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Influence of Branchless Banking Services on Saving Practices in Informal Settlements of Kenya: A Case Study of Kibera

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Abstract: ***Banking in several developing countries has transcended from a traditional brick-and mortar model of customers queuing for services in the banks to modern day banking where banks can be reached at any point for their services. This can be attributed to the tremendous growth in mobile penetration in many countries across the globe including developing countries. This study investigates the effect of branchless banking services on the saving practices in informal settlement of Kenya. The study is motivated by the social economic trend in Kenya's population which has been varying consistently depending on the employment rate and the income levels. The study concentrates on the following independent variables i.e. trust and security, transaction costs, perceived convenience and Financial Literacy and how they have influenced the saving practices in informal settlements of Kenya. The analysis is built on a regression model where the relation between savings and a set of fundamental independent variables are investigated to examine the relationship between these two aspects. Primary data was collected using semi- structured questionnaires whereas Secondary data was obtained from written sources such as published and unpublished materials, reports, scholarly journals and periodicals, working papers, and records. A pilot study was done on the area of study in order to measure the validity and reliability of the data collection instrument. The study uses SPSS to model the relationship between the various selected variables and test their explanatory power on changes in savings practices. The study revealed that trust and security is an important element to low income earners and that they would only engage in services or even purchase of products that were most secure and those that possessed low level of risks. Expensive services also have been identified by this study as another factor that would greatly determine whether the subjects of this study would undertake the aforementioned mobile banking platforms or not. The study also established that convenience and financial literacy were not significant variables in determining whether informal settlement dwellers would prefer to use mobile banking services or not. Low effort expectancy can be said to be a benefit factor in the adoption of new technology and thus an important factor in explaining the usage of mobile banking.***

Keywords: Self-efficacy, Risk, Relative advantage, Branchless banking, Informal settlement, Savings

1. Introduction

Financial sector has over the past few decades shown great growth in volume and intricacy (Banerjee and Duflo, 2011). They argue that, regardless of the banking industries creating significant improvements in areas concerning financial feasibility, competitiveness and profitability, concerns have been raised that most banks do not incorporate vast segment of the population, particularly the informal settlement dwellers and the underprivileged parts of the society, within the basic banking services (Banerjee &Duflo, 2011).Additionally, most banks have in the past shun the informal settlement dwellers due to their unstable ways of living, irregular flow of income and lack of ways of achieving financial disciplines. This according to Nandhi (2010) has led to informal saving mechanisms by the informal settlement dwellers which include storing money at their places of residence or with their friends. It is as a result of this that the banking industries in most developing countries have recently come up with ways of promoting sustainable development through financial inclusion by introducing retail points which operate as cash merchants commonly referred to as branchless banking (Ruthven, 2002).

Branchless banking is therefore defined as a postal or a retail outlet that is contracted by financial institutions or even mobile network operators so as to deal with client transactions (Ruthven, 2002). It can as well according to Kumar et al. (2006), be defined as the provision of monetary services to clients through a third party (agent) on behalf of a licensed financial organization or a mobile money operator. Ruthven (2002) in her study adds that, in agent banking as opposed to a branch teller, it is the proprietor or the employee of the outlet who performs the transaction's and allows the customers to deposit, transfer funds, withdraw, pay bills or obtain government benefits and inquire on their account balances. She as well states that, banking agencies can be post offices, pharmacies, lottery outlets, supermarkets and many others depending on the country's financial laws and regulations. For instance, in India, mobile network operators and post offices act as agents while in Kenya, any for-profit organization like a grocery store or any local retailer can act as an agent (Ruthven, 2002).

Branchless banking comes with its share of benefits especially to the people living in informal settlements. According to a report by World Bank (2014), provision of accessibility of saving accounts or rather easy informal saving technologies to individuals more so to the informal settlement dwellers increases savings for education purposes, productive investment, and the tendency to consume. As well, for small businesses that encounter great constraints, financial services like micro credit are linked to innovation and job creation (World Bank, Global Financial

Development Report, 2014). However, the benefits of branchless banking go further beyond simple growth influence and promote additional sustainable and inclusive growth. For instance, the report by World Bank (2014) further states that branchless banking has made it possible for convenient systems to reach informal settlement dwellers and low population density countries like Tanzania and Kenya that are usually high transaction cost regions for most banks, making the businesses feasible and reducing the operational costs which are passed onto their clients as lower interest margins and greater pension and allowance payments.

Branchless banking however does not lack its challenges, according to Clara (2010) most branchless banking facilities within informal settlements face issues like lack of mobile network services and float, insecurity issues and fear of armed robbery, and inadequate capital. As well, since banks are unable to fully rely on agents for cross-selling their financial products, they may be required to incur extra costs in marketing and organizing sales forces, inclusive of their branch employees to do the cross-selling of their extra financial products to the agent clients so as to increase the general customer profitability (Clara, 2010)

In Kenya, branchless banking has developed widely with majority of non-bank based models that have been launched by Mobile Network Operators (MNOs). According to a report by Safaricom (2011), the M-pesa has enabled many informal settlement dwellers who were unbanked before to easily access money, transfer funds, withdraw money and pay bills by use of their cell phones. This is evident with statistics showing a decrease from 38.3% to 32.7% of the individuals excluded from financial services, which suggest great gains in financial inclusion due to M-pesa launch(Michelle, 2014). Consequently, the success of M-pesa has brought about a partnership between Equity bank and Safaricom to develop a bank-based model known as M-KESHO through which individuals from remote regions where accessibility of banking facilitates is difficult, can make direct transactions as well as withdrawals as long as they have bank accounts(Jack & Billy, 2012).

