HOW ACCESS TO FINANCIAL SERVICES INFLUENCES HOW KENYANS USE THEIR DISPOSABLE INCOME: A CASE STUDY OF M-PESA AND M-SHWARI.

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DECLARATION

I declare that this research is my own work and has not been previously submitted in whole, or in part, for the award of any degree. Each significant contribution to, and quotation in, this dissertation from the work, or works, of other people has been attributed, and has been cited and referenced.

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TABLE OF CONTENTS

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Abstract

This research investigated the use of mobile banking within an urban city environment. The study was conducted in Nairobi which is a major urban city in Kenya. Mobile banking as used in the study refers to non-bank affiliated banking provided by mobile phone service providers whereby users make use of their mobile phones and agents to perform transactions. The study had two main objectives: to determine if financial institutions influence the way people spend their disposable income; and, to determine how new forms of financial access, such as M-pesa and M-shwari, influence the way people use their money. The study took the form of surveys and semi-structured interviews. One hundred and eight respondents took part in the survey, and six respondents took part in the interviews. The results suggest that the availability and type of financial institutions and services does influence the way people spend their disposable income, and that new forms of financial access, facilitate a change in the manner in which people make use of their finances. The study also looks at the role of gender in the use of financial services.

CHAPTER 1: INTRODUCTION

1.1 Research Topic and Rationale

This study investigated the influence of financial access on how individuals living in Nairobi, Kenya spend their income. Financial access as used in the study refers to individuals having access to financial services that are able to meet their needs, accessible as well as affordable. Access to the appropriate financial services can lead to development of livelihoods by providing means to manage cash flows, cope with risk, and encourage savings for future and current use. The study looks at how individuals use mobile banking and the influence this form of banking has on financial choices.

By looking at how financial access influences income spending, an understanding is created of means by which financial institutions and financial services can contribute to individuals' socio-economic development.

1.2 Financial Access

Financial inclusion can be defined as "access to and usage of affordable, appropriate and accessible financial services" (World Bank Development Research Group et al., 2014:6). Financial inclusion as the description suggests goes beyond simply increasing the number of financial establishments that provide financial services to the population in a country. Building banks in rural areas does not equal to financial inclusion unless the rural population is actually able to make use of these services and these services cater to their needs. However, it should not be assumed that people are excluded from financial access only because the right financial services do not exist, exclusion can be both voluntary and involuntary. In the case of voluntary exclusion, an individual may not have a need for existing financial services and in the case of involuntary exclusion; barriers exist that prevent people from accessing financial services.

This report is concerned with the manner in which financial access influences income use, and therefore approaches financial access by looking at factors that pertain to involuntary exclusion. As already mentioned, involuntary exclusion is facilitated by barriers that prevent access to financial services, these barriers can be both price and non-price barriers. Price barriers may exist in the form of: minimum balance requirements, bank fees and minimum amounts required to open an account. Non-price barriers may exist in the form of: distance of financial establishment, lack of documentation to open accounts and lack of understanding of how financial services work (Demirguc-Kunt et al, 2008).

It is argued that the poorest of the poor are poor because they are unable to accumulate capital as they use the little capital they have for consumption rather than savings, and in this way they become “trapped with low or negative economic growth” otherwise known as the poverty trap (Sachs, 2005:56-57). By being able to save for the future, the poor can in fact accumulate capital that can be invested in the future and in turn break the poverty cycle (Sachs, 2005: 56-57). In this case, it is necessary to encourage the poor to save so that they can be able to make future investments that enable them to escape the poverty trap. Essentially this means convincing and encouraging the poor to sacrifice current capital consumption for investment and future consumption. To enable savings and management of funds, it is also necessary to have the tools that enable one to do so and this is true not only for the poor but it also speaks to the general population who have to manage their resources in order to sustain their livelihoods.

Though household income plays a role in savings and spending, the research is not concerned with the amount of household income *per* se, but is rather concerned with how individuals spend their disposable income; and how this spending or savings is influenced by financial institutions.

Levine (2004) argues that financial instruments, markets and institutions may affect the decisions people make with regards to their finances. According to Levine, there are theoretical models that show “that financial instruments, markets and institutions may arise to mitigate the effects of information and transaction costs” (Levine, 2004:2) and this in turn influences the financial choices made with regards to consumption, savings and investments. North (1991:1) describes institutions as “the humanly devised constraints that structure political, economic and social interaction.” Financial institutions in this way are the rules and regulations by which financial systems operate and the role of institutions is therefore to minimise transaction costs and reduce uncertainties associated with social and economic transactions that result from market imperfections. Not only do institutions minimise transaction costs but the manner in which they are developed influences who has access to what. The actors involved in the creation of institutions do so within a specific political and economic environment and thus may make decisions based on the most favourable outcome that will be beneficial not only to themselves but also to those with whom they have a relationship.

Besides institutions, inclusion is in some cases believed to be influenced by gender. Evidence exists showing that a gap exists between the number of men and women who have access to financial services worldwide, with the number of women generally being lower. The number of women without access to financial services is greater in developing countries and this can be attributed to a number of factors, such as, women not having access to cash or documentation required for opening accounts. The research considers the role of gender as it pertains to financial inclusion as well as the benefits associated with women being financial included.

1.2.1 Financial Access in Kenya

According to the latest FinAcess National Access Kenya Report, which profiles developments in financial access and usage, 25 per cent of the Kenyan adult population is excluded from financial services. With a population of 19.4 million, that means approximately 4.8 million adults have no access to either formal or informal financial services. This is a notable decrease of 13.9 per cent from the 2006 figures when the first survey was conducted and prior to the introduction of mobile banking. Furthermore, of the 75 per cent with access to financial services, 63 per cent have access to mobile banking. The report also found that the number of adults using mobile banking is more than double (11.5 million) of adult bank users (5.4 million). Whereas, bank use has seen an increase from 13.5 per cent in 2006 to 29.2 in 2013, mobile banking has increased to 62 per cent in about the same period of time, bearing in mind that mobile banking was only introduced in Kenya in 2007 (FSD, 2013).

1.3 Research Objectives

The aim of the research is to investigate the influence of financial institutions on income spending. The research aims to determine if financial institutions affect the way in which income is saved (or consumed) as well as if new institutions affect individuals' investment (or consumption) decisions.

For financial institutions to have any influence it is necessary for people to actually have access to these institutions and services. For this reason, mobile banking was chosen as it is currently considered to be the most accessible provider of financial services in Kenya for majority of the population and it has the least barriers of entry in comparison to traditional banks. With over 11.5 million adult mobile banking users in Kenya as of 2013, mobile banking has been able to give financial access to more people than traditional banks which had 5.4 million users as of 2013 (FSD, 2013). The mobile banking platforms to be used for the purposes of this research are M-pesa and M-shwari. M-pesa is the most widely used form of mobile banking in Kenya with over 17million registered users nationwide as of 2013. M-shwari, being a relatively new offering, has over 1.2 million registered subscribers as of 2013 (Safaricom Limited, 2013).

1.4 Research Questions

Financial inclusion in itself does not necessarily lead to change in financial behaviour which would lead to improved livelihoods through better management of financial resources and enabling provision for future consumption and emergencies. It is for this reason that the central questions of this research are:

- Do financial institutions influence the way people spend their disposable income?
- How do new forms of financial access, such as M-pesa and M-shwari, influence the way people use money?

1.5 Definitions

1.5.1 M-pesa

Introduced in 2007, M-pesa is a mobile banking platform offered by Safaricom Limited (Kenya) that enables users to receive and send money through their mobile phones (M-pesa, Internet). Users are able to add and withdraw money to their M-pesa account through any of the over 65,000 Safaricom agents located nationwide (Safaricom Limited, 2013). Agents are conveniently located throughout the country in shops, petrol stations, grocery stores etc. In addition to remittance, users are also able to pay bills and transfer funds to and from their bank accounts to M-pesa.

1.5.2 M-shwari

In 2012, Safaricom in partnership with Commercial Bank of Africa (Kenya) introduced another banking service, M-shwari. M-shwari enables existing M-pesa customers to save money using their mobile phones while earning interest, as well as giving users access to short term loans. Users can save as little as Ksh 1 and receive loans from as little as Kshs 100 up to Kshs 20,000. Users are able to open an M-shwari account and perform transactions through their mobile phones and are not required to complete any paperwork as is often the case when receiving such services from traditional banks. Users are able to withdraw and deposit funds by transferring funds from their M-pesa account to their M-shwari account and vice versa (M-shwari, Internet).

1.6 Structure of the report

The report starts by presenting a brief summary introducing the concepts of financial access and financial inclusion thereby setting a foundation for the research report. The research objectives and questions are also outlined in the introduction. The methodological approach is discussed in chapter two. This is followed by the literature review in chapter three which examines four key literatures in terms of financial access: institutions, financial institutions and development, financial services for poor households and mobile banking; and lastly the role of gender in financial access. Also included in the literature review is an examination of key empirical studies that have preceded this report and have paved the way for this report and fieldwork. In chapter four, a discussion and analysis of the fieldwork is presented. The paper concludes with a conclusion and recommendations of the study in chapter five.

CHAPTER 2: METHODOLOGY

2.1 Research Design

Ragin (1994:191) defines research design as the plan for the collection and analysis of evidence that enables the researcher to answer the research question posed. Quantitative methods are generally aimed at gathering facts whereas qualitative methods are more useful for exploring people's experiences and knowledge. With this in mind, a qualitative research method approach was used as the aim of the research is to examine how access to financial services influences the manner in which people use their income; as well as how the introduction of new forms of financial services affects financial decision making. Financial diaries have generally been used in research that aims to gain understanding of the influences of financial services on specific groups however, due to limited time and resources; this research method was not feasible for this study.

2.2 Sample

According to Neuman (2000:201), by specifying the unit being sampled, the geographical location and temporal population boundaries, the researcher defines the population. After defining the population, the researcher then identifies a target population which is the specific pool of cases to be studied (*Ibid*). The target population for the research was active M-pesa users in the geographical area of Nairobi. Nairobi was chosen as it is the most populated urban city in Kenya and is considered to have the largest number of mobile banking users (FSD, 2013).

The list from which a sample is selected is known as a sampling frame (Babbie, 1973: 89). Snowball sampling was used to identify participants for the survey. By using existing relationships I was able to gain access to respondents and this may have influenced the rate of response. With snowball sampling, because it is based on existing relationships, there tends to be less apprehension as people can sometimes be suspicious of the intentions of the questionnaire and in some cases some would expect payment especially if they have participated in a previous survey that offered remuneration. A downside that I encountered with snowball sampling is that people often knew people within the same circles and this could explain the high number of respondents with tertiary education.

2.3 Method of Data Collection

Surveys can be used for the purposes of: description, explanation and exploration and are also best suited for people who are asked the same questions in the same order (Babbie, 1973:58, Robert et al, 2003) . It was for this reason that the survey method was used, so as to obtain an overview of how people use M-pesa and M-shwari by asking questions related to product usage as well as views on certain aspects of the product. The format used for the surveys was a short questionnaire that had questions related to both M-pesa and M-shwari as well as biographical questions. Wisker (2001;142) argues that because of the frequency of the use of questionnaires in the public domain, responses tend to generally be low with the exception of cases where one is able to make respondents complete the questionnaire on the spot and return them. One advantage of administering the questionnaire face to face is that respondents are able to clarify any questions that they may have and it also reduces the chances of having unanswered questions (Babbie & Rubin, 2005). In my case, I found that respondents preferred to keep the questionnaire, and answer the questions at their own pace then return the completed questionnaire. As already mentioned, the downside to this method of administering questionnaires is that some respondents will not complete or return the questionnaire and this did happen, resulting in receiving only108 fully completed questionnaires out of the 130 questionnaires that were distributed.

