BRANCHLESS BANKING IN KENYA

DOES MOBILE BANKING AND AGENT BANKING HAVE THE POTENTIAL TO LIFT THE WELFARE OF LOW-INCOME INDIVIDUALS?

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Abstract

Branchless banking, the use of alternative delivery channels such as mobile banking and agent banking, is becoming increasingly popular among commercial banks in Kenya and in other developing countries. It is believed to reach the low-income and rural individuals as well as making these individuals better off. This study is an attempt to examine whether the use of mobile banking and agent banking can live up to the promise of lifting the welfare of low-income earners in Kenya. Potential welfare gains were identified and these gains were later explored in a household survey. The survey examined the effects from these non-traditional channels on low-income individuals based on their ability to save, to invest and to consume as well as the effects on their overall welfare in terms of food security and health. Findings from this study suggest that mobile banking and agent banking have facilitated the delivery of financial services to previously excluded individuals in Kenya and the result is an economic lift in overall welfare. This paper therefore shows that alternative delivery channels can work as a bridge between the institutions and the excluded, given that the right kind of financial tools are provided in order for opportunities to be created through financial inclusion. Finally, for these non-traditional delivery channels to be effective, institutions need to be creative as well as understand the low-income earners and their financial needs.
### Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>ASCAs</td>
<td>Accumulation Savings and Credit Associations</td>
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<td>CGAP</td>
<td>Consultative Group to Assist the Poor</td>
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<td>FSD</td>
<td>Financial Sector Deepening</td>
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<tr>
<td>CBA</td>
<td>Commercial Bank of Africa</td>
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<td>CBK</td>
<td>Central Bank of Kenya</td>
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<td>KCB</td>
<td>Kenya Commercial Bank</td>
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<td>MFI</td>
<td>Microfinance Institution</td>
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<td>M-PESA</td>
<td>A money transferring system developed by Safaricom and Vodafone. The letter M stands for Mobile and PESA is the Kiswahili word for “money”.</td>
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<tr>
<td>RoSCAs</td>
<td>Rotating Savings and Credit Associations</td>
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<td>SACCO</td>
<td>Savings and Credit Cooperative Societies</td>
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1. Introduction

The use of formal financial services such as credit, savings, insurance and remittances is commonly referred to as financial inclusion. An extensive body of research suggest that access to fundamental financial services is crucial. It enables people to save for the future, invest in profitable business opportunities and to protect themselves against unpredictable shocks (Demirgüç-Kunt, et al., 2008). Despite the fact that many adults in Kenya are assumed to be lacking access to these services there has been great progress in the past years as branchless banking has transformed the financial environment. By using alternative delivery channels, such as mobile banking and agent banking, the idea is to go beyond branches and increase the accessibility of financial services. Branchless banking is believed to increase the use of financial services among financially excluded adults and is therefore becoming an increasingly popular phenomenon in many developing countries. This paper sets out to try exploring the opportunities with branchless banking as a way to overcome barriers to financial access in developing countries such as Kenya. Although new ways of delivering financial services have received a lot of positive reactions in Kenya, the question remains whether these services can live up to the promise of lifting the welfare of low-income earners. The main purpose of this thesis can therefore be summarized in the following questions:

- What are the potential welfare gains from using branchless banking in Kenya?
- Can branchless banking live up to the promise of lifting the welfare of low-income earners in Kenya?

By highlighting the opportunities and challenges with branchless banking, the aim is to show that it is possible to lift the welfare of low-income earners by creating financial products that coincide with the financial needs of these particular customers. In order for alternative delivery channels to be successful, institutions need to realize the benefits from being creative as well as attentive to the financial needs of low-income earners in order to fully reach the financially excluded. To capture any potential welfare gains from using mobile banking and agent banking in Kenya, a household survey was
carried out in Kenya. The questionnaires were evenly distributed between both sexes and the distribution took place in both urban and rural parts of the Nairobi region. This was a deliberate choice for the survey to detect any variations among the respondents in terms of individual characteristics. The survey allowed this study to test whether predictions on potential welfare gains were found in a selected group of households. Interviews were also undertaken with representatives from the industry as well as with organizational representatives in order to obtain a complete picture of the effects from mobile banking and agent banking on low-income earners.

The paper begins with an overview of Kenya’s financial landscape by identifying three types of institutions: Formal, formal other and informal. This background overview is then followed by a brief presentation of the theoretical framework and previous literature on access to financial services as well as branchless banking. The social value that these services bring is then explored as potential welfare gains are identified. The second part of this study tries to determine if the use of alternative delivery channels have the potential to lift the welfare of low-income earners in Kenya by making the right kind of financial services accessible to them. The theories suggesting that greater access to financial services is beneficial for low-income individuals in developing countries was tested through a household survey that explored the welfare impacts from branchless banking. Finally, the findings from this study is presented and combined with reflections based on the conceptual framework. The study brought attention to some potential challenges with mobile banking and agent banking and these are presented in the end of this paper.
2. Background

In Kenya, the financial environment has changed dramatically over the last decade as a result of changes in market structure, but above all, as a result of the emerging branchless banking. One of the main contributors to this transformation is the technological progress that has been taking place in Kenya in the past 10 years allowing financial institutions to provide their customers with financial tools such as mobile banking. An important starting point for mobile banking in Kenya was the launch of M-PESA in 2007. This service started off as a money transferring system created by the worldwide cell phone provider Vodafone and its Kenyan affiliate Safaricom. In 2011 the service had roughly 15.2 million national users (almost 40% of the adult population) and about 30,000 agents throughout Kenya. One explanation for its huge success is the way the system is integrating with the formal financial sector as many commercial banks as well as other formal institutions provide their services using M-PESA as a channel. The possibilities with M-PESA have therefore widened and the system now includes all services covered in financial inclusion, namely remittances, credit, savings and even insurance. Another important contributor to the transforming financial landscape is agent banking, allowing institutions to hire agents to provide a wider customer base. Due to strong competition amongst commercial banks, actors within the formal sector is now realizing the benefits from adopting new ways of delivering their services so that even the low-income and rural individuals can access them (FSD, 2011, 2012).

Although the mobile banking and agent banking platforms are believed to have had a great impact on the financial environment in Kenya it is not the only contributor to the economy’s financial development. Another contributing factor to this change has to do with the structural changes taking place during the past years. One illustrative example is the Microfinance act that became effective in 2008. The implications from this regulative system is that the Central Bank of Kenya (CBK) uses licensing and supervision in order to allow deposit-taking MFIs to hold money from the public. The purpose of this regulation is to make the financial market more efficient and accessible while encouraging competition among MFIs. Other financial institutions have followed
this path as they are registering for a license as a deposit-taking financial institution. As a result of these regulatory systems, the number of formal institutions has increased as former unregistered financial institutions are registering to be able to hold deposits from the households (Central bank of Kenya, 2008).

In order to understand the financial environment in Kenya one needs to look at the shape and the divisions within the financial market. One organization working towards financial deepening in Kenya, Financial Sector Deepening Programme (FSD Kenya), distinguishes between financial institutions based on formality. The different categories are *Formal, Formal other* and *Informal*, and they are presented below.