Focusing on the case in question, in the past the people living within Kenyan informal settlements and in particular Kibera informal settlements experienced challenges when trying to access financial services(EFInA, 2011). This was due to unavailability of banks within the informal settlements and thus the informal settlement dwellers were forced to travel long distances in search of the financial services. The engagement of branchless banking within Kibera informal settlements has helped solve these problems and currently the residents can access the financial services whenever and can save as little as they can(EFInA, 2011). Presently, within Kibera, branchless banking outlets like M-kesho which enables transfer of cash to and from via use of a mobile device and ownership of Equity Bank account exists. According to Kitaka (2011) in his study, the M-kesho agent model has extra benefits like receiving confirmation text messages after a deposit or withdrawal is made. Other agent banking models available within kibera informal settlements are M-pesa from Safaricom, Equity Mashinani, Co-op kwajirani, pesa pap from Family bank, KCB mtaani and BenkiYangu from Post bank(Kitaka, 2011).

2. Statement of the Problem

In the past, access to banks was challenging for most informal settlement dwellers and people residing within rural areas since the banking sector only targeted the working class and the middle class persons (Kitaka, 2011). This went on until when the Equity Bank was formed which mainly targeted the low income and middle class persons by offering free opening of accounts and low maintenance charges. From this, many other financial institutions adopted the same approach and have come up with the branchless banking models such as M-pesa from Safaricom, Equity Mashinani, Co-op Kwa jirani, and pesa pap from Family bank, KCB mtaani and BenkiYangu from Post bank among others (Kitaka, 2011).

According to Yobes et al. (2012), branchless banking has indeed helped in tapping the low income clients especially those residing within informal settlement regions by making banking more convenient in terms of transport cost reduction and saving costs since they can save the little they have. In addition, branchless banking has been presumed to influence the saving practices of the informal settlement dwellers as they can confidently inquire on their bank balances as low as they are and even withdraw small amounts of money (Yobes et al, 2012). According to a study conducted by Nandhi (2010) on the effects of branchless banking on saving practices of low income users in India, he found out that 61% of the bank based model EKO users initially had a bank account while 6% had never used a bank account before due to various reasons among them inability to save due to their low income. As well, to investigate on their saving practices before opening of the EKO mobile banking accounts, he found out that 54% of the respondents were saving with formal institutions while 81% were employing informal saving methods like hoarding at home and contributing to committees.

Further, with all these associated benefits of branchless banking, some studies show little quantitative evidence on whether these benefits have been properly appreciated by the target beneficiaries in Kenya among them being SMEs and informal settlement dwellers hence a gap. It is for such reasons that this study focuses on establishing the influence of branchless banking on the saving practices among Kibera informal settlement dwellers with a view to establish whether branchless banking has any effect on their saving practices. And as well identify the branchless banking services available in Kibera and establish the challenges faced in saving through branchless banking.

General Objective

The general objective of this study was to determine the influence of branchless banking on saving practices in informal settlements of Kenya.

Specific Objectives

The study was guided by the following specific objectives:

i) To determine the influence of trust and security of branchless banking on saving practices in informal settlement of Kenya
ii) To establish how transaction costs of branchless banking influences saving practices in informal settlements of Kenya
iii) To examine the influence of perceived convenience of branchless banking on the saving practices in informal settlements of Kenya.
iv) To determine the impact of financial literacy on the saving practices in informal settlements of Kenya

3. Literature Review

The study incorporated the following theories related to branchless banking:

Agency Theory (AT)

According to Mitnick (2011), agency theory explains the link or the relationship between principals and their agents within a business or an organization. In this, the principal assigns responsibilities to the agent and the agent does the work allocated by the principal. In other words, agency theory analyzes the relationship between the organization's owners and its managers, who, under the law, act as agents for the organization owners (Mitnick, 2011). However, the main issues in agency theory hub on whether sufficient market systems exist that induce managers to act in manners that maximize the utility of an organization's owner, whereby ownership and control are separate. Mitnick (2011) further explains the terms of agency theory in that, the principal (P) imparts authority to the agent (A) to perform transactions and decision making on their behalf in an effort to maximize the principal's utility preferences. But, there can be agency problems if; P and A bear differences in goals, P and A have different skills in assessing A's performance, P and A have disparate sets of information pertinent to the managerial decisions since A must always represent P, or P and A have disparate degrees of averting risks. Additionally, at the core of the agency problems is the idea that P's may be unable to monitor A's, either entirely or costless, as to the actions of the A's or the information behind the actions. Therefore, the branchless banking models allow usage of agents as proposed by this theory and the agency relationship advocated by the theory is that the financial institutions act as the principal and the agents operate on their behalf.