Flick (2011:65) suggests collecting data from participants in the same manner as a means of controlling for external influences so that differences in results are due to the different perspectives of participants and not as a result of differences in data collection methods. Initially, I intended to administer the questionnaires verbally however the first respondents I contacted preferred to take the questionnaire and return it the next day after completing it. Though the questions were brief and not time consuming I believe respondents felt more at ease answering the questions at their own pace therefore this was the method chosen for conducting the surveys.

2.4 Research Instrument

I made use of two research instruments: questionnaires and semi-structured interviews. The questionnaires were used as part of the survey to give an overview of how people use mobile banking in Kenya and the effects on income usage. The purpose of the interviews was to get richer in-depth information on how people relate to new financial services and how this has influenced financial decisions. The interviews echoed the results of the surveys. Both interviews and surveys were conducted within a period of six weeks.

2.4.1 Questionnaires

The questionnaire consisted of three sections: Section A – Biographical Information, Section B – Questions on M-pesa and Section C – Questions on M-shwari. In total there were twenty one questions excluding tables which required respondents to indicate to which extent they agree with the given statements. Section A consisted of six questions, Section B consisted of four questions and a table, and Section C consisted of ten questions and a table. The reason for using this format was to make the questionnaire simple and short therefore encouraging the participants to fill out the questionnaire as it would not require much time and respondents did not have to answer difficult questions which sometimes can lead to people not answering the questions. Prior to giving out the questionnaires, it was pre-tested with five respondents and changes were made where necessary to ensure that respondents would not be confused with the questions. After changes were made, the questionnaires were given to respondents.

2.4.2 Interviews

Wisker (2001:164) identifies three types of interviews: structured interviews, semi-structured interviews and unstructured interviews. Structured interviews involve having set questions asked in a set order. Advantages of structured interviews is that they provide uniform information and require fewer interviewing skills, on the other hand the interview can be too rigid and the questions can be leading thus not giving a true reflection of the interviewee's opinion. Whereas structured interviews tend to be rigid, unstructured interviews are the opposite and tend to be flexible, giving the interviewer more flexibility with the structure, content and questions. Unstructured interviews are more like a conversation and like conversations can go off topic thus making the interview difficult to analyse and transcribe (Kumar, 2005:122, Wisker, 2001:168). Semi-structured interviews are a cross between structured and unstructured interviews. Semi-structured interviews involve a set number of prepared questions that cover the scope of the interview, and unlike structured interviews the questions do not have to be in a set order. The questions serve the purpose of initiating dialogue with the interviewee (Flick, 2011:112). As the purpose of the interviews was to elicit opinions on the use of M-pesa and M-shwari, semi structured interviews were used so as to gain a deeper understanding of mobile banking usage while still obtaining specific information related to the study.

As already mentioned, the aim of the interviews was to get a deeper understanding of the way in which people used their money before and after gaining access to financial services, M-pesa and M-shwari. Initially, I intended to interview ten people however I only managed to interview six people. What came out of the interviews turned out to be what was already mentioned in the questionnaires by other respondents therefore the interviews served to reaffirm views expressed in the questionnaires. I interviewed both male and female users of M-pesa and M-shwari from different backgrounds and income groups. Interviews were conducted in both English and Kiswahili, depending on which language the respondent was comfortable with. As a Kiswahili speaker I was able to conduct the interviews as well translate them to English for the purpose of transcribing and data analysis.

2.5 Data Analysis

As the data was to be analysed by looking at the frequency of various themes, it was necessary to analyse the data in a manner that enabled me to count the different themes, as such it was necessary to code the data to achieve this. Data can be coded using either computer software or manually, I opted to use SPSS computer software to code responses (Kumar, 2005: 224). A fixed code format was used to develop a code book. Each response received from the respondents was entered into a specific column numerically. To code responses from the open ended questions, all responses were written down and themes extracted from the responses then responses were coded based on the themes.

For some responses it was necessary to consolidate the responses, such as in the case of the tables where respondents were required to select the extent to which they agreed with the given statement; the responses were narrowed down to three options from seven: Agree, Neutral and Disagree. Agree was used to indicated respondent’s choice of “strongly agree”, “somewhat agree” and “agree” and disagree was used to indicate choices of “strongly disagree”, “somewhat disagree” and “disagree”. This was done as there is generally a slight distinction between the three options.

2.6 Ethical Considerations

All participants were above the age of 18 therefore consent was not needed from a third a party; additionally the research did not involve individuals from vulnerable groups. Prior to administering the surveys and conducting interviews, I informed the participants of the nature of the research verbally and advised them that they were under no obligation to take part in the survey and that participation was voluntary and no remuneration would be given for participation. Participants were also given an information sheet detailing the purpose of the research and why they have been selected; and a consent form which each participant signed. The participants retained the information sheet which also gave details of both myself and my supervisor in the event they required more information or wished to raise any concerns.

To maintain anonymity and confidentiality of participants, participants were not required to give any names or identifying remarks on the questionnaire. During the interviews although names were exchanged they were not recorded for the purposes of data collection. I did record some interviews and prior to recording, participants were asked to give consent for me to make use of the recording device.

2.7 Limitations

The study only looked at M-pesa users however this is not the only mobile banking provider in Kenya. Therefore the study is limited in this aspect as it only provides data based on users of one mobile banking provider and provides no reference to other mobile banking providers. Due to limited resources and time, I decided to only look at users of M-pesa which is provided by Safaricom, Kenya. M-pesa is the most widely used mobile banking service used by majority of Kenyans and it has also been in operation for longer. Additionally, Safaricom was the only mobile banking provider who at the time of the research that also provided a mobile phone based savings and loans service (M-shwari).

A second limitation is the area of study. The study was conducted in Nairobi which is an urban area and the results do not reflect opinions of users in rural areas who may use mobile banking services in a different way than those in urban areas.

A high number of the respondents (75%) have tertiary education in the small sample size of 108 respondent however it should be noted that majority of urban dwellers have tertiary education and this could be due to requirements by the job market and as it is often the case in Africa, people move from rural to urban areas in search of employment to support their families or simply for a better life.

The sample source itself is a limitation in that it is small scale and though it reflects the general make-up of a Kenyan urban area in terms of age, gender and education, it cannot be used to generalise the influence of financial access on income usage of the population at large. The sample chosen does however give insight into how access to financial services can affect an individual's financial choices.

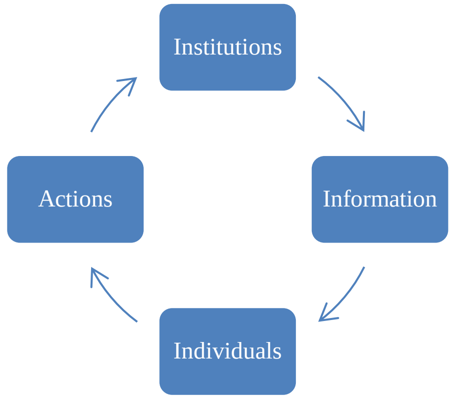
CHAPTER 3: LITERATURE REVIEW

A literature review serves a variety of functions. Its purpose is to provide a theoretical background to the study, create links and illustrate how the study contributes to existing knowledge and it also enables one to contextualise findings (Kumar, 2005:30).

This study aims to look at the role of institutions in influencing financial decisions and as such the literature review focuses on three main areas of literature which contribute to the establishment of financial institutions and how financial institutions contribute to development. Firstly, literature on institutions is discussed with the aim of giving an understanding of how institutions influence the type of financial systems established in a country and how these in turn determine who has access to financial institutions and services. This is followed by a discussion on financial development and financial inclusion to illustrate how financial inclusion plays a leading role in development and economic growth. Then we look at literature that focuses on poor households and mobile banking, to gain an even better understanding of how financial access, more specifically digitised banking systems, can affect those living below the poverty line. Gender is briefly discussed to give an overview of the how financial access may affect women and the impact this has on households.

3.1 Institutions and Economic Growth

Institutions are the constraints created by society to structure interactions and “[the] systems of shared beliefs, internalised norms, rules and organisations that motivate, enable and guide individual’s to follow one rule of behaviour thereby generating regularities of behaviour” (Grief in Shirley, 2008; 17; North 1991:97). Using North’s and Grief’s definitions, it can be said that institutions are not simply the laws and rules that govern a society’s interactions but also the internalised beliefs and norms that influence the behaviour of individuals. Institutions in a society essentially work to create order and reduce uncertainties in interactions with others and are shaped by existing socio-economic conditions as well as interactions between individuals; as individuals evolve so do institutions (Hodgson, 1998:177).



Source: Hodgson, 1998

Institutions shape economic change in that decisions affecting the development and financial system are made by political, social and economic actors and the decisions they make are made within the framework of the existing institutions (Shirley, 2008). Institutions and actors differ from place to place; therefore we cannot expect the same policies to have the same effect in all countries. For example, "investment and innovation, sound macroeconomic policies and education…promote growth" (Shirley, 2008; 17) in developed countries, however these same growth promoting measures may not have the same effect in developing countries. Shirley argues that this is because the ultimate factors that determine an economy's future is the choices made by the above mentioned actors and these choices are motivated largely by institutions (*ibid*). What Shirley proposes is in line with the political institutions view of financial development which is one of two main reasons scholars have presented as an explanation for why developing countries have been unable to create conditions that support financial development

Scholars provide two main reasons to explain why developing countries have been unable to create conditions that would facilitate financial development: legal origins view and political institutions view. Proponents of the legal origins view argue that the current levels of financial development are "largely determined by a country's colonial history" (Haber et al, 2008:1) and politics and political institutions do not matter or play a lesser role than legal origins. The political institutions view on the other hand, argues that though financial development occurs as a result of specific laws and regulations, these laws and regulations are determined by politics and political institutions. The main argument of the political institutions view is that, for financial development to occur, it is necessary to have a government that is able to enforce financial contracts, however at the same time the governments rely on the very same markets and institutions for its financing thus creating a conflict of interest. It is therefore necessary to have political institutions that also limit the authority and discretion of governments, especially in the security markets and banking sectors (Haber, 2008:2).

According to North and Shirley (2008; 289) governments that are able to protect property rights, create an environment for investment that is stable and peaceful. This in turn creates an environment where enforceable rules that support contracts exist, which leads to the growth of financial markets. By ensuring that contracts and rules are enforced, governments create an environment where people are not afraid to invest because they may lose their investment or worse yet, may be expropriated by the government. It is also therefore necessary to place limitations on governments to ensure they do not abuse their power through corruption and other means. North states that "where limits on government are weak or non-existent, corrupt officials can subvert regulations created to supervise financial markets in order to extract bribes or create rents for politically important constituents" (North & Shirley, 2008:289).

Through their interaction, governments and investors influence the size and the financial structure of a country. The stability of financial institutions is essentially determined by political institutions and their enforcement characteristics (Haber et al, 2008). Political institutions determine how much power and restrictions a government has and in turn, this determines the kind of financial institutions found within a country. A country that has weak political institutions is more likely to have weak financial institutions in addition to lowering financial accessibility to most of its population. Another factor that influences the size and structure of banking systems is the demand for and supply of financial services.

In societies where wealth is highly concentrated, the development of financial services is considered to be lower and the demand for banks modest. On the other hand, in societies where wealth is more broadly dispersed, the demand for banks is higher. Therefore as wealth becomes less concentrated; the demand for banks increases. However an increase in demand for banks does not necessarily mean an increase in the supply of banks. Haber (2008) gives some reasons for why the supply of banks does not necessarily always coincide with increased demand:

1. Bankers may fear expropriation by the government. Where governments are powerful and have no institutions to limit their power, they may abuse their power and expropriate banks. Additionally, in an environment where governments are not held accountable, they may renege on loans issued by banks.

