full audit on its security misgivings.

This research paper attempts to look at the adoption of Equitel mobile services by Equity Bank customers and specifically at the benefits, drivers and challenges of its adoption. The research will also find out from the customers if any theoretical securities issues of the thin Sim Card technology issues previously raised by Safaricom and LAC(2014) has been experienced by the customers. There have been debates on the necessity of regulation for MVNOs' growth. There have been arguments for and against MVNOs regulation (Sangwon et al, 2008). MVNOs protagonists assert that MVNOs can further greater innovation and service competition in 3G mobile cellular markets. Without regulatory frameworks, MVNOs might not venture into the 3G mobile markets for the long term because of MNOs' core network ownership superiority (Lewin, 2001). MNOs incentive for hosting MVNOs depends on how differentiated MVNOs products are from the MNOs (Dewenter & Haucap, 2007). These conflicting views on MVNOs make it necessary to conduct a study on the adoption of MVNOs.

Previous studies on the Kenyan banking and telecommunication sectors have focused on financial inclusion with a bias towards Equity bank(Garth Saloner et al, 2007;FSD

Kenya)and mobile money services specifically Safaricom’s MPESA(Rajiv Lal Ishan Sachdev, 2015;FDS Kenya, GSMA 2010). There has also been a study on ICT infrastructure sharing amongst mobile operators in Kenya (Charles & Christopher, 2015) but with just a mention on MVNOs. MVNOs are a relatively new concept in Kenya and there have not been any studies on its adoption in Kenya hence the basis of this research paper to find out the current situation in Kenya with a focus on Equitel MVNO.

1.3 Research Objectives

These include:

- a) Establish the extent to which Equity Bank customers are using Equitel to transact
- b) Determine the drivers of Equitel adoption
- c) Establish the benefits of using Equitel to customers
- d) Determine the challenges affecting the adoption of Equitel

1.4 Value of the study

Since this is a research on the relatively new service of MVNOs in Kenya, the findings can be relevant for Equity bank to assess the benefits of MVNOs in serving customers and growing their services and product lines. It can also be used by players in the banking sector to build on the use to technology to offer and deepen banking services. The study will also be of great benefit to policy makers. The findings of the study can help in establishing regulatory guidelines for MVNOs as well as to establish the framework for infrastructure sharing since MVNOs ride on leased infrastructure and telecommunication

frequencies. It will also as a knowledge base for academic researchers, governments, and telecommunication and banking industry players.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter studies the emerging concept of mobile virtual network operators and the extent of its use globally, its theoretical framework and previous studies on the subject. It also discusses the drivers, challenges and benefits of MVNO as well as strategies new or prospective entrants can employ to succeed. A conceptual framework is then formulated to act as the basis of the research on the adoption and the extent of usage for Equitel MVNO in Kenya.

2.2 Theoretical foundation

The unified theory of acceptance and use of technology (UTAUT) and social networks theories will be used in studying the market diffusion and Equitel MVNO adoption by Equity Bank customers. The UTAUT theory explains user intents to use an information systems and the ensuing usage behavior. The theory holds that four key concepts (performance expectancy, effort expectancy, social influence, performance expectancy and facilitating conditions) are direct determining influences of usage intention and behaviour as well (Venkatesh et. al., 2003).

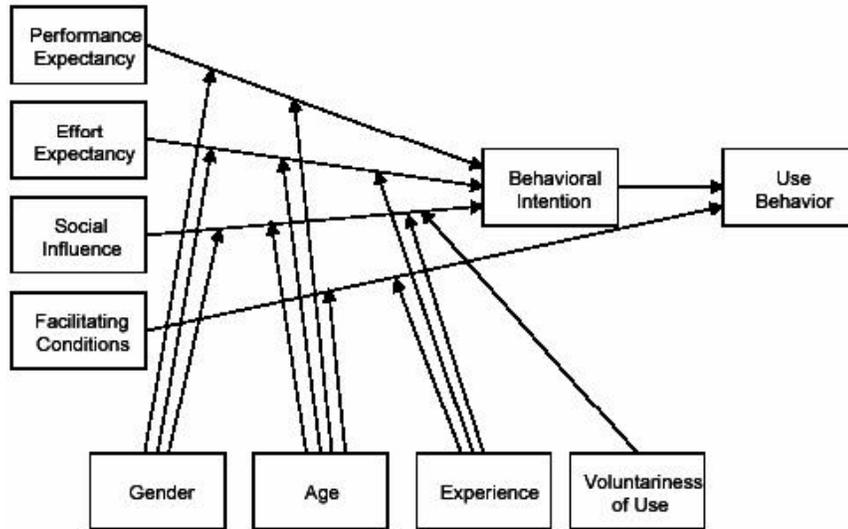


Figure 1 : UTAUT

According to UTAUT, brands that have social attachment with their customers such as Equity Bank Limited are likely to succeed as MVNOs since they already have facilitating conditions (trust, listening ear, large customer base etc). This research paper will look into the conflicting views of people on the adoption of Equitel MVNOs, its benefits and challenges in the market as well as the drivers for its usage. The research will be carried out to find out the shared meaning that different people have about MVNOs and specifically Equitel MVNOs. The research will point out how people will be influenced by Equitel MVNOs as well as how people will influence the adoption and diffusion of MVNOs.

Social Networks theory views social relationships in terms of interconnection amongst individuals. Relationships are regarded as nodes and ties whereby nodes are the individual actors and ties are the existing relationships in social networks. It is the

attribute of individuals that matter i.e whether they are pro technology, friendly or unfriendly, smart or dumb and this will influence the success or failure of a product launched within the social network. Social networks theory will be used in this research to find out how social relationships amongst consumers are affecting the adoption of Equitel services.

2.3 The Concept of MVNO

Mobile virtual network operators are emergent alternative channels for mobile network operators to grow market share and drive network traffic (Dong & Michael, 2005). Since the start of the first mobile virtual network operator, Virgin Mobile, in the UK, more than three hundred MVNOs have been launched across the globe (ARCchart 2006). Verhaegan (2006) estimated that about 3.3% of all mobile phone users globally would be making phone calls and sending SMSes using an MVNO by 2010. The number of MVNOs in operation worldwide stood at 992 with only 260 MNO sub-brands, GSMA intelligence (2015). The emergence of MVNOs has been facilitated by the advancement of mobile phone networks which has led to the robust 3G mobile licenses being given to many leading communications firms across the globe. According to a research paper by Delta Perspective, MVNOs started in developed markets and subsequently in emerging markets (Nino Vashakidze, 2016). There has been a proliferation of mobile virtual network operators on different mobile markets more so in Europe, USA and parts of Asia. According to a Thesis by Olga Sasinovskaya (2004), more and more mobile virtual network operators, are entering the European market and MVNOs are considered to be mostly a European phenomenon. MVNOs provides an opportunity for non-telecom

companies to enter into the traditionally capital intensive telecommunications industry. Kim et al (2010) illustrated that MVNOs operate with various business models stretching from simply reselling network services to offering their own primary network facilities .According to Ergas et al (2005), the term MVNOs can be applied in at least three different models. First there is a “full” MVNO which involves the MVNO providing its primary core network, including a mobile switching center, which may be connected to the MNO’s spectrum. The second model of MVNOs is an “intermediate” MVNO which obtains a switched service but runs its own home location register. Alternatively, the MNO and MVNO might co-own the HLR and partition it. The third possible model of MVNOs is a “thin” MVNO where the MVNO offers “bolt-on” content platforms and applications.

