

**THE EFFECTS OF MOBILE MONEY TRANSFER ON COST  
EFFECTIVENESS OF INTERNATIONAL NON-GOVERNMENTAL  
ORGANIZATIONS IN KENYA**

**BY**

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**DECLARATION**

I declare that this project is my original work and has never been submitted for a degree in any other university or college for examination/academic purposes.

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

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## **DEDICATION**

This project is dedicated to my family members for support and encouragement.

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First and foremost,

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## **LIST OF ABBREVIATIONS**

ANOVA: Analysis of variance

B2P: Business to Person

CGAP: The Consultative Group to Assist the Poor

GDP: Gross Domestic Product

GSMA: Group Special Mobile Association

ICT: Information Communication Technology

MMP: Mobile Money Platform

MMS: Mobile Money Services

MMT: Mobile Money Transfers

MMU: Mobile Money Uptake

MNO: Mobile Money Operators

MNP: Mobile Network providers

NGO: Non-Governmental Organization.

NPS: National Payment System

INGO's: International Non-Governmental Organizations

P2B: People to Business

PIN: Personal Identification Number

SMS: Short Message Services

M-PESA: where M denotes mobile and PESA denotes money in Swahili in Kenya.

TAM: Technology Acceptance Model

TPB: Theory of Planned Behavior

TRA: Theory of Reasoned Action

USAID: United States Agency for International Development

USD: United States Dollar

## **ABSTRACT**

Mobile advancements are changing monetary life in developing nations, where copious people are operating smart phones for the latitude of fiscal interactions, for instance, acquiring, and conveying cash exchanges. Certainly, mobile cash is as of now being utilized by banks and versatile system administrators to give many unbanked purchasers an approach to store and get to cash digitally. There are many types of electronic payments in Kenya such as M-pesa that is offered by Safaricom, Airtel money offered by Airtel, Equitel money offered by Equity bank, western union. Mobile money happens to be a type of electronic payments. The objective of the study was to ascertain the impact of mobile money transfer on cost effectiveness of International NGO's in Kenya. The research design used was descriptive study. The target population was the International NGO's operating in Kenya and that have adopted mobile money technology. This research being descriptive used primary data. This data was collected from the employees of the various INGO's. The data was analyzed using descriptive statistics. The study concludes that mobile money transfer is highly compatible with other operating systems used in the INGO's, mobile money system has minimal downtime, and that mobile money system allows staff to share financial information in INGO's. In addition, the study concludes mobile money system reliability affect the cost effectiveness of the NGO's largely and that NGO's has enough hardware to support mobile money technology and that the mobile technology hardware is well maintained.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

Mobile advancements are changing monetary life in developing nations, where numerous people are operating mobile phones for latitudes of fiscal transfers, for instance, acquiring and conveying money exchanges. In fact, mobile cash is now used by banks and mobile system administrators to give many unbanked purchasers a way to deal with storing and acquiring money digitally (Cynthia, 2010).

Mobile banking services, known as "mobile cash", allow unbanked people to use their cell phones as a financial balance that is to store, pull back and exchange cash. Individuals can likewise utilize portable frameworks to pay service bills and pay for products in dealer shops. In Kenya Mobile cash administrations began in 2007 through M-Pesa ("M" for "portable", "pesa" for "cash" in Swahili), a well-known mobile cash benefit offered by a local portable system administrator, Safaricom (Mbiti & Weil 2010). From that point forward, the mobile cash industry has quickly extended, especially in creating economies in Africa and South Asia, for example, India, Bangladesh, and Pakistan. Mobile money has been portrayed, optimistically, by policymakers, the media, or above all cell phone organizations as a prospect for monetary advancement and destitution decrease, even without the support of a satisfactory evidence base (William & Tavneet 2011).

As the utilization of mobile phones for money exchange is generally recent, there are no exhaustive studies on the subject separated from investigation concentrating on particular nations, divisions, and contextual analyses. Due to the difficulties experienced with taking care of money, for example, misappropriation of assets; an

excess of money in the hands of employees consequently presenting them to instability, poor management of advances, deferred repayments to members and recipients, high operational costs. For example, protection, the greater part of the International Nongovernmental Organizations (INGO's) have received the mobile money exchange benefits as they commonly dispense high volumes of low esteem installments to a huge number of program members and recipients in extremely remote locations of Kenya. This is because of variables such decreased value-based cost, comfort, consumer loyalty, effectiveness and secure method for executing business.

### **1.1.1 Mobile Money transfer**

According to GSMA intelligence (2016), Kenya is a discoverer market in Eastern Africa with 3 operators and 36.3 million mobile connections and 78% SIM penetration. Kenya's mobile market has developed greatly over a short period, according to Central Bank of Kenya mobile payments amounted to Kenya shillings 2816.099 billion in 2015 up from 16.32 billion in 2007. Currently, 96% of the population utilizes mobile coverage with over 3,499 3G localities in the nation. Resultantly, in Kenya, customers, corporations, and the government continue to enjoy the increased advantages emanating from the positive advancements in the mobile sector. Mobile payment is an approach based on accounts held by the administrator, with exchanges approved and recorded progressively utilizing secure Short Message Services (SMS). Since its foundation in February 2007, the growth of M-Pesa has influenced the achievement of 15 million enlisted clients and contributions of up to 18% of Safaricom's aggregate income. For this study we are doing to consider two models namely business to person (B2P) and Person to NGO Payment.

Business to person (B2P) model entails how an International NGO disburses payments to beneficiaries through their mobile wallets, these beneficiaries are sometimes scattered in various parts of the country some very remote places. The payments being paid by the International NGOs could be work advances, travel reimbursements, allowances. This model is very popular among International NGOs where the adoption of the mobile technology is high (Donner *et al* 2008).

The second model is Person to NGO (P2B) Payment where persons are allowed to remit funds to the NGO using the mobile money technology, the funds remitted could be in form of donations, unspent advances etc.

### **1.1.2 Cost Effectiveness**

International NGO's have for a number of years experienced challenges emanating from handling large volumes of cash or advancing funds to employees to carry out various program activities, examples of these challenges misappropriation of funds, insecurity of employees due to holding of too much cash , poor accountability of funds advanced, high operational costs due hiring of security to safeguard cash and staff in insecure and remote places in order to pay beneficiaries, high vehicle running expenses, etc. delayed reimbursements or payments to participants and beneficiaries etc (Davis, 1989). This confirms that the International NGO's were as such exposed to various risks indicated and as a result of which they were incurring huge administrative costs to implement the intended program activities. Therefore the emergence of the mobile technology was as opportune time to address these challenges and effectively manage costs (Al-Jabir 2012). As such most of the International NGO's have adopted the mobile money transfer services as they typically disburse high volumes of low value payments to thousands of program participants and beneficiaries in very remote places of Kenya. This is due to factors

such reduced administrative costs, convenience, customer satisfaction, efficiency and secure way of transacting business.

It's also good to note that due to low disbursement rate that was being experienced before the emergence of the mobile money transfer technology; most NGO's had to grapple with the issues of low burn rate and high administrative costs hence not complying with the donor rules and regulations, the consequence of this was that NGO's were forced to refund the unspent funds after the donor contracts come to an end. This heavily affected the NGO's reputation, hence reduced funding from donors.

On 15 August 2014, a lawful notice offering life to the National Payment System (NPS) Regulations of 2014 was issued. Production of the Legal Notice topped off a long wait for a formal lawful structure for mobile money. The NPS Regulations have classified into law the administrative practices that have advanced since mobile money was presented in 2007, starting with the prudential and market direct prerequisites cherished in the no protest letters, and have given more authenticity to existing plans of action. For administrators, the NPS Regulations gave genuinely necessary assurance in the market and heading for speculators looking to enter it. In a nation where there are more than 26.2 million enlisted mobile money records and 59% of the grown-up populace effectively utilizes mobile money, the clients will profit most from thorough instruments for buyer review, exposure of terms of administration, upkeep of security, and privacy of client information GSMA (2015).

### **1.1.3 Determinants of Cost effectiveness**

Cost-effectiveness analysis is a type of monetary analysis that equates the relative expenses and results (impacts) of at least two strategies/courses of action. There are various determinants of cost effectiveness in international NGO's, however, for this



study the researcher will narrow down to timeliness in payments, reduced paperwork and reduced time spent on an activity

#### **1.1.4 Relationship between Mobile money Transfer and Cost Effectiveness of International NGO's**

It's evident that of late most international NGO's have adopted the mobile money transfer services in Kenya and its effect are visible in the lives of Kenyan, however the evidence of these effects is not documented as not many studies have been done on its effect. However according to USAID (2013), USAID is working with other organizations such as CGAP , the Gate Foundation and Mercy corps to help people understand what mobile money is and why it's worth working on. Additionally, according to USAID and Nethope (2014), the key benefits of adopting E payments are upgraded expense reserves and efficacy, augmented limpidity, abridged outflow (siphoned funds) and waste, condensed safety threats to initiative staff and accomplices, better-quality admittance to financial amenities for your payment recipients, enriched entree to an increasing ecosystem of value added and corporate amenities for your compensation beneficiaries.