Technology Acceptance Model

According to a study by Mwangi (2011), since branchless banking models use technology in their operations, questions regarding the user friendliness of the adopted technologies by the agent models are bound to be asked and hence the need of employing the Technology Acceptance Model in this study. Having been developed by Davis in 1986, the Technology Acceptance Model forecasts acceptability of a device or technology and identifies the alterations which must be incorporated in the system so as to make it user acceptable (Mwangi, 2011). As well, this model proposes that the acceptability of an information system is dependent on these two factors: the perceived usefulness and the perceived ease of use. Perceived usefulness in this case is the degree to which one believes that the usage of a system will enhance their performance in terms of job effectiveness, productivity and time saving while perceived ease of use is the degree to which one believes that the usage of a system will be easy requiring no effort in terms of physical effort, mental effort and personal expectation experience of the system's ease of use. In relation to the concept of branchless banking, perceived usefulness comes into play in that the branchless banking models were meant to ease financial transactions by making it easier for clients to access the financial services at their expediency making banking more enjoyable since there is elimination of queuing which would improve financial service delivery as well as the saving practices among the informal settlement dwellers in Kenya. On the other hand, perceived ease of use in relation to branchless banking is shown by the fact that there is an electronic device directly connected to the bank and the client is guided by the agent in using the device (Mwangi, 2011).

4. Conceptual Framework

The conceptual framework illustrates the dependent and independent variables. The independent variables affect the saving practices while the dependent variable is the result of the independent variables.

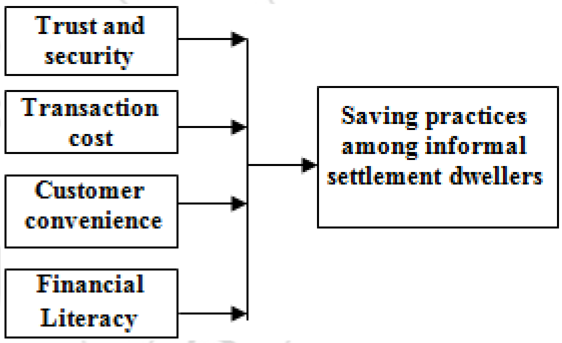

Figure 1: Conceptual framework

1) How Trust and security affect the Saving Practices among Informal settlement dwellers

Consumers think of the risks they undergo if they adopt the new banking through mobile services; especially due to the rising number of hackings and identity theft that has invaded the e-commerce sector. Many people feel like they have exposed themselves to the possible theft and perceived ease of misuse of their bank accounts in the event that hackers get access to their secret codes or from friends and relatives who are likely to access their mobile phones (Yeow, et.al, 2008).

The consumer may feel at risk and exposed to insecurity and uncertainty that makes him or her anxious about adopting mobile services such that they end up not enjoying the benefits derived from the mobile banking (Poon,2008). According to Featherman & Pavlou's (2003), definition of perceived risk in electronic service context is that, a bank customer's expectation of potential loss in the pursuit of a desired outcome of using mobile banking. Porteous (2006) asserts that mobile banking has the potential to be transformational owing to various facts. First, it uses existing mobile communications infrastructure that already reaches un-banked persons. Secondly, new players such as mobile phone industry may drive Operators, it with different target markets from traditional banks that are able to harness the power of new distribution networks for cash transactions.

These include mobile service providers, who extend the reach beyond the conventional tellers or ATM networks of banks. In addition, it may be Cheaper than conventional banking, if the offering is competitive enough. The differences between the schemes can also be described in terms of the broader system the characteristics which may be less transparent to consumers. The systems vary in terms of their technical platform; who manages the money float and settlement mechanisms; who manages the interaction with a customer and how; and whose brand is used to market the product. These broader characteristics fall into the following categories: open or closed systems, interoperability, identity of the deposit holder, tariff structures for consumers, regulatory compliance and mechanisms for deposit making, transfers and cash withdrawal (Porteous, 2006). According to Porteous (2006), Regulatory compliance means that there is a variety of ways to comply with both knows your customer (KYC) and anti-money laundering (AML) regulations. For example, AML tools are applied only when transactions exceed specific limits in terms of both frequency and amount. The migration from mobile customer to mobile bank customer offers significant potential to reduce the costly information asymmetries between customer and bank, as mobile operators of payments schemes hold useful information about customers" usage patterns. Tariff structures for consumers are customers charged account fees or fees per transaction.

Perceived risk as defined by (Pavlou, 2001), "It is the user's subjective expectation of suffering a loss in pursuit of a desired outcome". The quality of online services offered, the possible risk of illegal activities and fraud has always been a concern for both consumer and service providers (Ba and Pavlou, 2002). The risk factor as perceived by bank consumers in electronic transactions may comprise of financial risk, service performance risk, community risk, psychological risk, time risk, and physical risk (Forsythe and Shi, 2003). According to (Dineshwar and Steven, 2013), perceived risk and reliability were found to be the main obstacles to mobile banking usage in the African country of Mauritius. Risk in mobile banking is perceived to be higher than conventional banking because information exchange on wireless infrastructure, which produced inherent doubts among consumers as hacking and other malicious attacks, might cause financial and personal data loss (Yousafzai et al, 2003).