2. Bankers' inability to enforce financial contracts with debtors: bankers will not write financial agreements that they cannot enforce therefore they would need to give debtors incentives to abide by signed agreements and contracts. Such incentives could, for example, be the repossession of assets if debtors do not hold up to their side of the agreement. This "incentive" however, needs to be credible to work. If debtors believe that there will be no recourse for reneging on financial contracts they will be most unlikely to uphold the agreement. Therefore, besides the debtors belief that they need to abide by the agreed upon terms of the contract, institutions need to be in place to ensure that there are credible repercussions for non-compliance. Banks will also need a credible system that enables them to determine what assets a debtor owns. In this case, governments can assist by creating institutions that enable bankers to have access to information on their debtors' assets so as to be able to give out loans against such assets. Using the example of repossession of assets for loan defaults, it is necessary for the bank to be supported by institutions such as courts and a police force with a credible power of coercion to recoup losses from loan defaulters (Haber, 2008:13).

   The inability to enforce financial contracts also influences whom the bank does business with. As banks are unable to monitor and enforce contracts with the majority of the population, they will limit their business dealings to a limited number of individuals and firms. In this way, they limit their risks and transaction costs of enforcing contracts and in the event that the other party does not comply they will be able to resolve the issue(s) amongst themselves based on an existing relationship rather than turn to the existing inefficient legal institutions for resolution (Haber, 2008:15).

3. Investors do not trust bankers and therefore they do not put their wealth in the banking system. Bankers in this case need to create relationships with investors that are based on trust and create measures to assure investors that their wealth is in good hands. Investors also need assurance that the government will not seize their wealth or refuse them access once their wealth is in the bank.

The possible risks faced by both banks and investors can be mitigated by having institutions in place that protect both banks and investors. The role of governments is to ensure that these institutions are in place and that the rules and laws are followed not only by individuals but also the government itself. Governments, as previously mentioned need to be powerful enough to implement these laws and rules as well as be able to carry out punishments for breaking contracts. The power of governments also needs to be limited so as to avoid expropriation and reneging on loans and agreements by the government itself.

Inefficient or weak institutions lead to a system where there are few banks and limited banking services. These limited banks cater to a selected few individuals and firms and this works against the development of banking systems. A developed banking system serves as an indication of a developed financial system which is considered to be necessary for economic growth (Haber, 2008:12). Efficient institutions that support banking systems tend to reduce barriers to banking as well as transaction costs, they also enable banks to provide services to more people. Without reliable institutions in place, bankers are reluctant to offer services to individuals and firms with whom they do not have a personal relationship. Banks will primarily do business with people they know personally through formal and informal networks to enable them to enforce contracts in the absence of reliable institutions. Creating personal relations based on trust is not a bad thing; however it limits access where it is the only way in which one gains access to financial services. In such a scenario where access is limited to those with close relationships with the bankers, it would be more beneficial to have many banks as they will cater to a variety of small groups of people thus increasing accessibility. On the other hand, if there are few banks then access to the banks is even more limited when access is based on close relationships. Besides creating barriers to basic financial services, this also leads to barriers for entrepreneurs who want to establish businesses/industries that require large amounts of capital. Without access to credit these businesses/industries may never see the light of day simply because a budding entrepreneur did not have the right personal connections.

Current successful market economies involve impersonal market exchanges that can sometimes take place over long distances, such as buying goods online with buyers and sellers never having to meet face to face. These kinds of transactions are supported by institutions that reduce transaction costs and create an environment of trust. This is not to say however that traditional personal market exchanges do not take place rather that they take place side-by-side with the less personal forms of transactions (Shirley, 2008;19). Using remittance as an example, prior to Kenyans having access to mobile banking, various methods were used to send money with the most frequent being the use of family and friends to deliver money where it needed to go. A survey conducted in Kenya by Morawczynski (2009: 510) found that people complained that methods of sending money through family and friends, transport companies and post office were costly as well as risky thereby increasing the transaction costs of money transfer. There was also a lack of trust as people complained that often money as well as goods did not reach the intended recipient. The latest Financial Sector Deeping survey (FSD Kenya, 2013) shows a drastic decline in the number of people who use family and friends for remittance between 2006 and 2013. On the other hand, there has been a large increase in the number of people using mobile banking for remittance which was introduced to Kenya in 2007. Therefore the more personal form of transactions, sending money through friends and family, still exists even though there is more reliance on the less personal use of mobile banking to send money.

In the example presented above, a level of trust is necessary for both personal and impersonal transactions. One has to trust that the money they are sending with family or friends will be received by the intended recipient. In the case of mobile banking, there needs to be trust that when one sends money via their mobile phone, it will indeed get to its intended recipient. Without this trust/belief, this system of impersonal transactions would not work. Besides institutions that govern transactions, it is also necessary for users of a service to have the belief that they can confidently use the product and that their money will be safe. In looking at trust in mobile banking in Kenya, Morawczynski & Miscione (2008) make the argument that customers trusted M-pesa because Safaricom's president at the time, Michael Joseph, was not a Kenyan national and therefore had no tribal affiliations and it was believed that he was politically neutral.

To gain from impersonal trade two kinds of institutions are needed: institutions that lower the cost of transactions and institutions that protect property rights. These two types of institutions promote trust, which has been identified as key in using non-personal financial services. Transaction costs are important for development in that where costs of transacting are extremely high, opportunities will be forgone. Institutions lower transaction costs by making people's and firms' actions more predictable. For example, institutions such as courts and the police assist by punishing those who do not abide by the established rules of society (Shirley, 2008:20).

3.2 Financial Institutions and Financial Development

According to Claessen and Perotti (2007:749) recent evidence has shown that financial services are critical for financial development and can assist in reducing inequality and poverty. Furthermore, access to financial services can improve the welfare and productivity of individuals in developing countries. Some models of economic growth imply that financial development reduces inequality while also enhancing growth. Financial development can therefore be seen as helping the poor "by improving the efficiency of capital allocation, which accelerates growth, and by relaxing credit constraints that more extensively restrain the poor, which reduces income inequality" (Claessen & Perotti, 2007:750).

Haber et al. (2008) argue that there is a positive association between the material well-being being of a country's population and that country's financial development; therefore to improve the wealth of a population it is necessary for a country's financial institutions to develop. Banks are considered to be crucial in creating efficient financial systems that are able to contribute to economic growth. Though the size and systems of the banking systems are influenced by both the demand for and supply of financial services, the supply of banks does not necessarily respond to increase in demands (Haber, 2008: 11). This is evident in the rural areas of developing countries where despite the need and demand for banking services, banks are unable to set up banks in these locations due to high transaction costs associated with establishing banks, e.g. infrastructure. Due to the lower transaction costs of setting up mobile money agents in rural areas as well as in various locations in the urban areas, the mobile financial sector has been able to meet the high demand for financial services that the banks are unable to meet. Mobile banking in Kenya also makes use of existing places of business, e.g. shops, supermarkets, petrol stations, thereby diversifying existing businesses and providing an additional source of income for agents.

In *Finance and Growth: Schumpeter Might be Right*, King and Levine (1993) base their research on Schumpeter's argument that services provided by financial intermediaries within the financial system are essential for economic growth as they provide services that enable the mobilisation of savings, evaluation of projects, managing of risks, monitoring managers and even more importantly they facilitate transactions. Not only is this essential for economic development, but also technological innovation. Because finance can change the rate of economic growth and the labour demand, financial systems have great implications on both poverty and income distribution. This is because financial systems influence the ability for one to start a business, thus influencing entrepreneurial enterprise, it influences the ability of one to pay for education and in some way determines what kind of education one is able to get. In this way, Demirguc-Kunt and Levine (2009) argue that access to finance can in fact shape the gap between the rich and poor as well as how the gap affects future generations This is not to say that only financial systems matter in making these decisions, but rather the ability to access credit, manage financial risks and income shocks as well as raising lump sums determines how much financing one is able to acquire and make use of.

Financial development aims to increase the availability and use of financial services to a wider group of people. Thereby, enabling individuals to access financials services and tools, such as credit and saving facilities, which they previously could not access. Once again, this is not to say that these individuals did not all together have access to some form of financial services providers or other, be it informal or formal, it essentially means that individuals will have access to additional formal/semi-formal types of financial instruments. From research based on financial diaries and interviews of 250 poor households in Bangladesh, India and South Africa, Collins et al. (2009) found that none of the households used less than four types of financial instruments. Besides giving disadvantaged or poor households an additional means to manage finances, financial development expands economic opportunities and contributes to reducing the persistent intergenerational income gaps (Demirguc-Kunt & Levine, 2009: 1).

Demirguc-Kunt and Levine (2009:2) find that emerging empirical research has pointed conclusively that improvements in the financial sector which lead to improved financial contracts and markets, and expand economic opportunities assist in reducing income inequality as well as lessening the gap in income distribution. They give the example of how access to credit markets could increase a parent's investment in the education of their children and this in turn helps parents deal with income shocks and therefore they do not have to take their children out of school and into labour when faced with household income shocks. There is also evidence that indicates that better functioning financial systems create an enabling environment for new firm formation as well as expansion of existing firms (Demirguc-Kunt & Levine, 2009: 2).

3.3 Financial Services for Poor Households and Mobile Banking

To gain a better understanding of how poor households manage their finances and the important role of financial tools for the poor, Collins et al. (2009) made use of financial diaries in three countries: Bangladesh, India, and South Africa, and interviewed participants every two months over a period of one year. In their research of how the world's poor live on $2 a day, they found that money management is a necessity in the lives of the poor. More so because of the unpredictable and inconsistent income sources, the poor have to manage the little that they do have in order to survive and make ends meet on a daily basis. Even when income is regular, it is still a necessity for the money to be managed well to be able sustain the livelihoods of the poor. An error in money management could mean the difference between a family having a meal and sleeping hungry. And should this pattern continue, it could lead to destitution and starvation. Therefore, besides money management being desirable, it has life and death implications.

The study found that the poor were frustrated by the quality of financial instruments available to them and the authors concluded that with access to better financial tools the chances of poor households improving their livelihoods are much higher (Collins et al, 2009:3). This illustrates the growing need for financial services that are more suitable to poor households, services that take into account the limited income, irregular income and the need to have access to funds for emergencies.

Every household that took part in Collins et al (2009) study held some sort of savings and debt and it was found that none of the households used less than four types of financial instruments (formal and informal). From this, we see that the poor are aware of the value of their money and try and make it work for them which is no different from higher income households. The main difference that can be found between income groups is how they use financial tools and what financial tools they use. Three main needs were found to drive the financial activities of the poor households that took part in the study. These needs can be used to demonstrate the manner in which financial institutions can influence financial decisions (Collins et al., 2009):

1) Managing basics: cash-flow management to transform irregular income flows into dependable resources to meet daily needs
2) Coping with risk: dealing with emergencies that can derail families with little reserve
3) Raising lump sums: seizing opportunities and paying for big ticket expenses by accumulating useful large sums of money.

It is argued that poor households are indeed willing to pay for credible and reliable financial service. These services need to take into account the difficulties that poor households face such as the ability to make regular payments when faced with irregular sources of income. Using close relations and informal lenders for money is not ideal but faced with little choice of financial tools at their disposal; poor households are forced to turn to those who are able to understand their plight. Asking friends and neighbours to hold money for you while you have it, is well and good however there is no guarantee that when you need the money that it will still be available. Some of the households that participated in the Collin et al (2009) study commented that they do not necessarily like having to deal with people over money but felt that because they are poor they have no choice.