*Formal institutions*

The first category is formal institutions and it represents all registered and regulated institutions. Examples of such institutions are all commercial banks, PostBanks, insurance companies as well as deposit-taking MFIs and SACCOs. Formal institutions have grown considerably in Kenya the last decade and are responsible for making 22.6% of the Kenyan population financially included. One of the leading commercial banks is Equity Bank capturing 46% of all the formal bank accounts followed by Co-operative Bank, Kenya Commercial bank (KCB) and Barclays. Since the imposition of the Microfinance act and similar regulatory systems, more financial institutions are recognized as formal institutions and this effectively increases the number of formally included adults. Among those adults who are financially included 9.1% are using SACCOs and 3.4% are using a MFI including both regulated and non-regulated institutions. In Kenya three deposit taking MFI (Women’s Finance Trust (KWFT), Faulu Kenya and Jamii Bora) make up for 10% of the formal accounts in the country. Since 2010 Jamii Bora Kenya Ltd. has transformed their structure into including a fully-fledged commercial bank, Jamii Bora Bank, still targeting the low-income individuals (FSD, 2010, 2011). Although the use of formal institutions has been low in the past, they are becoming increasingly popular among Kenyans as people are realizing the benefits from using these reliable and often more affordable services. Formal services are also becoming more attractive to a wider customer base as the commercial banks in Kenya are starting to develop ways to adapt their products to low-income users.
Formal other

The second category comprise of institutions that are registered but un-regulated and are therefore classified as formal other. Today this category covers a big part of financial services used by many Kenyans and partly responsible for this development are the emerging mobile transferring systems with M-PESA in the lead. This service was initially created to make mobile transfers possible for individuals and companies. Today M-PESA has developed into being much more than just that, as it is believed to serve as a great complementing financial tool to the formal sector. The SACCOS and MFIs that still have not registered as a deposit-taking institution are captured in this category. The fact that a number of institutions are leaving this category for formal institutions seems to be weighed by the fact that M-PESA and other similar services draws many customers. As a consequence the category formal other still cover up to 17.9% of the adult population in Kenya (FSD Kenya, 2011).

Informal institutions

The last category is the informal institutions, which include all un-registered institutions that are not covered by the two other categories. Moneylenders and shopkeepers are types of informal services that still play a big role in the lives of Kenyans seeing as these services usually are easily accessible. Other examples of informal institutions are ASCAs (Accumulation Savings and Credit Associations) and RoSCAs (Rotating Savings and Credit Associations). The general concept of these associations is to pool resources by forming a group where everyone is obliged to regularly contribute with an equal amount of money in order for everyone to collectively save and borrow money from this pool. The difference between the two is that, unlike the RoSCA, the money is not automatically reimbursed to the person lending the money once the money has been collected within the ASCA. Development shows that these institutions are becoming less important as providers of financial services in Kenya as other service providers are gaining more influence. However, informal finance provided by a friend, family member or another individual or group is still considered an important source of finance as it serves up to 26.8% of the adult population (FSD Kenya, 2011).
3. Conceptual framework

3.1 The importance of financial access

Studies on the relationship between financial access and the impacts on households in developing countries have grown considerably in recent years. Many researchers are studying the effects from financial deepening on low-income earners in countries such as Kenya. There is a need for this kind of research seeing as most of the theoretical framework on financial access has been dominated by studies made on developed countries and these studies might therefore not be applicable on developing countries. Many researchers believe that in order to lift the welfare of low-income individuals in developing countries it is vital to provide them with fundamental financial services such as savings, credit, insurance and remittances (Beck et al., 2009). People that lack access to these fundamental services need to rely on their own resources in order to create opportunities to foster their economic welfare. Financial outreach is the number of adults served by formal financial services. By increasing the number of adults served by formal institutions this is believed to enhance the welfare of those financially included adults. Apart from the direct welfare gains that are the main focus of this paper, there are also potential indirect gains that could be realized from financial inclusion such as job creation and wage increases. The World Bank (Demirgüç-Kunt, et al., 2008) made an attempt to explain the importance of financial services. In the following subsections these services are introduced along with a description of the implications from having access to these services.

Remittances

Financial institutions provide people with payment services channeled through different forms of transactions. Making transactions available will facilitate the daily lives of individuals as well as it will facilitate trade within in country. Access to transaction-services will also reduce costs for the provider as well as the user and this creates more incentive to use financial services (ibid).
Savings
The ability for individuals to save and earn interest on their money will help smooth consumption over time to fit their consumption behavior. Apart from consumption smoothing, savings can protect these individuals from unpredicted shocks through a buffer. Financial institutions will help pool savings and make efficient use of these resources through investments (Demirgüç-Kunt, et al., 2008).

Credit
As resources are pooled from savings, this will make credit available allowing people to seize profitable investment opportunities and make smart business choices. Enabling people to act on profitable investment opportunities will create an incentive to be innovative and will therefore contribute to the actualization of innovative business ideas that will foster the growth of the economy as a whole (ibid).

Insurance
Making insurance available at an affordable price will reduce the uncertainty for vulnerable individuals allowing them to focus on other things such as innovative business ideas. Financial institutions will insure these individuals against risk and increase their ability to promote their economic welfare (ibid).

When financial institutions work efficiently, these institutions can provide people with the right kind of financial tools in order to channel resources and make efficient use of them. Financial depth is believed to be pro-poor both in an absolute sense, implying a reduction in overall poverty, as well as in a relative sense, implying that the income gap is becoming less significant. Empirical studies have shown that the positive welfare effect from financial deepening is not dominated by an overall growth instead this growth is concentrated in the low-income groups (Beck et al., 2009). Although financial deepening is believed to lift the welfare of low-income earners, empirical studies on the direct link between financial deepening and poverty reduction seems to be somewhat weak. Well-functioning financial institutions can therefore see to the financial needs of individuals creating opportunities to enhance their economic welfare. If the financial market fails to provide people with the appropriate resources they need to rely on their own resources. If institutions are not making good use of the resources that they
mobilize, the market will not work efficiently. In any of these scenarios opportunities can be missed and gains from financial deepening might not be realized (Demirgüç-Kunt, et al., 2008).

It is important to distinguish between access to and use of financial services seeing as access is determined by the supply of financial services and use is determined by both supply and demand. The fact that institutions are making services available to people does not automatically imply that the public will use them. Individuals might choose not to use the product if the financial products available do not match their financial needs. It should therefore be of great interest for institutions to understand the behavior of people by looking at their specific demand when it comes to financial services. Involuntary exclusion is strongly associated to barriers to access and these usually occur out of market failures. Voluntary exclusion, on the other hand, refers to those people who have access to financial services but for some reason choose not to use the services that are provided. Explanations for voluntary exclusion may vary but the main explanations include religious or cultural reasons or indirect access to services through a family member or friend. Policymakers are not overly concerned about voluntary exclusion seeing as these people are not demanding the service and are therefore excluded by choice. Attention and resources are therefore directed towards combating involuntary exclusion by reducing barriers to access (ibid). A foundation of potential barriers to access will be established in the following section.

3.2 Potential barriers to access

It has been argued that the access gap is not a result of lack of resources but rather a result of formal institutions choosing not to provide low-income earners with services due to the risk that it constitutes. The risk of lending to individuals with a lack of resources is usually reflected in high costs as well as problems with information asymmetries and Moral hazard. The high costs are often a result of the low-income borrowers not being able to repay the loan. When the interest rate charged by the institution has a negative impact on the incentives and the actions of the borrower there is a problem with moral hazard. Adverse selection, on the other hand, occurs when the interest rate attracts individuals that constitute a high risk (Stiglitz et al., 1981). Based on these issues, financial institutions are typically careful when giving out loans to individuals with a lack of resources and this is reflected in the limited number of
institutions providing high-risk individuals with loans. When the market fails to provide all individuals with the appropriate financial instruments market failures may occur causing barriers to financial access to arise. Financial markets characterized by imperfect competition, lacking infrastructure or asymmetric information are indications of some kind of market failure. These market failures may give rise to barriers to access associated with the cost, distance or another factor preventing low income-individuals from using the service (Allen et al., 2012). The theoretical framework on barriers to access is dominated by the New Institutional Economics and its focus on market failures and transactions costs. The theory suggests that barriers associated with physical distance, documentation requirements and so on will lead to transactions costs and market failures. As a consequence, problems with moral hazard and adverse selection are likely to occur and a lack of supply of financial services may arise (Claessens, 2006).