#### **1.1.5 International NGO's in Kenya**

The Non-Governmental Organizations Co-ordination Board regulates the International NGO's industry. Its foundation, as a state corporation, was the Non-Governmental Organizations Co-ordination Act (Cap 19) of 1990. Additionally, its key responsibility entails the regulation and enabling the NGO sector in Kenya. Its Co-ordination Board has comprehensive control over the International NGO's sector and plays crucial responsibility for the registration, facilitation, and coordination of every national and international NGOs operating in Kenya. Moreover, it advises the national government on their participation to the country's progress in addition to

giving regulatory guidelines for NGOs, which is critical for their alignment of practices with national primacies. Resolutely, they accept and conduct extensive analysis on NGO's annual reports.

International NGO's plays a very imperative part in the Kenya social and development agenda in such sectors as water and sanitation, education, governance, health, voluntary saving and loan, etc. In Kenya there are two major categories of NGO's namely the national nongovernmental organizations and international non-governmental organizations. The study will dwell on international NGO's that have made some strides towards adoption of mobile money technology and further sought to review its effects on cost effectiveness of international Nongovernmental organizations.

## **1.2 Research Problem**

There are many types of electronic payments in Kenya such as M pesa that is offered by Safaricom, airtel money offered by Airtel, Equitel money offered by Equity bank, western union. Mobile money happens to be a type of electronic payments. According to Central Bank of Kenya, since the introduction of mobile money by Safaricom in 2007, the amount of transactions and funds transmitted through the mobile payment platform in Kenya has been on an upward trend since 2007, in 2015 mobile payments amounted to Kenya shillings 2816.099 billion up from 16.32 billion in 2007. As many Organizations continue to adopt mobile money transfer services in Kenya as indicated in various journals and case studies such as USAID and NetHope (2014), William, J., & Tafneet, S. (2011), Mbiti and Weil (2010), USAID and Citi bank (2011). It is evident that there is a gap as there is minimal documented evidence on the effect of mobile money services adoption by INGO's on its cost effectiveness. The absence of

the evidence on the effect of mobile money services on cost effectiveness of INGO's is a huge issue that cannot not be underestimated as it forms the basis upon which policy formulation and engagement is driven by the donors such as USAID. They are driving the adoption of inclusive e payment as a means to achieve development outcomes and improve aid efficiency, the recipients of the funds, mobile money providers, regulators, and above all the beneficiaries. It is in this regard that this research is aimed at bringing out the evidence drawn from international NGO's that have adopted the mobile money technology.

This study sought to answer the question: What is the effect of mobile money transfer services on the cost effectiveness of International NGO's in Kenya?

### **1.3 Research Objectives**

To ascertain the effects of mobile money transfer on cost effectiveness of International NGO's in Kenya.

#### **1.1.3 Specific objectives**

- i. To examine the effect of mobile money system reliability on cost effectiveness of International NGO's in Kenya
- ii. To establish the effect of staff competence in using the mobile money technology on cost effectiveness of International NGO's in Kenya
- iii. To examine the effect of mobile technology infrastructure on cost effectiveness of International NGO's in Kenya

### **1.4 Value of the study**

The study will provided the much needed evidence on the effects of mobile money transfer services on cost effectiveness of international NGO's in Kenya hence contribute to the innovation diffusion theory. The theory explains the acceptance of

technology, which is a major factor driving adoption of mobile money technology and further contributes to the theory of technology acceptance that explains the relationship between perceived usefulness and ease of use.

The bigger picture of the study is that it sought to help in the prudent fiscal management and overall compliance with donor financial rules and regulations and will be source of information to inform policy by the funders and recipients leading to appropriate policy engagement from informed perspective. It also trickles down the benefit to the ultimate beneficiaries who include the communities that most of the INGO's serves given the likely revolution of the speed to which money can reach the volunteers or beneficiaries in the remote parts of Kenya.

The study will offer valuable contribution to practice the results of the study will make the International NGO's management to appreciate the need to adopt mobile technology. Definitely, if they are yet to, they will also appreciate effects of mobile money on cost effectiveness of International NGO's as well as reflect the generally acceptable practices for scholars and practicing professionals in the field of mobile technology and specifically mobile money.

The study will offer valuable contribution to body of knowledge that will be used by the various scholars and professionals in this field of international development to drive the recognition and growth in mobile money and its effects on cost effectiveness on international NGO's.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter reviewed the literature that is relevant to this study of effects of mobile money transfer on cost effectiveness of International NGO's in Kenya, and further highlights the views of different researchers, Scholars and academicians that have been advanced in the field of mobile money adoption by International NGO, s sector and beyond. Among the issues covered in this chapter include the theoretical review, conceptual framework, empirical literature and the summary of literature review

#### **2.2 Theoretical Review**

To find the effects of adoption of mobile money transfer services on cost effectiveness of international NGO's this study reviewed a number of theories that are considered relevant to this study. Thus, this section contributes to the project by reviewing dominant concepts and theoretical perspectives, which are within the scope of this study. In this study, discussion was focused on the current dominant perspectives on diffusion of innovation theory that explains the acceptance of technology which is key in driving adoption of technology, Davies(1989), technology acceptance model(TAM) that explains relationship between perceived usefulness and ease of use, Theory of reasoned action and theory of planned behavior.

##### **2.2.1 Innovation Diffusion Theory**

This is a hypothesis that has acquired consideration by researchers in clarifying customer conduct towards innovation. In the Rogers advancement dispersion theory, Rogers (1995) Innovation is described as an idea, practice or question that is viewed as new by an individual or another unit of gathering, while spread is the system by

which an improvement is conferred through particular channels after some time among the people from a social structure, Rogers (1995). According to Teo and Pok (2003) innovation diffusion is a theory that explains acceptance of technology. This theory focuses on acceptance of technology, which makes it relevant and applicable to this study. By these definitions, innovation diffusion is accomplished by how a social framework acknowledges and starts to utilize (embrace) a thought or an innovation. Roger further distinguishes five qualities of any advancement and these are as per the following

Relative advantage which is how much the advancement is seen as being superior to the initiative it surpasses. Compatibility which refers to the degree to which embracing the development aligns with people's practices. Complexity which alludes to how much a development is seen as moderately hard to comprehend and utilize. Trialability which alludes to how much a development might be explored different avenues regarding on a constrained premise before making a reception (or dismissal) choice. Finally, observability which is how much the consequences of advancement are unmistakable to others, Rogers (1995).

This theory therefore highlights the birth of a new idea or an object such as mobile technology and how it's disseminated to the community using various channel and the aspects affecting the implementation of such new phenomenon such as mobile money services hence very relevant to the study

### **2.2.2 Technology Acceptance Model**

Davis (1989) proposed the Technology Acceptance Model (TAM) as an adjustment to the Theory of Reasoned Action (TRA); moreover, the aim of the modification was the development of models of recognition in IT, which emanated from IBM Canada contractual agreement with MIT. The contractual agreement, formed in the 80s,

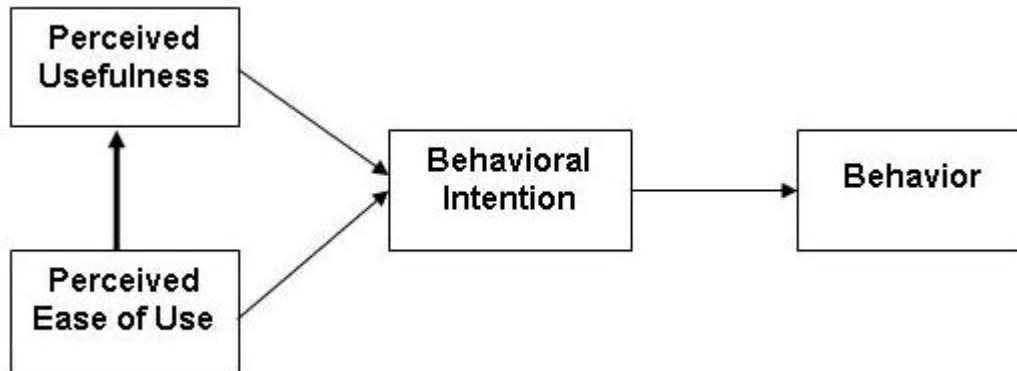
evaluated the market potential to new products by the subject company and formulated a probable explication of the bases of computer utilization, Davis et al; (1989).

Davis (1989) proposed that TAM was focusing on the purpose the clients acknowledge or dismiss the data innovation and how to enhance the acknowledgment, offering along these lines, a support to predict and clarify the acknowledgment. Davis (1989) discovered that the apparent utilize had advanced effect in the conduct than the apparent office. The TAM has the benefit of focusing on data innovation and has a solid hypothetical foundation, other than the wide empirical evidence, Davis (1989).