The thin MVNOs are often referred to as enhanced service providers (Kiesewetter, 2002). Anders et al. provide a different classification of MVNOs based on their “breadth of functions and level of integration in the value chain” (Lillehagen et al, 2001). The first model in this category is the Retailer mobile virtual network operators which provides mobile telephony services to its own subscribers and can perform various roles of traditional telecommunications operators such as billing, sales and distribution but does not venture into the telecommunications industry. The second model is the expander mobile virtual network operators which enters new market segments as telecommunications network providers seeking opportunities. The third model under range of functions and the level of integration category is the integrator MVNO which go

in other layers of the network seeking value on content providing to get a grasp on the customer, broaden the market, and aggregate value to the customers.

According to mobile dynamics website, the three possible models of MVNOs are: MVNOs which are described as mobile service providers having their own switching infrastructure; Enhanced mobile service providers (ESPs) which have more branded customer interfaces and Services providers (SPs) which are the traditional mobile services providers providing sales, marketing and customers support facilities. Differences among mobile virtual network operator players- service providers ,enhanced service provider, and resellers are based on the ownership of spectrum, network facilities, selection of services being offered (Marek, 2005;Vartoustas et al, 2006;).

<i>MVNO Players</i>	<i>MVNO</i>	<i>ESP</i>	<i>SP</i>	<i>Reseller</i>
Network ownership	Yes	Varies	No	No
Spectrum ownership	No	No	No	No
Customer service	Yes	Yes	Yes	Through carrier
Billing	Yes	Yes	Yes	No
Ownership of portfolio of services	Yes	Yes	No	No
SIM card ownership	Yes	No	No	No

Figure 2.1: Types and Differences of MVNO Players

A study by D. Varoutas et al (2006) found out that MVNOs are not mandated to access to 3G operator’s network access. Studies by Hausman(1997), Alesina et al.(2005) stated that regulations in mobile cellular markets may bring about unforeseen costs by reducing the amount of investment or delaying implementation of innovative technologies . In a 3G licensing briefing paper, Patrick (2001) point outs that the opinions against regulatory

involvement are based on the fact that the benefits of MVNOs are not tested and proven, and that there is insufficient indication that have there been a failure in the market and that the mobile cellular market is competitive by nature and therefore does not need regulation.

2.4 Drivers of MVNOs

MVNO development has been on the rise worldwide and depends on several factors. The most significant driver for its proliferation is mobile penetration. GSMA intelligence research (2015) found out that MVNOs tend to be predominant in developed markets where mobile penetration based on connections is beyond 100%. Europe has two thirds of domestic mobile virtual network operators globally (585), with Asia Pacific having 129 MVNOs and Northern America region (107). There is however disparity in Sub-Saharan Africa which has only 8 MVNOs. New MVNO markets are developing in Latin America, Africa, Middle East and Asia (informa, 2012). Mobile market saturations necessitate the need to offer specialized telecommunication services beyond the basic services provided by the incumbent MNOs. Another Key driver for MVNO adoption globally is regulation (GSMA Intelligence, 2015; Informa, 2012; Lee et al, 2008; Kim et al 2010). Markets that have favourable regulations for MVNOs such as Hong Kong have witnessed rapid subscriber base growth. In such markets, subscribers enjoy the robust features and capabilities of 3G which is underutilized in countries where regulatory frameworks do not favor the entry and existence of MVNOs. MVNOs have extensively been encouraged in Europe as a way to deepen competition thus hasten the development of new mobile cellular services and innovation (GSMA Intelligence 2015; Annukka &

Heikki 2006). The third driver for MVNO development is the advancement in Telecommunication technologies such as 3G, 4G and the upcoming 5G. These have robust features and require heavy capital investment by the MNOs in licenses and infrastructure. The fourth driver is the existence of a sizeable niche market segment. Niche segment allows MVNOs to provide specialized services which might be differentiated from the ones provided by MNOs. It also allows MVNOs to be able to generate profits from their operations and also reduces conflicts with MNOs who fear cannibalization by MVNOs serving the same market segment in which host MVNOs are operating.

Consumer factor is another key driver for MVNO diffusion. According to Kimiloglu et al (2011) opportunities for MVNO diffusion in market depend on the profile and behaviour of its consumers as these provide prospects for segmentation. Sizeable segments and brands in the market are critical success factors for MVNO diffusion (Stefan et al 2009). It is easier to provide new services to already existing consumers using already existing distribution channel and leveraging on strong brand coverage. Both demographic characteristics such as age and ethnic origin and behavioral characteristics of the consumers in the market are important in accelerating MVNO adoption (Lee et al., 2008).

2.5 Benefits

Informa (2012) believes that virtually every market has a potential to benefit from MVNOs and that operators can benefit from MVNOs. MVNOs can provide a win-win market whereby MNOs can get additional customers in a more efficient way than what

their own retail networks can do. MVNO can benefit from the partnership by getting mobile connectivity and extending their revenue sources and brands while customers can benefit by getting specialized offering. For both the regulator and consumer, MVNOs increase competition in the market (Kim et al (2010)). This improves the quality of services being offered as well as diversity giving the customer freedom of choice.

2.6 Challenges

MVNOs face several challenges which include reliance on MNOs for the infrastructure. A research on MVNOs by Dewenter and Haucap (2007) reveals that MNOs might not have proper incentives to host MVNOs in some markets and that might prompt for proper regulations to boost competition in the telecommunication markets. Most MNOs argue that they invest a lot in the infrastructure and licensing requirements hence should be granted exclusivity to the network. They see the MVNOs as threats from a competition point of view. Another challenge that MVNOs face is the lack of clear regulation framework on how to operate. This makes it difficult for MVNOs to make sustainable agreements with the incumbent MNOs on revenue sharing and operating modalities. Most MVNOs also do not have experience in telecommunication business and this might prevent them from estimating the consequences of certain strategies e.g low price which might not be sustainable (Annukka, 2006).