Although many developing countries including Kenya are making great progress towards financial deepening several potential barriers to access still prevent certain people from using formal services. In a study made by Beck et al. (2007), a survey on financial access was carried out in 62 countries and in what follows is a summary of the most common barriers to access found in this research. Below are four main barriers to access and all these barriers were shown by the authors to have a negative impact on financial outreach as they prevent people from using financial services.

*The proximity barrier*

The main barrier to access is believed to be the lack of physical presence by formal financial institutions. There are numerous ways to measure the proximity to financial services although the more common ones measure branch and ATM penetration as well as distance. Another issue associated to proximity has to do with the fact that not all bank outlets offer the customers the whole range of services in order to fill the financial needs of households. The proximity barrier is believed to be the main obstacle preventing people from having access to formal services in developing countries where distance is a major issue. It is often the rural population that is most affected by this barrier seeing as the areas that they live in usually are remote areas with lacking infrastructure (Beck et al., 2007).
The high cost barrier

Another main barrier to access is the costs associated with opening a formal account as well as using it for transactions and other financial services. Creating these high cost barriers are the minimum amount of money required in order to open an account, the cost of making a transaction or other fees associated with a formal account. This constitutes a barrier particularly for the low-income earners who lack sufficient resources in order to open and use a formal account (Beck et al., 2007).

The documentation requirement barrier

Documentation requirements also work as a barrier to access seeing as it excludes many adults who fail to provide necessary documentation. The documentation requirement can constitute a problem seeing as many low-income individuals in developing countries are unable or have difficulties to get hold of formal documents such as identity cards or wage slips (ibid).

The information barrier

Another barrier to access is the fact that there might be an issue of trust due to asymmetric information causing problems of moral hazards and adverse selection. The group of people that is most likely to be affected by this barrier is the group referred to as the unbankable. The unbankable consists of people who are considered a high lending risk or who lack sufficient earnings in order to obtain access to financial services (ibid).

When exploring barriers to financial access in countries with different characteristics Beck et al. (2007) found that the stricter the regulatory framework is on the financial system, the higher are the barriers to access. Economies with stricter regulations on the formal financial sector often require more documentations and higher minimum balances in order to open an account. Furthermore, the requirements on collateral in order to obtain a loan are usually higher in these economies and finally there are usually high restrictions put on financial services carried out through alternative delivery channels.
3.3 The use of financial services in Kenya

In general terms, financial inclusion only refers to the use of financial services categorized as formal and formal other. It does therefore not include the use of informal institutions, which constitute a big portion of the financial services used by many individuals in developing countries. By overlooking the fact that informal institutions often serve an important role for adults in developing countries this might reflect the reality of financial access in a somewhat distorted way. A study made by Allen et al., (2012) looks at financial inclusion among developing countries and it shows that on average only 41% of all adults are formally included. According to this study the number of adults that are formally included in Kenya is significantly lower than the average among developing countries as only 22.6% of all the adults report having an account at a formal institution. However, if you consider all three forms of financial institutions in Kenya the number of financially included adults are considerably higher. Between 2006 and 2009 the overall financial inclusion among adults increased from 58.7% to 67.3% when taking all forms of institutions into consideration. The general pattern during this time-period shows that less people are financially excluded due to an increases usage of financial services categorized as formal and formal other. The informal sector witnessed a small increase although the number of adults relying only on informal services reduced significantly mainly as result of the success of M-PESA (FSD Kenya, 2011).

Studies made by FSD Kenya are showing an increase in overall financial inclusion from 18.9% to 22.6% between 2006 and 2009. Although services are becoming more available in remote areas, the use of financial services in rural areas remain low as only 17.6% of the rural segments of the population report having an account at a formal institution. The male population is dominating the financial use in the country, 27.9% of all men have a formal account meanwhile only 17.8% of all women report having a formal account. When FSD Kenya studied the savings behavior in the country, they found that only about half of the population is using some kind of savings product (formal, formal other or informal) and this number has not increased significantly between 2006 and 2009. However, the number of people using some kind of loan product did increase during this period although the most drastic increase has been witnessed in the use of remittances. A major contributor to this increase is the success of M-PESA and as a result more than half of the population had received money in 2009 meanwhile only 16.5% of the adults had received money in 2006. In contrast, the uptake
of insurance products in Kenya has remained low and the number of people with an insurance product during this time period was more or less unchanged (FSD Kenya, 2009). The data provided by FSD Kenya shows that there has in fact been an increase in the use of financial services between 2006 and 2009 and it has probably continued to increase since then. However, the use of insurance products as well as savings products remain low indicating a great gap in financial access. Financial institutions and policymakers therefore have a lot to cope with in order to deal with the challenge of increasing savings and the number of insured individuals.

Although the informal sector is not expanding much, these findings show that informal institutions still play a significant role in providing people with access to basic financial services. As been argued by many researchers including Susan Johnson and Max Nino-Zarazua (2011) it is important to look at the contributions of financial institutions other than formal as they serve a good complement to the formal sector. In order to obtain a representative picture of financial access it is therefore important to include data from informal and semi-formal (formal other) institutions as they still contribute to financial inclusion in many developing countries. Instead of fighting the integration of the formal and the informal systems one should consider these systems as complementing each other during the transition phase towards an expanding formal sector. Highlighting the importance of other sectors is the social value added through the integration between formal financial services and the use of non-traditional channels provided by semi-formal institutions such as M-PESA.

**Targeting the low-income earners**

Traditionally in developing countries, the formal financial system is shaped to fit wealthy individuals as well as large firms and therefore giving a disadvantage for individuals and firms with limited resources (Claessens, 2006). The financial needs of a low-income customer differ from other customers in several ways. Firstly, the services provided by the institutions have to be easily and quickly accessible by the user to meet their generally urgent need for credit. Secondly, because of lack of resources financial services need to be affordable and the total costs need to be transparent for the person to be able to use the service. Finally, another major aspect is the time-restrictions of the repayments, which have to be flexible in order to match the uneven income-levels often characterized by the low-income user (Collard et al., 2005).
In Kenya, many commercial banks are now moving away from the traditional view by targeting those previously called unbankable. This idea of targeting the low-income earners was originally adopted by the MFIs and has now been a widened concept within the formal sector in Kenya. In a study made by Allen et al. (2011), the authors tries to evaluate the economic impacts on households generated by Equity Bank, one of Kenya’s leading commercial bank targeting the low-income earners. They found that the strategy to target the low-income and rural individuals in Kenya has given results as Equity Bank have had a great positive impact on outreach among the previously excluded adults. Furthermore, they argue that Equity Bank has been able to tailor formal financial services that meet the needs of low-income earners. The way that the bank has adapted their products to people with limited resources shows in the fact that it provides their customers with micro-loans with a small collateral requirement. Another thing is the fact that opening an account does not require a minimum balance, it only requires a valid identification card and a photo. The approach to target those who are traditionally excluded is an active strategy as they call themselves a growing Microfinance bank (Equity Bank). By making these tailored financial services available on the mobile phone and by hiring agents to increase accessibility this has probably deepened the penetration of these services further. Although Equity Bank has been taking a leading role in the development towards making banking more accessible to the low-income and rural citizens, other banks are quickly catching up as they are developing new ways to reach those who are typically not served by formal financial services. A summary of some illustrative examples of methods used to attract these customers is presented in the following section along with potential gains from using these alternative ways.
4. Potential welfare gains from using branchless banking in Kenya

4.1 Filling the access gap with branchless banking

When financial institutions are using alternative delivery channels such as agent banking and mobile banking in order to reach more customers they are taking part in branchless banking. These alternative delivery channels are mainly believed to overcome the barriers to access associated with high costs and proximity although other barriers to access may also be overcome through branchless banking. While widening access to financial services this will effectively reduce the number of financially excluded people. Since branchless banking is a relatively new phenomenon the literature on the subject is quite limited. Nevertheless, it is commonly believed that the use of alternative delivery channels will increase the accessibility of services as well as lower the costs for both customers and financial institutions (Ivatury et al., 2008).