The model Technology Acceptance Model (TAM) aimed at appreciating the fundamental association between outer factors of client's acknowledgment and the candid employment of PC, trying to comprehend the client's conduct through the efficient information (Davis, 1989). Be that as it may, despite the fact that this person comprehend that obvious novelty is sufficient, its application might be impaired when it is excessively entangled, in ways that the effort is not beneficial the utilization. Along these lines, the TAM fundamentally focuses on two builds: the deceptive usefulness and the apparent office, seeing that both dignified completely impacts of outer factors, for example, highlights frameworks, advancement handle, preparing, in the utilization expectation, Davis, (1989).

Perceived utility, which alludes to a degree in which a man trusts that the utilization of a specific framework may enhance his execution; Facility of perceived utilize which is the gradation in which a man trusts that the utilization of a data framework will be free of exertion.

The outline below recommends that the people will utilize a decided innovation in the event that they trust that this utilization will give constructive results, centering in the apparent convenience and in the apparent value.



As per the model, the utilization of the data frameworks would be resolved by the utilization aim that the person provides. This, on the other hand, would be resolved together by the person's utilization demeanor in connection to the genuine utilization of the framework and by perceived usefulness, every one applying a relative weight. This connection amongst state of mind and aim proposes that individuals frame goals to perform activities to the ones they have a positive feeling. On the opposite side, the connection between perceived usefulness and utilize aim, depends on the possibility that, inside an authoritative setting, the general population shape goals in connection to practices which they accept will build their execution at work. The authors Davis, Bagozzi, and Warshaw (1989) presume that the spared exertion, because of the change in the apparent helpfulness simplicity might be connected in different tasks, therefore permitting that one individual complete more work with similar exertion, along these lines having an immediate impact in the apparent convenience. Perceived usefulness utilization has a causal impact on perceived usefulness. The influence of



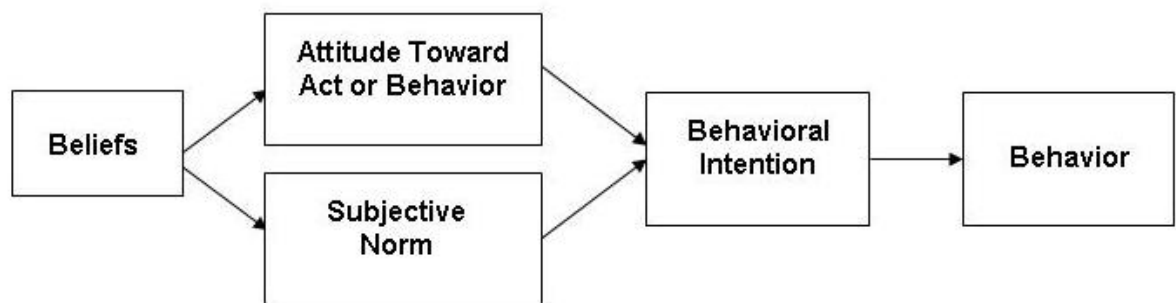
peripherals in the utilization aims are intervened by value and simplicity (Davis et al; (1989).

The model TAM has acquired hypothetical and empiric support, through approvals, applications, and reproduces made by specialists and the data innovation zone experts. Lee et al. (2003) directed a meta-investigation of writing about the TAM and discovered that the model demonstrated reasonable results, maintaining its viability in the clarification of innovation acknowledgment by the clients of data framework, been connected in various advancements, as, content processors, email, web, bank and health institutions frameworks, and additionally extraordinary circumstances (after some time and societies)( Lee et al., 2003).

### **2.2.3 Theory of Reasoned Action**

The Theory of Reasoned Action (TRA) has its beginnings in the social psychology that ventures to distinguish the determinant components of the deliberately purposeful conduct (Fishbein; Ajzen, 1975). It characterizes the relations between convictions, states of mind, standards, goals and conduct, that is, a decided conduct, for instance, innovation utilization or dismissal is the result of a goal in making the conduct, and the personal demeanors impact this aim conjointly. For Fishbein and Ajzen (1975), the parts that edge the dispositions are the sentiments that suggest themselves to the data that the subject has around a picked challenge and the subjective rules that is the impression of an outside assessment about getting or not picked coordinate. As indicated by the TRA, the craving picks the viable lead that hints the perceivable displays (Fishbein; Ajzen, 1975).

We could address the work TRA in the running with way: it is envisioned that a client who has the shrewd intend to utilize a picked data structure, reinforcement from the use point of view, which may ensure or opposing, trailed by subjective gages, which are implied the discernment that the client has of the other individuals' evaluation. People play out a lead, even not concurring with it and its results, on the off chance that they accept that a picked singular imagines that this one ought to be his direct and on the off chance that they are empowered to satisfy that individual. The model was used to settle on correct desires of human choice generally speaking as to vote in the races and blended refreshments use, being found that the speculation balanced well in the conjecture of choice among choices (Dillon; Morris, 1996). The model TRA is presented in diagram.



The TRA acknowledges that the general population carry on objectively, assessing what they need to lose and to win with the appearance of their states of mind. In this way, thoughts, individual objectives, qualities, convictions and mentalities impact the conduct they emanate at work, in the event that they accept; for instance, that to share learning will bring benefits, they will have a tendency to be great to the sharing (Fishbein; Ajken, 1975).

The hypothesis of reasoned action has as of now been broadly looked into and demonstrated achievement in the forecast and clarification of human conduct in an assortment of territories, Davis et al (1989) According to Davis (1989), for being so summed up and to integrate different hypothetical viewpoints of psychology, before being applied in researches of acknowledgment of data frameworks, the TRA ought to be superbly suitable for the investigation of the determinants of the utilization of the PC as a particular case.

#### **2.2.4 Theory of Planned Behavior**

The Theory of Reasoned Action has been utilized for a considerable measure to inspect the client's acknowledgment, in fact, in connection to the innovation, other hypothetical viewpoints were likewise utilized (Dillon; Morris, 1996). Over 10 years after the TRA, Ajzen (1991) exemplified the Theory of Planned Behavior (TPB), which supplements the TRA, amassing to it progressively in building goal of utilization, i.e. seen behavioral control (Dillon; Morris, 1996). As indicated by Ajzen (1991), the TPB is a hypothesis intended to predict and clarify the human conduct in particular settings, for instance, in data frameworks. The apparent behavioral control mirrors the conviction about the entrance to the assets and to the important chances to perform decided conduct. As general manage, the more grounded the aim to get required in a conduct, the more likely ought to be its execution. Ajzen (1991) comprehend that the conduct aim is reflected in the conduct if the individual choose his own will to receive or not the conduct, what implies, by the apparent control that he has about the wanted conduct. The conduct is the result of a progression of intellectual and full of feeling occasions went before ordinarily by the cognizant aim of acting.

### **2.3 Empirical Review**

Extensive research has been done around the adoption of mobile money transfer services in Kenya and its impact in various sectors of the economy. The impact of the mobile money has been noted to be both positive and negative to the various sectors of our economy. This study seeks to borrow a lot from the below past studies and especially from the likely identified gaps and will form the academic base for analyzing mobile money adoption and its effect on cost effectiveness of International NGO's. According to USAID and Nethope (2014) alleviation and improvement associations frequently make high volumes of little installments for projects and operations consequently there is a chance to grow monetary consideration and create benefits for individuals living at the base of the pyramid by moving from money installments to electronic installments. The concentrate additionally refers to the event to receiving E-Payments as enhanced cost investment funds and productivity, expanded straightforwardness, decreased spillage (siphoned subsidizes) and squander, diminished security dangers to program staff and members, enhanced access to budgetary administrations for your installment beneficiaries, enhanced access to a developing biological system of significant worth included and business administrations for your installment beneficiaries.

Plan International in Uganda was an early adopter of e-payments. In 2012 Plan International used physical cash to reimburse transportation costs to each of the 50 to 100 participants who attended its frequent workshops across five districts in Uganda. When Plan switched these payments to a mobile money bulk payment product, it secured 77 percent in costs, secured contributors time by eradicating money payments, augmented staff productivity by plummeting paperwork and freeing up

time for delivering preparation content, increased limpidity, and compacted the safety jeopardies of staff's cash management. USAID (2012)

According to GSMA (2014), the key findings on appropriation of mobile money administrations were the quantity of enrolled accounts all-inclusive developed to achieve just shy of 300 million in 2014. While this is a noteworthy turning point for the business, there is still tremendous potential for future development as this lone speaks to 8% of portable associations in the business sectors where versatile cash administrations are accessible. In 2014, seven new industries amalgamated the positions of nations where there are more mobile money accounts than ledgers, conveying the aggregate to 16, demonstrating that versatile cash remains a key empowering influence of money related consideration. The business is getting more astute about what it takes to incite portable cash appropriation: dynamic versatile cash accounts remain at 103 million as of December 2014, and an expanding number of administrations are accessible to the clients. Administrators are achieving more clients at the base of the pyramid. Review respondents reported a general increment in the infiltration of mobile money administrations among women and among rustic clients. On the utilization of the versatile cash benefits, the study noticed the accompanying.

