

Mobile Technology and Access to Financial Services in Karamoja, Uganda

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Abstract

Access to financial services for the rural poor around the world has become a large development issue, recognized by institutions such as the UN and the World Bank. Having access to financial services such as savings accounts and cheap money transfers has proven to improve the economy of households as well as their ability to cope with emergencies and different kinds of shocks. The mobile phone is increasingly used as a tool for accessing basic financial services, especially in sub-Saharan Africa, and is believed to be a tool for bringing access to finance for the poor and remote populations. This paper investigates the extent of mobile financial services usage, barriers to mobile financial services adoption as well as the perception of mobile financial services usefulness in three sites in Karamoja region, which is one of the least developed and most marginalised parts of Uganda. The aim is to assess whether mobile financial services can be a viable means for financial inclusion in Karamoja, Uganda, by comparing the usage between different geographical settings as well as among people with different social characteristics and backgrounds. The results show that the mobile financial services was to a high extent adopted and found useful in urban and semi-urban locations while the adoption was low in the rural location due to economic, geographical and educational barriers as well as the fact that mobile financial services was still an unknown phenomenon to many. The results point to the limitations of mobile financial services in providing the most remotely located and low-income populations with access to finance, however findings also indicate that there is a future potential for its spread due to an interest in acquiring phones and mobile financial services use.

Keywords: Financial inclusion, mobile financial services, urban, rural

Prologue

During a trek through the East African countries of Rwanda, Tanzania and Kenya I noticed many things of interest, many of which were expected, however some of them less so. Of course, I knew beforehand that a large portion of the rural inhabitants of these countries were living off the land and that the material wealth among the people I was to meet would only be a fraction of the Western lifestyle. I saw farming households on the stretches between villages while markets, small restaurants, bicycle repairers and tailors could be found in the small centres. These things all appeared quite ordinary after some time and seemed to rhyme well with the lifestyles in these rural regions. However, one thing stuck to my mind. Everywhere I went, no matter how small the village, I noticed large mobile network operator ads above small shops telling me to buy airtime and use their “mobile money services”, which I learned was mobile technology based services for handling money in different ways. The mobile phone related ads at first seemed an odd feature in this landscape. The impressions that scarce access to electricity, hard manual labour and wood-fired stoves had given me of the way of life in these regions did not seem to rhyme well with the ads telling me to consume different products through a modern piece of technology. I could not have been more wrong about this. In fact, the more I learnt about the use of mobile phones and the so-called mobile money services, the more I became aware of its popularity. The mobile money services stuck to my mind during the trip and I wanted to know more about this apparent phenomenon, the result is this bachelor thesis in the subject of geography.

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Table of Contents

Abstract	i
Prologue	iii
Table of Contents	iv
1. Introduction	1
1.1 Background and problem statement	1
1.2 Purpose and research questions	3
1.3 Limitations	3
1.4 Disposition	4
2. Theoretical and conceptual framework	6
2.1 Introduction	6
2.2 The spread of mobile phone technology in sub-Saharan Africa	6
2.3 Information and communication technology and time-space compression	7
2.4 Financial inclusion for development	9
2.5 The role of mobile financial services for financial inclusion	10
3. Geographical area of study	13
3.1 The Karamoja Regional Context	13
3.2 Study locations	15
3.2.1 Urban – The town of Moroto	15
3.2.2 Semi-urban - Kangole trading centre	15
3.2.3 Rural - Lomareho Village	16
4. Method	17
4.1 Introduction to a mixed methods approach	17
4.2 Conducting research in a different cultural context	17
4.3 Quantitative data collection	20
4.3.1 Structured interviews	20
4.3.2 Sampling	21
4.3.3 Data analysis	22
4.3.4 Reflections on the quantitative data collection.....	23
4.4 Qualitative data collection	24

4.4.1 Semi-structured interviews.....	24
4.4.2 Sampling	26
4.4.3 Data analysis	26
4.4.4 Reflections on qualitative data collection	26
5. Presentation of empirical findings.....	28
5.1 Introduction	28
5.2 The use of mobile money	28
5.3 Barriers to mobile money adoption.....	31
5.3.1 Access to mobile phones.....	31
5.3.2 Being aware of mobile money	33
5.3.3 Affording mobile money	33
5.4 The usefulness of mobile money	34
5.4.1 Safety of saving and sending money	34
5.4.2 Emergencies	37
5.4.3 The effect of mobile money on savings behaviour	38
5.4.4 Convenience and reduced transport	39
5.4.5 Interest and growth of savings.....	41
6. Discussion.....	42
7. Conclusions and research recommendations	46
References.....	48
Appendix 1 - Questionnaire	
Appendix 2 - Interview guide	
Appendix 3 - Respondents of the semi-structured interviews.....	

1. Introduction

1.1 Background and problem statement

During the last 5-10 years, using the mobile phone for doing economic transactions and handling personal finances has become increasingly popular in sub-Saharan Africa. This phenomenon that is usually called mobile money has been given much attention for its potential to bring access to financial services for people who were excluded from the formal financial system. Mobile money, or mobile financial services, can be defined as “the use of a mobile phone to access financial services and execute financial transactions” (Alliance for Financial Inclusion, 2012, p. 3), in this report the terms “mobile financial services” and “mobile money” are used interchangeably. The financial services that can be facilitated through mobile money include at least access to an account to store money in a digital form and the possibility of sending and receiving money to other mobile numbers. Other services are usually offered as well, such as paying electricity or water bills and in some countries the mobile network operators offer interest bearing accounts and small loans. To say that mobile money is increasingly popular is not an overstatement. In 2012 there were around 57 million registered mobile money accounts in sub-Saharan Africa (GSM Association, 2013, p. 62), in 2015 this number had increased to around 223 million accounts (GSM Association, 2015, p. 33). Although not all accounts have remained actively used, it gives an indication of the popularity of the services.

Financial inclusion can be described as “all initiatives that make formal financial services accessible, affordable and available to all segments of the population” (Triki & Faye, 2013, p. 25). Promoting financial inclusion therefore means promoting access to appropriate formal financial products for vulnerable groups. The importance of promoting financial inclusion in developing countries is increasingly seen as a development priority since it is believed that a financial sector that is inclusive of the poor and vulnerable can facilitate inclusive economic growth both on both a micro and a macro-economic level (Triki & Faye, 2013, p. 139). The use of financial services is believed to have a positive impact on poverty alleviation by giving households tools to manage their income in a sustainable way, handle economic shocks and to increase opportunities of making investments (Klapper, El-Zoghbi, & Hess, 2016, p. 2).

The majority of the population in sub-Saharan Africa are not financially included, meaning they are not using any formal financial services, and the differences between urban and rural regions in financial services use is significant (Triki & Faye, 2013, p. 44). Urban regions are often nodes of interconnection, innovation and possibilities, while rural regions often lag behind due to low access to services. Consequently the rural populations risk becoming trapped in poverty, creating inequalities of opportunity between regions. The distance to a bank is a great barrier for financial inclusion of the rural population since they often need to travel long distances to receive remittances or tend to other financial matters, costing them efforts, time and money. The introduction of mobile money has brought forward a possibility for bridging this financial divide by providing services for a lower cost than banks and by rendering spatial location less relevant for access to financial services due to the fact that mobile financial services are not dependant on physical bank branches. Since the spread of mobile money, many formerly unbanked people are now using, or have access to, financial services.