2) Effect of Transaction cost on the Saving Practices among Informal settlement dwellers

The reason perceived cost is included in the framework is because it plays an important role for informal settlement dwellers in determining adoption branchless banking. The costs of the service are considered as one of the most imperative factors in the decision making process. This is because it determines the customer's ability to use the service depending on availability of the specified amount and their set budget. Perceived cost is the perceived quantifiable costs of acquisition and use of technology (Koenig-Lewis, Palmer, & Moll, 2010). Referring to Luarn& Lin's, (2005) definition, perceive financial cost is "the extent to which a person believes that using mobile Banking was cost money."

Mobile phones provide technological services that reduce costs; increase income and increases reach-ability and mobility. They can help to extend social and business networks and they clearly substitute for journeys and, for brokers, traders and other business intermediaries (Donner 2005, Hughes &Lonie 2007). Mobile banking systems are providing good money transfer and payment services to early users. However, there was need to be better marketing and training involved to help consumers understand what the systems are capable of, as well as, improved policy measures to ensure that the benefits of mobile banking are evenly distributed across all banking and consumer sectors.

Mobile banking has evened out the cost of accessing financial services enabling and enhancing the financial inclusion project where the goal is to ensure most of the people who are not included in the banking statistics as financial users of financial services. The introduction of branchless banking was a project aimed at reaching people who could not have otherwise been able to access normal banking services. Today people from all walks of life are able to access banking services at a more reduced cost. The cost of transferring funds from one party to another has reduced tremendously to as low as 1 shilling to not more than 330 shillings for any given amount.

The cost of withdrawing funds from ones bank account through the phone has also reduced allowing people to have access to funds from different points in location and at any given time including non-working hours. In the past the daily costs of living such as electricity bills, water bills and the process of purchasing goods and services has also been made easy with the option paying bills using handsets. For example, going to shopping malls one doesn't to carry liquid cash at hand for purposes of security. Transactions can now be made using cashless methods and procedures such as lipa na mpesa.

Mobile Financial Services (MFS) encompasses a broad range of financial activities that consumers engage in or access using their mobile phones. MFS can be divided into two distinct categories: mobile banking (m-banking) and mobile payments (m-payments) (Boyd & Jacob, 2007). Mobile banking is defined as "a channel whereby the customer interacts with a bank via a mobile device, such as a mobile phone or personal digital assistant (PDA)" (Barnes &Corbitt, 2003). Mobile banking can also be considered as the convergence of mobile technology and financial services (Chung &Kwon, 2009). M-banking is a subset of banking as it allows everyone easy access to their banking activities via mobile handsets. With the improvement of mobile technologies and devices, mobile banking has been considered as a salient system because of such attributes of mobile technologies as ubiquity, convenience and interactivity. Mobile payments on the other hand are defined as the use of a mobile device to conduct a payment transaction in which money or funds are transferred from a payer to a receiver via an intermediary, or directly without an intermediary. Mobile devices can be used in a variety of payment scenarios, such as payment for digital content (e.g., ring tones, news, music, or games), tickets, parking fees and transport fares, or to access electronic payment services to pay bills and invoices.

3) Effect of consumer convenience on saving practices among Informal settlement dwellers

According to Stuart (2005), the low income earners especially informal settlement dwellers typically employ a myriad of informal financial saving mechanisms to satisfy their diverse financial needs. He adds that, the prevailing perception that informal settlement dwellers do not save may stem from the low penetration of formal saving techniques, most commonly saving with financial institutions like banks. In addition, most informal settlement dwellers globally have been reported to adopt informal saving mechanisms due to their low income and the high transaction and transportation costs incurred to access formal financial services (Stuart, 2005).

The situation in Kenya was no better before the introduction of branchless banking. However, after introduction of branchless banking which is suitable for informal settlement savers and that satisfies their client preference, many people residing within informal settlement regions have been reported to increase their saving practices (Leonard, 2002). This is because low-income earners especially informal settlement dwellers tend to care most about accessibility and security, both which branchless banking is trying to incorporate. The accessibility in this case can be in terms of physical accessibility (proximity), financial accessibility (affordability) and liquidity (Leonard, 2002). Unlike formal services, branchless banking incorporates the aspects of security, proximity and affordability which indicate the high usage of branchless banking services for saving by informal settlement dwellers.

Additionally, branchless banking adoption has led to increased saving practices by the informal settlement dwellers compared to before when accessing formal financial institutions was costly. This is in line with Kitaka (2011), who argues that most low income earners and in particular the people residing in informal settlements avoid saving with financial institutions since the access and use of formal savings products involves a lot of monetary costs like all which they feel they cannot afford. Moreover, due to trust issues, there is a lot of under saving among informal settlement dwellers based on their subjective appraisal of the financial institution’s reliability. Additionally, Kitaka (2011) points out that due to the fact that regulatory barriers include requirements like “know your customer” rules, they hinder saving practices of the low income earners since they feel they do not fit into this regulation due to their low income.