Given that MVNO is a relatively new concept, there have been issues regarding the regulation of MVNOs. MVNOs regulations differ in markets across the globe. This depends on the requirements of the MVNOs and on the obligations put on MNOs (Ergas et al, 2005; Kiesewetter, 2002). While some countries such as Denmark, Ireland and

Hong Kong have made specific regulations pertaining to MVNOs, Scandinavian countries do not have specific regulations. Others such as the UK, USA, New Zealand and Austria have no access regulations. Countries such as Germany basically have regulatory provision for MVNOs entering the market as resellers whereby MNOs act as whole sellers of telecommunications services (Ralf & Justus, 2006). The general trend is that MVNOs must get a license from the country regulator.

2.7 Empirical Literature on drivers of MVNO Adoption

Different scholars have studied and identified the drivers of adoption of MVNOs in different markets. Sangwon Lee et al (2008) in his study of MVNO adoption globally, recognized the business strategies employed by MVNOs as a key driver for adoption in the specific markets. They concluded that although price is the most important factor for mobile users to switch operators at the initial stages of MVNO operation as suggested by Verhaegen (2006), there exists other exogenous factors (consumer, industry, technology and regulation) that push for the need for strategic competition beyond price. This emphasizes that MVNOs need to apply strategies of differentiation and focus on top of cost leadership in order to sustain their growth. Yang et al (2006) also found out that complementary business models are essential for MNO-MVNO partnerships to thrive and drive MVNO adoption.

Undifferentiated MVNOs that offer only voice services are likely to find it difficult in maintaining mass market share and profitability as this will mostly evoke defensive moves from the incumbent MNOs (Sangwon Lee,2006;MVNO Directory). Both Kim &

Park (2004) and Foros et al (2002) agree that MVNO entry strategies depend on exogenous factors. A research paper by Kim & Park(2004) analyzed the optimal access charge between MNOs and MVNOs when the products that they offer are either complementary or substitute and found out that MVNOs are likely to grow if they offer substitute services emphasizing the need for MVNOs to adopt differentiation and market segmentation strategy if they are to succeed.

Technology is a key driver for MVNO diffusion in markets. MVNOs are fast growing in countries where the GSM market is active, Hande et al (2011). Development in mobile phone technologies has created prospects for MVNOs to use their excess capacity created by 3G and 4G technologies (Lee et al, 2008). MVNOs have used this to their advantage by entering niche markets previously not served by traditional operations (ITU 2006b). A study by Lee et al (2008) found out that there is a strong positive correlation between high level 3G network developments and adoption of MVNOs in mobile markets. Advanced technology allows new market entrants such as MVNO to provide distinct market segment with differentiated valued added services (VAS) (Lee et al., 2008; Kimiloglu et al).

Previous studies also pinpointed regulation as key driver for MVNO adoption in markets. MVNOs need low entry barriers into the highly competitive telecommunication sector. Most studies (Dorabialski & Morawski, 2004; Ergas et al, 2005; Kiesewetter, 2002; Lee et al, 2008) have been focused on the question on whether the MNO may grant voluntary access to their networks to MVNOs. Regulated MVNO access may spur access by new

MVNOs. European Commission has been pro MVNOs and continues its effort to increase competition giving directives that have changed the regulatory frameworks and lowered entry barriers for MVNOs(Annukka & Heikki, 2005;Dewenter & Haucap;2006). MVNOs have been allowed to offer SIM-based mobile services without owning infrastructure and regulations that allow mobile number portability have decreased switching costs for customers and increased churn rates for mobile service providers. MVNOs exist in almost all liberalized markets, Dewenter &Haucap (2006) emphasizing the need for regulations to drive MVNO growth and innovation in the mobile industry. There has however been counter arguments on whether regulations drive MVNO adoption. Ergas et al, (2005) argued that regulations that promote forced access to MNOs network by MVNOs may decrease the investment incentives for the incumbent MNOs leading to reduced investments on the infrastructure.

Market structure is also a success factor for MVNO business model (Shin, 2008). The degree of competitiveness and market structure is a key driver for MVNO diffusion (Annukka & Heikki, 2006). Shin & Bartolacci (2007) pointed out in their study that vertically integrated mobile markets would hamper the adoption of MVNO while highly competitive mobile markets would increase their formation and diffusion. Studies show that in highly concentrated markets such as Kenya, market followers (e.g Airtel) usually do not have much to lose while dominant operators (Safaricom) are threatened by MVNOs under-cutting them(MVNO Directory, 2008). In practice, this pattern has been observed in the following examples (MVNO Directory, 2008): In the United Kingdom, One2One, which was the fourth biggest telco by market shares in the MNO market

formed the first ever MVNO partnership with a non-telco company Virgin and targeting the youth market segment. Virgin Mobile went on to become an important player in the UK mobile sector building a rock-solid place in customers' views next to the four main players. A similar scenario played in South Africa with the third place company Cell C partnering with Virgin Mobile to launch business as an MVNO.