Access to finance is a great issue for the poor in rural sub-Saharan Africa. Poor infrastructure and long distances to bank branches makes it hard for people in many rural areas to physically access important financial services, high costs for using the services provided by traditional banks is another barrier to financial inclusion among the poor. The focus of this study is on the rural Karamoja region. It is situated in the northeastern part of Uganda, bordering Kenya and Sudan and count as one of the least developed regions in the country. It is a region challenged by long lasting poverty, poor infrastructure and both social and cultural marginalisation where the majority of the population live in rural settlements. Among the roots of the poverty problem lies a long and continuous history of violence due to the prevalence of small arms, unemployment and lack of opportunities of making a living. Shocks related to climate and season as well as a history of armed cattle-raids has made it difficult to transition out of poverty (Development Research and Training, 2008). Karamoja region therefore provides an interesting site for studying the possibility of mobile technology to provide the remotely located poor with access to finance.

Mobile money is a booming phenomenon and research on the topic is increasingly extensive, especially in sub-Saharan Africa. There are previous studies made on mobile money usage in Uganda, (Economic Policy Research Centre, 2013), however these have

mostly been large scale and of a predominantly quantitative character and the geographical aspects of usage have been investigated using broad categories such as east, west, north, south and central regions as well as urban - rural. This study positions itself as a current and detailed study from a region where the challenges for financial inclusion might be considered large and takes into account not only the usage or barriers to usage of mobile technology for financial inclusion, but also the perceived usefulness of the services divided on personal characteristics and local geography using a mixed methods approach.

1.2 Purpose and research questions

The aim of this study is to assess whether mobile money can provide a viable and useful means of financial inclusion in one of the least developed parts of Uganda. The following research questions will guide the study to achieve the aim:

- To what extent is mobile money used in places of different urban/rural character and among people of different age, gender and socio-economic status?
- What barriers to adoption of mobile money can be found in places of different urban/rural character and among people of different age, gender and socio-economic status?
- How do mobile money users perceive the usefulness of mobile money?

A mixed method of inquiry was used to provide answers to these research questions.

Fieldwork was conducted in Moroto and Napak district in Karamoja region during a period of 10 weeks and included a questionnaire survey, followed up by semi-structured interviews.

Field observations of both the physical and cultural environment at the study sites were made during the stay as well. The study was conducted in three sites of different urban, semi-urban and rural character and with respondents of different age, gender and socio-economic status.

1.3 Limitations

Mobile network coverage is a prerequisite for mobile money usage and it determined in which geographical areas it was possible to conduct the study. As can be seen in Figure 1, northern and northeast Uganda has limited network coverage by the largest network operator. The study was limited to include three locations with different urban - rural characters within the

area of coverage, making it a small study of a few cases. The research questions were limited to creating a general picture of the extent of usage, barriers to usage and user perceptions of mobile money services in this particular region and at this time. Each of these three issues could also on its own be a subject of research for more in-depth knowledge.

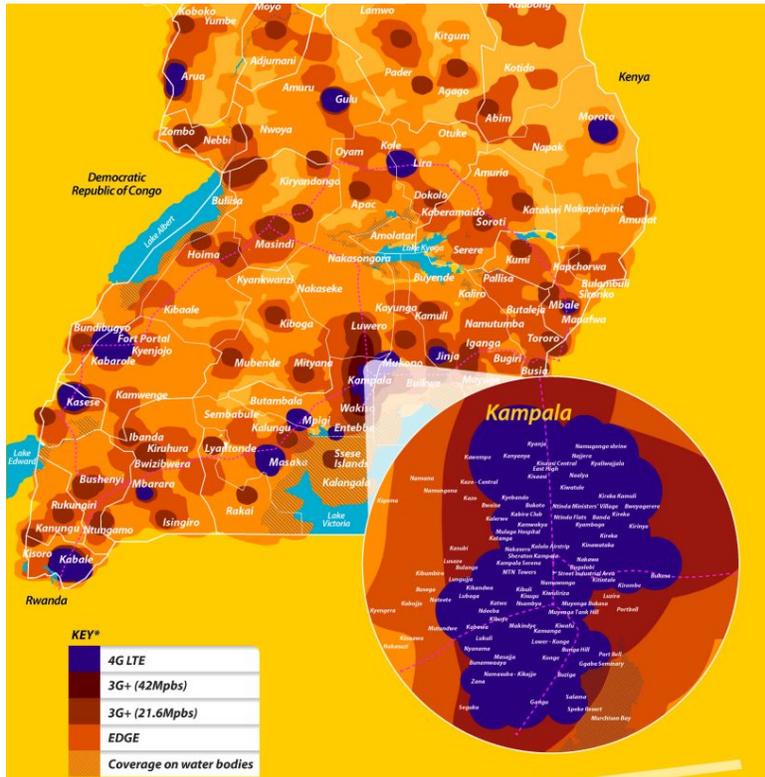


Figure 1. Map showing the extent of mobile network coverage in Uganda from the largest mobile network operator. Light yellow areas have no network coverage.

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http://www.mtn.co.ug/internet/Coverage_Services/Pages/GSM-Coverage.aspx. Copyright [2014] by

Mobile Telephone Networks.

1.4 Disposition

This bachelor thesis begins with an introduction in which the main subjects of financial inclusion and mobile financial services are introduced and put into a developmental context. The research aim and research questions are furthermore presented, followed by the geographical and academic limitations of the paper. After this the theoretical and conceptual framework for the study is introduced, covering theories and concepts related to the main subjects of financial inclusion and mobile financial services. This is followed

by a description of, motivation for and reflections on the methods used to answer the research questions. The empirical evidence gathered is furthermore presented, followed by a discussion of the results in relation to the research questions and the theoretical and conceptual framework. Finally a conclusion covering the main points of the thesis is given.

2. Theoretical and conceptual framework

2.1 Introduction

This section begins with a description of the spread of mobile phone technology in sub-Saharan Africa and a theoretical discussion on the spatial-temporal impact that information and communications technology (ICT) such as mobile phone technology can have on time-space relations in both Western and African contexts. The theory of financial inclusion for development is furthermore presented and related to the new Sustainable Development Goals (SDG's) together with some of the available evidence of the benefits of access to finance for the poor. Lastly the concept of mobile financial services and the potential of mobile-based financial services in extending access to finance for the remotely located poor is discussed.

2.2 The spread of mobile phone technology in sub-Saharan Africa

Mobile phone usage in sub-Saharan Africa spread quickly around the late 1990's and beginning of the 2000's, driven to a large extent by the liberalisation of the telecommunications sector in many African countries (Williams, 2011, p. 71). Before this, in most countries ICT-service was provided by the state and consisted mostly of landlines accessible by only a small percentage of the population. With the end of ICT monopolies and the start of competition between companies the ICT-sector gained spectacular momentum (Williams, 2011, p. 9). Few had predicted there would be a large demand for telecommunication products among the poor populations but with a focus on pre-paid phone cards and cheap low-end phones, demand among the rural poor exceeded all expectations (Etzo & Collender, 2010, p. 660). Mobile subscriptions are high and indicate that a large portion of the population in sub-Saharan Africa has access to a mobile phone. In Uganda, mobile subscriptions were at 7 out of 100 people in 2006, by 2014 this number was 52 out of 100 people, a remarkable increase (International Telecommunication Union, 2014). However, using subscriptions as a measurement for mobile phone adoption should be done with care since many people have more than one mobile subscription, making it hard to derive exactly how large part of the population actually owns a mobile phone (Aker & Mbiti, 2010, p. 211). Also, mobile subscriptions might not always equal ownership, sharing within families or

between friends is common and some argue that the mobile phone is more of a communal instrument than a personal belonging in many African contexts (Tall, 2004, p. 32).