Widespread research has provided support that perceived ease of use had a significant effect on usage intention; it is an important forecaster of technology adoption. This study seeks to revalidate such relationships in the perspective of mobile banking services offered. Perceived ease of use refers to the degree to which a person believes that using a particular system would be free of effort. A study performed on the factors influencing the intention to adopt mobile banking services in Kenya, perceived ease of use was one of the significant factors in usage intention.

4) How Financial Literacy Influences Saving practices among Informal settlement dwellers

Financial literacy is defined as sufficient knowledge of personal finance facts and terms for successful personal financial management (Garman &Forgue, 1997). Meanwhile, Anthes (2004) defines financial literacy as the ability to understand how money works in the world: how someone manages to earn or make it, how that person manages it and how they invest it (turn it into more). Many consumers use credit to help manage their personal finances. Credit can be a mortgage to buy a house, a loan to buy a car, a line of credit for larger purchases or a credit card to make everyday purchases more convenient. It's important to understand how different types of credit work, and how to use credit to build a strong personal credit history. Mobile banking credit policies are a bit lenient because they don’t require a lot of requirements when one has to access credit products. Financial literacy provides one with the necessary knowledge on credit requirements and policy structures that govern banking services. Branchless banking has provided a platform that simplifies traditional banking practices on matters related credit. Informal settlement dwellers only need to understand the basic criteria with regards to borrowing practices. This has been a positive influence on their saving practices and mobile banking practices in general.

Traditional banking requires that one must have some form of stable income in order to access loan facilities. This requirement has affected most customers from accessing credit from banks. Another requirement has been collateral policy that involves providing some form of security in order to access loan facilities. These two requirements greatly affect people of low income such as informal settlement dwellers of Kibera. Introduction of branchless banking came as a relief to people in low income brackets and people with unstable income example the juakali sector. Mobile banking doesn’t require stability of income nor does it require collateral in order for one to access loan and credit facilities. This is assumed to be one of the greatest influences towards saving practices by people who are not included in the financial spectra.

Branchless banking or mobile banking is more simplified and has provided more investment opportunities for people with low or unstable income. Today one can save with services such as M-shwari and get some interest income on their savings. There are also promotions that are from time to time run by various agencies with possibilities of winning various cash prices and other assets such as vehicles while saving with them. Despite the fact that chances of winning are based of major probabilities these opportunities have changed lives of informal settlement dwellers because they are encouraged to save more rather than consuming their small disposable income. Traditional modes of banking require one to have substantial amount of money in order to get some significant interest accruing but this has now changed with introduction of branchless banking in informal settlement areas.

5) Savings practices of Informal settlement dwellers

Studies of previous researchers have looked into various areas of mobile banking mostly M-Pesa mobile technology adoption, this study seeks to bridge this gap by researching the Factors influencing the use of Mobile Banking among informal settlement dwellers in Kibera.

The value of adoption and usage mobile banking service in this study mean the customers' overall perception of it benefits and sacrifices needed to use it. Zeithaml's (1988), definition of perceivedvalue is the overall assessment on the product or service utility determines by customer's perceptions of what is received and what is given. In services, it involves the comparison of what one is getting that is benefits and what he has to give up in terms of sacrifices in order to receive the service. The benefits include the value desired by the customer while sacrifices include monetaryand non-monetary considerations (Thaler, 1985). Sacrifice factors denote what the customer is expected to part with or forego, in exchange for obtaining the service. These may include cost and risk associated with the use of a particular service; in this study, mobile banking services usage.

With non-bank based model, there is no direct contractual relationship between the customer and the financial institution (Christen & Rosenberg, 2003). The customer instead usually gives cash to the retailer in exchange for electronic value recorded in a virtual account on the non-bank's server kept through a Mobile Network Operator (MNO) or an issuer of stored value cards. Additionally, unlike formal banks, non-banks that provide Mobile Financial Services (MFS) are not subject to prudential regulations as they are restricted not to intermediate the repayable deposits they gather and so when non-banks issue e-money, regulators are reasonably concerned on ensuring enough protection for customer finances (Kangni, 2005).Therefore, the non-bank mobile providers usually earn profits in other means, for instance through transaction fees or lowered airtime distribution charges and reduced churn among others. In addition, non-banks such as MNOs as well are well placed to radically expand the reach and range of informal settlement dwellers and unbanked person's financial services.

Ease of use is enhanced by the use of simple technology and applications that are easy to operate; such that little technical knowledge is required in using the system. Low effort expectancy can be said to be a benefit factor in the adoption of new technology and thus an important factor in explaining the usage of mobile banking. Benefits e-commerce to SMEs includes lower administrative cost (Quayle, 2002), increased internal efficiency (Macgregor et al.1998; Hawkins & Prencipe, 2000), improved relationship with business partners (Poon &Swatman, 1997), improve competitiveness (Fraseretal.2000); improve quality of information (Kaplan &Sawhney, 2000). Mehrtens. Et al (2001) ranked perceived benefits as main factors for small firms' Internet adoption. M-banking provides benefits to SMEs like 24/7 access to bank account, fund transfer and bill payment. M-banking also widens scope of financing from both local and global players (UNCTAD, 2001). Therefore; we can conclude that perceived benefits is one of the main factors for e-banking adoption by small firms.