In order to reach the financially excluded individuals, alternative delivery channels can work as a bridge between the formal sector and the low-income individuals. In areas where the infrastructure is insufficient for banks to operate within or if the costs of having an actual branch in that area is too high, the bank can choose to hire an outlet to take care of certain bank errands that need physical presence. This would enable more people to get access to formal services meanwhile keeping the costs of doing so low for the financial institution providing the service. The fact that households do not need to visit an actual branch also creates more convenience for customers. Inconveniences that can be overcome through branchless banking include the need to travel long distances to reach a branch or having to endure long queues to get the assistance that they need. Another benefit from using branchless banking is the fact that the document requirements seem to be lower with alternative delivery channels, especially with mobile banking (Informant 1).

When services become accessible to a wider customer base this could potentially increase the savings rate as well the use of credit, remittances and insurance among those previously excluded. This would as a result complete the goal of increasing overall financial inclusion by developing products that are appealing to the financially excluded. However, the fact that financial services are becoming available to a wider crowd does
not necessarily imply that low-income individuals will participate in this development. Studies made by the Consultative Group to Assist the Poor (CGAP), an organization working towards financial deepening, have shown that in developing countries few low-income individuals adapt to branchless banking services at an initial stage (Ivatury et al., 2008). In order for the poor segments of the population to adapt to the service it is important for the service provider to develop products that meet their needs in terms of product characteristics as well as price. When the service has grown and people are adapting to the service then the benefits from branchless banking can be realized (McKay et al., 2010).

When financial institutions integrate with alternative delivery channels it is almost exclusively the commercial banks that are integrating with the new branchless banking platform. Although these platforms are usually open for other institutions to use, in reality they rarely do participate in branchless banking, probably because of lack of resources but above all because of their lack of success with these services. In fact, observations from Kenya and other developing countries have shown that once MFIs use these channels they have had little success in getting repayments on-time as well as fewer people are attending group meetings (Informant 2). Because the expansion of branchless banking is mainly lead by the commercial banks this thesis will mainly examine the interaction between banks and branchless banking platforms.

4.2 Branchless banking in Kenya

In Kenya, many commercial banks are trying to move away from the traditional view that banks are for wealthy people by targeting a wider spectrum mainly consisting of low-income and rural individuals. To enhance the use of financial services, many financial institutions in Kenya are using alternative delivery channels in order to reach customers. Examples of such alternative delivery channels include mobile banking platforms and agent banking platforms aiming at widening the customer-base. The main objective is to offer the customers easily accessible and affordable services in order to reach a greater mass. As a consequence, many financial institutions in Kenya have joined the movement towards branchless banking and today most commercial banks offer some kind of branchless banking product enabling customers to reach their products without the physical presence of a branch. The integration with branchless banking
channels have had a great impact on the financial development in Kenya and a big part of this has to do with the deep penetration of mobile phones the last decade.

In the end of 1990 only about 3% of the Kenyan population owned a mobile phone compared to 93% in 2011 (Demomynes et al., 2012). The deep mobile penetration opened up for new possibilities using alternative delivery channels in which financial institutions could widen their customer base and as a consequence new platforms were built. Other branchless banking services, such as hiring post offices and retailers as agents, have shown to be very successful in serving low-income and rural individuals with fundamental financial needs. However, the financial development in Kenya has been dominated by the great expansion of mobile banking and this might not have been possible without the great expansion of mobile phone users in recent years (FSD Kenya, 2011). There are many ways in which banks can use alternative delivery channels to capture additional customers although this study will focus exclusively on the impacts from mobile banking and agent banking.

**Mobile banking**

The service that has gained most attention within mobile banking in Kenya is the successful mobile-based money transferring system M-PESA, provided by Vodafone and its Kenyan affiliate Safaricom in 2007. The mobile network providers took advantage of the fact that there was an access gap in terms of safe and affordable services that allow you to send, withdraw and deposit money through your mobile phone. The fact that most Kenyans owned a basic mobile phone created an opportunity to use mobile-based financial services that only required having a phone with sms-function (Jack and Suri, 2011). As been argued before by Beck et al. (2007), in economies with strict regulations on the financial sector there tend to be more restrictions on the use of alternative delivery channels such as these. The fact that the regulatory framework on financial services in Kenya has not been as strict as in many other countries has enabled mobile banking to flourish before the restrictions came along. This enabled Safaricom to widen the customer base through the M-PESA platform and eventually this platform was combined with formal financial services (Informant 1). Today many financial institutions in Kenya use the services provided by Safaricom as a way to reach out to customers. In order to understand the current financial development in Kenya some
illustrative examples of the deep penetration of mobile banking services on the financial market will be presented.

In 2010, Safaricom developed a new product in collaboration with Equity bank, one of the leading commercial banks in Kenya. Together they launched a completely mobile-based service called M-Kesho providing their customers access to financial services consisting of micro-credit, micro-savings and micro-insurance. The uptake on this product was quite good and within 6 months of its launch it had reached more than 0.5 million customers (Demomynes et al., 2012). Two years after the launch another commercial bank, Commercial Bank of Africa (CBA), went in collaboration with Safaricom and developed a similar product called M-Shwari. Along with providing customers with credit and remittance services, this product was mainly developed with the aim focus of increasing savings by offering higher interest on the money you save. The uptake on Safaricom’s products remained high as M-Shwari was able to reach a staggering 2.5 million customers after just 4 months of its launch (Commercial Bank of Africa, 2012). These partnerships gave both banks the possibility to ride on Safaricom’s wave of existing customer base and thus widening their own customer base. The fact that Safaricom has a wide and diverse customer base is yet an advantage for the banks as the mobile operator has been able to reach not just the wealthy but also many of the poor and the rural parts of the population, i.e. the unbankable. Another recent example is a mobile-based insurance service called Salamasure developed by Safaricom and UAP, one of Kenya’s leading insurance company, although the effects of this particular product remain to be seen (UAP). These examples show that the possibilities of mobile technology are endless and there are ways to reach the unreachable that do not include actual branches. Despite the expansion of products available with mobile banking, the main focus from the perspective of the mobile providers is still the mobile payments (Ivatury et al., 2008).

Partnering up with mobile network providers is becoming increasingly popular and by 2012, 17 banks had created their own mobile banking platform through a partnership with a network provider. The number of transactions continue to increase at a rapid pace as a consequence of mobile banking (CBK, 2012). Mobile banking is divided into two categories, partially and fully integrated mobile banking services. Access to partially integrated services require an existing bank account meanwhile a fully integrated services only requires that you are a registered customer at the mobile
network provider (Demombynes et al., 2012). M-Kesho and M-Shwari are both examples of fully integrated mobile banking services and these services have gained a lot of recognition in Kenya. However it remains a fact that these methods of delivering financial services are relatively new and that little research has been done on the effects of these services.