> "Patching cash-flow mismatches between income and expenditure is ideally done through saving and dissaving, but, because appropriate vehicles are hard to find, poor households

more often turn to small scale borrowing and lending with friends, relatives, neighbours and employers. It is often hard work, and it can carry high costs – some of which are social and psychological and not just economic" (Collins et al, 2009:61).

A G20 report adds that income inequality alleviation and broad economic growth is made harder as those excluded from formal financial systems, for example, women, poor people and small businesses, must rely on their own limited informal and semi-formal savings and borrowings to finance investments such as education and entrepreneurial investments (World Bank Development Research Group et al., 2014:6). Informal transactions, though sometimes inadequate do have benefits: they are close at hand, paperwork is often not required, in some cases there are no additional costs and should there be any cost, the terms of payment can be made flexible and prices negotiated to suit poor households (Collins et al., 2009). A 2006 research study on financial access in Kenya found that the three major reasons people listed for not having a bank account were: lack of income, lack of regular income and affordability (FSD, 2007:17).

Mobile banking has been found to reduce household transaction costs as well as improve the ability of households to share risks. A focus note presented by Cull et al. (2014) summarises recent evidence on financial inclusion on two economic levels: microeconomic and macroeconomic. At the microeconomic level, they look at evidence of how the lives of the poor are affected by the use of different financial products. They find that studies have shown that:

- Small businesses benefit from having access to credit; although the impact on the borrower's household's broader welfare may be more limited.
- Access to formal savings options can boost household welfare as savings enable households to manage cash flow spikes, smooth consumption and build working capital.
- Insurance and savings can help poor households mitigate risk and manage shocks.
- Reduced transaction costs seem to be reduced by new types of payment services, thereby improving household's ability to manage shocks and share risks.
- Based on research, local economic activity is suggested to improve with financial access.

At the macroeconomic level, empirical evidence shows that financial inclusion is positively correlated with growth and employment. The main mechanisms cited for this correlation is better distribution of capital and risk across the economy and generally lower transaction costs. Access to banking benefits may also have a positive effect on financial stability, which benefits the poor indirectly (Cull et al., 2014: 7).

Financial inclusion has also been found to improve the effectiveness and efficiency of government payments such as social welfare and in some instances salaries of civil servants. Besides creating accessibility, efforts to create financial accessibility can lead to financial innovation which in turn enable a decrease in transaction costs and widens the reach of financial services and tools. These financial tools and services need not only serve the purpose of making formal financial services more inclusive but could also serve as vehicles for broader developmental programmes (*Ibid*).

Studies have shown that broader participation and access to financial systems can "reduce income inequality, boost job creation, increase investments in human capital and directly help poor people manage risk and absorb financial shocks" (World Bank Development Research Group et. al, 2014:1) and it is with this in mind that financial inclusion is considered to contribute to strong, sustainable and balanced growth which is one of the core goals of the G20.

According to the World Bank Development Research Group et al (2014) report, current statistics indicate a high rate of financial exclusion, especially within developing countries and among women. More than 2.5 million adults do not have any form of formal account globally, and of this number nearly eighty percent are poor adults. Furthermore, it has been found that only thirty seven per cent of women in developing countries have access to formal accounts in comparison to forty six per cent of men (*Ibid*). The study argues that digital payments in all its forms can play a crucial role in the G20 achieving its goals and lists the following as some of the benefits of digitising (World Bank Development Research Group et al., 2014:7):

- Digitising helps overcome the costs and physical barriers that have beset otherwise valuable financial inclusion efforts.

- Digital platforms offer the opportunity to rapidly scale up access to financial services using mobile phones, retail point of sales, and other broadly available access points, when supported by an appropriate financial consumer protection framework.
- Digital payments can promote women's economic empowerment by facilitating greater account ownership and asset accumulation and increasing women's economic participation.

A study was conducted by Jack and Suri (2014) to explore the impact of reduced transaction costs on risk sharing by looking at the effect of mobile banking on household consumption in Kenya. Based on gathered evidence, the study argues that mobile banking has increased the ability of households to spread risks and attributes this to the reduced transaction costs associated with mobile banking.

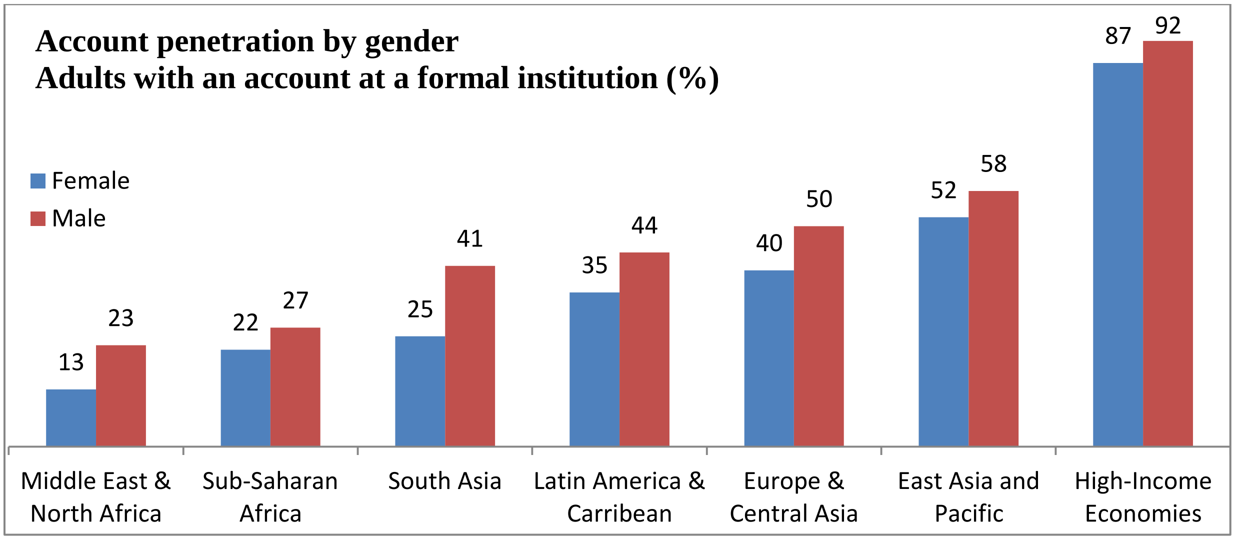
In Kenya, as in many developing countries, internal migration occurs as people search for employment and other opportunities beyond their immediate communities thereby creating dispersed social networks. It is believed that lower transaction costs can have an impact on not only the size but also the frequency of domestic remittances especially in an environment where existing forms of remittance are expensive and unreliable. Before M-pesa was introduced, majority of the population used informal means of sending money such as friends and family and public transport companies, in some cases this process proved to be unreliable and often resulted in delays and losses due to theft (Jack & Suri, 2014:2, Morawczynski, 2009).

The study conducted by Jack and Suri (2014) found that households that did not use M-pesa, suffered a seven per cent reduction in consumption when they experienced negative income shocks whereas the consumption of households that use M-pesa was unaffected. These effects were found to be more evident amongst the bottom three quintiles of income distribution and this was expected as those in the top quintile of income distribution were generally likely to use other mechanisms to smooth risk prior to the introduction of M-pesa (*Ibid.*).

Even though M-pesa can be used for savings and thereby increasing the ability to deal with risk, the study found that remittances are what lead to improved risk sharing. The authors argue that when faced with shocks, M-pesa users are more likely to receive not only a greater number of remittances, but also a larger amount of money in total. This can be as a result of not only the lower transaction costs associated with mobile banking, but also the increased number of people within one's network that they can ask for money from. One is not limited to nearby neighbours and can therefore widen their pool of people who can provide financial assistance when needed. M-pesa's convenience and safety enables users to send remittances from any location and distance, thus facilitating prompt responses when negative shocks are experienced. Because it is safe and secure one is assured that the recipient will receive the money. Mobile banking therefore seems to increase the "effective size of, and number of active participants in risk sharing networks, seemingly without exacerbating information, monitoring and commitment" (Jack & Suri, 2014:27).

3.4 Financial Access and Gender

Data from the Global Financial Inclusion Database indicates that fifty per cent of adults worldwide have an account at a formal financial institution. The database uses a set of indicators to measure how adults in 148 countries "borrow, make payment and manage risk" based on a worldwide survey taken in 2011 (Demirguc-Kunt & Klapper, 2012). The authors cite high cost, lack of proper documentation and physical distance as some of the most commonly reported barriers to formal financial institutions. In the case of developing countries, there is a gender gap in financial access among men and women of six – nine percentage points across all income groups, on the other hand the average difference in high income economies is not across all income groups, and it is only in the poorest income quintile that the difference exceeds four percentage points. In Sub-Saharan Africa, of the forty nine per cent of adults with access to formal accounts, twenty-seven per cent were men and twenty-two per cent were women. The numbers were lower for North Africa and Middle East, with twenty-three per cent of men reporting to have formal accounts and only thirteen per cent of women. (Demirguc-Kunt & Klapper, 2012). In Kenya, approximately seventy per cent of the male adult population has access to formal financial services in comparison to approximately sixty-two per cent of the female adult population (FSD, 2013).



Source: Demirguc-Kunt & Klapper, 2012.

Women who took part in the study reported that they tend to use someone else's account significantly more than men, thereby highlighting that though the figures for women's ownership of a formal account are low it does not mean that they do not make use of or have access to formal financial services. The challenge here seems to lie more in ownership rather than actual use of financial services, which brings to question, what prevents women from having ownership of formal accounts. The authors argue that the exclusion of women from formal account ownership may be "linked to individual preferences or cultural norms, or it may indicate a lack of awareness of financial products or lack of financial literacy" (Demirguc-Kunt & Klapper, 2012).

Using a randomized controlled trial, Ashraf et al (2010) found that individually held commitment savings products by women lead to an increase in the decision-making power of women within the household. They also found that there was a household purchase shift towards more female-oriented durable goods such as washing machines, sewing machines, electric irons, kitchen appliances, air-conditioning units, fans and stoves. Despite the results of the trial, the authors do acknowledge that it is not conclusive as to whether only transferring income to women can improve their status in the household, thus implying that other factors should be taken into consideration when creating policies and framework that target increased financial access and ownership of formal accounts to women (Ashraf et. al, 2010; 333).

Whereas Ashraf et al (2010) argue that there exists little evidence that expanding financial access and usage can promote female empowerment, Duflo (2012) argues that economic development of women can lead to women empowerment and that the two work hand in hand. She states that inequality between men and women is bred through poverty and lack of opportunity; therefore, when economic development reduces poverty, it in turn reduces the existing inequality thereby empowering women. Gender inequality in the economic and financial sphere influences women's livelihoods in that, for example, they are not able to make investments due to lack of access to credit amongst other things. A policy brief on advancing African women's financial inclusion also argues that increased access and usage of financial services by women greatly benefits development because women tend to be the primary financial managers in most families and are therefore tasked with ensuring the entire household's well-being through the use of a variety of financial tools. Although the brief recognises women being the main financial manager in households, they also acknowledge that women can be constrained by members of the very household that they are trying to maintain. Furthermore, it is believed that financial inclusion of women has "a positive spill-over effect on men, the entire household and local community" (MFW4A, 2012:3).