The diffusion of mobile phones has been fast and is growing however it is not without obstacles. For people to use mobile phones and related services they need to be able to afford it, live in a geographical area with the preconditions for network coverage and have the knowledge and will to adopt it, it is a mixture of demand and supply-related factors. At the start of the mobile network expansion in Africa, most investments were directed at urban areas for obvious reasons. Cities have a higher concentration of people and they tend to have higher income than the rural population, meaning higher demand for services. With increased competition the networks then expanded to small towns and the rural areas. However, network expansion might come to an end in some areas where the population density is too low to make investments in infrastructure economically viable (Williams, 2011, p. 17) and geography and demographic patterns can therefore still be influencing factors when it comes to accessing ICT and the associated services. Prices for the use of mobile services can also be an obstacle for the adoption of mobile phones in Africa. However as networks have expanded, competition has increased between the mobile network operators (MNO's) and pushed down the prices (Williams, 2011, p. 4).

2.3 Information and communication technology and time-space compression

How does ICT like mobile technology connect to human geography? Temporal, spatial and monetary costs of travelling can correlate to create barriers for access to vital services for people living in geographically remote areas of society, which often equals the countryside as compared to the opportunity-rich and quickly developing urban areas. As presented below, mobile technology can have significance in compressing time and space by making the transfer of information between people and institutions of society occur in real-time and from any location. Human geography is a discipline that intends to describe and explain the interrelations between people, place and environment and how these relations vary spatially and temporally across locations. The change that mobile technology has brought to relations between people in space and time has therefore been a large area of study in the discipline of

human geography (Castree, 2013) as well as in transportation studies and sociology (Schwanen & Kwan, 2008, p. 1363).

Many agree on the fact that ICT can loosen the constraints that physical location make up in determining the possibilities and opportunities people have in shaping their lives, the debate is about to which extent. Frances Cairncross spoke of the communications revolution leading to what he called the death of distance, implying that distance was to become irrelevant as one of the organising principles of human behaviour and the structure of our society (Cairncross, 1998). Others take a more moderate view on the impact of ICT and argue that the impact of ICT in changing space-time restrictions is dependent on the activities undertaken, the actual technology, the persons involved and the social, cultural and physical contexts in which they operate (Schwanen & Kwan, 2008, p. 1375). Schwanen and Kwan have studied the spatial-temporal impact of mobile phone use among families in the Netherlands and one of the conclusions were that the phone was used for coordinating business and family activities and meetings while physically travelling, which saved time and smoothed schedules for families (Schwanen & Kwan, 2008, p. 1372).

Gina Porter has written on the impacts of mobile technology on transport and time saving in the context of rural Africa and made a comparison with existing discussions on the impact of mobile technology on mobility that is often based on Western contexts. She argues that there is no major evidence of a decline in distance travelled due to mobile technology in a Western context; rather the phone has meant greater opportunities for social coordination and productivity while on the move, as shown also in Schwanen and Kwan's study of Dutch families mentioned before. Porter further argues that mobile technology has had a different impact in rural Africa than in Western contexts because of a much higher friction of distance, or costs of travelling, due to lack of infrastructure, lack of transport means, financial restrictions and other mobility restraints (2016, p. 440). She presents evidence from two studies that related mobile phone use to travel patterns among both young and elderly in African rural contexts and in both studies phones could help organise access to transport as well as be a substitute for transport. Travel substitution was perceived as highly valuable by the users, especially for those who resided at locations with limited transport options, since the cost of a phone call were much lower than the cost for travelling (Porter, 2016, p. 439). Porter argues that the potential for mobile technology for substituting travel is greater in

African than in Western contexts and that the positive impacts of mobile phones on relaxing spatial restraints is especially significant among those with low incomes or limited physical mobility due to physical disabilities, old age or household responsibilities (Porter, 2016, p. 440).

2.4 Financial inclusion for development

More than half of the world's adult population does not have a bank account at a formal financial institution, meaning a financial institution such as a bank or a mobile network provider regulated and licensed by the state. In sub-Saharan Africa about a third of the adult population has an account in a formal financial institution (Demirguc-Kunt, Klapper, Singer, & Van Oudheusden, 2014, p. 11). Among these are people who actively choose to not open an account but the great majority is involuntarily without one, whether its cost, travel distance or other inconveniences that constitute the barriers (World Bank, 2014, p. 34). According to a report published by the World Bank, the most common barrier is to not have enough money for it to be necessary to open an account. The second most common barrier was not having enough money to uphold the minimum balance and afford the costs often associated with having a bank account and the third that the distance to the bank was too long (Demirguc-Kunt et al., 2014, p. 19). Women, youth, the poor and rural residents experience the largest barriers to access (World Bank, 2014, p. 3). Being financially included is strongly related to income level in developing countries and the richest 20% is twice as likely to have an account at a formal financial institution than the poorest 20% (Demirguc-Kunt et al., 2014, p. 15).

Research has shown that financial inclusion has had developmental benefits such as reducing poverty (World Bank, 2014, p. 3), and it is considered to be a tool to achieve some of the new Sustainable Development Goals (SDG's). The first SDG, "end poverty in all its form everywhere" explicitly mentions equal rights to economic resources and access to basic services in one of the targets: "By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance" (United Nations, 2015, p. 15). The poor and vulnerable people

mentioned in the quote are often not part of the formal economy as wage earners. Instead they are often “self employed” farmers, pastoralists or small-scale entrepreneurs. This means that both consumption and production are intertwined in these livelihoods and it is believed that access to a wide range of financial services is important to manage the financial needs that arise. Research based on financial diaries suggests that poor families make great use of informal financial services and are constantly borrowing and saving in informal ways (Cull, Ehrbeck, & Holle, 2014, p. 1).

Another target under the first sustainable development goals deals with building the resilience of the poor to reduce their vulnerability to economic, social and environmental shocks. This is also an area where access to financial services is believed to have the potential of making a difference. The strongest evidence for this has come from management of savings. Having saved money is believed to help families and individuals to manage irregular incomes, balance their consumption, accumulate capital and manage shocks. A study from Kenya showed that even simple forms of safe savings, like keeping money in a box with a lock, could increase an individual’s investments in health as well as reduce the vulnerability of an household in case of health shocks (Dupas & Robinson, 2013, p. 1168).