2.8 Conceptual Framework

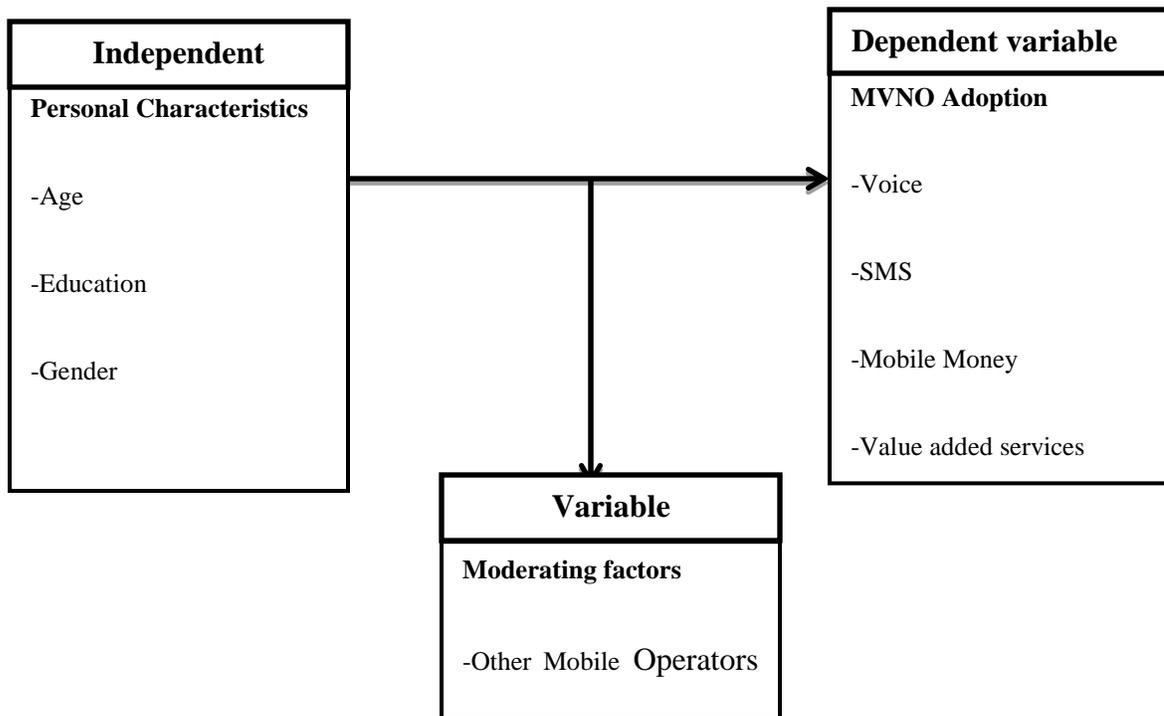


Figure 2.2: Conceptual Framework

CHAPTER THREE: RESEARCH METHODOLOGY

This chapter deals with methodological procedure that is used in collecting data and its analysis. This includes research design, target population, sampling design, data collection, limitations of the study, data collection, and data analysis methods, ethical considerations and the methodology of the study.

3.1 Research Design

Research design describes the purpose of the study and whether it is descriptive, hypothesis testing, exploratory, or case study analysis. It also deals with the type of investigation used to carry out the research as well as the level of researcher interference with the research. The setting of the study, whether contrived or noncontrived, the time horizon and the unit of analysis of the study are also identified in this chapter. This study used descriptive design to establish the drivers of Equitel adoption amongst Equity Bank customers. The study was trying to establish the association of MVNO drivers and adoption of Equity services hence it was correlational. The timeframe for the study was cross-sectional as data was gathered from Equity Bank customers in a period of 2 weeks to help with the research.

3.2 Data Collection

The data required for the study was collected either from the primary source. The data was collected from the customers with minimal interference at their branch activities. Individual customer was the unit of analysis and the population studied was Equity Bank customers. The population frame from which the sample to be used in study was drawn

from Equity Bank customers from 12 Equity Bank branches distributed across Nairobi County. Simple random sampling methodology was used to identify Equity Bank customers to be used for the research and a sample size of 100 Equity Bank customers was used to investigate the research questions. Roscoe (1975) recommends that a research sample sizes between 30 and 500 are appropriate for most research. Primary data was used for this study and was gathered directly from respondents and for this study the researchers used questionnaires. The information was gathered from Equity Bank customers who transact with the bank.

3.3 Data analysis

This study employed quantitative data analysis techniques and specifically descriptive and inferential statistics. Data collected from the Equity bank customers was input into Microsoft Excel and SPSS software for analysis. To analyze the drivers, the following regression model will be used.

$$Y = a_1 X_1 + a_2 X_2 + e$$

Whereby

Y=MVNO adoption

a_1 a_2 are the coefficient of regression

X_1 =Drivers and X_2 =moderating variables

e=standard error

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter discusses in details the interpretation and presentation of the research findings arising from the research tools through data analysis. This chapter presents the analysis and findings of the study as set out in the research methodology. The data for this research e through primary data with questionnaires as the primary research tool. These were designed according to the research objectives of the study. The research sought to determine how successfully Equity Bank has adopted MVNO services in Nairobi County.

4.2 Response Rate

From the data collected, out of the 100 questionnaires administered for each customer of equity bank, 86 were duly filled and returned. This represented an eighty six percent response rate, which is considered satisfactory to make conclusions for the study. According to Mugenda and Mugenda (2003) a research with fifty research per cent response rate is adequate, sixty percent good and above seventy percent is rated very good. This further supported by (2000) who asserts that a response rate of fifty percent is adequate, while a response rate greater than seventy percent is very good. This implies that based on this assertion; the response rate in this case of eighty six percent is very good.

Table 4.1: Response Rate

	Frequency	Percentage
Returned questionnaires	86	86%
Unreturned questionnaires	14	14%
Total	100	100%

4.3 Demographic Information

4.3.1 Gender of the Respondents

The respondents were requested to specify their gender. The results were as shown by the figure below

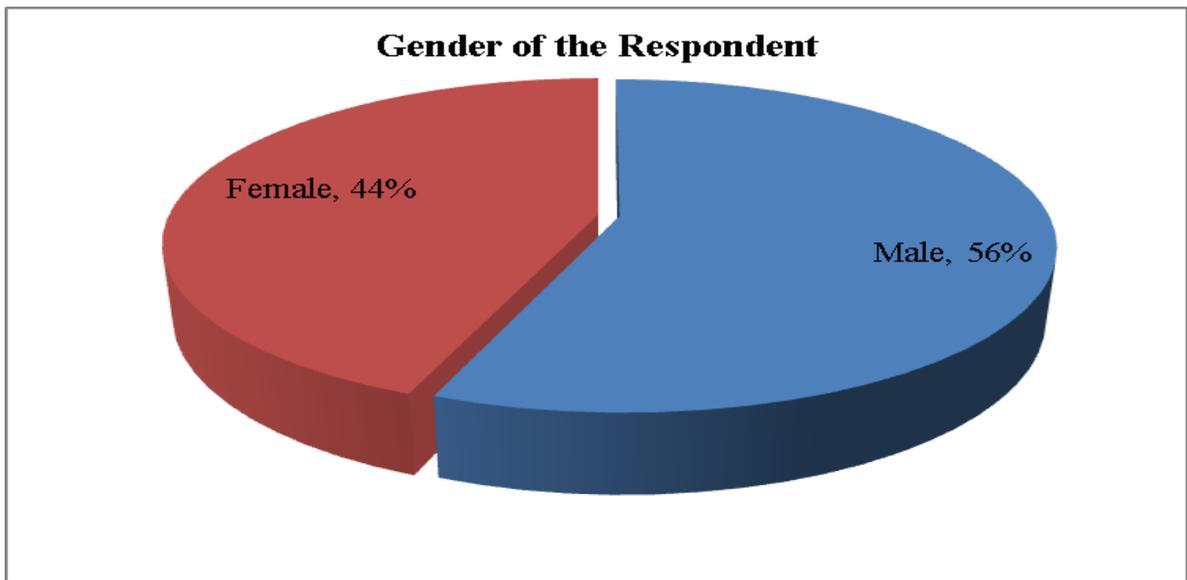


Figure 4.1: Gender of the respondents

According to the outcomes, 56% of the respondents were male while 44% were female.