In their report, Aterido et al (2011) find that though women are disadvantaged in access to financial services, the reasons for this disadvantage does not necessarily lie within the existing financial services that are available. They argue that the disadvantages rather lie in other dimensions that are related to women's participation in the modern market, thus lowering women's use of formal financial services. Examples of these dimensions include women's: lower level of income and education as well as household and employment status (*Ibid*). Whereas Aterido et al. (*Ibid*) find that the reason for women being disadvantaged in access to financial services are not necessarily within the financial sector, in *Advancing African Women's Financial Inclusion* (MFW4A, 2012:5), lack of "political will" regarding gender equality and equality in access to finance is cited as one of the overarching reasons for the low participation of women in formal financial services. The following are also included as reasons that further contribute to women's lower participation in formal financial services:

- Culture, norms, belief systems, customary law

- Lower levels of education
- Lack of employment opportunities
- Lower income levels
- Obstacles to access to land
- Family responsibilities limiting women to family and household businesses
- Time constraints; mobility constraints
- Influence of and control by other family members of women-owned businesses
- Lack of decision-making power and self-esteem

Based on her findings, Duflo (2012) is of the view that to bridge the gender gap it is necessary to continue carrying out policy actions that favour women at the expense of men. She does not discuss what specific policies need to be addressed; however, other authors argue that policies need to take into account other factors that inhibit women's participation in the economic and financial sphere to be able to address the existing inequalities. The *Advancing African Women's Financial Inclusion* policy brief (MFW4A, 2012) is also of the belief that policies need to be more gender-sensitive and should aim to address the constraints that women face in accessing formal financial services. They acknowledge that African women are increasingly involved in the policy decision making and policy formulation levels. This however does not necessarily mean that gender issues are advanced in policies therefore we should be wary about making a correlation between women's involvements in policy and the advancement of gender issues. All it shows, in my opinion, is that women are more involved in these spheres. Hallward-Driemeier and Hasan (2013) argue that changing or making laws that protect rights between men and women will unlikely lead to equal access of economic opportunities however differential legal protections will basically make equality impossible. Changes to product designs and easier access to financial services in addition to equitable treatment under the law can be instrumental in improving women's access to finance (Demirguc-Kunt et. al, 2013).

When considering economic rights, be it that of women or men, it is necessary to take into account the legal system within which the economy lies. The content of formal laws as well as the effectiveness within which a formal legal system operates determines the strength of the formal economic rights and this is because these rights are ultimately defined by formal law.

3.4.1 What do women look for in financial services

According to the *Advancing African Women's Financial Inclusion* report (MFW4A, 2012), African women have specific needs, and therefore need a wide a range of financial services to meet these needs. The reasons mentioned in the previous section that contribute to women's lower participation in formal financial services makes women more vulnerable, therefore making them seek out appropriate financial means to manage risk. Women need a variety of financial services to enable them to cater for the various roles they play. They play an important role in both the household and community and they therefore need financial services that enable them to take care of their household (this is generally considered a woman's responsibility) while also positively impacting the community (*Ibid*).

Women seek "safe, convenient and confidential ways to save small amounts" (MFW4A, 4:2012). With limited access to funds with which to work with, women need mechanisms that enable them to save whatever little they can spare while still allowing them to meet their household and community financial needs. Running a household is time consuming, therefore financial services need to be convenient so that women are still able to perform household duties and attend to financial matters. Research conducted in Malawi that involved the use of a mobile van to deliver financial services at one stop suggests that women value geographic convenience more than men (Stuart, Ferguson and Cohen, 2011a). As mentioned previously, women are sometimes constrained by the demands of the very people they are trying to assist therefore confidentiality goes a long way in enabling women to maximise their finances while limiting external interference. Women are also more concerned with convenience and security of withdrawals and deposits than the actual interest income. The ability to deposit and withdraw along with convenience enables women to manage their household budgets as well as deal with risks such as income shocks and emergencies. Women are also involved in both short-term and long-term savings which further supports their needs for short-term savings that enable them to deal with financial shocks that they may experience due to, for example, health issues and irregular income. Long term savings enable women to plan for future expenses such as education and purchasing of large items in addition to investing in small to medium size business enterprises to generate profit and increase household income (MF4W, 2012).

3.5 Literature Review on Empirical Studies on M-pesa

Ever since the introduction of M-pesa in Kenya there have been a number of studies conducted that look at various aspects of M-pesa from a number of fields. This section gives an overview of a number of studies and research that have been conducted on M-pesa that a relevant to this research report.

In a 2009 survey report, Jack and Suri (2011) found that M-pesa had reached nearly forty per cent of the Kenyan adult population two years after it was launched. Though M-PESA was initially adopted mostly by wealthier households, the number of less wealthy households was also found to be taking advantage and it was found that there was an increase in the use of M-pesa by the unbanked population.

A number of studies have been conducted on the impact and use of M-pesa in low-income households and at a community level. Stuart & Cohen (2011b) make use of a financial diary methodology to examine how low-income Kenyans use M-pesa. The focus of the study was to determine the value of M-pesa on low income households, the most likely areas for M-pesa's future growth and whether M-pesa can serve as a platform for financial services beyond remittances. The study found that M-pesa is of value to low-income household, especially as a means of sending money to family members in other parts of the country.

Studies have looked at the use of M-pesa across different households in different areas. Jack & Suri (2011) focused on the differences between users and non-users as well as early-adopters and late-adopters of M-pesa detailing differences in the way each group used M-pesa. Jack & Suri (2011) found that M-pesa adoption was spreading beyond the wealthiest groups. Using data from the Financial Access Survey conducted in 2009, Mbiti and Weil (2011) found that individuals in the higher socio-economic groups to pay wages than their respective counterparts. In addition, a higher percentage of wealthy individuals (30%) reported using M-pesa to save than poor individuals (15%) report doing so. Similar gaps were also observed between more-educated and less-educated individuals. Based on their analysis of all the figures of the survey, Mbiti & Weil (2011) suggest that the biggest beneficiaries of M-pesa are individuals with higher socio-economic status. However, they do add that this does not hinder individuals with lower socio-economic status from enjoying the benefits of M-pesa.

Whereas some studies have found that the use of M-pesa as a savings tool is negligible, with money mostly being taken out and used on the same day (Mbiti & Weil, 2011; Stuart & Cohen, 2011b) other studies have found that M-pesa users are more likely to save than non-users (Ravi & Tyler, 2012) . Despite their findings of low use of M-pesa as a savings tool Mbiti and Weil (2011) did find that the increased use of M-pesa increased the probability of users getting banked and lowered the propensity of people to use informal savings mechanisms. According to Stuart & Cohen (2011b), seventy per cent of the money that goes into M-pesa, leaves the account before any additional money is received and in eighty-eighty per cent of these cases, the money is cleared on the same day.

Plyler et al. (2010) conducted a study to explore the economic effects of M-pesa. Besides looking at the direct effects of M-pesa, they also looked at the spill over and ripple over effects caused by the presence and use of M-pesa. They found four observable community effects: (i) local economic expansion in terms of money circulation and local employment, (ii) physical, financial and food security, (iii) financial, human and social capital accumulation, and (iv) business environment in terms of transactions ease and quality control (Plyler et al., 2010:7). Furthermore, the scale of the effects of M-pesa at community level is further influenced by gender and geographic location of the communities.

According to Maurer (2012) mobile money is complicated in that besides finding people adapting to a new system, you find people adapting and modifying those systems. This can be seen in the adoption of M-pesa in Kenya. Initially, M-pesa was created as a means for users to pay back loans however users begun to use the system for other uses, such as storing money and sending money to other users, thereby modifying the mobile money system.

Ngugi et al. (2010) conducted a study to review the key factors that led to the growth of mobile banking in Kenya by using M-pesa as a case study. Their study considered the outstanding challenges experienced by users as well as possible solutions and possible future trends. The study was conducted by reviewing existing literature on mobile banking, secondary data and a survey which involved early adopters of M-pesa, young tech survey people living within the major urban areas (Ngugi et al., 2010:1).

Duncombe & Boateng (2009) reviewed forty-three research articles written between the years 2000 – 2008. The review found that research to date has become too narrowly defined due to the high level of practitioner involvement in providing useful links to the mobile phone industry to the research community. Though there are some academic studies that have been carried out with regards to understanding the role of mobile phones in the development of financial services, they are often carried out for specific purposes by practitioners. Furthermore, they argue that academic research in this field is unable to keep up with the rapid change on the ground (Duncombe & Boateng, 2009:1239).

CHAPTER 4: DISCUSSION AND ANALYSIS

4.1 Introduction – Biographical Information

A total of one hundred and eight respondents took part in the survey, which included forty-four male respondents and sixty-four female respondents. Respondents were selected through snowball sampling from a pool of existing registered M-pesa users residing in Nairobi. As the target was registered M-pesa users, the respondents were above the age of 18, as this is a requirement to register for M-pesa. The majority of the respondents were between the ages of 20 – 35, accounting for 58.3 per cent of the total respondents. Seventy-five per cent of the respondents had tertiary education. These figures are a small representation of the urban population in Nairobi. According to the latest FinAccess National Survey (FSD Kenya, 2013), Kenya's adult population has more females (52%) than males (48%), the largest age group is between 26 – 35 years old and more people with tertiary education live in urban areas. The latest report on financial access found that the number of adults who use formal non-prudential financial services, which includes mobile financial services providers, is higher amongst females than males. On the other hand, the number of adults with access to formal financial services such as banks is still much higher amongst males than females. Majority of the respondents earned between 30,000 – 49, 999 Kshs and the least earned between 80, 000 – 100,000 Kshs.

4.2 M-pesa Use

The majority of M-pesa users have been using M-pesa for 5-7 years (*See Chart 1*). M-pesa was introduced in 2007 and it has received great acceptance among the public. From a gender perspective, male respondents have been using M-pesa for longer than their female counterparts (*See Chart 2*). According to the FinAccess report on Kenya (FSD, 2013) between 2009 and 2013 the number of males with access to formal non-prudential financial services, which includes mobile phone financial services, increased from 17 per cent to 30.5 per cent and, for females it increased from 13.3 per cent to 35.7 per cent. The number of females with access to traditional banks and financial markets is lower than the number of men; some of the reasons for this could be linked to barriers of entry into formal financial services faced by women such as lower levels of education, lack of employment opportunities, lower income levels and lack of property ownership. Often banks require documentation and minimum deposits to open an account and maintain it, lack of the required documents and affordability are one of the reasons identified as creating barriers to access to financial services for the general population and this problem is faced even more amongst the female population who may not have the same property rights as men, thus further creating additional barriers to financial services.

4.2.1 Age and Gender of M-pesa Users

Age is also a factor to be considered in how people use financial services. Majority of the respondents are between the ages of 20 – 35 (*See Table 1*). This same age group uses M-pesa the most for bank related transactions and not just money transfers (*See Table 2*). The younger generations are believed to be more technologically savvy and more inclined to make use of mobile banking than older generations who are more used to the traditional banking systems. Familiarity with mobile phones was identified as one of the challenges that would be faced during the pilot stages of M-pesa (Hughes & Lonie, 2007) however in 2014 the number of mobile phone users in Kenya has increased, which implies that more people are familiar with basic mobile phone operations.

The respondents were made up of sixty-four women and forty-four men. Generally more women used M-pesa services than men, with the top three uses being: money transfer, buying airtime, and paying utility bills and school fees amongst both men and women (*See chart 3*). Women performed more transactions than men on a monthly basis with most women performing 0 – 5 transactions a month. In general, majority of the respondents, regardless of gender, agreed that they send more money to family and friends, use less cash for transactions and prefer to use M-pesa for transactions. The main difference found between male and female M-pesa users is that men reported having used M-pesa for longer, whereas women have used the product for a shorter period of time though they make up the majority of M-pesa users.

4.2.2 Income and M-pesa use

To show how different income groups use mobile banking, respondents were asked to select what they use mobile banking for from a choice of eight typical uses of mobile banking (*See Table 2*). All income groups make use of the different services offered by M-pesa regardless of the income amount. Majority use M-pesa for money transfers which is its main purpose, to send and receive money. Those with an income of between 30,000 – 49,999 Kshs make the most use of all the services in comparison to the other income groups. As alluded to earlier, one would expect to find that those who use M-pesa for saving would make use of M-shwari for saving, but this does not seem to be the case, majority of M-shwari users were those earning between 10,000 – 29, 999 Kshs. The reason for this is unknown however it could possibly be due to lack of access to reliable and safe saving tools.