5. Research Methodology

This study used a descriptive research design. The study targeted all the branchless banking agents of Kibera to give easy access to customers who engage in saving practices and provide information concerning their branchless banking practices. There are 94 banking agencies in Kibera, (Agent Network Accelerator Survey, 2015).

Table 1: Target Population

Bank Agencies	*Target Population*
KCB	28
Equity Bank	32
Co-operative Bank	21
Family Bank	13
TOTAL	**94**

The sampling specifically focused on the different banking agencies in Kibera. The researcher targeted customers in each banking agent. They will make a total of 384 respondents. **The study adopted proportionate stratified Sampling design which is a sampling method where each element of the population has an equal chance of being selected.** The study employed simple random sampling technique in selecting the respondents within each banking agent. Each individual was chosen entirely by chance and each member of the population had an equal chance of being included in the sample. The minimum sample size of 384 respondents was considered to be representative and sufficient at a 95% confidence level for population range above 100,000 (Saunders et al., 2009). The sampling specifically focused on the different branchless banking agencies in Kibera. The researcher targeted customers in each banking agent as tabulated in figure 3.1. This will make a total of 384 respondents. This study used questionnaires to collect primary data. Primary data was collected using questionnaires administered to respondents.

Questionnaires are a series of written questions on topics about which respondent's views or perceptions are sought (Mugenda and Mugenda, 2003). The questionnaires in this study utilized both open and closed ended questions.

To collect primary data, the researcher requested the respondents to spare ten minutes and fill the questionnaires. Some of the close ended questions required a response on a Likert scale, showing to what extent each factor influences their saving practices. This study pre-tested the questionnaire on at least 39 respondents targeted who comprise of 10% of the targeted population as is in line with Kothari (2004).Data analysis for this study utilized quantitative methodology in order to derive meaning from the data collected. The data was analyzed using statistical package for social sciences SPSS and presented through percentages, means, standard deviations and frequencies in graphical and tabular manner. Data collected was first coded as per the variables, then data entry done for every research tool filled after which descriptive statistics was carried out and presented in pie charts and frequency tables then interpreted to derive meaning with regards to the study objectives. A multivariate regression model was adopted to show the regression analysis of saving practices as the dependent variable and perceived trust and security, transaction cost, customer convenience and financial literacy as the independent variables is given below similar to Ahmed (2006).

$SP_t = f(PS_t, TC_t, CC_t, FL_t)$ ……. General specification

The general idea of a multiple linear regression model is that the response variable Y is a straight-line function of a given number of explanatory variables. Where the unknown parameters are denoted as α, the independent variables as X and the dependent variable as *Y*.

Therefore:
More specifically
$SP = \alpha_0+\alpha_1 PS+\alpha_2 TC+\alpha_3 CC+\alpha_4 FL+\varepsilon$ .... long run equation
Where
SP = Saving practices
PS = Perceived trust and security
CC = Customer convenience
FL = Financial literacy
TC = Transaction cost
ε = Error term
$\alpha_0, \alpha_1 \ldots \alpha_5$ = parameters
α_0 = Constant
The error ε_t term accounts for omitted variables and errors in measurement

6. Results and Discussions

The study targeted a sample size of 384 respondents from which 235 filled in and returned the questionnaires making a response rate of 61% acceptable according to Mugenda and Mugenda (1999).

What are the major reasons that would prevent you from using branchless banking services?

According to the findings 68% of the respondents feared that the transactions are not secure, 12% of the respondents were of the view that can get along without branchless banking, 52% thought that mobile banking services are expensive and 8% of the respondents were not convinced of the benefits and 12% lacked the necessary skills and knowledge to operate branchless banking.