2.5 The role of mobile financial services for financial inclusion

Access to appropriate new technology is mentioned in the quote from the SDG 1 above. With the attention that has lately been given to mobile money technology there is reason to believe it is being implicitly mentioned. Many point to the potential of mobile money as a way of expanding financial inclusion in sub-Saharan Africa and point to the effect mobile money has had on the large reduction of unbanked people (World Bank, 2015). The new SDG’s have an emphasis on leaving no one behind or, “reaching the last mile” (Karl & Choritz, 2016, para.1), through solutions that target the people and places with the least resources and greatest development needs. Financial inclusion is believed to be one of the tools for reaching the last mile and mobile financial services are seen as central for including the remote and unbanked poor populations (Karl & Choritz, 2016). In a report the African Development Bank describes ICT and especially mobile financial services as a potential game changer for financial inclusion in Africa because of the possibility of making large volumes of low value

transactions without the need for physical financial infrastructure associated with banks. This means lower costs and an extended geographical reach of financial services (Triki & Faye, 2013, p. 107).

Evidently, mobile money is now providing the poor in many African countries with access to electronic payments, transfers, insurances, savings or credit amongst other services at any time through their mobile phone. Besides being cheaper and more accessible than other alternatives, the said benefits of mobile money include the fact that the digitalizing of money enhances security by reducing the use of cash as well as greater financial autonomy for women by making it easier for them to have personal savings without permission from their husbands (World Bank, 2012, p. 63). The most well known example of mobile financial services is M-PESA in Kenya, which was launched in 2007. It is now used by most Kenyans and has according to research had a positive socio-economic impact on formerly marginalized households (Jack & Suri, 2011). In the case of Uganda, mobile money started in 2009 and has since then increased the number of financially included at a remarkably higher pace than banks have been able to do. Mobile financial services are now by the far most commonly used formal financial services (Economic Policy Research Centre, 2013, p. 63).

There are two distinctive categories of mobile financial services, the additive and the transformative model. The additive model links the mobile phone to traditional bank institutions and the user needs to have an existing bank account. The transformative model is independent of formal bank accounts and allows the unbanked population access to services provided mainly from mobile network operators with a license to operate financial services (Etim, 2014, p. 3). It is the latter of the two that this study focuses on. The procedure to become a mobile money user in Uganda is relatively simple. A person with any kind of mobile phone first needs to buy a SIM card and register a telephone number. This requires a national ID and a small sum of money. At the same time they can also register as mobile money users, giving them the possibility of handling a mobile money account through their phone. When registered the user can go to a mobile money agent to deposit, send, receive or withdraw money. A mobile money agent is a person or business that is contracted to facilitate transactions for users, this includes helping people deposit cash in their mobile money accounts, sending money to other numbers as well as receiving and withdrawing money

(GSM Association, 2010). These agents are plentiful throughout Uganda since being a mobile money agent is a decently paid employment that does not require much education.

3. Geographical area of study

3.1 The Karamoja Regional Context

The Karamoja sub-region (See Figure 2) stands out from the rest of Uganda in many ways. It is a semi-arid area with only a few months of rain each year. The urban population is still small and the population is predominantly pastoralist or agro-pastoralist. The region has the lowest values on different developmental indicators in Uganda. This is partly due to a long history of cattle raiding, in modern times fuelled by an influx of guns acquired from nearby Turkana region in Kenya, South Sudan and from previous times of instabilities in northern Uganda (Longoli, n.d.). A disarmament process starting around 2002 and forward has brought relative peace to the region. However the procedures during the disarmament have been criticized for being violent and for destabilizing the power balance between the different sub-groups. There are accounts of killings, rape, torture and even stealing of cattle executed by soldiers assigned to confiscate weaponry from the different tribes of Karamoja (Knighton, 2003, p. 445). Author Ben Knighton who wrote a paper on the atrocities during disarmament concludes by calling the Ugandan state “just another raider” (Knighton, 2003, p. 449).

The violent history together with natural hazards, such as droughts, has made many households vulnerable and dependent on food assistance during dry periods. In early 2016 it was reported that more than half of the population in Karamoja experienced a shortage of food since the drought had destroyed the harvest (Okiror, 2016). A report from 2013 funded by USAID states that the main barriers to economic development are insecurity, poor infrastructure and a lack of access to basic services including roads, water, communication and financial services. The reported constraints to food production included drought and animal disease (Burns, Gezu, & Darlington, 2013, p. 63). The same report states that financial services were mainly available in larger towns while Village Savings and Loans Associations (VSLA) were used in the rural areas. The VSLA is an informal way of saving where a group of people save money together. The members’ joint savings make up a fund from which the members can borrow money that they repay with interest. After a period of time, usually 12 months, the accumulated capital is shared among the members according to how much they have

contributed. The VSLA is organised in the way that it has a written constitution and an elected management committee (VSL Associates, n.d.). The VSLAs have seemed to function quite well but some problems have been associated with these groups such as an exclusion of the poorest as it was seen as too risky to lend to them by members (Burns et al., 2013, p. 61). In the report it was stated that mobile money presents a significant opportunity for making financial services available in the region. The described challenges to mobile money expansion were a lack of mobile phones and an unreliable network in some parts, however it was stated that “it is only a matter of time before the mobile banking revolution reaches Karamoja” (Burns et al., 2013, p. 62).

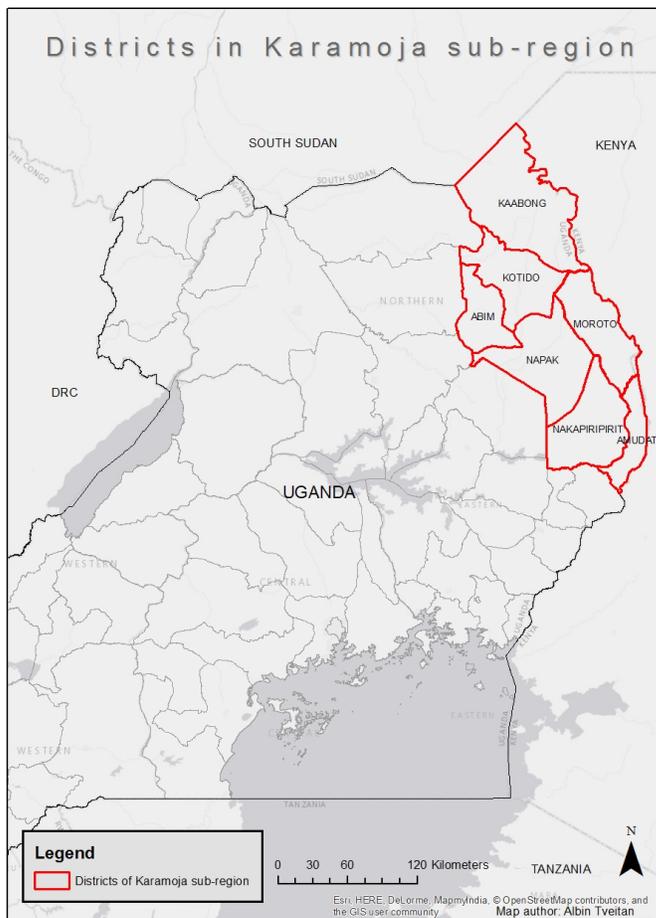


Figure 2. The map shows the location of Karamoja sub-region and its districts marked with red.
 Source: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community