This shows that both genders were fairly represented while the study was carried out.

4.3.2 Age of the Respondents

The study also sought for the age of the customers in Equity Bank in Nairobi County.

The results were as shown by figure 4.2

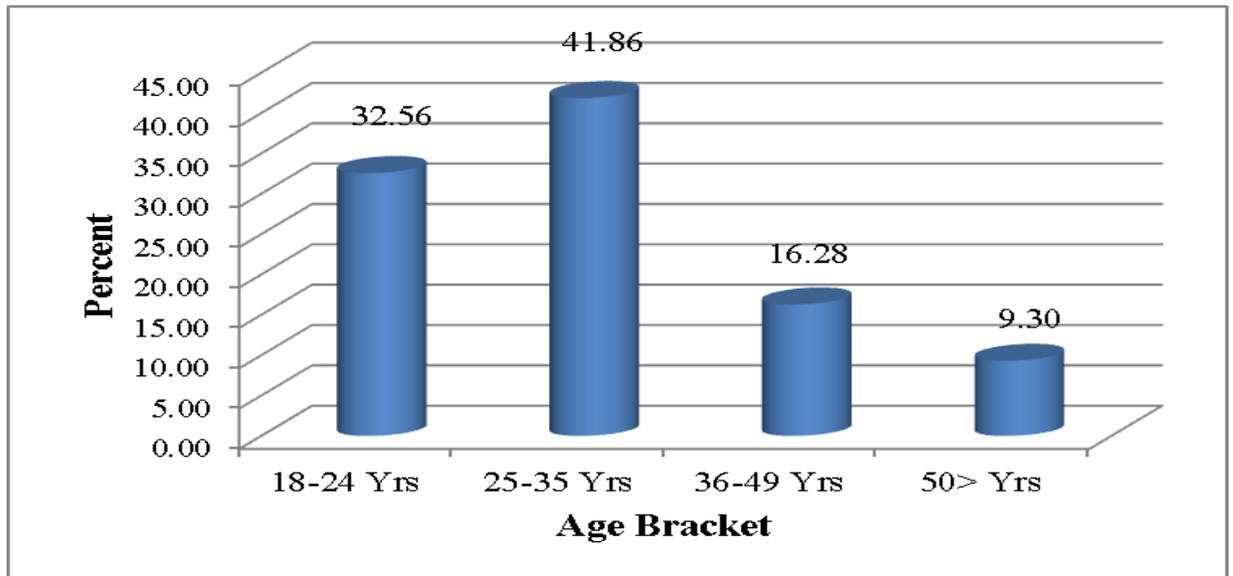


Figure 4.2: Age Bracket

According to figure 4.2, 41.86% of the respondents indicated that they were aged between 25 and 35 years, 32.56% indicated between 18 and 24 years, 16.28% of the respondents were between the age of 36 and 49 years and 9.30% of the respondents indicated that they were aged 50 years and above. The researcher observed that the most of the respondents were well above the age of 31 years indicating that the respondents were mature and were in a position to respond to the questionnaires efficiently.

4.3.3 Highest level of education

The study sought to establish the level of education qualifications of the Equity Bank Customers in Nairobi County. The findings were presented in table 4.2

Table 4.2: Highest Level of Education

Level of Education	Frequency	Percent
Certificate	6	6.98
Secondary	15	17.44
Degree/professional	47	54.65
Post Graduate	18	20.93
Total	86	100

Table 4.2 illustrates the highest education qualification of the respondents where 54.65% with a frequency of 47 respondents had attained degree/professional; 20.93% with a frequency of 18 respondents were post graduates; 17.44% with a frequency of 15 respondents had reached secondary level while 6.98% with a frequency of 6 respondents were certificate holders.

4.3.4 Learning about Equitel Services

The respondents were asked to indicate where they learnt about Equitel services. The results were as shown by table 4.3

Table 4.3: Learning about Equitel Services

	Frequency	Percent
From a friend	8	9.30
From a family member	5	5.81
Through media	10	11.63
Equity Bank Branch	18	20.93
Equity Bank Website	3	3.49
Social Media	9	10.47
Colleague	6	6.98
Equity Bank Staff	27	31.40
Total	86	100.00

According to the findings, (27) 31.40% of the respondents indicated that they learnt about Equitel services from equity bank staff, (18) 20.93% indicated equity bank branch, (10) 11.63 indicated through social media, (8) 9.30% of the respondents indicated from a friend, (6) 6.98% indicated colleague, (5) 5.81 indicated from a family member and (3) 3.49% indicated from Equity Bank Website. This indicates that most of the respondents learnt about Equitel services from Equity Bank Staff followed by those who learnt from Equity Bank Branch.

4.3.5 Mobile operator simcard actively used

The respondents were requested to indicate other mobile operator simcard they actively use. The results were as shown by figure 4.3

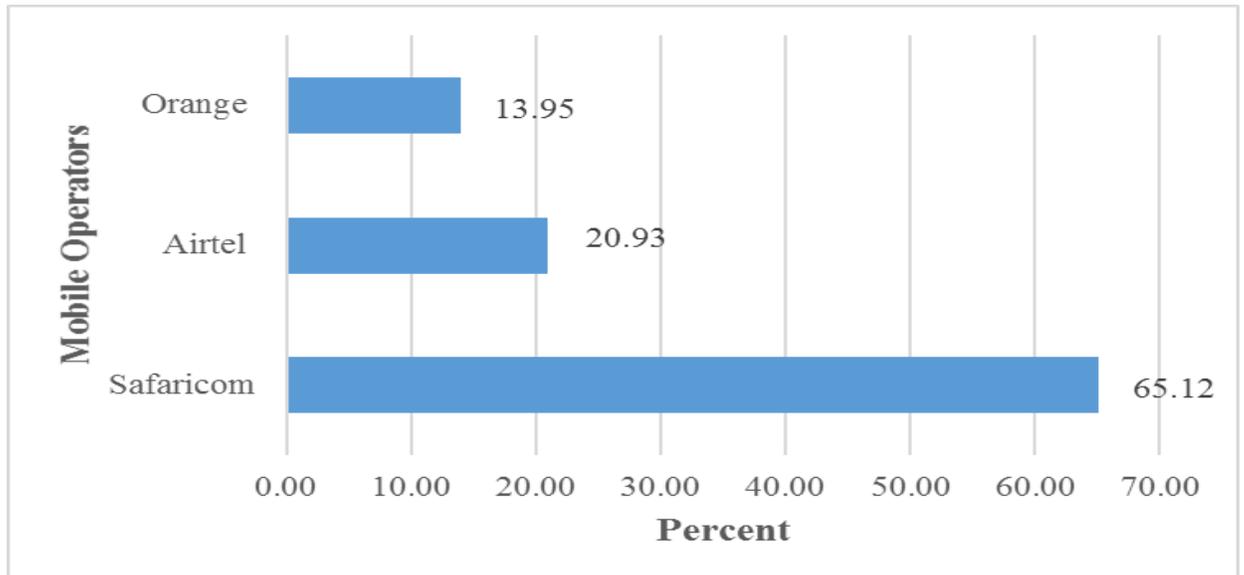


Figure 4.3: Mobile operator simcard actively used

From the findings, 65.12% of the respondents indicated they were using also Safaricom, 20.93% of the respondents indicated Airtel and 13.95% indicated Orange. This simply shows that most of the respondents were active Safaricom subscribers.