Domestic person to person (P2P) exchanges and airtime top-ups keep on dominating the worldwide item blend regarding volume and esteem, yet the quickest development in 2014 happened in mass distributions, bill and shipper installments, reflecting an extending ecosystem of institutional and business clients of portable cash. The lofty increment in the quantity of worldwide settlements through portable cash has been fundamentally determined by the presentation of another model utilizing mobile money as both the sending and accepting channel. Mobile money is lessening the expenses of worldwide settlements for clients: overview respondents reported that the

middle cost of sending USD 100 by means of mobile money is USD 4.0, not as much as a large portion of the normal cost to send cash comprehensively by means of conventional cash exchange channels. Vendor installments are on the ascent, reflecting solid enthusiasm among mobile money suppliers to encourage clients' every day consumptions on merchandise and ventures. More should be possible to drive dealer reception, be that as it may, as just 25.4% of the 258,000 traders enlisted to utilize mobile money are right now dynamic.

As an indication of a developing industry, in 2014 mobile money suppliers put resources into fortifying their inward abilities to address an expanding number of clients and exchanges. Half of all respondents had effectively finished stage relocations or wanted to move their stage in 2015. Donner and Tellez (2008) did a study on portable managing an account and financial improvement where they tried to connection appropriation, effect, and utilize. The study set up that through offering an approach to bring down the expenses of mobile money from place to place and offering an approach to carry more clients into contact with formal money related frameworks, m-keeping money/m installments frameworks could turn out to be a vital advancement for the creating scene.

According to Rachael (2010), take-up of mobile phones in Kenya has been unparalleled. Mobile banking in Kenya influences execution of association, conduct, and basic leadership of the whole economy. The pattern of proceeded with dependence on cell phones to execute money related exchange is consistently picking up force. Mobile money is an advancement that has continuously rendered itself in unavoidable methods for cutting over various divisions of economy and industry.

Al-Jabri (2012) concentrated on mobile banking appropriation by taking a gander at the utilization of dissemination of advancement hypothesis. This study tried to examine an arrangement of specialized traits and how they influence mobile banking appropriation in a developing country, similar to Saudi Arabia. The study utilized dissemination of development as a gauge hypothesis to research considers that may impact mobile banking reception and utilization. Even more particularly, the target of this exploration was to analyze the potential facilitators and inhibitors of mobile banking adaption. The study was guided by six theory including: relative advantage positively affecting portable keeping money appropriation; Complexity negatively affecting versatile managing an account selection; Compatibility positively affecting versatile saving money reception; Observability positively affecting versatile saving money appropriation; Trialability positively affecting mobile banking reception; and perceived hazard negatively affecting mobile banking reception.

The discoveries propose that banks, in Saudi Arabia, should offer portable saving money benefits that are immaculate with various current customer requirements, past experiences, lifestyle, and feelings to fulfill customer wants. With better portable saving money support and course of action of an assortment of organizations, the more accommodating customers see versatile keeping money to be and to grow their level of determination. In this manner, bank's thought should focus on the cognizance of customer direct and arranging strong portable saving money structures that will address their issues and give profitable and quality organizations. Moreover, banks should focus on bestowing information that underscores the relative favored point of view and handiness of portable keeping money diverged from other dealing with a record channels, for example, physical closeness to the bank or using ATM machines. Banks must hope to reduce dangers saw by their customers by giving specific

guarantees securing them and considering their disagreements essential and frantically.

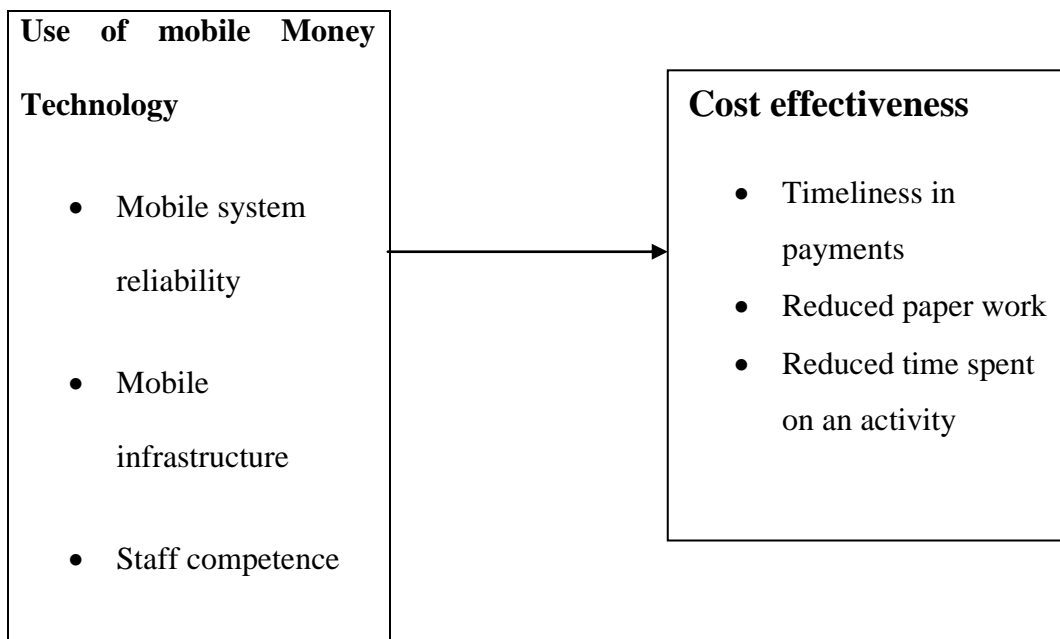
According to Ojanji (2014) on his study 'Effect of Mobile Money Uptake on Financial Performance within the Kenyan NGO sector, the study provided evidence that mobile money uptake (MMU) is key to the financial performance of NGOs. Particularly when looking at the various key performance parameter of customer satisfaction, fiscal security , cost reduction, compliance , long term growth and reach .Similar evidence from this study is that MMU has yielded substantial benefits to the entire Kenya consumer and producer community and therefore it is a way of life that have to be embraced by all sectors of the Kenya population.

## **2.4 Conceptual Framework**

Due to factors influencing cost effectiveness namely timeliness in making payments, reduced time spent on an activity and reduced paperwork due to use of reliable mobile money transfer services, good mobile technology infrastructure and competent staff, it's expected that an organization that adopts mobile money technology will be more cost effective .



**Figure 2.1: Conceptual Framework**



## **2.5 Summary of Literature Review**

The chapter has extensively reviewed literature related effects on mobile banking in various sectors of our economy. The review of the literature has revealed that mobile money technology may have positive impact on cost effectiveness of international NGOs in terms of reduced operational cost, convenience, efficiency, minimal case of misappropriation, reduced insecurity exposure to staff etc. However it's evident that none of these studies is focusing of effects of mobile money on cost effectiveness of international NGO, s hence the need for this study.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter focused on the research methodology that was used to conduct the study. It describes the research design, target population, sampling techniques, data collection methods, data analysis and presentation techniques.

#### **3.2 Research Design**

The methodology that was applied by the study has been selected in order to acquire adequate information to enable the researcher deduce conclusions about the effects of mobile money transfer service on the cost effectiveness of International NGO's in Kenya.

The research design used was descriptive study. Being the most preferred method, it enables the researcher achieve his objectives even with little control over events surrounding the research problem. The adoption of mobile money transfer by organizations is quickly gaining momentum in the NGO sector hence the need to be studied.

#### **3.3 Target population and sampling**

The target population was the International NGO's operating in Kenya and that have adopted mobile money technology. Currently 106 International NGO's operating in Kenya has adopted the mobile money technology. The target population enabled the researcher to establish how effective the mobile technology is to the cost effectiveness of International NGO' s in Kenya and the extent to which they have adopted the mobile money technology. The questionnaires were distributed randomly to one respondent from each organization making a total of 106 respondents.

### **3.4 Data Collection**

For the purpose of this research, and in order to achieve the objectives of the study, enough data was collected. This research being descriptive used primary data. This data was collected from the employees of the various INGO's. The researcher administered a questionnaire for primary data. This is because it is a familiar method to most people and it is easy to be analyzed. To ensure that quality data was collected with speed, the questionnaires were administered on a "drop and pick later" basis. This provided the respondents with adequate time to read, and understand before responding to the questions hence high quality of information. The respondents were also allowed to seek any clarification to avoid misunderstanding and to reduce the chances of giving inaccurate data.

#### **3.4.1 Data Validity and Reliability**

The study ensured that the data obtained is valid and reliable and the research design was constructed with validity and reliability in mind. In regard to construct validity, the study was designed to maximize use of multiple sources of evidence such as organization key relevant records, user opinions in addition to plans for documenting key aspects of the study and maintaining a data base of interview reports and organization data.

### **3.5 Data Analysis**

The data was analyzed using descriptive statistics. The descriptive statistical tools statistical package for social science (SPSS) Version 22.0 was used in data analysis. The analysis was done at 0.05 level of significance.