3.2 Study locations

3.2.1 Urban – The town of Moroto

The town of Moroto is the capital of Moroto district and the largest town in Karamoja. The urban population in Moroto district is approximately 14,000 residents according to the latest census survey from 2014 (Uganda Bureau of Statistics, 2016, p. 309), the great majority of the urban population resides in the town of Moroto. Moroto is a town in a process of quick development. Broad tarmac roads are being constructed under the supervision of Chinese engineers and big hotel chains are constructing hotels in the town. Moroto has had electricity for about five years and it is the last outpost connected to the electricity grid in Karamoja, further north all towns are at the time of writing lit evening time by generators. The nearby Mt. Moroto is rich in minerals, mainly limestone and marble but also metals such as gold that attracts mining companies and business people looking to profit. Also uranium is to be found in the mountain. The minerals combined with a strategic geographic location make Moroto a town of interest by the government. Among the features of the town are two bank branches, a lively market, a small library, many restaurants, pharmacies, shops as well as a nightclub. Donor organisations from many different countries are present, since Moroto is the largest town in one of the poorest regions of Uganda. Many villagers, recognized by their traditional outfits, come from the surrounding rural areas during daytime to work on contract work such as doing dishes for the restaurants, washing for the guest houses or to sell products such as charcoal, firewood or wooden crafts. They are usually paid per day and seem almost to constitute a kind of uneducated working class in Moroto town (field notes).

3.2.2 Semi-urban - Kangole trading centre

Kangole is a small town or trading centre with different kind of businesses including shops, restaurants and a busy market however on a much smaller scale than in the urban area. It is on a distance of about 25 km from Moroto and lies in the district of Napak. Four or five mobile money agents are operating here but an important difference from the urban area is that no bank branches are present and the closest one is in Moroto. The road to Kangole is mainly marram, only the first part leading out from Moroto is made of tarmac. The marram road from Soroti to Moroto passes through Kangole. This is also the road the buses from Kampala take

to get to Moroto via Mbale. Although there is no official numbers of the population in this town an estimate would be between one and two thousand inhabitants (field notes).

3.2.3 Rural - Lomareho Village

Lomareho is a small village about five kilometres from Moroto, at the foot of Mt. Moroto. The village consists of a group of manyattas, a traditional organisation of housing consisting of gatherings of mud houses surrounded by wooden walls and a nearby small centre with a few tiny shops selling products such as soap and salt. The village has no bank branches or mobile money agents. A marram road with scattered potholes leads to Lomareho village from the town of Moroto. If you follow the road a few kilometres further away, the mobile network coverage becomes dotted and eventually disappears. Many of the residents in Lomareho worked with subsistence mining using hand tools (field notes).

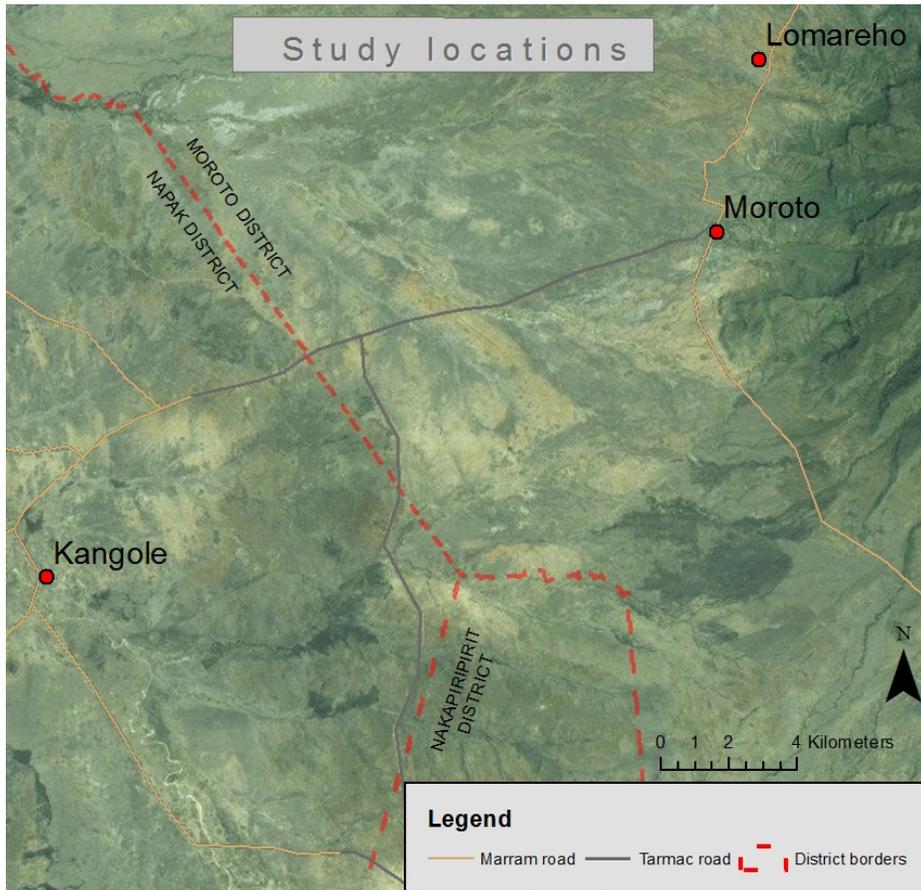


Figure 3. The map shows the location of the study sites in Karamoja sub-region marked with red dots.

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

4. Method

4.1 Introduction to a mixed methods approach

This study used a mixed method approach of investigation and included a quantitative questionnaire survey and semi-structured interviewing. As Alan Bryman writes there are many benefits of a mixed methods approach in social research, since a mixture of quantitative and qualitative research can be mutually enhancing. By using more than one method the research results are triangulated, if the results from both methods are alike or similar the results are often considered to be more credible (Bryman, 2011, p. 560). Baxter and Eyles describe triangulation as one of the most powerful techniques for strengthening credibility and mention mixed methods as one of the ways of triangulating results (Baxter & Eyles, 1997, p. 514). Furthermore, using qualitative methods for illustrating quantitative results can help building an understanding of the context around the researched theme and provide the reader with a more complete picture of the area of study. A mixed methods approach allows the researcher to mix research questions of both a quantitative and a qualitative character to provide answers to a research problem, such as in this case, where the aim is to both find the extent of mobile financial services usage and the users perceptions of the services (Bryman, 2011, p. 560). Bryman mentions that quantitative research is often seen as a method used for testing pre-formulated ideas, however he adds that this does not take in account the possibilities that quantitative research has in generating new entries and ideas (Bryman, 2011, p. 547). The questionnaire survey used in this study was not intended to test a hypothesis; instead it was used as an explorative tool to create a general picture of the extent of mobile money usage in relation to the specific locations and populations of investigation. The qualitative interviews that followed the questionnaire survey intended to complement, compensate and explain the results of the questionnaire survey and to help provide a more comprehensive picture of the researched problem.