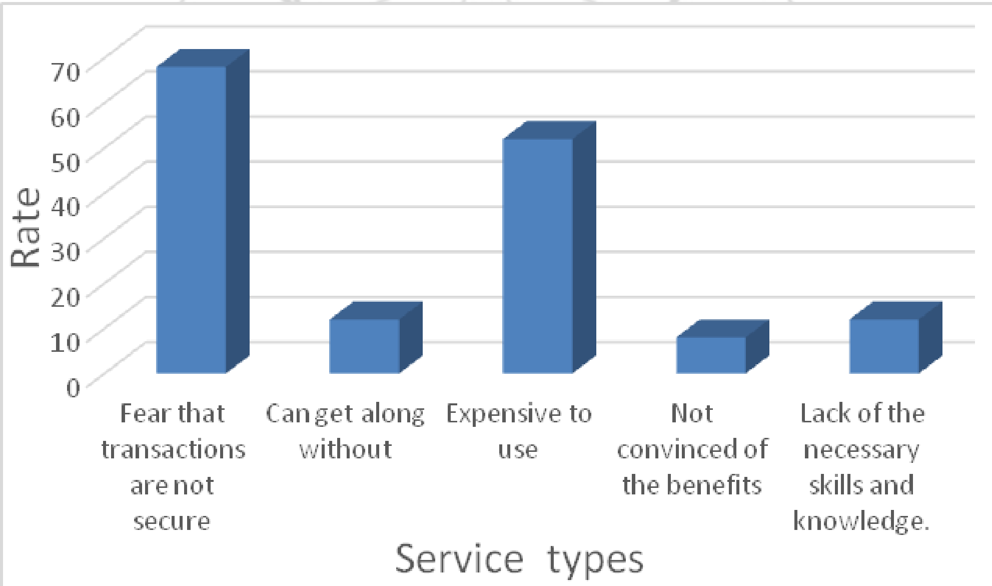

Figure 2: Reasons preventing usage of branchless banking

1) Perceived Trust and Security

a) Effect of perceived trust and security on saving practices

The study sought to determine whether perceived trust and security affects the saving practices of the low income earners, from the findings, majority of the respondents as shown by 76 % indicated that perceived trust and security affects the saving practices of the low income earners, 24% of the respondents were of the contrary opinion. This implies that perceived trust and security affects the saving practices of the low income earners.

Table 2: The effect of perceived trust and security on saving practices

Opinion	*Frequency*	*Percentage*
Yes	157	76
No	50	24
Total	**207**	**100**

b) Relationship between perceived trust and security and saving practices

The research sought to establish the extent to which respondents agreed with the following statements relating to perceived trust and security and saving practices, from the research findings, majority of the respondents agreed that safety is an important factor when it comes to saving practices as shown by a rate of 85 %, 100% of the respondents were in total agreement that there banks were safe in terms of service provision, most of the respondents that is 80% disagreed that they cannot get compensation from banks in case of fraudulent activity in their accounts, confidentiality of mobile banking transactions has been a great boost to saving practices as shown by a rate of 88% in agreement, security provided by the safeness and precautions of banking operations also has been a great boost on saving practices as shown by a rate of 100%. These findings concur with the works of Pavlou's (2003) who asserted that consumers think of the risks they undergo if they adopt the new banking through mobile services; especially due to the rising number of hackings and identity theft that has invaded the e-commerce sector.

2) Transaction cost

a) Effect of transaction cost on saving practices of low income earners

The study sought to reveal whether transaction cost has an impact on saving practices of low income earners, from the findings, majority of the respondents as shown by 82% were of the opinion that transaction cost affects the saving practices whereas 18% of the respondents were of the contrary opinion.

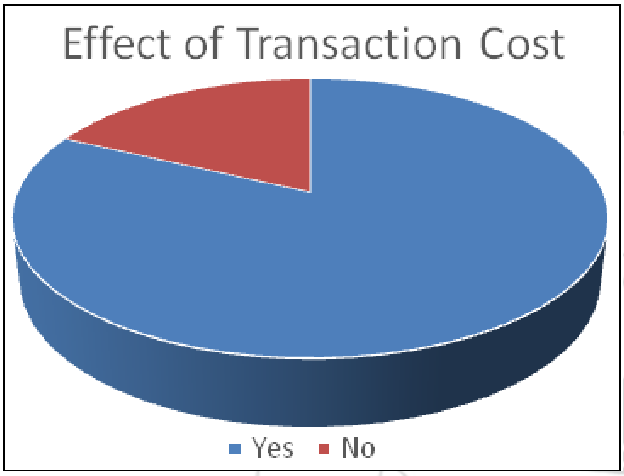

Figure 3: Effect of transaction cost on saving practices

b) Relationship between transaction cost and saving practices

The researcher went to establish the relationship between transaction cost and saving practices by sourcing the respondent's opinion on a number of statements. The observations made were that most of the respondents agreed to the fact that while transacting through branchless banking the costs incurred by the customer were affordable and within their means, on the second opinion there was a high percentage 80% of respondents disagreeing that it is expensive to buy a mobile banking enabled mobile phone, most of these devices are available today at very affordable prices. The third statement was based on issues of compensation in case of transaction errors, where majority 46% agreed that it is easier to get compensated or refunded if one makes a transaction error. The findings of Donner 2005, Hughes &Lonie (2007) support this findings, they claimed in there study that Mobile phones provide technological services that reduce costs; increase income and increases reach-ability and mobility. Fourth the researcher sought to determine whether the cost of subscription to branchless banking service was high and majority of the respondents 100% were of the opinion that this services require no subscription fees and finally the researcher wanted to determine the respondent's opinion on whether branchless banking is only for high income earners, the response was that majority 100% disagreed with these statement indicating that this service cuts across all income groups.

3) Customer Convenience

a) Effect of customer convenience on saving practices among low income earners

The study sought to establish whether customer convenience on saving practices among low income earners, from the findings, majority of the respondents as shown by 68% indicated that customer convenience affects the saving practices of low income earners 32 % of the respondents were of the contrary opinion. This implies that customer convenience has an impact on saving practices among low income earners.