4.3 Savings and Loans

Fifty six respondents make use of M-pesa to save money by leaving it in their M-pesa account and withdrawing it at a later stage. M-shwari on the other hand is a platform dedicated to savings and offers minimal interest as well as short term loans. In total, thirty-eight respondents who use M-pesa also use M-shwari, nineteen females and nineteen males. As a percentage, there are more male users than females. Majority of the users are between the ages of 20-35 years, in fact, respondents of only two age groups reported using M-shwari (*See Table 3*). None of the respondents below 20 and above 50 use M-shwari at this time. The age group that uses M-shwari is between 20 – 49 years old, with the majority being between 20 – 35 years old. This could possibly be due to the technological aspect of the product. The younger generations are considered to generally be more up to date and comfortable with using technology and would therefore most likely be the first to use new technology based financial tools. Additionally, this could be due to the fact that it is a relatively new service or they have no use for it, especially for those who are below the age 20 with limited funds as either students or just joining the workforce. Most respondents who use M-shwari earn between 10, 000 – 29, 999 Kshs.

Most M-shwari users have been using for M-shwari for less than one year and this once again could be due to it being a new service and uptake may increase at a later stage. Majority of the respondents use M-shwari for both savings and loans. M-shwari offers the ability to save while receiving interest and also offers small loans. The only requirement for savings is that you sign up for M-shwari then you can transfer funds to and from your M-pesa account. Loans, on the other hand, are issued based on the users' mobile phone product usage, e.g. voice and data, initially and for future loans, the loan amount one qualifies for is determined by mobile phone product usage as well as rate of savings and loan repayments. Therefore increased savings leads to a greater likelihood of qualifying for a higher loan amount. The loans are repayable within 30 days which could explain why most respondents use the loans for emergencies and unexpected expenses.

M-pesa was first introduced in 2007 and M-shwari was subsequently introduced in 2012. Majority of the respondents who use M-shwari have used M-pesa for 5 – 7 years. The number of respondents who use M-shwari decreases in relation to the number of years the respondents have used M-pesa (*See Table 4*). This implies that users who are comfortable with M-pesa are more likely to use other financial services offered on the same platform. This could be due to the level of trust and comfort users have already established with the existing financial services so expanding their use of different financial tools is less of a hurdle. Trust as already discussed in the literature plays a major role not only in the type of financial institutions that a country establishes but also who has access to these institutions. In much the same way, trust plays a role in whether the public accepts and makes use of a financial service. Morawczynski & Miscione, (2008) based on their research make the argument that customers trusted M-pesa because Safaricom's president at the time, Michael Joseph, was not a Kenyan national and therefore had no tribal affiliations and it was believed that he was politically neutral. In addition to this, customers affiliated some banks with specific tribes and due to historical tribal divisions some customers did not use certain banks because of the owners' tribal affiliations. Morawczynski & Miscione's study found that even though customers did not necessarily trust the agents who were responsible for depositing and paying out money into and from M-pesa accounts they trusted Safaricom as an institution. Illustrating how institutional trust can influence how people view financial service providers. The trust created leads to the assurance that one's money will not be stolen and gives one confidence to use impersonal forms of transactions that do not rely on personal relationship.

Like M-pesa, female users of M-shwari lag behind male users in terms of duration of the use of M-shwari. Being a relatively new product this can be expected and if the figures from M-pesa are an indication of the future of M-shwari, the number of female users is likely to increase in the future (*See Chart 5*).

4.3.1 Saving with M-pesa and M-shwari

In total, fifty six people use M-pesa for saving money and of those fifty six; twenty seven use M-shwari for savings as well; representing slightly less than half of the respondents (*See Table 5*). I would have expected to find that more people using M-pesa for saving would be using M-shwari for saving as it is just as accessible as M-pesa and offers interest as well however that is not the case. Possibly, savings in M-pesa are kept in the account to be sent at a later date, therefore acting more as a storage place rather than a savings. M-shwari on the hand appears to be used mainly for savings with a purpose beyond sending money; respondents reported using M-shwari mostly to save up money for emergencies. In literature pertaining to M-pesa for savings, some authors argue that users generally take their money out of M-pesa in a short time period therefore it does not serve as either savings or storage of funds, however other authors find this not to be the case and argue that M-pesa users are more likely to save than non- users and this could possibly be due to users having access to a financial tool that is safe, accessible and secure in comparison to putting money under the mattress and other forms of saving (Ravi & Tyler, 2012, Mbiti & Weil, 2011; Stuart & Cohen, 2011b).

4.3.2 Effect of M-shwari on Savings

Twenty-one of the thirty-eight respondents who use M-shwari (*See Table 6*) stated that M-shwari has changed their savings and ninety-two per cent of the respondents agree that they are able to save more money with M-shwari in comparison to only forty-nine per cent who agree that they save more with M-pesa. This indicates that using a product that caters for savings specifically increases the likelihood of savings as opposed to using a product for which savings is a by-product rather than its main purpose. One respondent wrote:

> "When you have extra cash in m-pesa, instead of spending and sending to guys you save it in m-shwari, then you are assured there's no money in m-pesa for sending. [It is a] faster, easier way of saving money".

Another commented that because the M-shwari balance is not reflected with the M-pesa account balance they are less likely to use it because they don't even know it is there. Some respondents felt similarly about M-pesa, citing that when the cash is not at hand, they are less likely to spend it thus increasing savings and enabling them to raise lump sums. The ability to save more with small amounts has also been cited as a reason for the change in savings. One is able to deposit as little as a shilling therefore they do not have to wait till they have a huge amount to save. Whenever they get a little extra, irrespective of the amount, they are able to put it into their M-shwari savings account. M-shwari issues loans based on existing savings and usage of M-shwari therefore the more you save the more you are able to borrow. This encourages some to continue making use of the savings account so that they qualify for bigger loans. This however does not always work as one respondent stated that he is frustrated that he is unable to get a loan despite having regular savings.

The ability to save instantly from your phone also means that you do not have to go to the bank to deposit the money meaning less travel. Not having to travel to the bank was another reason cited by respondents for the change in savings and savings culture. One respondent did not consistently use the saving services and mainly made use of it when she felt the need thus illustrating the flexibility of mobile phone based financial services.

4.3.3 M-shwari Deposits and Withdrawals

The respondents generally made more deposits than withdrawals, thus showing some form of commitment to savings. The ability to save any amount at any time was one of the most cited reasons for using M-shwari and this could be a contributing factor to the number of deposits into the savings account. Another reason for less withdrawal could be that people use this form of saving mostly for emergencies and the number of withdrawals would therefore be dependent on the number of emergencies encountered.

Slightly more women than men withdraw money from their M-shwari accounts more frequently *(See Chart 4).* Majority of the male respondents withdrew funds from their savings account less than once a month whereas majority of the women withdrew funds once a month. Likewise, more women deposited money into their M-shwari account than men. Therefore women use their M-shwari account more frequently than men. Based on these figures it would seem that men tend to retain their savings more than their female counterparts. This could be due to more frequent financial demands needs experienced by female respondents especially as women are generally responsible for household expenses. The deposit numbers show that though withdrawals are frequent, the deposits are even more frequent. This supports the notion brought forward in the *Advancing African Women's Financial Inclusion* report (MFW4A, 2012) which suggests that women are more concerned with convenience of deposits and withdrawals rather than interest income. Majority of the respondents use M-shwari to save for emergencies as well as emergency loans.

4.3.4 Small Loans

Looking at loans, in general, majority of the respondents (26) had taken loans with most having taken out one – three loans. From a gender perspective, eleven out of nineteen women had taken out loans whereas fifteen out of nineteen men had taken loans indicating that more men had taken out loans. This is a reflection of M-shwari users that have received loans, however there are some users who tried to get a loan but they did not meet the requirements. At least two respondents commented that they had attempted to get loans but their requests were denied and they were instructed to continue saving so as to qualify for loans. One M-shwari user who was interviewed said that the amount she is eligible to receive in loans has remained the same despite continuous savings and payment of all loans within the specified thirty days. She said she would still continue saving because that is her main aim for using M-shwari and she likes that she is able to put even as little as 50kshs, which she tries to do daily depending on her day's earnings. Majority of the respondents agree that M-shwari is accessible and that applying for loans is simple and straight forward.

When asked about the six-month fixed deposit savings account that had just been introduced in June most interviewees were interested in making use of it though they were not familiar with it at the time. In fact, one lady proceeded to activate it on her phone during the course of the interview. Another respondent associated the fixed deposit with Christmas. Whether this was part of the marketing strategy or not is not clear, however the respondent seemed more inclined to use the service to save for Christmas which is a time of year generally associated with increased household spending.

Another added benefit of the short term loans is that it assists when one is expecting money, for example, at the end of the month, but they need the cash immediately. This was cited as one of the benefits of M-shwari loans, likening it to pay-day loans that are sometimes offered by loan sharks and other less reliable and sometimes dangerous loan issuers. In this sense, M-shwari offers a safer and reliable alternative. In research conducted in a South African township, two women who received grants on different days gave each other loans to help them through until they received their grant (Collins et al, 2009) thus illustrating the benefits of small short-term loans . M-shwari creates another avenue to get a loan that does not require personal relationships or at least reduces reliance on relatives, friends and the like and this in turn can be beneficial as money has been known to cause rifts even among the closest of friends and family.

Majority of the respondents mentioned that they used the loans they received from M-shwari mainly for emergencies and to cover unexpected expenses. None of the respondents stated that they use the loans for investments, suggesting that M-shwari loans do not make a difference in investment choices but rather they make a difference in saving choices as already discussed. Seventeen of the thirty-eight respondents who use M-shwari agreed that they use loans received through M-shwari to supplement loans whereas fourteen people disagreed and seven were neutral. With regards to loan access, seventeen agree that they were unable to get loans before M-shwari, eighteen disagreed and three were neutral (*See Table10 and 11*).

4.4 Conclusion

Both M-pesa and M-shwari assist in managing cash flow when faced with irregular income. They enable users to keep track of their money as statements are readily available for a small fee and one can keep track and record of transactions through transaction confirmations received via text message. Having access to funds has been cited as one of the main reasons for using M-shwari for savings, users are able to earn interest on M-shwari account and access it whenever they need it thus enabling them to deal with emergencies when the need arises. The ability to access funds at all times also enables users to set aside money for emergencies on an on-going basis. M-shwari therefore enables one to cope with risk and raise lumps sums, even more so with the introduction of a fixed deposit option.

A higher percentage of men use M-shwari, indicating that men are more likely to save for longer periods than women. Women, on the other hand, are generally more active with the services provided by both financial platforms, M-pesa and M-shwari. They perform more transactions with M-pesa and they make more deposits and withdrawals on their saving accounts (M-shwari).

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

This research report explored the influence of financial services on how Kenyans use their disposable income by looking at the influence of mobile banking services on individuals residing in the urban city of Nairobi. Surveys were conducted with a hundred and eight respondents, and six semi-structured interviews were conducted. The study had two main objectives: to determine if financial institutions influence the way people spend their disposable income and the how new forms of financial access, such as M-pesa and M-shwari, influence the way people use their disposable income. The study showed that financial institutions do influence the way people spend their disposable income, but not just any financial institutions. Financial institutions that are accessible with limited barriers to entry, appropriate to serving the needs of the population and affordable to majority of the people do have an influence on the financial choices made by individuals. The study also showed that based on its accessibility, appropriateness and affordability, mobile financial service providers (M-pesa and M-shwari) can influence financial choices.