**Table 4.1: Operationalization and measurement of variables**

Variable	Indicators	Operational definitions	Measurement scale	Questionnaire item
<b>Independent variables</b>				
Mobile money system reliability	<ol style="list-style-type: none"> <li>1. Minimal down time</li> <li>2. Compatibility with other operating systems within the organization</li> <li>3. Allows relevant employee to share financial data</li> <li>4. Rights are assigned based on job description/duties and responsibilities</li> </ol>	<ol style="list-style-type: none"> <li>1. The extent of agreement that mobile money technology downtime is minimal</li> <li>2. The extent of agreement on compatibility of mobile money system to other operating systems with the organization</li> <li>3. The extent of agreement that mobile money system allows sharing of financial information by relevant staffs</li> <li>4. The extent of agreement that rights limitations are assigned based on job descriptions</li> </ol>	4 statements on a 5 point type of scale to reflect the descriptive norm of the extent of agreement on Mobile money technology reliability	Section B ( 5)
Mobile money technology	<ol style="list-style-type: none"> <li>1. Enough hardware to support mobile money technology</li> </ol>	<ol style="list-style-type: none"> <li>1. The extent of agreement</li> </ol>	3 statements on a 5 point type of scale to	Section C ( 7)

infrastructure	<ol style="list-style-type: none"> <li>2. The mobile technology hardware is well maintained</li> <li>3. Use of the latest technology</li> </ol>	<p>that there is enough computer hardware</p> <ol style="list-style-type: none"> <li>2. The extent of agreement that the hardware is well maintained</li> <li>3. The extent of agreement that mobile money is using the latest technology</li> </ol>	<p>reflect the descriptive norm of the extent of agreement on Mobile money technology reliability</p>	
Staff competency	<ol style="list-style-type: none"> <li>1. Staff are conversant with mobile money</li> <li>2. Staff understands different mobile money modules</li> <li>3. Staff are computer skilled</li> <li>4. Staff are trained on mobile money from time to time</li> </ol>	<ol style="list-style-type: none"> <li>1. The extent of agreement that staff are conversant with the mobile money technology</li> </ol> <p>The extent of agreement that staff understands different mobile money modules</p> <ol style="list-style-type: none"> <li>2. The extent of agreement that staff are computer skilled</li> </ol> <p>The extent of agreement that staffs are trained from time to time on mobile money technology.</p>	<p>4 statements on a 5 point Likert type of scale to reflect the descriptive norm of the extent of agreement on Mobile money technology and staff competence</p>	Section D ( 9)
<b>Dependent Variables</b>				

Cost Effectiveness	<ol style="list-style-type: none"> <li>1. Timeliness in payments</li> <li>2. Reduced paperwork</li> <li>3. Reduced time taken to carry out certain activities</li> </ol>	<ol style="list-style-type: none"> <li>1. The extent of agreement that mobile money transfer services has contributed to timely payments</li> <li>2. The extent of agreement that Mobile money transfer services has led to reduced paperwork</li> <li>3. The extent of agreement that Mobile money transfer services has led to reduced time taken to carry out activities</li> </ol>	3 statements on a 5 point Likert type of scale to reflect the descriptive norm of the extent of agreement on use of Mobile money technology on cost effectiveness in INGO	Section E ( 11)
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### 3.5.1 Study Model

The study adopted multiple linear regression models to test the effect of mobile money transfer (Independent) on the cost effectiveness of International NGO's (Dependent). The model adopted is as shown below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

Where

Y = is the dependent variable representing reduction in cost.

X<sub>1</sub>, X<sub>2</sub> and X<sub>3</sub> are independent variables

$X_1$  = Represents the mobile money system reliability.

$X_2$  = is staff competence in using the mobile money technology

$X_3$  = is the mobile technology infrastructure.

$\beta_0$  = Constant

$\beta_1$ ,  $\beta_2$  and  $\beta_3$  are coefficients

$\varepsilon$  is the error term

### **3.5.2 Test of Significance**

In order to test the significance of the model in measuring the effects of mobile money transfer on cost effectiveness of International NGO's, this study conducted an analysis of variance (ANOVA). On extractive the ANOVA statistics, the researcher looked at the F significance value. This study was tested at 95% level of confidence and 5% level of significance.

## **CHAPTER FOUR**

### **DATA ANALYSIS AND PRESENTATION**

#### **4.1 Introduction**

The objective of the study was to examine the effects of mobile money transfer on cost effectiveness of International NGO's in Kenya. The findings of the analysis of the effects of mobile money transfer on cost effectiveness of International NGO's in Kenya are presented in this chapter.

#### **4.2 Response Rate**

The study was directed on a sample of 106 participants. The insights investigation was utilized to demonstrate the connections between factors. Out of the 106, 90 questionnaires were appropriately filled and this speaks to a reaction rate of 84.9%. This reaction rate is viewed as attractive to make conclusions for the study. As per Mugenda and Mugenda (2003), a half reaction rate is satisfactory, 60% great or more 70% appraised extremely well. This likewise works together Bailey (2000) affirmation that a reaction rate of half is satisfactory, while a reaction rate more noteworthy than 70% is great. Based on this assertion, the response rate of 84.9% is very good. The results are shown in Table 4.2.



**Table 4.2: Response Rate**

	<b>Frequency</b>	<b>Percent</b>
Questionnaires filled and returned	90	84.9%
Questionnaires unreturned	16	15.1%
<b>Questionnaires administered</b>	<b>106</b>	<b>100%</b>

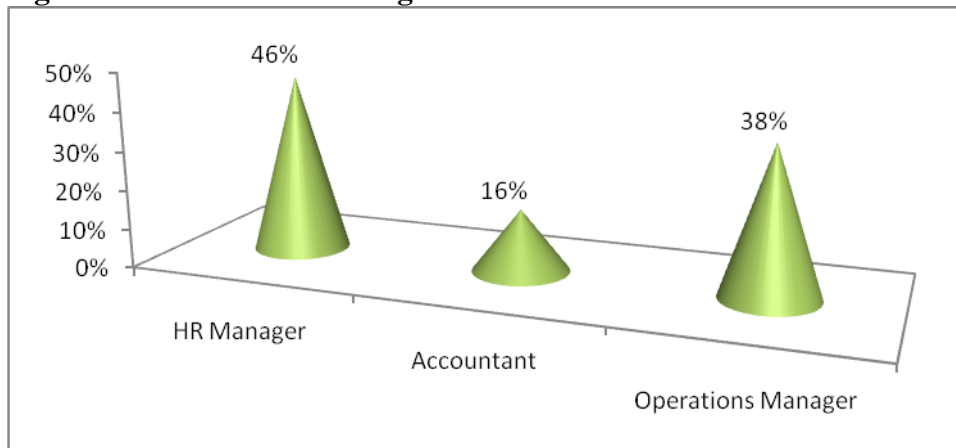
### 4.3 Demographic information

The study looked to discover the foundation data of the respondents required in the study. The foundation data focuses at the respondents' appropriateness in noting the inquiries

#### 4.3.1 Position in the organization

Respondents were kindly requested to indicate the position they held in their current international NGO's. The findings are illustrated in the Figure 4.2 below.

**Figure 4.2: Position in the organization**

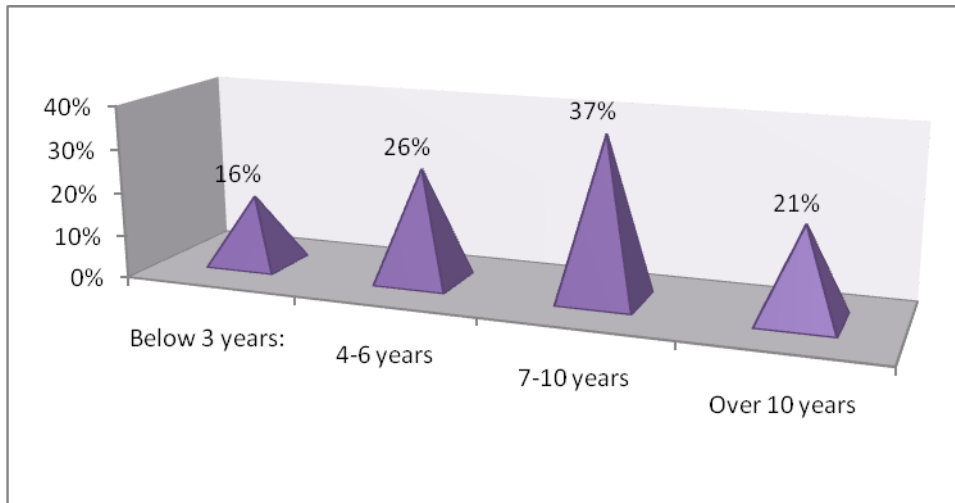


Based on the findings, it can be established that most of the respondents (46%) were HR managers, 38% were operations managers, while 16% were accountants. This implies that most of the respondents were HR managers.

### 4.3.2 Working in the organization

The study requested respondents to indicate the period of time they had worked with the international NGO's (in years). The findings are illustrated in the Figure 4.3 below.