4.4 Extent of usage of the Equitel Services

The study sought to find out the extent to which the customers have been using various Equitel services. The results were as shown by table 4.4.

Table 4.4: Usage of Equitel Services

	Mean	Std Deviation
Calling	3.48	0.49
Sending SMS	3.27	0.63
Browsing	3.76	0.23
WhatsApp	3.54	0.18
Facebook	2.89	0.65
Mobile money	3.93	0.27
Funds transfer	4.30	0.28
Checking balance	3.85	0.19
Loans	3.81	0.32
Saving plans	3.89	0.25

According to the findings, the respondents specified that they use Equitel for funds transfer very often as indicated by a standard deviation of 0.28 and a mean of 4.30 and. The respondents further indicated that use Mobile money very often as exhibited by a mean of 3.93 and standard deviation of 0.27. They also indicated with a mean of 3.89 and standard deviation of 0.25 that they use Equitel services very often as a saving plan.

Further, the respondents indicated with a mean of 3.85 and standard deviation of 0.19 that they use Equitel services very often to check balance. The respondents further indicated with a mean of 3.81 and standard deviation of 0.32 that they use Equitel services very often to access loans. They also indicated that they use Equitel services often to browse as revealed by a mean of 3.54 and standard deviation of 0.18. In addition, they use the services for calling often as exhibited by a mean of 3.48 and standard deviation of 0.49. Further, the respondents indicated that they use Equitel services occasionally to send SMS as displayed by a mean of 3.27 and standard deviation of 0.63. Finally, they indicated that they use Equitel services to Facebook occasionally as displayed by a mean of 2.89 and standard deviation of 0.65.

4.5 Benefits of using Equitel to customers

The study sought to establish benefits of using Equitel to customers. The results were as shown by the table 4.5.

Table 4.5: Benefits of using Equitel to Customers

	Mean	Std Deviation
Convenience	4.08	0.22
Low charges	4.04	0.28
Easy to use	3.96	0.27
Accessing useful Information	3.81	0.12
Buying airtime	2.79	0.22
Topping up airtime	3.48	0.49
Calling	2.54	0.10
Sending money	4.34	0.30
Withdrawing money	3.97	0.24
Paying bills	4.36	0.35
Sending SMS	2.10	1.42
Accessing Facebook	2.07	0.97
Viewing statement and bank balance	3.68	0.66
Access free insurance cover	2.89	1.14

In effort to determine how often the respondents enjoyed the benefits of using Equitel, the study found that they benefited in paying bills very often as pointed out by a mean of 4.36 and standard deviation of 0.35. The respondents further indicated that they benefited in sending of money very often as pointed out by a mean of 4.34 and standard deviation of 0.30. Also, the respondents indicated that they benefited from convenience very often as pointed out by a mean of 4.08 and standard deviation of 0.22. Further, they benefited in low charges very often as pointed out by a mean of 4.04 and standard deviation of 0.28. In addition, the respondents benefited in withdrawing money very often as pointed out by a mean of 3.97 as well as a standard deviation of 0.24. They also benefit from easy use very often as pointed out by a mean of 3.96 and standard deviation of 0.27. Further, they access useful information very often as pointed out by a mean of 3.81 and standard deviation of 0.12. The respondents also benefit by viewing statement and bank balance often as pointed out by a mean of 3.68 and standard deviation of 0.66 and topping up airtime as pointed out by a mean of 3.48 and standard deviation of 0.49. Further, the respondents benefit often by accessing insurance cover as pointed out by a mean of 2.89 as well as standard deviation of 1.14; buying airtime as pointed out by a mean of 2.79 as well as standard deviation of 0.22. The respondents benefit occasionally by calling as pointed out by a mean of 2.54 as well as standard deviation of 0.10. Further, the respondents benefit occasionally as pointed out by a mean of 2.10 and standard deviation of 1.42.

4.6 Challenges affecting the adoption of Equitel

The study sought to determine the challenges affecting the adoption of Equitel. The results were as shown by table 4.6.

Table 4.6: Challenges affecting Adoption of Equitel

	Mean	STD Deviation
Poor network quality	3.76	0.16
Poor network coverage	3.98	1.25
Insecure	2.00	0.49
Slow internet	3.76	0.28
Cumbersome to use mobile services	2.65	0.35
Difficult to access customer care	3.00	1.22
Resetting the PIN is cumbersome	2.56	0.54
Thin sim can easily be misplaced	3.87	0.90
No Feature to confirm the recipient of mobile money	2.37	0.84
Poor customer services	2.78	1.02
Takes too long to renew simcard	1.79	0.67

In effort to determine the challenges affecting the adoption of Equitel, the respondents indicated that they are affected by poor network coverage very often as pointed out by a mean of 3.98 and standard deviation of 1.25. They are also affected very often by thin sim that can be easily misplaced as pointed out by a mean of 3.87 and standard deviation of 0.90. Further, the respondents indicated that they are affected by poor network quality as pointed out by a mean of 3.76 and standard deviation of 0.28. They are also affected by slow internet as pointed out by a mean of 3.76 and standard deviation of 0.16. Further, the respondents indicated that it is difficult to access customer care occasionally as

pointed out by a mean of 3.00 and standard deviation of 1.22. They also encounter poor customer services often as pointed out by a mean of 2.78 and standard deviation of 1.02. Further, they indicated that it is cumbersome to use mobile services often as pointed out by a mean of 2.65 and standard deviation of 0.35. In addition, the respondents indicated that resetting the PIN is cumbersome often as pointed out by a mean of 2.56 and standard deviation of 0.54. Also, they indicated that occasionally, there is no feature to confirm the recipient of mobile money as pointed out by a mean of 2.37 and standard deviation of 0.84. Further, the respondents indicated that occasionally it is insecure as pointed out by a mean of 2.00 and standard deviation of 0.49. However, the respondents indicated it is never takes too long to renew SIM card as pointed out by a mean of 1.79 and standard deviation of 0.67.