Agent banking

Another important alternative delivery channel used by many formal financial institutions in Kenya is the use of a third party to expand the market. By hiring an agent, such as post office or a retailer, the financial institution is able to reach those without access to an actual branch. While some products can be accessed through mobile services, some products still require physical presence and the fact that a bank can hire an authorized agent to deal with these errands will make the product more accessible as well as affordable. The agents therefore fill an important role in that they provide people with the ability to make withdrawals and deposits without having to go to an actual branch. Another benefit from using an outlet is the fact that it is believed to be a smart strategy move in a competition perspective. By hiring someone with local presence and knowledge this will facilitate the establishment of a new product in that particular market. Hiring someone with a lot of influence is another way to expand your customer base and that is exactly the strategy that Kenya’s leading bank Equity bank was aiming for when they partnered up with the major retail chain Nakumatt in 2007 (Ivatury, 2008). In similarity with the partnership between banks and Safaricom, this allowed Equity bank to increase their total customer base by accessing the customer base that Nakumatt had built up. Apart from using major existing platforms like Nakumatt to widen the customer base Equity Bank also uses small agents in remote areas in order to reach another big un-served group, the rural population. By hiring agents in remote areas this is believed to fill the access gap of financial services and effectively increasing financial outreach in these particular areas.

The agency-model was developed by the Central Bank of Kenya in 2010 to lower costs as well as increase convenience for customers. After just two years 10 commercial banks had been given the approval to hire agents. Together these banks had more than 16 000 agents throughout the country. According to the Central Bank, the strategy to increase financial use with agency banking had increased the number of transactions
from 8 million transactions in 2011 to 38 million transactions a year later. The value transacted also increased tremendously during this time, in 2011 the amount transacted were 43.6 billion Kenyan shillings and in 2012 this amounted to 195.8 Kenyan shillings (Central bank of Kenya, 2011, 2012). The bank that is dominating in the number of agents amounting to roughly 40% of the total number of agents is Equity Bank. By the year 2012 they had increased the number to 6 344 agents and the number of transactions that were carried out by Equity agents rose with 96% between 2011 and 2012. Since the launch of the agency-model, the total number of accounts at the bank increased with more than 25%  (Equity Bank). As part of their strategy to target the low-income and rural individuals, Equity Bank is hiring agents in remote areas to reach the financially excluded. Improved outreach must be a result given the fact that most of their customer base is from the poorer segments of the population along with the fact that the bank has grown considerably the last couple of years.

Apart from a striking increase in transactions the effects from the agency-model have not been as striking as the effects from mobile banking. One possible reason might be the fact that agents generally are only allowed to carry out services such as withdrawals and deposits as well as account openings. Big parts of the Kenyan population are still located in rural areas and for obvious reasons banks are unable to open branches in all these regions. Agents can therefore serve as a good complement to the formal sector in providing rural citizens with the services that they provide.

Although the uptake on many of these branchless banking services has been surprisingly high it remains to be unsaid if the goal of reaching the financially excluded has been achieved. The reason being that many of these customers were previous customers and it is therefore important to look at the number of additional customers gained with a specific product. What needs to be determined is therefore whether branchless banking has been able to increase outreach and lift the welfare among the low-income segments of the population. In the following section the impacts from using alternative delivery channels will be examined and from those results potential gains will be identified.

4.3 Potential welfare gains
The introduction of mobile banking as well as agent banking can bring a lot of social value for low-income individuals in Kenya through the removal of many potential
barriers to access. Removing barriers that are preventing low-income individuals from using formal services will make financial services more accessible which could potentially help lift the welfare of these individuals. In a previous section, the barriers that were found to be most worrying were the proximity barriers, high cost barriers, information barriers and barriers associated with documentation requirements. As will be discussed, mobile banking and agent banking can facilitate the delivery of financial services and effectively reduce all four barriers to access emphasized in this paper.

**Removal of barriers to access**

The use of mobile phones and agents has lowered the costs for banks to be able to provide people with appropriate services. This has in turn lowered transaction costs associated with financial services effectively making the cost barrier less significant. Branchless banking has also made financial products more accessible for people in remote areas through mobile banking platforms and agent banking platforms. Increased accessibility is therefore reducing the proximity barrier as people can access the services provided by banks without having to go to an actual branch. As distances is often a big concern in Kenya when it comes to access to formal financial services, the fact that services are now available in most populated areas can add a lot of social value for the people living there.

The barriers associated with documentation requirements has also become less significant as the financial services with mobile banking and agent banking are requiring fewer documents than traditional channels. For example, to obtain a M-Swhari account the customer only need to have an active M-PESA account along with an ID document (CBA). Information barriers preventing low-income individuals considered a high lending risk to access financial services can be hard to overcome. However, the success of mobile banking in Kenya suggests that micro-loans provided by banks though the mobile platform could be the solution. When you take a micro-loan through M-Shwari for example, the service is registered on the sim-card and if you decide not to pay of a loan you will not be able to use any of the M-PESA services. Given that the loans are small this would imply that the amount that you gain from not repaying your loan is worth less than the consequences you have to face from not repaying. By creating enough incentive for people to pay back their loans could therefore make financial institutions more comfortable to invest in these kinds of solutions.
Welfare gain

Studies on financial deepening have shown that low-income earners adapt poorly to branchless banking services. In Kenya, the fact that M-PESA got such good response from the start has probably contributed to the fast adaption among low-income earners and also to the great success in mobile banking. In a study made by Jack and Suri (2011), the authors are examining the economic impacts from M-PESA on Kenyan households. They find that although the service was initially more used by wealthier adults the poorer segments of the population quickly followed. Possible explanations for its huge success are the fact that the service is easy to understand and use as well as it is perceived to be a safe instrument for remittances and savings. Their observations suggest that there is an increase in savings on M-PESA among those who have an M-PESA account as well as an account at a formal institution. The study also confirm that potential effects from using alternative delivery channels such as M-PESA include an enhanced ability to save, invest and to get insurance. Furthermore, the authors conclude that there are various potential economic effects from using the service on the household level. One important effect from the service is the fact that it provides the users with a safe storage for money keeping. This brings an incentive to keep the money that you own on the M-PESA account, which could potentially increase the overall savings rate among households. Products like M-Shwari with the added benefit of earning interest on the money you save makes the incentives of keeping your money on this platform even greater. Another very important economic effect from the service is the ability to transfer money between accounts across the country at a low price. This could imply that opportunities with high returns are not missed out on because of distance and availability.
5. Method and approach

The approach used in this thesis was a combination of qualitative and quantitative methods and this section will give an outline of the approach used to answer the question formulation. The paper explored the opportunities with branchless banking based on the foundations of financial access presented earlier in the conceptual framework. The assumptions made in theories and previous studies were then examined through the main questions asked in this thesis. For relevant information on financial access specific to Kenya, extensive data on financial use were provided by FSD Kenya and then complemented with other valuable information received from an interview with one of their employees. The Financial Sector Deepening programme (FSD Kenya) was created in 2005 and with funds from professional partners such as the Kenyan government and the World Bank they work towards improving the access to financial services for financially excluded adults throughout the country. Reactions from the industry itself were received through interviews undertaken with representatives from financial institutions. The main focus of this study though was the consumer of the services, namely the household. A household survey was therefore carried out in order to capture the effects from branchless banking on the low-income earners. To explore the welfare effects from mobile banking and agent banking, a measurement on outreach and welfare need to be established. In what follows is a brief discussion of the various ways to measure outreach and welfare in terms of financial services.