4.2 Conducting research in a different cultural context

The relationship between the researcher and researched is always influenced by a variety of factors, perhaps more so when the research is conducted in a different cultural context. A person's identity is constituted by characteristics such as race, gender and cultural background and together they form our positionality towards the researched. The

researcher's cultural background might manifest itself in physical appearance or in behavior and attitude and this might in turn influence the way a respondent perceive him or her. It is therefore important to adapt appearance and behavior to the local context, for example by avoiding clothes that attract attention or by adopting local customs such as eating local food. Apentiik and Parpart describes that colonial history in some countries might have influenced wrongful perceptions of white people as in some way being superior. In this case the country of investigation is a former colony and the researcher is a white European, according to the points provided by Apentiik and Parpart this might have had implications for the interactions with respondents and the local community. To counter such problematic perceptions of power relations it is of great importance to be as open and respectful as possible in every interaction with the local community. Learning basic phrases of the local language can be a good tool for smoothening relations, building rapport and improving communication in formal and informal conversations alike (Apentiik & Parpart, 2006, pp. 34-39). The impacts of the researchers positionality is difficult to assess, however all possible measures should be taken to mitigate the impacts of wrongful perceptions or cultural differences. During the fieldwork of this study, especially during time of interviews, an appropriate appearance was therefore actively considered and chosen. An effort in learning the local language was also made as far as the duration of fieldwork allowed, and an emphasis on learning local social codes and signs of courtesy were made to make sure that local residents and respondents of the research were addressed in a respectful manner.

Janet Momsen write that women historically have been overlooked in development research because they were often less educated than men but explains that women on the contrary often holds important local knowledge. They stress the importance of including voices and perceptions from both men and women together with people of different ages and education for the gathering of local knowledge (2006, p. 45). It was natural therefore to actively strive for an even participation of men and women in the study, not only for being able to detect differences between the genders on the subject of investigation, but also to take into account differences in information that men and women can hold and to not neglect information provided by women.

Furthermore Apentiik and Parpart argue that the history of interaction between donor organizations and the community in the area of interest might influence the way the respondents perceive and answer to one's own research. To give "the right answers" or exaggerating answers might by the community be associated with expectations of more donor help or rewards in other forms. The local milieu of aid work and the research previously conducted by donor organizations within the community must therefore be noted and taken into account when interacting with respondents, since one might be associated with other institutions (Apentiik & Parpart, 2006, p. 37). The region and local communities of study in this case are subject to frequent research and donor activities, which might have possibly influenced the answers of the respondents. The impacts of this issue are hard to counter and no measures were therefore made to counter them, instead the circumstances are only being noted for the sake of research transparency.

Language and translation is another issue when conducting research in a community where the language is not known by the researcher. In such a case accounts from respondents often need to be interpreted via a third part such as a local assistant or interpreter. The interpretation of language always distorts the results since the interpreting person makes his/her own judgment about what is important to interpret and how to present it in another language. The judgment and attitude of interpreters is also informed by their perception of their own society as well as their position in society, which might be influenced by characteristics such as gender, age or class (Bujra, 2006, pp. 172-174). To minimize a biased interpretation or loss of important information through the interpreters' own judgments it is important to employ an interpreter who has adequate experience with the task as well as informing the interpreter of the research aims and methods of achieving them. The interpreter employed in this study was a man in his late twenties who had previous experience of conducting quantitative surveys for donor organizations in the area. Before conducting the questionnaire survey all questions were explained and discussed. Before conducting the semi-structured interviews the interpreter was informed of the somewhat different circumstances that encompass qualitative interviews in comparison to quantitative surveys, such as the importance of not asking leading questions and giving a rich interpretation that includes as many details as possible.

4.3 Quantitative data collection

4.3.1 Structured interviews

Quantitative primary data was collected through structured interviews using a standardised questionnaire. One of the benefits of structured interviews where the interviews stick to a standardised scheme of questions is that errors related to the interviewer are minimised. The interviewer only needs to tick the boxes with the alternative that the respondent chooses, this minimises the element of interpretation of the respondents answers during the interview. Structured interviews also make quantitative data analysis easier since a closed question with standardised answers in most cases is easier to code than an open question, errors related to coding are minimised since the researcher do not need to interpret and categorise for example sentences that differ between respondents (Bryman, 2011, p. 205).

For this study the questions were created to provide answers to the first and second research questions regarding the extent of mobile money usage based on social characteristics and location as well as barriers for usage. The questions followed a standardised questionnaire and the same questions were asked to all respondents. The questions asked were of a closed character with either two or more alternatives. The questionnaire was created in Microsoft Word and included 19 different questions concerning mobile phone ownership, mobile money use, the use of other formal and informal financial services and habits of handling cash. Also questions of social characteristics such as age, gender, primary income source, level of completed education, religion and ethnicity or tribe were included in the questionnaire (See Appendix 1). Questions on mobile phone ownership and knowledge of mobile money were included since they inflict on the extent of mobile money usage and at the same time can provide quantifiable data on barriers to usage. Questions on other financial services were included to understand the context of access to finance in the different areas as to be able to say something about the importance of mobile money as a viable means for access to finance. Questions on social characteristics were included with the purpose of finding correlations between variables on financial services use and the social characteristics that was believed to have a possible influence. Lastly, a question regarding whether the respondent would accept to be contacted again for another interview was included.

A pilot test was done with the questionnaire including six respondents to find errors or issues related to the questions after which the questionnaire was revised and altered to its finished form. It was printed out in enough copies to cover 150 respondents. Three locations were chosen and 50 interviews conducted at each location. The interviews were made in a few different spots in each of the three locations since one location may include one category of respondents but exclude another. The choice of what individuals to approach and include in the survey was based on the gender and perceived age of the individual. An assessment was made after a certain number of interviews had been conducted to find out what ages and gender were not sufficiently represented and this guided the selection of the remaining respondents. Together with the interpreter the interviewees were approached and after a personal introduction the purpose of the survey was shortly explained to them. If the person accepted to participate the structured interview followed. The interviews were done during daytime at public places such as markets or along busy streets.

4.3.2 Sampling

Since there was no address list or other type of index to be found over the populations, a probability sample design was not considered feasible. Instead a non-probability purposive sampling design was chosen. Purposive sampling is useful when the researcher wants to select a sample that cover a wide variety of elements or attributes among a population, this to be able to identify important patterns across the variations (Daniel, 2012, p. 9). Purposive sampling aiming at a great variety is also called maximum variability sampling. The sampling method was considered appropriate for gaining insight into how mobile money use varied between different geographical and socio-economic variables. The aim was to maximize the variability of the sample to test for many different variables that might relate to mobile money use and thereby create a comprehensive picture of the research problem. The sample included 150 respondents distributed on three different geographical locations. The locations consisted of one of urban, one of semi-urban and one of rural character and in each location 50 respondents were interviewed, of which 25 were men and 25 were women. Gender and location were the only variables with the same number of participants in each category. An even participation of respondents of different age, income, education and other variables as was strived for but not realised. This was partly due to the fact that in one specific location on a given time there might be a limited spread of people with different educational backgrounds,

income levels or other social attributes, therefore only correlations between variables that had an adequate number of respondents were presented in the result. Tables 1,2 and 3 below show locational distribution of respondents per the variables education, income and age.