4.7 Equitel Services Used

The study sought to determine the various Equitel Services used by the respondents. The results were as shown by table 4.7.

Table 4.7: Equitel Services Used

	Frequency	Percent
Sending money to mobile money	83	96.51
Sending money to another bank	66	76.74
Sending money to Equity bank account	78	90.70
Paying utility bills	54	62.79
Pay for goods and services	40	46.51
Buy airtime	62	72.09
Saving money	70	81.40
Getting Eazzy loans	26	30.23
Making voice calls	75	87.21
Sending SMS	48	55.81
Access internet	32	37.21
Check airtime balance	54	62.79
Buy and check data bundles	45	52.33
Contact customer care	26	30.23
Access maternal health content	6	6.98
Access financial literacy information	18	20.93
Access Wikipedia	38	44.19
Access learning materials for KCSE	6	6.98
Access Facebook	15	17.44

According to table 4.7, 96.51% of the respondents indicated that use Equitel services to send money to mobile money. Further, 90.70% of the respondents indicated that they send money to Equity bank account. In addition, 87.21% of the respondents indicated that

they make voice calls. Also, 81.40% indicated that they use Equitel services in saving money. The study also found that 76.74 of the respondents indicated that they send money to another bank. The study further found that 72.09% of the respondents buy airtime. In addition, 62.79% of the respondents indicated that they pay utility bills and check airtime balance using Equitel services. Further, the study found that 55.81% of the respondents use Equitel services in sending money, 52.33% by buying and checking data bundles. Also, 46.51% indicated that they pay for goods and services and 44.19% access Wikipedia. Further, 37.21% of the respondents' access internet, 30.23% use Equitel services to get Eazzy loans and the same percent (30.23%) contact customer care. Also, the study found that 20.93% of the respondents' access financial literacy information, 17.44% access Facebook and 6.98% access maternal health content and the same percent access learning materials for KCSE.

4.8 Inferential Statistics

The section presents the results of inferential statistics. Regression analysis established the relative significance of each of the variables on MVNO adoption in Equity bank. The researcher performed a regression analysis to establish the association between the independent variables with the dependent variable of the study. The following regression model was adopted for the study:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + e$$

Where:

Y = MVNO adoption

β_0 = Constant Term

β_1 = Beta coefficients

X1 = Drivers

X2 = Moderating factors

ε = Error Term.

Table 4.7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.838(a)	.702	.696	.51038	.843	2.532	4	219	.023

Predictors: (Constant),

Dependent Variable:

Table 4.8: ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
Regression	.953	4	.238	2.532	.023
Residual	20.351	215	.094		
Total	21.304	219			

Predictors: (Constant),

Dependent Variable:

ANOVA findings (P- value of 0.023) in table 9 show that there is correlation between the predictors' variables (drivers and moderating variables). Table 4.9 shows the coefficients of regression equation for the study.

Table 4.9: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.606	.433		1.336	.104
Drivers of adoption	.602	.126	.467	5.133	.002
Moderating variables	.613	.378	.506	2.451	.022

a. Dependent Variable:

The following regression result was obtained:

$$Y = 3.606 + 0.602X_1 + 0.613X_2$$

From the model, when other factors (drivers of adoption and moderating factors) are at zero, the MVNO adoption will be at 3.606. Holding other factors constant, a unit increase in drivers of adoption would lead to 0.602 (p=.002) increase in MVNO adoption at Equity Bank.

In addition, it is noted that holding other factors constant, a unit increase in moderating factors leads to a 0.602 (p=0.022) increase in MVNO adoption.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the study findings where the main objectives were to determine the adoption of mobile virtual network operations by Equity Bank in Kenya. This chapter represents the conclusion and recommendations of this case study. To begin with a summary of the case study is presented. This is followed by recommendations for further research in the area of strategy implementation following this case study.

5.2 Summary of findings

The study revealed that Equity customers use Equitel for funds transfer, mobile money, as a saving plan, to check balance and to access loans very often. The study further established that Equity bank customers use Equitel services often to browse and for calling purposes. Further, the study established that Equity bank customers use Equitel services occasionally to send money and to access Facebook.

Regarding the benefits of using Equitel to customers, the study established that Equity bank customers benefited more in paying bills, sending money, convenience, low charges, withdrawing money, easy use and access useful information very often. The study also revealed that the customers also benefit by viewing statement and bank balance, topping up airtime, accessing insurance cover, buying airtime often. In addition, the customers were found to benefit occasionally by calling and sending SMS.

On challenges affecting the adoption of Equitel, the study revealed that most of the Equity bank customers experience poor network coverage, thin sim that can be easily misplaced, poor network quality and slow internet very often. Further, the study established that it is difficult to access customer care, encounter poor customer services, cumbersome to use mobile services and resetting the PIN often. Also, the study revealed that occasionally, there is no feature to confirm the recipient of mobile money and also it is insecure using Equitel services. However, the study found that it never takes too long to renew simcard.

Regarding the various Equitel Services used by Equity bank customers, the study found sending of money to mobile money is the most utilized Equitel service, followed by sending money to Equity bank account, making voice calls and sending money to another bank. The study further found most of the customers buy airtime, paying utility bills and checking airtime balance, sending money, buying and checking data bundles. Further, the study revealed that less than 50% of the Equity bank customers use Equitel services to pay for goods and services, accessing Wikipedia, getting Eazzy loans and contacting customer care. Also, other Equity customers use Equitel services access financial literacy information, access Facebook, access maternal health content and access learning materials for KCSE.

5.3 Conclusions

The study concludes that majority of Equity customers use Equitel for funds transfer, mobile money, as a saving plan, to check balance and to access loans. The study further

concludes that there is a positive significant relationship between drivers of adoption, moderating factors and MVNO adoption as shown by a p-value of 0.023 and a p-value of 0.002 consecutively. Lee et al., (2008), argues that both demographic characteristics such as age and ethnic origin and behavioral characteristics of the consumers in the market are important in accelerating MVNO adoption.

Regarding the benefits of using Equitel to customers, the study established that Equity bank customers benefited more in paying bills, sending money, convenience, low charges, withdrawing money, easy use and access useful information very often. The study also revealed that the customers also benefit by viewing statement and bank balance, topping up airtime, accessing insurance cover, buying airtime often. In addition, the customers were found to benefit occasionally by calling and sending SMS. Informa (2012) believes that virtually every market has a potential to benefit from MVNOs and that operators can benefit from MVNOs.