5.1 Measuring outreach and welfare

When it comes to financial outreach it can simply be defined as the number of people served by formal financial services. In the world of microfinance the definition is widened to include other dimensions based on social value provided by the financial service. Social values may include the net gain from using the service as well as the costs associated with the product. The varieties of products available as well as the time-restrictions of the products are two additional ways of measuring social value for the low-income user (Navajas et al., 2000). Although the aim of this thesis was mainly to study the use of alternative delivery channels by commercial banks and not by MFIs the
framework on microfinance can still be applicable here. The reason being that many banks in Kenya are starting to use an approach similar to the one used by many MFIs by targeting the low-income users. With Equity Bank as a front figure, banks are starting to adapt many of their products to this particular group by providing services such as micro-loans, micro-savings and micro-insurance. Apart from that, banks are also adjusting their products to the low-income user in other ways. Typically the documentation requirements, costs and minimum balances are lower with these products compared to traditional financial products (Allen et al. 2011).

Both welfare and outreach can be measured in several ways. In order to really examine the outreach effect all formal financial institutions would have to provide information on the total number of additional customers received from branchless banking. This would be an interesting study for future research although because of strict competition policies carried out from most banks in Kenya along with limited resources this was not practically achievable in this study. On the other hand, to try capture the effects reflected in potential welfare gains, this study was focused on the customers and potential welfare effects that they experienced from using services provided through mobile banking and agent banking. Based on a household perspective, the aim of this thesis is not to illustrate any exact information on the impacts but rather to capture the perceived effects on low-income earners from mobile banking and agent banking

5.2 The survey

The purpose of the survey was to examine the impact of mobile banking and agent banking on low-income households in terms of certain aspects such as savings, consumption and overall welfare. The targeted group, low-income earners, were randomly selected in areas where they were likely to operate within such as food markets and slum areas. The distribution of questionnaires took place in both urban and rural parts of the Nairobi region to identify any significant variation in the effects captured in the responses in the questionnaires. A sample of 100 randomly selected households was given questionnaires and out of this sample half was distributed in rural areas (the outskirts of Nairobi) meanwhile the other half were distributed in urban areas (within Nairobi). Out of both samples, half was answered by women and the other half answered by men in order to detect any variation between the two sexes. Due to
limited resources and time this study was carried out within the Nairobi region and representing the opinions of hundred men and women within this region. A big portion of the sample were M-Shwari users and this was an active decision to capture the affects from this particular product. Before the questionnaires were handed out people were therefore asked first of all if they were users of mobile banking and the agent banking services and secondly if they were M-Shwari users. Prior to answering the questionnaire, the respondents were clearly informed that the questions were concerning the effects from mobile banking and agent banking. To minimize the risks associated with language barriers and to avoid any misunderstandings, a translator was used during the questionnaire distribution. Although the translator was available during the whole distribution he was mainly used in rural areas where people typically are not as familiar with English.

In the questionnaires, the focus group was given questions on the effects that they experienced from using the products available with mobile banking and agent banking. The aim of the questionnaires was to see whether the welfare gains from branchless banking had been realized in the selected group of low-income users in Kenya. The welfare gains that were examined in this study were mainly people’s ability to increase their consumption, savings and insurance-coverage as well as their ability to seize profitable investment opportunities through micro-loans. The second part of the survey tried to determine whether they consider the services available with mobile banking and agent banking are tailored to match their personal financial needs regarding costs, time for loans to be repaid etc.

As the study went on, another interesting issue concerning the bank agents rather than the customers was brought up from one of the interviews. This proposed issue suggested that the agents were making too little commission from their client banks in order for the business to be cost-effective. If the agents are not given enough incentive to carry out financial services in their businesses this will eventually affect the customers in a negative sense given that they are the channel between the commercial bank and the customer. Therefore this issue needs attention for the key players within the financial market to be able to address the issue. An attempt to examine whether this actually constitutes a problem, interviews with 4 urban agents and 3 rural agents were undertaken. They were mainly asked of their opinion of whether they are considering the commission earned from their client banks is appropriate for them to be able to
carry out financial services. Another issue that was examined under the interviews was whether the agents consider the information received from their bank client to be sufficient in order to satisfy the customers with their financial needs.

5.3 Validity of the findings
Measures has been taken to raise the validity of this study by including sources of information from both the industry itself as well as including sources of information from an outside-perspective (FSD Kenya). Apart from that, the study made on the household-level was representing both men and women as well as rural and urban parts of the country. Although attempts has been made to increase the validity of this study, potential problems associated with limited resources and time as well as language barriers might still have affected the end result. The fact that the interviewed bank agents have their own incentives might also reflect the results and therefore the reader should be aware of the risk of source of error in this concern. All these aspects are likely to have affected the results of this study and therefore this thesis should not be seen as representing the effects from branchless banking on the Kenyan population as a whole. Rather it should be seen as an attempt to give the reader an idea of potential gains from branchless banking along with an examination of whether these gains has been realized when it comes to a selected group of low-income earners in Kenya.
6. Can branchless banking live up to the promise of lifting the welfare of low-income individuals in Kenya?

So far, it has been argued that the welfare of low-income earners in developing countries could be lifted by making appropriate financial services available to them. The survey focused on capturing the welfare effects from using mobile banking and agent banking in the perspective of the household. Based on the opinions of the households, they were asked whether they experienced and increased ability to save, invest, to get insurance and to transfer money. As a way to measure the impacts on welfare they were asked if these services had allowed them to widen their consumption possibilities. Finally, the survey examined the effects on overall welfare in terms of food security, health, education and the like. For a detailed presentation of the sample characteristics (gender, age, educational status, geographical location and income level) see Appendix A in the end of this paper. In the following section, the results are presented based on all aspects covered in the survey namely transactions, savings, loans, insurance, consumption, tailoring services, overall welfare and finally the well being of the agent.

6.1 Findings from Kenya

The findings established from the household survey is showing a pattern supporting most of the assumptions made in the previous section on potential welfare gains from increased access to financial services. Most of the households claimed that they have experienced an overall increase in the use of financial products although the use of insurance products remain low. The questions covering the aspects of consumption possibilities and overall welfare were given positive responses by a majority of the surveyed. Based on these findings, the focus group confirmed the assumption that potential welfare gains can be realized from using alternative delivery channels. The study therefore indicates that mobile banking and agent banking can have a positive impact on the welfare of households in Kenya. In what follows is a more detailed overview of the findings from this study based on the aspects mentioned earlier. To demonstrate any variation in individual characteristics the overview of the findings include differences between female and male as well as between rural and urban.
Increase in transactions

As a consequence of the widened transaction possibilities through money transferring systems such as M-PESA a majority of the focus group (86%) claim to have increased the number and amount of money transacted since they started using these services. Showing in Table 1 is a slightly higher increase in urban areas (88% of all urban) compared to rural areas (84% of all rural) meanwhile the increase is somewhat higher among male respondents (86% of all male) compared to female respondents (84% of all male).

Table 1. Has the number and amount of transactions that you carry out to/from formal accounts increased?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>88% of urban</td>
<td>12% of urban</td>
</tr>
<tr>
<td></td>
<td>84% of rural</td>
<td>16% of rural</td>
</tr>
<tr>
<td></td>
<td>86% of male</td>
<td>14% of male</td>
</tr>
<tr>
<td></td>
<td>84% of female</td>
<td>16% of female</td>
</tr>
<tr>
<td></td>
<td>Total: 86%</td>
<td>Total: 14%</td>
</tr>
</tbody>
</table>

Increase in savings

Most people said that their ability to save had increased from using these services meanwhile 18% of the households did not experience a positive impact on their ability to save. As shown in Table 2, the number of people that experienced an increase in savings is slightly higher in urban areas as 84% of all respondents in urban parts gave an affirmative response compared to 80% in the rural parts. However, the difference between sexes is considerably higher as 90% of all female respondents claimed to have experienced a positive effect on savings meanwhile only 74% of all male respondents claimed to have experienced the same effect on savings.