Table 1. Level of completed education of respondents per location

	Urban		Semi-urban		Rural		Total	
	No.	%	No.	%	No.	%	No.	%
No education	15	30%	22	44%	42	84%	79	53%
Primary school	14	28%	18	36%	8	16%	40	27%
Secondary school	9	18%	9	18%	0	0%	18	12%
Higher education	12	24%	1	2%	0	0%	13	9%
Total	50	100%	50	100%	50	100%	150	100%

Table 2. Income level of respondents per location

	Urban		Semi-urban		Rural		Total	
	No.	%	No.	%	No.	%	No.	%
Relatively high income	31	62%	18	36%	5	10%	54	36%
Low income	11	22%	29	58%	43	86%	83	55%
No income	8	16%	3	6%	2	4%	13	9%
Total	50	100%	50	100%	50	100%	150	100%

Table 3. Age distribution of respondents per location

	Urban		Semi-urban		Rural		Total	
	No.	%	No.	%	No.	%	No.	%
<20	7	14%	8	16%	6	12%	21	14%
20-29	23	46%	18	36%	16	32%	57	38%
30-39	11	22%	15	30%	6	12%	32	21%
40-49	4	8%	3	6%	5	10%	12	8%
50+	5	10%	6	12%	17	34%	28	19%
Total	50	100%	50	100%	50	100%	150	100%

4.3.3 Data analysis

After conducting the questionnaire survey the answers from every respondent was typed into the statistics software SPSS from which the results were analysed using cross tabulations and frequency counts. The aim was to derive the most distinguished correlations between different variables of interest that were to be included in the results chapter and that would form the basis for further qualitative study.

4.3.4 Reflections on the quantitative data collection

To include an element of randomization in the sampling might have increased the validity of the research and to a higher degree made the sample representative of the populations in each area. In non-probability sampling methods such as maximum variability sampling it is the researcher self that has full power in the selection of which individuals to include as opposed to a random, or non-probability sampling method. The disadvantages to this kind of sampling include that the respondents that participate in the survey are those who happen to be near the interviewer at the time of inquiry and that the choice of whether to include or not include a respondent in the research is made by the researchers own perception of whether the respondent would fit in to the sample. This perception is not always correct and the result might be that a person that would actually fit into the sample would not be included because the researcher has the wrong perception of for example the persons age and therefore do not ask the person for an interview. Samples from a non-probability method such as mine where respondents are purposively targeted and no element of randomization persists should not be seen as representative for a target population, and the credibility of generalizations to a larger population is consequently low.

As Alan Bryman points out it is important to bear in mind that the correlations that are found between variables are not always examples of a causality, or cause and effect. It is not possible to be entirely sure that one variable is the cause of another and most often it might be a mix of factors that influence a phenomenon (Bryman, 2011, p. 326). Therefore it should be emphasized that the results presented show correlations between variables of the researcher's choice, and other variables that was not measured might also have influenced the results.

It should be mentioned that the questions of religion and ethnic belonging that were included in the questionnaire (see Appendix 3) are not reflected in the results since no strong correlations could be found between them and the core question of mobile money use. Furthermore the three income levels, "no income", "low-income" and "relatively high-income" were defined by the researcher on the basis of the respondent's income source that was reported by the respondents themselves during the quantitative interviews, as well as fieldwork observations and information gathered during the qualitative interviews. The low-income quintile consisted of respondents occupied with subsistence or seemingly low income economic activities, mainly artisanal mining, and small-scale entrepreneurs selling for

example a kind of local brew, firewood or pastries as well as those receiving pension. The relatively high-income quintile consisted of respondents with formal paid work in places like development organisations, clinics, security organisations or shop assistants. Income is difficult to assess, and can be measured in many other ways such as measuring assets of individual and household consumption. The division of primary income sources into different income levels are no matter how well informed still arbitrary and influenced by the interpretation and perception of the researcher, this should be taken into consideration when reflecting on discussions relating to income.

The survey aims to measure the usage of mobile money, however being a user can be defined in many ways. Some respondents can use mobile money once and consider themselves as users, while others would refuse to call themselves users under the same conditions. Operationalizing the concept of usage by for example asking questions of the frequency of mobile money usage and creating a definition of “user” would have given the results a higher degree of credibility.

As the number of respondents were determined by quotations at the different locations and between men and women, the number of respondents that were strived for were attained. However at some occasions the approached person did not accept to participate in the survey due to different reasons and their opinions were consequently not added to the result, adding to the selection bias. The total number of these non-respondents estimated to range between 10-15 persons, meaning that roughly another 10% more people compared to the total included respondents were asked to participate but refused. The number of people that refused to participate is not estimated to have differed substantially between locations or different people.

4.4 Qualitative data collection

4.4.1 Semi-structured interviews

While the before mentioned questionnaire provided data on the patterns of the mobile money usage, the semi-structured interviews were used to complement this with more in-depth personal accounts of using mobile technology for handling money. A less structured mode of investigation is appropriate to allow for the interviewees’ perceptions and perspectives to come forward undisturbed by leading questions. Contrary to the structured interviews used in

the questionnaire, where ‘sticking to the point’ is crucial, in qualitative interviews it is desirable to let the dialogue move freely in different directions within the theme of investigation since this might generate knowledge on what the respondent perceives as important. The researcher can also ask follow-up questions should topics of interest emerge during the course of the dialogue (Bryman, 2011, p. 413). Still, the semi-structured interviews are usually guided by a number of themes, which is useful when the aim is to keep focus on a few specific areas of interest. In this case, a few interest areas and a list of questions that were derived with consideration to the results from the questionnaire survey guided the semi-structured interviews. Together this constituted an interview guide (See Appendix 2). The interest areas, and consequently the questions asked, differed between different locations and individuals. In the urban and semi-urban area general questions on the perceived usefulness of mobile money for sending and saving money as well as paying bills were asked since the use of mobile money was so widespread in these areas. Also questions about the perception of other types of financial institutions such as banks, VSLAs and a comparison to handling cash were asked so as to be able to make a comparison between them and mobile money.

In the rural area the use of mobile money was relatively very low, therefore the focus of the interviews was placed on exploring barriers to usage and respondents that did not use mobile money were consequently interviewed. If the respondent had no phone and a low income, questions could for example be asked about the possibilities and attitudes of buying a phone and the respondent’s attitudes towards using one. Some of the respondents at the different locations were asked to compare different ways of handling money, such as to compare saving money at home, in the VSLA or in the mobile phone.

Together with the interpreter the possible respondents were either contacted through phone or found by asking around for the person in the area we found him or her the last time. The respondents were given a second introduction to the researcher, reminded of the subject of research and given an explanation to why more questions would be asked as well as how long the interview would take. If the respondent accepted to participate once again an interview followed which usually lasted around 20 minutes. The interviews were usually recorded with the permission of the respondent and then transcribed in full length.

4.4.2 Sampling

The respondents were chosen from the people already interviewed in the questionnaire. As described by Sandelowski (2000, p. 252), a survey that unravels the most significant variables and associations can be a good instrument for guiding the sampling in a qualitative follow-up study. A list of the respondents can be found in Appendix 3. The selection was made to include a variety of people from different locations as far as possible, including people with both low and relatively high income, both men and women, and people with varying use of mobile money and other financial services. Although the aim was to provide a varied sample, the results from the quantitative survey also influenced the sample. It was for example important to try to include the predominantly rural financially excluded to complement the quantitative data with more in-depth accounts of their situation. Both users and non-users of mobile money were included as well as people who did or did not use traditional banks and VSLAs. A mix of different people with different financial habits was important to collect accounts from many categories of users or non-users and be able to make a comparison.