**Figure 4.3: Working in the organization**

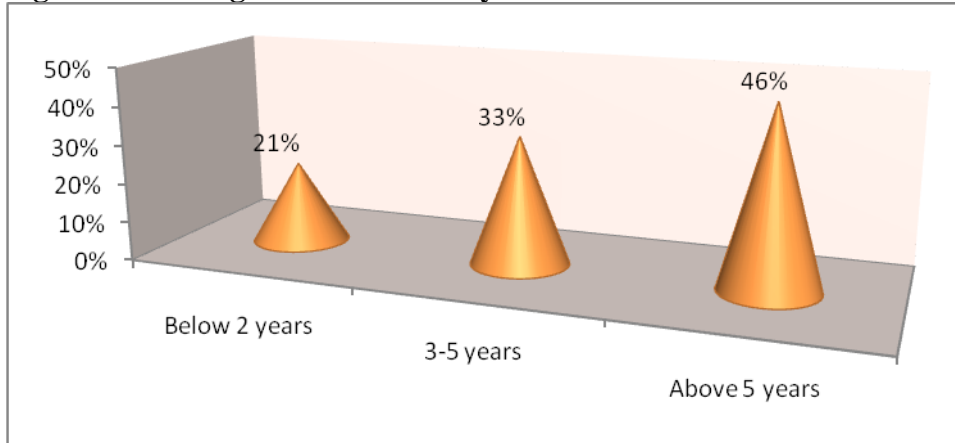


From the findings, it can be established that most of the respondents (37%) have worked with the international NGO's for a period of 7-10 years, 26% have worked for 4-6 years, 21% indicated over 10 years while 16% were aged below 3 years. This implies that most of the employees in the international NGO's have worked with the international NGO's for a period of 7-10 years and thus could be familiar with the dynamics in their area

### 4.3.3 Usage of Mobile money transfer

The study sought to establish the length of the period in which international NGO's have been using the services of mobile money transfer. The findings are as presented in the Figure 4.4 below.

**Figure 4.14: Usage of Mobile money transfer**



Based on the findings, it can be established that most of the respondents (46%) indicated that their firm have been using mobile money transfer services for a period of above 5 years, 33% indicated for a period of 3-5 years while 21% indicated a period of below 2 years. This implies that most of the international NGO's have been using mobile money transfer services for a period of above 5 years and thus higher chances of giving reliable information with regards to the effects of mobile money transfer on cost effectiveness of International NGO's in Kenya

#### **4.4 Mobile Money System Reliability**

##### **4.4.1 Mobile money system reliability in disbursing funds to beneficiaries**

Respondents were requested to indicate their level of agreement with certain statements with regard to mobile money system reliability in disbursing funds to beneficiaries or customers in International NGO's. Their responses were rated on a five point Likert scale where: 1= strongly disagree, 2= disagree, 3- Neither agree nor disagree, 4=Agree and 5=strongly agree. SPSS was used for generation of standard deviation and mean as illustrated on Table 4.3 below. A mean range of 1-3 would mean little influence while 3-5 would mean great influence.

**Table 4.3: Mobile money system reliability in disbursing funds to beneficiaries**

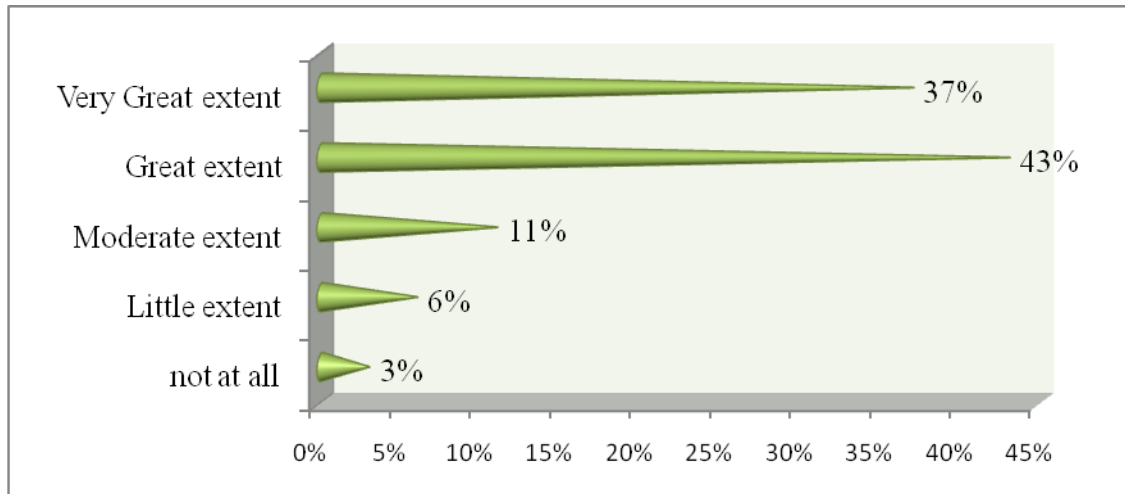
<b>Statement</b>	<b>Mean</b>	<b>Std.Dev.</b>
Mobile money is highly compatible with other operating systems used in the organization	4.2857	.83141
Mobile money system has minimal downtime	4.1270	1.19801
Mobile money system allows staff to share financial information	3.9365	.94822
Mobile money system has rights system limitations for staff depending on their job descriptions	3.3810	.65816

Based on the study findings, respondents strongly agreed that mobile money is highly compatible with other operating systems used in the organization (mean=4.2857), mobile money system has minimal downtime (mean=4.1270), and that mobile money system allows staff to share financial information (mean=3.9365). Further, respondents agreed that mobile money system has rights system limitations for staff depending on their job descriptions (mean=3.3810). This indicates that mobile money is highly compatible with other operating systems used in the organization, mobile money system has minimal downtime, and that mobile money system allows staff to share financial information.

#### 4.4.2 Money system reliability and cost effectiveness

The study sought to examine the extent to which mobile money system reliability affect the cost effectiveness of the international NGO's. The study findings are as shown in Figure 4.5 below

**Figure 4.5: Money system reliability and cost effectiveness**



From the study findings, majority of the respondents (43%) were on the opinion that mobile money system reliability affect the cost effectiveness of the international NGO's to a great extent, 37% indicated to a very Great extent, 11% indicated to a moderate extent, 6% indicated to a little extent, while only 3% of the respondents were on the view that mobile money system reliability does not affect the cost effectiveness of the international NGO's. This implies that mobile money system reliability affects the cost effectiveness of the international NGO's largely

#### 4.5 Mobile Money Infrastructure

##### 4.5.1 Mobile money infrastructure in support of operations

The study sought to determine respondent's level of agreement with several statements on Mobile money infrastructure in support of operations in your organization. Their responses were rated on a five point Likert scale where: 1=

strongly disagree, 2= disagree, 3- Neither agree nor disagree, 4=Agree and 5=strongly agree. SPSS was used for generation of standard deviation and mean as illustrated on Table 4.4 below.

**Table 4.4: Mobile money infrastructure in support of operations**

	Mean	Std.Dev
The organization has enough hardware to support mobile money technology	4.381	0.77102
The mobile technology hardware is well maintained	4.254	0.76133
The mobile money technology uses latest state of the technology	3.746	1.19094

According to the study findings, respondents strongly agreed that the organization has enough hardware to support mobile money technology (mean=4.381), and that the mobile technology hardware is well maintained (mean=4.254). Further, respondents agreed that the mobile money technology uses latest state of the technology (mean=3.746). This implies that international NGO's has enough hardware to support mobile money technology and that the mobile technology hardware is well maintained

#### **4.5.2 Influence of mobile money infrastructure on cost effectiveness**

Respondents were kindly requested to indicate the extent to which mobile money infrastructure affect cost effectiveness of their organization. Study findings are as presented in Table 4.5 below

**Table 4.5: Influence of mobile money infrastructure on cost effectiveness**

	<b>Frequency</b>	<b>Percent</b>
Very Great extent	18	21%
Great extent	46	51%
To moderate extent	10	10%
Little extent	10	12%
No extent	6	6%
<b>Total</b>	<b>90</b>	<b>100%</b>

According to the findings, majority of the respondents (51%) indicated that mobile money infrastructure affect cost effectiveness of international NGO's to a great extent, 21% indicated to a very Great extent, 12% to a little extent, 10% indicated to a to moderate extent, while only 6% indicated mobile money infrastructure affect cost effectiveness of international NGO's. This implies that mobile money infrastructure affect cost effectiveness of international NGO's largely.