From the research findings and answers to the research questions, a conclusion can be made about the study. There are a number of factors that either hinder or propel use of mobile banking by Equity Bank customers, bearing in mind that the operating environment is also not static but evolving. The design of effective strategies should therefore ride on competencies inherent within an organization in addition to taking advantage environmental factors that also favor it while at the same time curtailing threats posed by competition. This is supported by (Kim et al (2010) who argues that both the regulator and consumer, MVNOs increase competition in the market. Also, Dewenter

and Haucap (2007) reveals that MNOs might not have proper incentives to host MVNOs in some markets and that might prompt for proper regulations to boost competition in the telecommunication markets.

The study further, concludes that adoption of Mobile Virtual Network Operations has contributed positively to the operational efficiency of Equity bank in Kenya. This could be attributed to the trends recorded in the drivers of adoption. This therefore means that the more clients a bank has in the mobile banking platform and the higher the amount of money transacted through mobile banking the better the operational efficiency of a commercial bank hence this study concludes that adoption of MVNO positively enhances operational efficiency of Equity Bank in Kenya. It is also concluded that the factors which were being measured in this research had a significant impact in influencing adoption decisions.

5.4 Recommendations of the study

This study has unveiled important information regarding adoption of Mobile Virtual Network Operations, the services which customers feel add value to them, those which they feel are not important and the challenges they face when using or when making the decision to sign up for mobile banking.

It is recommended that the management of these banks and other service providers reevaluate their mobile banking services and embark on a fact finding mission to find out from their customers the services which they would like to have access to via MVNO, so

that whatever solutions they come up with will be more enticing to customers and encourage them to sign up. It is also recommended that service providers address the challenges highlighted so as to give customers a worthwhile experience when taking up this innovation because the benefits of MVNO adoption are yet to be fully explored beyond convenience.

Second, the adoption of competitive strategies to cope with technological changes should not be limited to the private sector but I would recommend also the Government of Kenya to adopt it too. Even if majority of the government institutions tend to be monopolized such that they don't have many competitors, the adoption of technological changes like advanced machinery and digitalization will go a long way in creating quality products and services and efficiency in the processes that they daily undertake. This will lead to better services and client satisfaction in what is offered.

5.5 Limitations of the study

This study was limited to Mobile Virtual Network Operator adoption at one commercial bank, the results may not be generalized as representative of the entire banking industry. Another limitation of the study was that given the nature and sensitivity of banking profession, most interviewees were cautious about giving away too much information on their challenges and protecting the privacy of their experiences on running their accounts hence giving scanty responses.

5.6 Suggestions for further studies

The study confined itself to Equity Bank (Kenya) limited which is only one player in the banking industry. The study should be replicated in other players in the banking industry and the results compared so as to establish whether there is consistency on the challenges inherent in Mobile Virtual Network Operators and strategies implemented to tackle them. Further still, there is need for investigation on how best government policy makers can facilitate policy framework that foster financial inclusion in the fast evolving mobile banking field.

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APPENDIX

Appendix 1: Questionnaire

Instructions: Please tick in the box corresponding to the category which most closely describes yourself

Section A

General Information

Gender

Male

Female

How old are you?

18-24

25-35

36-49

50 and Above

What is the highest level of education you have completed?

Secondary

Certificate

Degree/Professional

Post Graduate

How did you come to learn about Equitel Services?

From a friend

From a family
member

Through the Media

Equity Bank

Branch

Equity Bank

Social Media

Website

Colleague

Equity Bank Staff

What other mobile operator simcard do you have actively use?

Safaricom

Orange

Airtel

Section B

Please indicate the degree of your agreement or disagreement with each statement by marking (√) in the box provided below: -

What is your extent of usage of the following Equitel Services?

Item\Rating	1	2	3	4	5
	Always	Very Often	often	Occasionally	Never
Calling	<input type="checkbox"/>				
Sending SMS	<input type="checkbox"/>				
Browsing	<input type="checkbox"/>				
Whatsapp	<input type="checkbox"/>				
Facebook	<input type="checkbox"/>				
Mobile money	<input type="checkbox"/>				
Funds transfer	<input type="checkbox"/>				
Checking Balance	<input type="checkbox"/>				
Loans	<input type="checkbox"/>				
Saving plans	<input type="checkbox"/>				

Section C

How often have enjoyed the following benefits of using Equitel as a customer? Tick All Appropriately

Item\Rating	1	2	3	4	5
	Always	Very Often	often	Occasionally	Never
Convenience	<input type="checkbox"/>				
Low charges	<input type="checkbox"/>				
Easy to Use	<input type="checkbox"/>				
Accessing useful information	<input type="checkbox"/>				
Buying airtime	<input type="checkbox"/>				
Topping up airtime	<input type="checkbox"/>				
Calling	<input type="checkbox"/>				
Sending money	<input type="checkbox"/>				
Withdrawing money	<input type="checkbox"/>				
Paying bills	<input type="checkbox"/>				
Sending SMS	<input type="checkbox"/>				
Accessing facebook	<input type="checkbox"/>				
Viewing statement and bank balance	<input type="checkbox"/>				
Access free insurance Cover	<input type="checkbox"/>				
Accessing loans	<input type="checkbox"/>				

Section D

What often have you experienced the following challenges while using Equitel services?

Item\Rating	1	2	3	4	5
	Always	Very Often	often	Occasionally	Never
Poor network quality	<input type="text"/>				
Poor network coverage	<input type="text"/>				
Insecure	<input type="text"/>				
Slow internet	<input type="text"/>				
Cumbersome to use mobile services	<input type="text"/>				
Difficult to access customer care	<input type="text"/>				
Resetting the PIN is cumbersome	<input type="text"/>				
Thin sim can easily be misplaced	<input type="text"/>				
No Feature to confirm the recipient of mobile money	<input type="text"/>				
Poor customer services	<input type="text"/>				
Slow internet	<input type="text"/>				
Takes too long to renew simcard	<input type="text"/>				

Section E**Which of the following Equitel Service(s) do you use?**

Sending money to mobile money	<input type="checkbox"/>
Sending money to another bank	<input type="checkbox"/>
Sending money to Equity bank account	<input type="checkbox"/>
Paying utility bills	<input type="checkbox"/>
Pay for goods and services	<input type="checkbox"/>
Buy airtime	<input type="checkbox"/>
Saving money	<input type="checkbox"/>
Getting Eazzy loans	<input type="checkbox"/>
Making voice calls	<input type="checkbox"/>
Sending SMS	<input type="checkbox"/>
Access internet	<input type="checkbox"/>
Check airtime balance	<input type="checkbox"/>
Buy and check data bundles	<input type="checkbox"/>
Contact customer care	<input type="checkbox"/>
Access maternal health content	<input type="checkbox"/>
Access financial literacy information	<input type="checkbox"/>
Access Wikipedia	<input type="checkbox"/>
Access learning materials for KCSE	<input type="checkbox"/>
Access Facebook	<input type="checkbox"/>