The research report looked at a number of factors that determine the kind of financial system countries have as well as the level of accessibility and inclusiveness. Institutions in a country determine the social, political and economic decisions made by actors and this in turn influences the behaviour of the general population. Institutions shape economic growth as actors make decisions that will decrease, increase or hinder economic growth within the confines of existing institutions. The political origins view was used to illustrate how political institutions shape the establishment of financial and banking systems. In much the same way that social, political and economic actors make decisions within the confines of existing institutions, so do bankers. For banking and financial systems to provide affordable, accessible and appropriate financial services, strong institutions that support the banking system need to be in place.

The research report also discussed financial institutions and financial development to illustrate the link between financial access and development. Financial development in and of itself does not increase development however it creates an environment which enables socio-economic development. This includes creating mechanisms that enable cash flow management so that people are better able to deal with unexpected income shocks and emergencies. Through shared risk, people are able to access and accumulate funds in a timely manner during times of need. By looking at financial services for poor households and mobile banking, we find that the need for financial services for the poor is crucial especially in light of with irregular and unpredictable incomes. Mobile banking was then presented as a form of digitised financial service that can cater to the financial needs of the poor.

The respondents involved in the study mainly consisted of those with tertiary education, thus implying some form of financial literacy. There were a high number of tertiary educated respondents, however all respondents regardless of education levels made use of mobile banking in more or less the same way. The same applies to gender: both male and female respondents used mobile banking in the same way with non-significant differences in usage that could be attributed to gender. Women however made use of mobile banking services more frequently than men and their uptake of M-pesa and M-shwari was slower than men, meaning that men have been using these products for longer.

The findings from my study were not different from previous studies conducted on mobile banking specifically in the geographically area of Kenya. Whereas most studies concentrated on M-pesa alone, my study also focused on the influence of M-shwari thereby adding to existing studies. Incorporating my findings with that of previous nationwide studies such as the Financial Sector Deepening National Surveys, my study was able to illustrate how new forms of financial services have led to increased financial inclusion and changed the ways in which people use their disposable income. Due to reduced transaction costs and increased trust in de-personalised forms of transactions the uptake of new financial services such as mobile banking has been well received in Kenya and contributed to the reduction of the number of adults who are financially excluded. It has also made saving and getting small loans more accessible and convenient, thereby increasing the likelihood of savings.

In conclusion, based on my findings, though M-pesa and M-shwari have not facilitated a major transformation in the way people do business, it has created an efficient, accessible and affordable vehicle for remittances and savings. Individuals who took part in the study used M-pesa mainly for remittances and less for performing business transactions. By reducing the costs and consistently increasing the number of agents who are part of its network, Safaricom has created an accessible way to send money that does not require a lengthy process or negotiations. In a country with a large number of urban migrants moving from rural areas, M-pesa has a provided a means by which one can send money in a timely manner which is of utmost importance in times of crisis. M-shwari further provides the ability to save the little that you have instantly, thereby cutting down the time spent in going to the bank and keeping money in tins until you have enough to deposit or waiting for the next trip to town.

Financial development does not happen overnight and it is a process that is driven by both individual actors and institutions. As needs arise, financial systems adjust to cater to those needs. In this same way, M-shwari was developed to cater for savings and loans five years after the introduction M-pesa, thus illustrating the transformation of a financial service geared towards promoting financial access and satisfying the needs of the excluded, as well as included.

5.2 Recommendations for future research

The purpose of this study was to examine the influence of financial access on financial choices. It argued that the establishment of financial institutions and banking systems determined the rate of access and inclusion within a country. This study presents opportunities for further studies as outlined below:

- Future research on a large scale with a more sophisticated research tool such as financial diaries can be used to gather more insight into daily use and influence of financial services. A larger and more diverse population size can be used.

- Other forms of new innovative financial tools can be included in future studies so as to give a comparative analysis of different methods of increasing financial access and their effectiveness.

- My study found that women users lagged behind in the uptake of services provided by mobile financial service providers. A future study could look at exploring the gender differences that exist in the acceptance and perception of financial services.

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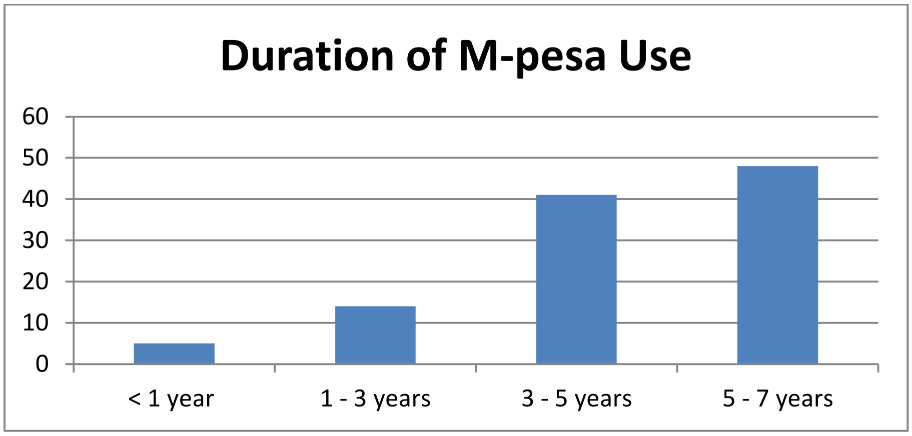
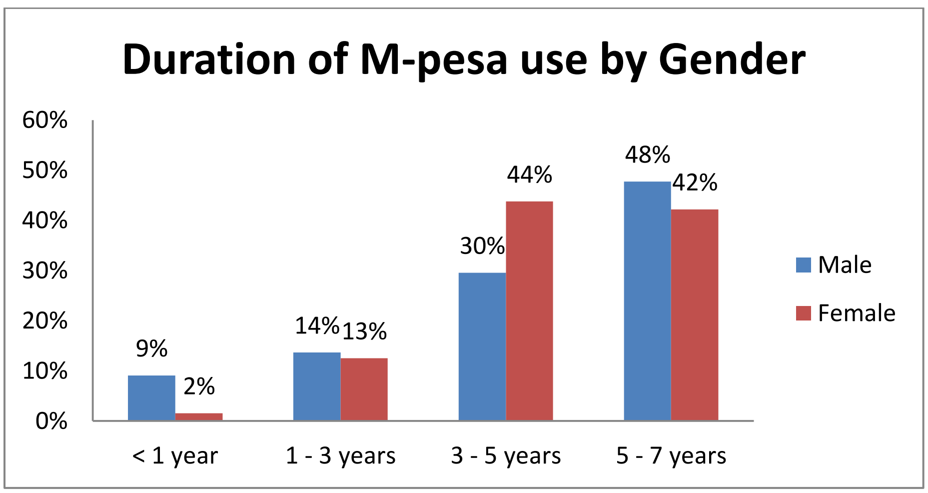
APPENDICES

APPENDIX I: CHARTS AND TABLES

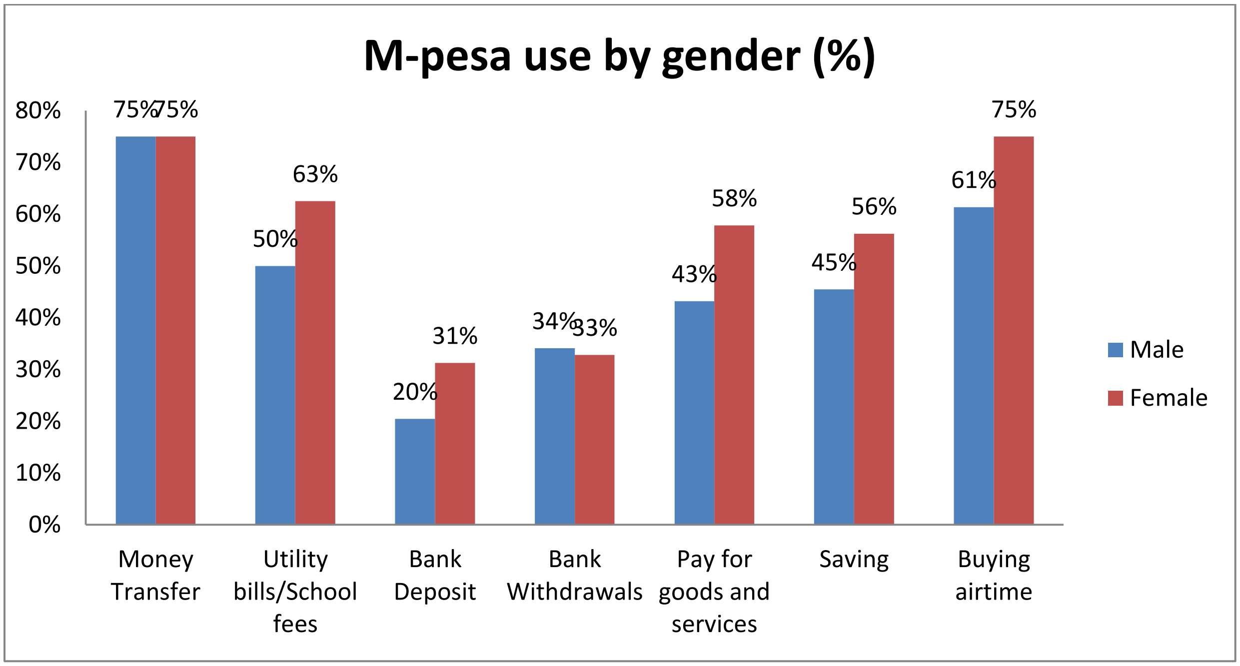
- **Chart 1: Duration of M-pesa Use by years**