## **4.6 Staff Competency**

### **4.6.1 Effects of staff competency on Mobile money transfer technology**

It was the interest of the researcher to determine the extent to which respondents agreed to several statements on effects of staff competency on Mobile money transfer technology in use in their organization. Their responses were rated on a five point

Likert scale where: 1= strongly disagree, 2= disagree, 3- Neither agree or disagree, 4=Agree and 5=strongly agree

**Table 4.6: Effects of staff competency on Mobile money transfer technology**

Statement	Mean	Std.Dev.
The relevant organization staff are conversant on how the mobile money system works in the organization	4.236	0.0253
The staff understands different modules under the mobile money technology system	4.013	0.4521
Staff are computer literate	3.946	0.2569
Staffs are been given relevant mobile money training from time to time	3.861	0.2364

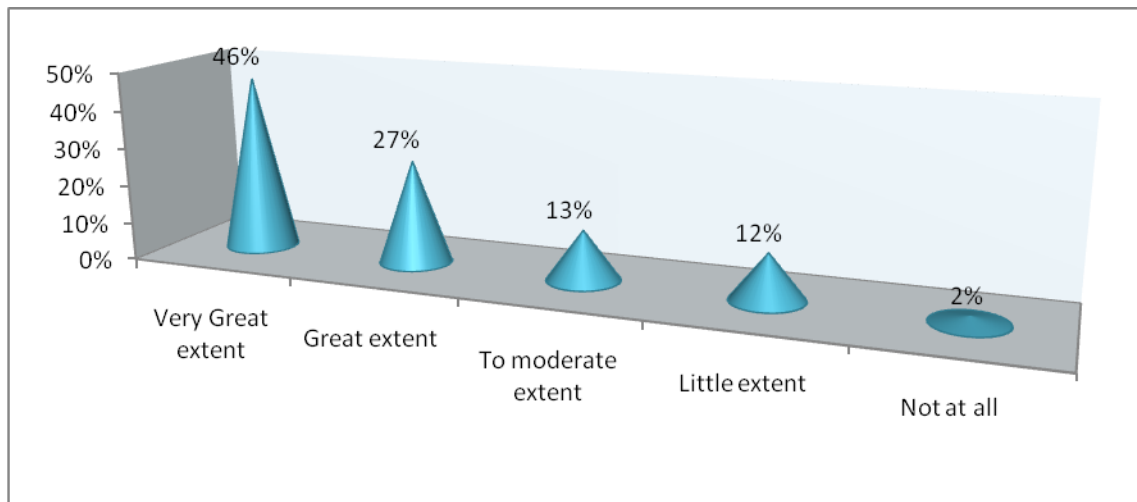
Based on the study findings, respondents strongly agreed that the relevant organization staffs are conversant on how the mobile money system works in the organization (mean=4.236), the staff understands different modules under the mobile money technology system (mean=4.013), and that staffs are computer literate (mean=3.946). In addition, respondents agreed that staffs are been given relevant mobile money training from time to time (mean=3.861). This portrays that the relevant organization staffs are conversant on how the mobile money system works in the international NGO's, the staff understands different modules under the mobile money technology system, and that staffs are computer literate international NGO's.



#### 4.6.2 Staff competency and cost effectiveness

The study also was interested in establishing the extent to which staff competency affecting cost effectiveness in international NGO's. Study findings are as presented in Figure 4.6

**Figure 4.6: Staff competency and cost effectiveness**



According to the findings, majority of the respondents (46%) indicated that staff competency affecting cost effectiveness in international NGO's to a very great extent, 27 % indicated to a great extent, 13% indicated to a to moderate extent, 12% to a little extent, while only 2% indicated that staff competency do not affect cost effectiveness in international NGO's. This implies that staff competency affecting cost effectiveness in international NGO's largely

#### 4.7 Cost Effectiveness

The study sought to determine respondent's level of agreement with several statements on cost effectiveness in International NGO's following the adoption of mobile money transfer technology. Their responses were rated on a five point Likert scale where: 1= strongly disagree, 2= disagree, 3- Neither agree nor disagree,

4=Agree and 5=strongly agree. SPSS was used for generation of standard deviation and mean as illustrated on Table 4.7 below.

**Table 4.7: Cost Effectiveness**

<b>Statement</b>	<b>Mean</b>	<b>Std.Dev.</b>
Use of mobile money transfer has improved timeliness in payments	4.3264	0.8652
Use of mobile money transfer has reduced paperwork involved in disbursing funds	4.0123	0.2341
Use of mobile money transfer has reduced time taken to carry out certain activities	4.2314	0.3245

According to the findings, respondents strongly agreed that use of mobile money transfer has improved timeliness in payments (mean=4.3264), use of mobile money transfer has reduced time taken to carry out certain activities (mean=4.2314), and that use of mobile money transfer has reduced paperwork involved in disbursing funds (mean=4.0123). This implies that use of mobile money transfer has improved timeliness in payments among the international NGO's, use of mobile money transfer has reduced time taken to carry out certain activities among the international NGO's, and that use of mobile money transfer has reduced paperwork involved in disbursing funds among the international NGO's.

#### **4.8 Regression Analysis**

In determining the relationship between the study variables, the researcher conducted a regression analysis whose results were as follows:

### 4.8.1 Model Summary

Coefficient of determination (R square) discloses the degree to which change in the reliant variable can be clarified by the adjustment in the free factors or the rate of variety in the needy variable that is clarified by the autonomous factors. From the study findings, the three independent variables studied (that is, mobile money system reliability, staff competence and mobile technology infrastructure), explain 77.79% of variation in reduction in cost in international NGO's in Kenya as represented by the  $R^2$ . This means that other factors not studied in this research contribute 22.21% of variance in the dependent variable.

**Table 4.8 Model summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig.
1	.882 <sup>a</sup>	.7779	.756	0.0221	.0031

a. Predictors: (Constant), mobile money system reliability, staff competence and mobile technology infrastructure

b. Dependent Variable: reduction in cost in international NGO's in Kenya

### 4.8.2 Analysis of Variance (ANOVA)

Analysis of Variance (ANOVA) consists of calculations that provide information about levels of variability within a regression model and form a basis for tests of significance. From the study findings in Table 4.9 below, the significance value is 0.012, which is less than 0.05, thus the model is statistically significant in predicting how mobile money system reliability, staff competence and mobile technology

infrastructure influence the reduction in cost in international NGO's in Kenya. The F statistic was significant (as was =7.32) and this showed that the model had a good fit.

**Table 4.9 ANOVA (Analysis of Variance)**

		Sum of				
Model		Squares	df	Mean Square	F	Sig.
1	Regression	12.768	4	3.192	7.32	.012 <sup>a</sup>
	Residual	17.876	41	.436		
	Total	30.644	45			

a. Predictors: (Constant), mobile money system reliability, staff competence and mobile technology infrastructure

b. Dependent Variable: reduction in cost in international NGO's in Kenya

### 4.8.3 Coefficient of Correlation

**Table 4.10: Coefficient of Correlation**

	Unstandardized		Standardized		
	Coefficients		Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	6.182	.826		0.635	.0000
mobile money system reliability	0.764	1.25	0.61	0.648	.0068
staff competence	0.810	.938	0.86	0.613	.0014
mobile technology infrastructure	0.661	1.56	0.42	0.615	.0261

The study findings showed that there is a significant positive relationship between mobile money system reliability and reduction in cost in international NGO's in Kenya ( $\beta=0.764$  and  $P$  value  $< 0.05$ ). Therefore, a unit increase in mobile money system reliability leads to an increase in reduction in cost in international NGO's in Kenya by 0.764. Results of the study showed that there is a significant positive relationship between staff competence and reduction in cost in international NGO's in Kenya ( $\beta=0.810$  and  $P$  value  $< 0.05$ ). Therefore, a unit increase in staff competence would lead to an increase in reduction in cost in international NGO's in Kenya by 0.810. Results of the study showed that there is a significant positive relationship between use of mobile technology infrastructure and reduction in cost in international NGO's in Kenya ( $\beta=0.661$  and  $P$  value  $< 0.05$ ). Therefore, a unit increase in use of mobile technology infrastructure would lead to reduction in cost in international NGO's in Kenya by 0.661.

Hence based on the above regression results, the study's regression model became;

$$Y = 6.182 + 0.764X_1 + 0.810X_2 + 0.661X_3 + \varepsilon$$

#### **4.9 Summary and Interpretation of Findings**

The study findings showed that there is a significant positive relationship between mobile money system reliability and reduction in cost in international NGO's in Kenya ( $\beta=0.764$  and  $P$  value  $< 0.05$ ). Results of the study showed that there is a significant positive relationship between staff competence and reduction in cost in international NGO's in Kenya ( $\beta=0.810$  and  $P$  value  $< 0.05$ ). Results of the study showed that there is a significant positive relationship between use of mobile technology infrastructure and reduction in cost in international NGO's in Kenya ( $\beta=0.661$  and  $P$  value  $< 0.05$ ). The findings are related to those of Mbiti and Weil

(2011) who found that Mpesa improved individual outcomes by promoting banking and increasing transfers hence promoting financial deepening. Also, Morawczynski and Pickens (2009) found that money transfer services were serving as a partial substitute for the formal banking system and promoted financial deepening. The findings are agree with those of Johnson (2012) who found that mobile money transfer had allowed relationships of exchange between equals to occur much more cheaply and efficiently, even extending the potential for social connections and negotiability to be developed through such means so offering new routes to financial access. More recently, the findings concur with those of Omwansa and Waema (2014) who found that mobile money services as a channel provided the reliability, convenience and flexibility needed by the poor and positively contributed to financial deepening.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents the summary of research findings, conclusions described in detail in the previous chapter. It further describes the limitations of the study, recommendations for policy and practice, and makes suggestions for further research.