Table 2. Has your ability to save increased?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>84% of urban</td>
<td>16% of urban</td>
</tr>
<tr>
<td></td>
<td>80% of rural</td>
<td>20% of rural</td>
</tr>
<tr>
<td></td>
<td>74% of male</td>
<td>26% of male</td>
</tr>
<tr>
<td></td>
<td>90% of female</td>
<td>10% of female</td>
</tr>
<tr>
<td></td>
<td>Total: 82%</td>
<td>Total: 18%</td>
</tr>
</tbody>
</table>
**Increase in loans**

Looking at Table 3, people’s ability to act on profitable business opportunities through micro-loans have increased although not significantly so as only 60% had been able to take a loan through these non-traditional channels. The study also shows that the urban population is perceived to be more likely of receiving a loan through these channels as 66% of the urban population report having used a loan product compared to only 54% among the rural population. These results also indicate that the male population (60% of all male) is perceived to be a bit more likely to receive a loan compared to the female population (58% of all female).

**Table 3.** Has your ability to seize profitable business opportunities increased with the availability of micro-loans?

<table>
<thead>
<tr>
<th></th>
<th>66% of urban</th>
<th>60% of male</th>
<th>Total: 60%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>54% of rural</td>
<td>58% of female</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>34% of urban</td>
<td>40% of male</td>
<td>Total: 40%</td>
</tr>
<tr>
<td></td>
<td>46% of rural</td>
<td>42% of female</td>
<td></td>
</tr>
</tbody>
</table>

**Use of insurance remains low**

Table 4 confirm the general assumption that the use of insurance products remain low as the number of people that report having used an insurance product through these channels is only 23%. Rather surprising, the number of people with an insurance product is slightly higher in the rural parts amounting to 24% compared to the urban parts amounting to 22%. A few more female respondents (24% of all female) claim to have been able to get a loan through these channels compared to their male counterpart (22% of all male).

**Table 4.** Have you been able to get some kind of insurance?

<table>
<thead>
<tr>
<th></th>
<th>22% of urban</th>
<th>22% of male</th>
<th>Total: 23%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>24% of rural</td>
<td>24% of female</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>78% of urban</td>
<td>78% of male</td>
<td>Total: 77%</td>
</tr>
<tr>
<td></td>
<td>76% of rural</td>
<td>76% of female</td>
<td></td>
</tr>
</tbody>
</table>
Increased consumption

The consumption aspect was used as a way to measure the effects on welfare. The households were therefore asked whether the use of mobile banking and/or agent banking had increased their overall consumption of goods and services. The findings shown in Table 5 indicate that most of the surveyed had experienced an increase in consumption as a result of using these services. Out of the total sample, 75% of the respondents had experienced an increase in consumption during the time that they had been using these services. The positive effect on consumption possibilities seems to be higher among the urban population (78% of all urban respondents) compared to the rural population (72% of all urban respondents). Quite astonishingly, is the fact that 80% of the women experienced an increase in consumption meanwhile only 70% of the men experienced a positive impact on consumption.

Table 5. Have you been able to increase your consumption?

<table>
<thead>
<tr>
<th></th>
<th>78% of urban</th>
<th>70% of male</th>
<th>Total: 75%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>72% of rural</td>
<td>80% of female</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>22% of urban</td>
<td>30% of male</td>
<td>Total: 25%</td>
</tr>
<tr>
<td></td>
<td>28% of rural</td>
<td>20% of female</td>
<td></td>
</tr>
</tbody>
</table>

Overall welfare improved

Finally, the respondents were asked whether they consider mobile banking and/or agent banking to have contributed to a lift in their overall welfare. As can be seen in Table 7, out of a sample of 100 households, 82% of all individuals claimed that the accessibility of these services had in fact increased their overall welfare in terms of food security, health, making profitable investments etc. The impact on overall welfare is a bit clearer among the urban respondents (86% of all urban) compared to the rural respondents (78% of all rural). The difference between sexes indicate that the lift in welfare is slightly higher among female as 84% of all female respondents believe that their welfare has been lifted as a consequence from mobile banking and/or agent banking. Among the male population, 80% experienced a lift in overall welfare as a result from these services.
Table 7. Would you say that your overall welfare in terms of food security, health, making profitable investments, education etc. has improved since you started using these services?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>86% of urban</td>
<td>14% of urban</td>
</tr>
<tr>
<td>Rural</td>
<td>78% of rural</td>
<td>22% of rural</td>
</tr>
<tr>
<td>Male</td>
<td>80% of male</td>
<td>20% of male</td>
</tr>
<tr>
<td>Female</td>
<td>84% of female</td>
<td>16% of female</td>
</tr>
<tr>
<td>Total</td>
<td>82%</td>
<td>18%</td>
</tr>
</tbody>
</table>

Products suitable for low-income earners

As been argued throughout this paper, for low-income earners to be able to actively use a financial product it has to be suitable for them in terms of costs, time restrictions etc. Given these aspects, the results found in Table 6 implies that most people (85% of the respondents) consider the formal financial products available through the mobile banking platform and the agent banking platform to be tailored to match their personal financial needs. The rural population seem to be more pleased with the products available on these platforms as 86% of the rural respondents and only 84% of the urban respondents agree that the products available are tailored to match their personal financial needs. Female respondents (86% of all female) are a bit more satisfied with the products compared to the male respondents (82% of all male).

Table 6. Would you say that the services available with mobile banking and agent banking are tailored to match your personal financial needs when it comes to costs and time for repayment etc.?

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>84% of urban</td>
<td>16% of urban</td>
</tr>
<tr>
<td>Rural</td>
<td>86% of rural</td>
<td>14% of rural</td>
</tr>
<tr>
<td>Male</td>
<td>82% of male</td>
<td>18% of male</td>
</tr>
<tr>
<td>Female</td>
<td>86% of female</td>
<td>14% of female</td>
</tr>
<tr>
<td>Total</td>
<td>85%</td>
<td>15%</td>
</tr>
</tbody>
</table>
The well being of the agents

To examine to which extent the survival of the agents is in danger due to cost inefficiency 7 interviews were undertaken, 4 urban agents and 3 rural agents. Under the interviews the representative from the agent outlet were given questions about the effects on their economic performance since the introduction of carrying out financial services. They were asked if they had witnessed increased or decreased overall profits based on both costs and revenue of carrying out these services. They were also asked whether they personally consider the commission earned from their bank client to be too low in order for the business to be profitable. Out of 7 agents, only two agent employees said that they had experienced decreasing profits due to the low commission earned. The remaining agents said that the commission earned from their clients allowed them to make enough profit. However, most agents said that because of lacking demand during some periods they had in fact experienced decreasing profits to some extent. Apart from the economic aspect, the interviews also examined whether the agents are given enough guidelines and training from their bank clients in order for them to be able to fully assist their customers with their financial needs. All the agents examined in this study had received information through standardized guidelines and/or through continuous training from the bank representatives. Based on the selected group of agents interviewed in this study, all the respondents believe that the information received is sufficient to meet the customers and their financial needs. Apart from that, the agents claim to satisfy their customers in all aspects apart from one and that is problems with the data system, which has brought complaints from customers.