- **Chart 2: Duration of M-pesa use by Gender**



- **Chart 3: What do you use M-pesa for? (by gender - % of total gender)**



- **Chart 4: M-shwari withdrawals and deposits by gender**

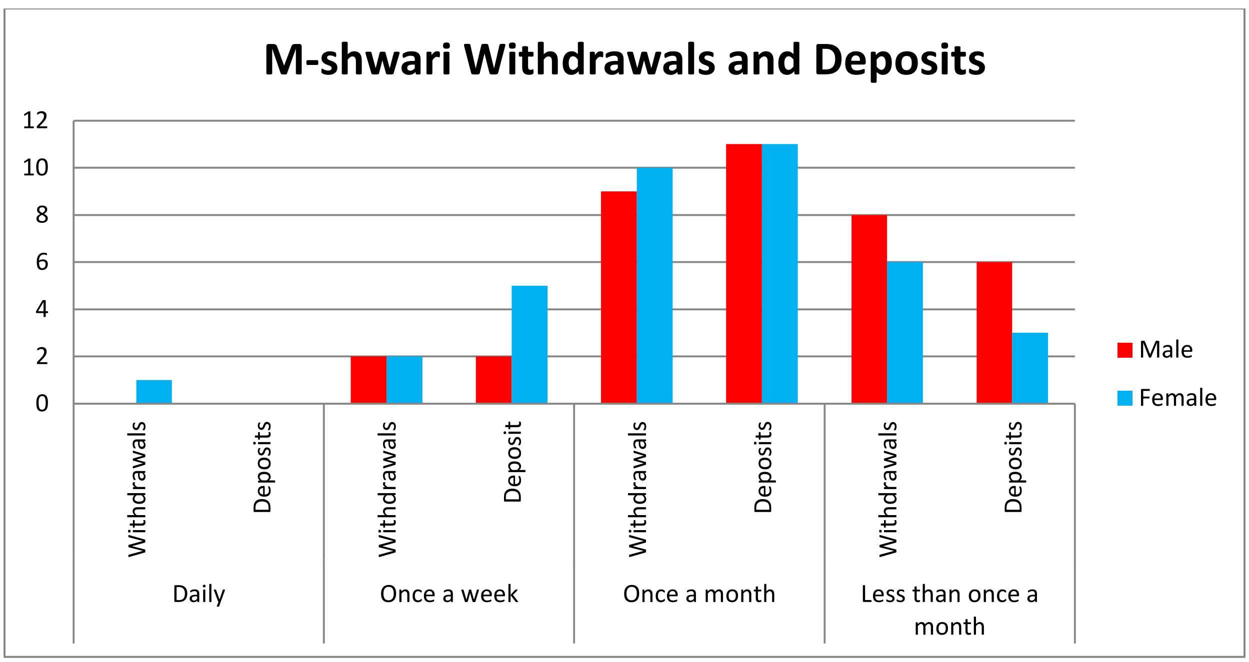
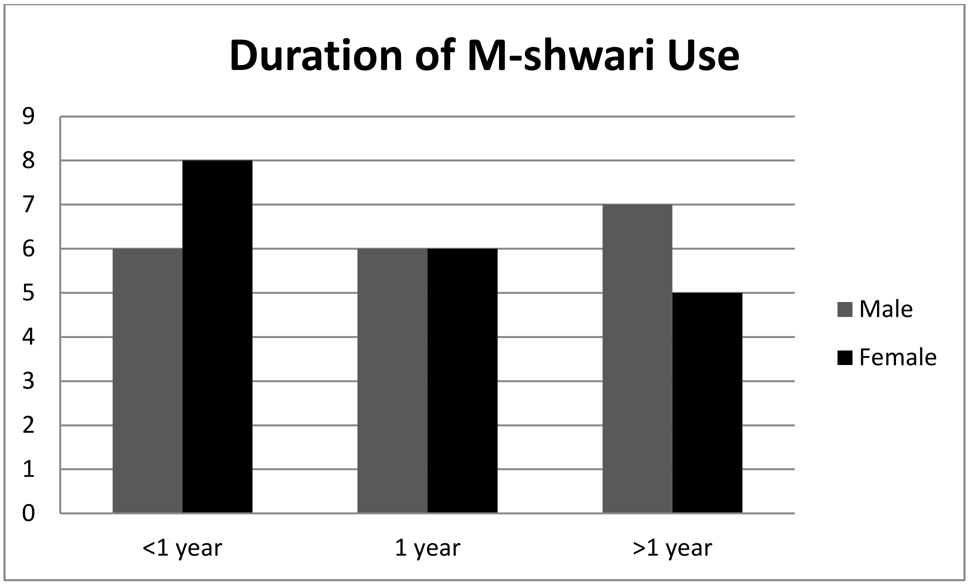


Chart 5: Duration of M-shwari use by gender



- **Table 1: M-pesa users by Age**

Age	Number of Users
< 20 years	2
20 – 35 years	63
36 – 49 years	37
>50 years	6
Total	108

- **Table 2: What do you use M-pesa for? (by Income)**

	Money Transfer	Pay utility bills/school fees	Deposit money to bank account	Withdraw money from bank account	Pay for goods and services	Save money	Buy airtme	Other
< 5,000	5	3	2	3	3	5	6	0
5,000 - 9,999	8	3	5	5	4	7	7	0
10,000 - 29,999	16	11	3	3	10	12	13	0
30,000 - 49,999	21	19	8	8	15	16	20	0
50,000 - 70,999	13	11	7	9	10	11	14	0
80,000 - 100,000	4	4	0	2	3	2	4	0
> 100,000	14	11	4	6	11	3	11	1
Total	81	62	29	36	56	56	75	1

- **Table 3: M-shwari users by age**

Age	No. of M-shwari Users
< 20	0
20 - 35	28
36 - 49	10
>50	0
Total	38

- **Table 4: M-shwari use in relation to duration of M-pesa use**

How long have you been using M-pesa	Do you use M-shwari	
	Yes	No
< 1 year	2	3
1 - 3 years	7	7
3 - 5 years	12	29
5 - 7 years	17	31
Total	38	70

- **Table 5: M-shwari use in relation to use of M-pesa for savings**

	Do you use M-shwari		Total
	Yes	No	
Do you use M-pesa to save	27	29	56
Total	27	29	56

- **Table 6: Has M-shwari changed your savings?**

	Has M-shwari Changed your savings
Yes	21
No	17
Total	38

- **Table 7: M-shwari deposits vs withdrawals:**

	Deposits	Withdrawals
Daily	0	1
Once a week	7	4
Once a month	22	19
Less than once a month	9	14
Total	38	38

- **Table 8: Number of loans received through M-shwari**

Number of loans	Number of recipients
None	12
1 - 3 loans	10
3 - 5 loans	7
>5 loans	9
Total	38

- **Table 9: Number of loans received through M-shwari by gender**

	None	1 -3 Loans	3-5 Loans	>5 Loans
Male	4	6	3	6
Female	8	4	4	3

- **Table 10: Ability to get loans before M-shwari**

I was unable to get loans before M-shwari	
	Frequency
Neutral	3
Disagree	18
Agree	17
Total	38

- **Table 11: Supplementation of loans with M-shwari**

I use M-shwari loans to supplements loans from other sources	
	Frequency
Neutral	7
Disagree	14
Agree	17
Total	38

APPENDIX II: QUESTIONNAIRE

Thank you for taking the time to complete this questionnaire. The questionnaire consists of 4 pages.

- Instructions:
  - Please complete all the sections (A, B and C).
  - Tick your response where applicable and write answers in words where applicable.
  - Should you require additional space to write your answers, use the bottom of the page and indicate the question number

SECTION A:

1. Gender: Male [ ] Female [ ]

2. Age Group
   a) Below 20 years [ ]
   b) 20 – 35 years [ ]
   c) 36 – 49 years [ ]
   d) 50 years and above [ ]

3. Level of education:
   a) None [ ]
   b) Primary [ ]
   c) Secondary [ ]
   d) Tertiary [ ]

4. What is your average monthly income (in Ksh)?
   a) Below 5,000 [ ]
   b) Between 5,000 and 9,999 [ ]
   c) Between 10,000and 29,999 [ ]
   d) Between 30,000 and 49,999 [ ]
   e) Between 50,000 and 70,999 [ ]
   f) Between 80,000 and 100,000 [ ]
   g) Over 100,000 [ ]

5. Please describe your work status (Tick all applicable options)
   a) Student [ ]
   b) Business owner [ ]
   * Type of business ____
   c) Employed [ ]
   d) Other (Please Specify e.g. pensioner/retired. unemployed) __________________________

6. What is your main source of income?
   a) Business [ ]
   b) Employment [ ]
   c) Other (please specify):____

*Other includes income received from rent, shares, allowances, pension etc.

SECTION B:

7. Why do you use M-pesa?____
   ____
   ____

8. How long have you been using M-pesa?
   a) 1 year or less [ ]
   b) 1 – 3 years [ ]
   c) 3 – 5 years [ ]
   d) 5 – 7 years [ ]

9. What do you use M-pesa for:
   a) Business [ ]
   b) Personal [ ]
   c) Both business and personal [ ]
   d) Other (please specify):____

10. Which M-pesa service(s) do you use? (Tick all applicable options)
   a) Money transfer [ ]
   b) Payment of utility bills/school fees [ ]
   c) Depositing money into my bank account [ ]
   d) Withdrawing cash from my bank account [ ]
   e) Payment for goods and services [ ]
   f) Saving money [ ]
   g) Buying airtime [ ]
   h) Other (Please specify)____

11. How many M-pesa transactions on average do you perform on a monthly basis?
   a) 0 – 5 transactions [ ]
   b) 6 – 10 transactions [ ]
   c) 11 – 20 transactions [ ]

d) 21 – 30 transactions [ ]

e) Over 30 transactions [ ]

Please indicate, by marking with an (x), the extent to which you agree with each of the following statements.

For each statement, please select one statement that best matches your level of agreement	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
I find m-pesa to be accessible							
M-pesa is secure							
M-pesa is convenient							
I am able to send money quickly with m-pesa							
I send more money to friends and family with m-pesa							
I prefer to use m-pesa for transactions							
I use less cash for transactions							
I am able to save more money with m-pesa							

SECTION C:

12. Do you use M-shwari? Yes [ ] No [ ]

The following questions are for those who answered Yes to the above question:

13. Why do you use M-shwari?____

____

____

____

14. How long have you been using M-shwari?
    a) Less than one year [ ]
    b) One year [ ]
    c) More than one year [ ]

15. What do you use M-shwari for:
    a) Savings [ ]
    b) Loan [ ]
    c) Both savings and loans [ ]
    d) Other (please specify) [ ]

16. On average, how often do you deposit money in your M-shwari account?
    a) Daily [ ]
    b) Once a week [ ]
    c) Once a month [ ]
    d) Less than once a month [ ]

17. On average, how often do you withdraw money from your M-shwari account?
    a) Daily [ ]
    b) Once a week [ ]
    c) Once a month [ ]
    d) Less than once a month [ ]

18. Has access to M-shwari changed your savings?
    Yes [ ] No [ ]

19. If yes, how has it affected your savings: ____
    ____
    ____
    ____

20. How many loans have you received through m-shwari?
    a) None [ ]
    b) 1 - 3 loans [ ]
    c) 3 - 5 loans [ ]
    d) More than 5 loans [ ]

21. How has access to loans via M-shwari impacted your life, if at all?___________________________
    ____
    ____
    ____

Please indicate, by marking with an (x), the extent to which you agree with each of the following statements

For each statement, please select one statement that best matches your level of agreement	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
M-shwari is an accessible way of saving money							

I am able to save more money with m-shwari							
I am more inclined to save money with the introduction of m-shwari							
M-shwari has made small loans more accessible							
I was unable to get loans before M-shwari was introduced							
I use M-shwari loans to supplement loans from other sources							
Applying for loans using M-shwari is simple and straight forward							

APPENDIX III: INFORMATION SHEET AND CONSENT FORM

CONSENT FORM (to be returned with questionnaire)

I hereby agree to participate in research regarding M-pesa and M-shwari. I understand that I am participating freely and without being forced in any way to do so. I also understand that I can stop this survey at any point should I not want to continue and that this decision will not in any way affect me negatively. The purpose of the study has been explained to me and I understand what is expected of my participation. I understand that this is a research project that whose purpose is not necessarily to benefit me personally.

I understand that this consent form will not be linked to the questionnaire/interview, and that my answers will remain confidential.

____________________ __________________________

Signature of Participant Date

Additional consent for audio recording:

In addition to the above, I hereby agree to the audio recording of this interview for the purpose of data capture. I understand that no personal identifying information or recording concerning me will be released in any form. I understand that these recordings will be kept securely in a locked environment and will be destroyed or erased once data capture and analysis are complete.

____

Signature of Participant Date

PLEASE TEAR THIS SECTION AND KEEP

INFORMATION SHEET

Study title: How access to financial services influences how Kenyans spend their income: A case study of M-pesa and M-shwari

Good day,

I am Jill Oyier from Wits University, Johannesburg. I am doing research on M-pesa and M-shwari. Research is just the process to learn the answer to a question. In this study I want to learn how M-pesa and M-shwari changes the way in which people spend their income.

I am inviting you to take part in a research study. You have been selected to take part in the study because you are a M-pesa/M-shwari user. The study involves you answering a questionnaire with questions related to how you use M-pesa and M-shwari. The questionnaire will take 5 – 10 minutes to complete. Participation is voluntary and your refusal to participate will involve no penalty or loss and you may discontinue participation at any time. No payment will be offered for your participation.

Absolute confidentiality and anonymity is guaranteed. Personal information will not be disclosed and you shall remain anonymous. Your name will not be recorded on the questionnaire and no one will be able to link you to the answers you give.

For further information/reporting/complaints with regards to the study you may contact:

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