#### **5.2 Summary**

The study established that mobile money is highly compatible with other operating systems used in the organization, mobile money system has minimal downtime, and that mobile money system allows staff to share financial information. In addition, the study revealed mobile money system reliability affect the cost effectiveness of the international NGO's largely and that international NGO's has enough hardware to support mobile money technology and that the mobile technology hardware is well maintained

Additionally, the study findings revealed that mobile money infrastructure affect cost effectiveness of international NGO's to a great extent. It was also clear from the study that the relevant organization staffs are conversant on how the mobile money system works in the international NGO's, the staff understands different modules under the mobile money technology system, and that staffs are computer literate international NGO's.

Further, the study revealed that staff competency affecting cost effectiveness in international NGO's largely. Moreover, it was established that use of mobile money

transfer has improved timeliness in payments among the international NGO's, use of mobile money transfer has reduced time taken to carry out certain activities among the international NGO's, and that use of mobile money transfer has reduced paperwork involved in disbursing funds among the international NGO's.

### **5.3 Conclusion**

The study concludes that mobile money transfers is highly compatible with other operating systems used in the INGO's, mobile money system has minimal downtime, and that mobile money system allows staff to share financial information. In addition, the study concludes mobile money system reliability affect the cost effectiveness of the international NGO's to a great extent and that international NGO's has enough hardware to support mobile money technology and that the mobile technology hardware is well maintained

Additionally, the study concludes that mobile money infrastructure affect cost effectiveness of international NGO's to a great extent. It was also clear from the study that the relevant organization staffs are conversant on how the mobile money system works in the international NGO's, the staff understands different modules under the mobile money technology system, and that staffs are computer literate international NGO's.

Further, the study concludes that staff competency affecting cost effectiveness in international NGO's to a very great extent. Moreover, the study concludes that use of mobile money transfer has improved timeliness in payments among the international NGO's, use of mobile money transfer has reduced time taken to carry out certain activities among the international NGO's, and that use of mobile money transfer has reduced paperwork involved in disbursing funds among the international NGO's.



#### **5.4 Recommendations for policy and practice**

From the study findings, the role of mobile money transfer services on cost effectiveness in international NGO's in Kenya cannot be under rated. Therefore the number of recommendations can be made for policy formulations. First, financial access is very vital for survival of international NGOs which can be enhanced by further development of mobile money transfer services. Therefore, policies aimed at promoting performance and growth of mobile money services should be formulated. Regulations should be in such a way that innovations on mobile money services are encouraged.

To promote further growth of mobile money the study recommends that the communication authority of Kenya to come up with polices to open mobile money services to competitors. This will promote development of more innovative products by the mobile operators and international NGOs and hence further promote reduction of costs in international NGO's.

A strong collaboration between the international NGO networks and the mobile money service providers will need to be mooted and encouraged as this will go a long way in setting the basis for the learning and information sharing platform which will ultimately lead to increased uptake of MMS and therefore increase business benefits to providers.

#### **5.5 Limitations of the Study**

The study used the survey questionnaire as the data collection instrument. This was the only survey approach and no attempt has been made to triangulate the data collected for example by use of other collection approaches like observation data.

Unfortunately, this was found to be beyond the scope of this particular study as it possessed neither the time nor resources to conduct multiple data collection approaches. Future studies with additional resources could attempt the cross-verification by use of multiple sources and further extend the study.

Some of the sampled international NGO,s were reluctant on sharing their mobile money transfer status from the perspective of security and the researcher had to engage the senior most finance personnel to unlock this fear and eventually responses were received.

Some of the sampled international NGO,s were reluctant to share their information on fear of their competitors undertaking business intelligence on them and the researcher had to work around this fear before they could respond.

Receiving responses took slightly longer time than expected due to some challenges with respondents not being able to understand some terms in the study instrument. The researcher had to follow-up with telephone calls so as to explain areas or terms that needed clarity.

## **5.6 Area for Further Research**

The study confined itself to international NGOs in Kenya and therefore this research should be replicated in other international NGOs as well as non- NGOs operating in the country and the results be compared so as to establish whether there is consistency on the effects of mobile money transfer on cost effectiveness.

Similarly further research should to be done to establish the challenges, which affect international NGO's in using and management of mobile money transfer.

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## Appendix i: Letter of Introduction



UNIVERSITY OF NAIROBI  
SCHOOL OF BUSINESS  
MSC. FINANCE PROGRAMME

Telephone: 020-2059162  
Telegrams: "Varsity", Nairobi  
Telex: 22095 Varsity

P.O. Box 30197  
Nairobi, Kenya

Date 6/10/2016

### TO WHOM IT MAY CONCERN

The bearer of this letter MUCHIRI DUNCAN WACHIRA  
Registration No. 1023/FS/1251/2015  
is a bona fide student in the Master of Science in Finance (MSc. Finance) degree program in this University.

He/She is required to submit as part of his/her coursework assessment a research project on Financial problems. We would like the student to do their projects on real problems affecting firms in Kenya. Your organization has been identified for the study and we would, therefore appreciate your assistance to enable him/her collect data in your reputable organization.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organization on request.

JANE MUTURI  
MSC. FINANCE ADMINISTRATOR  
SCHOOL OF BUSINESS



## **Appendix ii: Questionnaire**

### **Questionnaires for Respondents**

Dear respondents,

I am a student of the University of Nairobi conducting a research study as part of the requirements for the fulfillment of the award of a Master of Science in Finance Degree.

I kindly request for your opinion about the issues indicated in this questionnaire to facilitate the study about the effects of the mobile money transfer on cost effectiveness of International NGO's in Kenya. Your opinion will be highly confidential and will be used for academic purposes only.

#### **INSTRUCTIONS**

Please tick the option of your choice in the spaces provided if needed.

#### **SECTION A: GENERAL INFORMATION**

1. Name of the International NGO: .....
  
2. Your position on the organization: .....  
Name: .....  
Email: .....  
Telephone no: .....
  
3. How many years have your working in this organization: .....

Below 3 years: ..... 4-6 years: .....

7-10 years: ..... Over 10 years

4. For how many years have you been using Mobile money transfer services? : .....

**SECTION B: MOBILE MONEY SYSTEM RELIABILITY.**

5. Below are several statements on Mobile money system reliability in disbursing funds to beneficiaries or customers in International NGO, s. Please indicate the extent of your agreement with each statement in regard to your organization. Use a scale of 1-5 where 1= Strongly disagree , 2= disagree , 3- Neither agree or disagree, 4=Agree and 5=Strongly agree

Statement	1	2	3	4	5
Mobile money is highly compatible with other operating systems used in the organization					
Mobile money system has minimal downtime					
Mobile money system allows staff to share financial information					
Mobile money system has rights system limitations for staff depending on their job descriptions					

6. To what extent does mobile money system reliability affect the cost effectiveness of your organization?



Very great extent	
Great extent	
Moderate extent	
Little extent	
No extent	

**SECTION C: MOBILE MONEY INFRASTRUCTURE.**

7. Below are several statements on Mobile money infrastructure in support of operations in your organization. Please indicate the extent of your agreement with each statement in regard to your organization. Use a scale of 1-5 where 1= Strongly disagree , 2= disagree , 3- Neither agree or disagree, 4=Agree and 5=Strongly agree

Statement	1	2	3	4	5
The organization has enough hardware to support mobile money technology					
The mobile technology hardware is well maintained					
The mobile money technology uses latest state of the technology					

8. To what extent has mobile money infrastructure affected cost effectiveness of your organization?

Very great extent	
Great extent	
Moderate extent	
Little extent	
No extent	

**SECTION D: STAFF COMPETENCY.**

9. Below are several statements on effects of staff competency on Mobile money transfer technology in use in your organization. Please indicate the extent of your agreement with each statement in regard to your organization. Use a scale of 1-5 where 1= Strongly disagree , 2= disagree , 3- Neither agree or disagree, 4=Agree and 5=Strongly agree

Statement	1	2	3	4	5
The relevant organization staff are conversant on how the mobile money system works in the organization					
The staff understands different modules under the mobile money technology system					

Staff are computer literate					
Staffs are been given relevant mobile money training from time to time					

10. To what extent has staff competency affecting cost effectiveness in your organization?

Very great extent	
Great extent	
Moderate extent	
Little extent	
No extent	

**SECTION E: COST EFFECTIVENESS.**

11. Below are several statements on cost effectiveness in International NGO's following the adoption of mobile money transfer technology. Please indicate the extent of your agreement with each statement in regard to your organization. Use a scale of 1-5 where 1= Strongly disagree , 2= disagree , 3- Neither agree or disagree, 4=Agree and 5=Strongly agree

Statement	1	2	3	4	5
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Use of mobile money transfer has improved timeliness in payments					
Use of mobile money transfer has reduced paperwork involved in disbursing funds					
Use of mobile money transfer has reduced time taken to carry out certain activities					

Thank you for sparing your precious time to answer these questions