6.2 Challenges with Branchless banking

Although branchless banking seem to hold a great promise of increasing welfare among low-income individuals there are also potential challenges associated with branchless banking. One issue might be that financial institutions are relying too heavily on these alternative delivery channels making the institution vulnerable. Other issues include lacking competition among the service providers and together this might result in increasing costs from service providers and hence higher consumer prices, which eventually might lower the demand for these services. Most of the challenges with branchless banking have to be addressed by the financial institutions although some issues are directed towards other players such as the service providers. In order for
branchless banking to be sustainable these channels has to work efficiently for institutions to continue investing in them and for customers to continue using them. A short summary of potential challenges with branchless banking is shown below in the following subsections.

Tailoring services for the low-income earners
There has been great progress in Kenya in trying to attract more low-income earners by providing formal services adapted to these individuals such as micro-loans, micro-savings and micro-insurance. However, many commercial banks still need to understand these customers better in order to be able to tailor products that will fit the financial needs of the low-income earners. The low-income earner is often characterized by having limited resources to start with along with an irregular income flow so in order for this person to be able to use the financial service it needs to be adapted to these circumstances. There need to be a variety of products that can fit even the poorer segments in terms of time-restrictions of repaying loans and the costs of using the service among other things (Informant 1). Therefore institutions need to thoroughly study the financial behavior of this particular group in order to get a deeper understanding of how to develop products to match their needs. Simply making the financial products available to these individuals does not guarantee that they will use them. The products need to match the financial need of these people in order for them to engage in them.

Integration between the formal and the informal sector
Another concern is the integration of the informal and the formal sector mainly driven by the technology-based services provided by informal institutions aimed at increasing the accessibility of formal services. As been discussed earlier, many believe that there are great benefits to be realized from this kind of integration as informal services work as a good complement to the formal sector. Given that the financial sector is based on a well-functioning regulatory system, this integration can only make the use of alternative delivery channels grow even further (FSD, 2012).
Competition among service providers
Given the market share that Safaricom has when it comes to providing these kinds of services it is very unlikely that the survival of Safaricom would be in danger any time soon. However, the smaller network providers might have less power in negotiations which could potentially make them worse of in terms of shrinking profits. It is therefore essential to have healthy competition among service providers in order to foster innovation and to avoid any risks associated with a monopoly situation (The Economist, 2013). Making sure that the competition among service providers is sustainable is therefore vital seeing as the mobile market generally is dominated by few players, especially in developing countries (Ivatury, 2008).

System failure
Most of the agents that were interviewed mentioned the system failure as part of the challenges of carrying out financial services in their business (Informant 3). The service providers along with the banks therefore need to work efficiently when developing systems for the agents to operate with in order for them to be able to provide customers with reliable financial services.

Cashless society
Yet another issue is the expansion of the use of electronic money at the expense of a reduced circulation of physical money. The fact that Kenya is moving in the direction of a cashless society, although far away from being there, this puts pressure on the government to develop regulatory systems and other policies to meet the changing landscapes of the financial market (Ivatury, 2008).

The survival of the agents
The well-being of the bank agents were discussed earlier when their economic sustainability were examined. Although the findings show that the agents overall are satisfied with the commission that they receive from their bank clients. This aspect needs to be examined further seeing as increased financial access and the benefits from financial inclusion could depend on the survival of the agents (Informant 1).
The main purpose of this thesis was to examine whether potential gains from mobile banking and agent banking have been realized in the case of Kenya. Potential welfare gains were identified through the conceptual framework on the relationship between branchless banking and financial deepening. These potential welfare gains were then used as a point of reference when exploring the effects on low-income earners in a survey consisting of 100 randomly selected households. Given the results found in this study, there is a positive link between the use of these alternative delivery channels and increased welfare. A majority of the surveyed claimed that these services had contributed to an increased use of transaction-, saving- and loan-services meanwhile the use of insurance products had not increased as dramatically. Along with increased usage of financial services findings also indicate that low-income earners have experienced a substantial increase in consumption as well as a lift in overall welfare as a result from using these services.

The success of mobile banking in Kenya, with M-PESA in the lead, has changed the lives of Kenyans the past couple of years as it has provided them with financial tools adapted to fit the financial needs of individuals with limited resources. Potential welfare gains include an ability to make affordable transactions without having to rely on unreliable channels. It has brought an incentive to save with easily accessible platforms allowing you to earn interest on the money you save. Another major positive impact on the households stem from the fact that people are able to act on profitable business opportunities as well as make other efficient investments through access to formal micro-loans. The agency-model was developed by the CBK three years ago and since then it has really taken off in Kenya as many commercial banks have agents throughout the country. The agents fill an important role in delivering financial services where the banks are unable or unwilling to fill the need. Agent banking and mobile banking have shown to have a positive effect on overall outreach as well as making low-income and rural parts of Kenya better off. The conclusion drawn from this paper is therefore that the integration between non-traditional channels and formal finance with a microfinance approach will only make outreach and social value grow further.
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UAP Kenya

Appendix A. QUESTIONNAIRE – ANSWER DISTRIBUTION

SAMPLE CHARACTERISTICS

1. Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Urban</th>
<th>Rural</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Female</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
</tr>
</tbody>
</table>

2. Age

<table>
<thead>
<tr>
<th>Age</th>
<th>Urban</th>
<th>Rural</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24 years</td>
<td>22%</td>
<td>36%</td>
<td>29%</td>
</tr>
<tr>
<td>25-34 years</td>
<td>50%</td>
<td>34%</td>
<td>42%</td>
</tr>
<tr>
<td>35-44 years</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>45-59 years</td>
<td>4%</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>60+ years</td>
<td>4%</td>
<td>4%</td>
<td>4%</td>
</tr>
</tbody>
</table>

3. Educational status

What is the highest grade you have attended?

<table>
<thead>
<tr>
<th>Educational status</th>
<th>Urban</th>
<th>Rural</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>16%</td>
<td>12%</td>
<td>14%</td>
</tr>
<tr>
<td>Secondary</td>
<td>46%</td>
<td>54%</td>
<td>50%</td>
</tr>
<tr>
<td>Tertiary college</td>
<td>30%</td>
<td>24%</td>
<td>27%</td>
</tr>
<tr>
<td>University</td>
<td>8%</td>
<td>10%</td>
<td>9%</td>
</tr>
</tbody>
</table>

4. Where do you live?

<table>
<thead>
<tr>
<th>Location</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>50%</td>
</tr>
<tr>
<td>Rural</td>
<td>50%</td>
</tr>
</tbody>
</table>
5. **What is your monthly income on average in Kenyan Shillings?**

<table>
<thead>
<tr>
<th>Income Range</th>
<th>Urban Percentage</th>
<th>Rural Percentage</th>
<th>Total Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5 000</td>
<td>20% of urban</td>
<td>28% of rural</td>
<td>24%</td>
</tr>
<tr>
<td>5 000-10 000</td>
<td>42% of urban</td>
<td>28% of rural</td>
<td>35%</td>
</tr>
<tr>
<td>10 000-20 000</td>
<td>24% of urban</td>
<td>32% of rural</td>
<td>28%</td>
</tr>
<tr>
<td>20 000-40 000</td>
<td>10% of urban</td>
<td>12% of rural</td>
<td>11%</td>
</tr>
<tr>
<td>40 000-80 000</td>
<td>2% of urban</td>
<td>0% of rural</td>
<td>1%</td>
</tr>
<tr>
<td>80 000 and above</td>
<td>2% of urban</td>
<td>0% of rural</td>
<td>1%</td>
</tr>
</tbody>
</table>