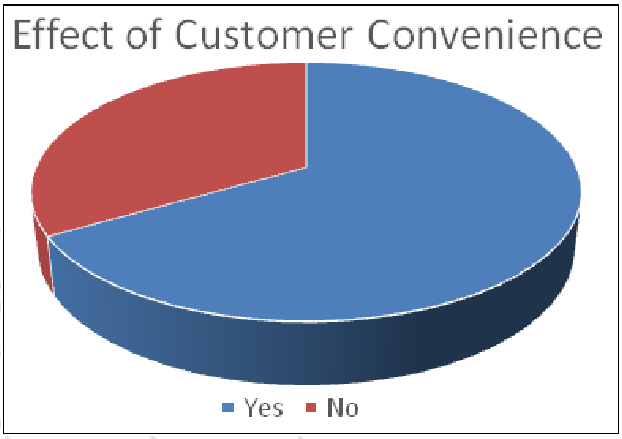

Figure 4: Effect of customer convenience on saving practices

b) Relationship between customer convenience and saving practices

the relationship between customer convenience and saving practices was analyzed and the findings were as follows, 82 % of the respondents were of the opinion that it is easy to use and learn how to use mobile banking or branchless banking systems that is it does not require a lot of technicalities, secondly 68 % of the respondents agreed that interaction with mobile banking does not require a lot of mental effort since it is easy to use hence convenient is business, thirdly the researcher observed that most respondents were of the view that using mobile banking is useful as it enables them to accomplish their tasks more quickly, finally on matters relating to accessibility to branchless banking outlets, 88% of the respondents agreed that accessibility of these outlets has boosted their saving activities. In line with this findings Stuart (2005) stated that low income earners especially informal settlement dwellers typically employ a myriad of informal financial saving mechanisms to satisfy their diverse financial needs. He adds that, the prevailing perception that informal settlement dwellers do not save may stem from the low penetration of formal saving techniques, most commonly saving with financial institutions like banks.

4) Financial Literacy

a) Effect of financial literacy on saving practices

The study sought to determine whether financial understanding and knowledge about financial aspects was an influencing factor on how low income earners engage in saving practices. From the research findings, majority of the respondents as shown by 52% agreed that the level of financial understanding was a major determining factor, while 48% of the respondents were of the contrary opinion.

This implies that people opinion on financial literacy on saving practices is indifferent

Table 3: Effect of financial literacy on saving practices

Opinion	*Frequency*	*Percentage*
Yes	108	52
No	99	48
Total	**207**	**100**

b) Relationship between financial literacy and saving practices

The researcher went on to establish the level at which respondents agreed with the following statements relating to literacy levels and saving practices. From the research findings, majority of the respondents 90% agreed that Service providers have the financial knowledge and expertise to advice the customer on available financial services, 100 % of the respondents disagreed that it would be hard to learn how to use mobile banking, thirdly the respondents were of the opinion that it is easy to use mobile banking to accomplish my banking tasks 82%. Finally, 100 % agreed that Proficiency and financial understanding on usage of m-banking enhances transaction processes between them and my bank this claim is supported by Delafrooz and Laily (2011) who conducted a study in Malaysia to examine the degree to which financial literacy influenced the saving behavior. The finding shows that saving behavior is significantly influenced by the financial literacy whereby individuals with low level of financial literacy are not intended to save and eventually encounter financial problems in future. The overall opinion was that most of the perceived variables above greatly determined the extent to which customers were inclined to branchless banking as opposed to traditional banking.

5) Saving Practices among informal Settlement Dwellers

The study sought to establish the extent to which respondents agreed with the below statements relating to saving practices:

Measure of saving practices

From the research findings the study revealed that, from the two models of mobile banking available, most customers preferred bank based models as opposed to non-bank based models.

Table 4: Measure of saving practices

Model	*Count*	*Percentage*
Bank based model	41	82
Non- bank based model	9	18

Table 4.14: Statements relating to saving practice

The researcher went on to establish the level at which respondents agreed with the following statements relating to saving practices. From the research findings, majority of the respondents agreed that Mobile payment user considers the technology to be convenient and well supported shown by a rate of 78%, 80 % were in agreement that perceived advantages have greatly influenced the behavior to use the technology by low income earners, 68 % of the respondents agreed that Cost and risk associated with the use of a particular service are minimal hence they prefer mobile banking services usage, 56 % were of the opinion that when it comes to mobile banking, regulators are reasonably concerned on ensuring enough protection for customer finances. While some of the respondents 80 % agreed that as a customer they prefer mobile banking as opposed to traditional banking because it doesn't require a lot of financial understanding, it is a more direct platform

7. Conclusion

The study revealed that trust and security is an important element to low income earners and that they would only engage in services or even purchase of products that were most secure and those that possessed low level of risks. Expensive services also have been identified by this study as another factor that would greatly determine whether the subjects of this study would undertake the aforementioned mobile banking platforms or not. Cost determine the deposable income available for the daily usage and consumption of this families and therefore they prefer low costs. The study also established that convenience and financial literacy were not significant variables in determining whether informal settlement dwellers would prefer to use mobile banking services or not. Although the last two findings highly contradict with previous literature where Ease of use is enhanced by the use of simple technology and applications that are easy to operate; such that little technical knowledge is required in using the system. Low effort expectancy can be said to be a benefit factor in the adoption of new technology and thus an important factor in explaining the usage of mobile banking.

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