4.4.3 Data analysis

The interview transcriptions in a digital form were first read through while reoccurring themes were noted and categorised with the help of comments in a word processing programme. The categories consisted of concepts such as “safety of savings” or “emergencies” that would become part of the report. When this kind of coding is made there is a risk of fragmenting the data and distorting the general picture (Bryman, 2011, p. 413). To avoid fragmenting the data many of the important points from the qualitative data are illustrated by quotes accompanied by an explanation.

4.4.4 Reflections on qualitative data collection

It proved difficult to find some of the persons chosen from the list of respondents from the questionnaire. Especially those without a mobile phone were hard to find. Sometimes the noted number was incorrect or the person could not be reached. This impacted on the sample of people and may have made the sample of respondents less diversified than desired.

As noted before the use of an interpreter during an interview always distorts the results in a way that is hard to account for. The interpreter interprets both the question and the answer and during the course of the interpretation information is inevitably lost and distorted. Aspects

of power relations, such as the fact that both the researcher and the interpreter were men and that the researcher was a white European could also have influenced answers from the respondents.

5. Presentation of empirical findings

5.1 Introduction

This section is organised according to the three different questions, starting with describing the extent of mobile money usage in the three different locations and how it differed between people of different income, age, gender and level of education. After that the barriers to usage that could be found in the quantitative as well as qualitative study is described with statistics from the quantitative survey complemented with accounts from the semi-structured interviews. Lastly the perceptions of the usefulness of mobile money is described, this chapter consists mainly of accounts from the semi-structured interviews.

5.2 The use of mobile money

The first research question concerned the extent of mobile money usage and the empirical findings on this is presented in this section. The most significant correlations between different variables tested for and mobile money use are presented while the weaker correlations are excluded or briefly mentioned. Data on the use of other financial institutions and informal ways of handling money as well as the portion of people who did not use any kind of financial institution is included for reasons of understanding the financial context and the state of financial inclusion in the three areas.

Total mobile money usage, independent of its combination with other financial services, was around 90% in the urban and semi-urban areas. This means only a few of the respondents were not using mobile money in these locations. In the rural area mobile money use was not nearly as common with only eight out of 50 respondents, or 16%, using mobile money. A difference between the urban and semi-urban areas was that it was slightly more common to use mobile money on another person's phone in the semi-urban area than in the urban area. Table 4 shows the number of respondents who use mobile money on either their own or another person's phone divided on location.

Table 4. Mobile money users per location

	Urban		Semi-urban		Rural		Total	
	No.	%	No.	%	No.	%	No.	%
Using their own phone	35	70%	25	50%	4	8%	64	43%
Using another person's phone	8	16%	20	40%	4	8%	32	21%
Not a user	7	14%	5	10%	42	84%	54	36%
Total	50	100%	50	100%	50	100%	150	100%

According to the survey, almost 40% of all respondents from all locations used mobile money as their only formal financial services provider. The highest percentage could be found in the semi-urban area where more than half of the total number of respondents at that location used no other formal financial services than mobile money as shown in Table 5.

Table 5. Respondents with mobile money as their only formal financial service provider

	Urban		Semi-urban		Rural		Total	
	No.	%	No.	%	No.	%	No.	%
Mobile money as only formal financial service provider	21	42%	32	64%	4	8%	57	38%
Total	50		50		50		150	

Mobile money use seemed to be strongly related to income level. About 90% of those classified as having relatively high income used mobile money on their own or another person's phone and for the low-income group this rate was about 50%. It is worth to mention that income level was also strongly related to location. Around 60% of respondents from the urban area were classified as having a relatively high income, while only 10% of the respondents in the rural area were classified as having a relatively high income. The semi urban area had a more even distribution of respondents from the low and relatively high-income quintiles, but with a majority of people in the low-income group at 64%.

Mobile money usage was almost as common among women as among men, 48% of the total number of mobile money users were women. However it was somewhat more common among women to use mobile money on another person's phone instead of a personal phone.

The age group 20-29 had the highest percentage of mobile money users, 43% of the total number of mobile money users were of this age group. Together with the age group 30-

39 they made up about 70% of all mobile money users while the rest of the users were scattered between the age groups 18-20, 40-49 and 50 and above.

As shown in Table 6, there seemed to be a high correlation between the level of completed education and the use of mobile money on either a personal or on another person’s phone. When analyzing the total number of respondents, a higher level of education meant a higher level of mobile money users. Among those with completed higher level of education, meaning education on a higher level than secondary school, the use of mobile money was at 100%. Among those with no education about 43% were using it, on either their own or on another person’s phone. Among those who had completed primary or secondary school the use of mobile money on a personal or on another person’s phone was at 80% and 94% respectively.

Table 6. Mobile money users divided on level of completed education

	No education		Primary school		Secondary school		Higher education		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Using their own phone	19	24%	19	48%	13	72%	13	100%	64	43%
Using another person’s phone	15	19%	13	33%	4	22%	0	0%	32	21%
Not a user	45	57%	8	20%	1	6%	0	0%	54	36%
Total	79	100%	40	100%	18	100%	13	100%	150	100%

It should be noted that the level of education differed a lot between the locations as can be seen in the sample section (p. 19). In the rural area, 84% of the respondents had not completed any level of education while the remaining 16% had completed primary school. The semi-urban area had a higher portion of primary and secondary school completers but only one respondent of higher education. The urban area had a quite even spread of people with different levels of completed education, as well as a high portion of 25% of respondents who had completed a higher level of education.

Informal ways of handling money such as saving money in a box at home or sending and lending cash with the help of family and friends were common in all three locations. The rural area actually had the lowest prevalence of informal ways of handling money. This might however be related to a general lack of money, which is further elaborated under the next research question concerning barriers to usage.

Membership in a Village Savings and Loans Association (VSLA) was popular in all three locations. In the urban and semi-urban areas the membership in VSLAs among respondents was slightly below 50 % with a more or less equal distribution between men and women. In the rural area the VSLA membership was about 25 % with almost as many women as men participating, meaning the VSLA was more popular than mobile money in this location.

The use of traditional/commercial banks was at 42% in the urban area, 18% in the semi-urban area and 8% in the rural area. Slightly more men than women used traditional banks in the urban area while the gender difference was minimal in the semi-urban area. The number of respondents who used traditional banks was too low in the rural area for gender statistics to be significant.

A total of 39 out of 150 respondents in the survey were not using any informal or formal financial institution. Out of these, five were from the urban area, four were from the semi-urban area and 30 respondents were from the rural area. This means 60% of all respondents from the rural area could be counted as completely financially excluded according to the survey, as compared to only a fraction of the respondents from the two other areas. Out of the financially excluded in the rural area there were about as many men as women and all of them were of the low-income level. Seven of them had finished primary school and the rest had no education.

5.3 Barriers to mobile money adoption

The second research question concerned barriers to mobile money adoption and empirical findings on this are presented in this section. Since mobile money was used to such a large extent in the urban and semi-urban areas the barriers to use of mobile money will mostly be discussed through voices from the rural area. A lack of mobile phones, lack of knowledge about mobile money as well as economic constraints came up as the major barriers in this study.

5.3.1 Access to mobile phones

A prerequisite for using mobile money is having access to a mobile phone. The survey showed that in the urban and semi-urban areas personal mobile phone ownership was high

with 80% in the urban location, while in the rural location merely 16% of the respondents owned phones. This is illustrated in Table 7. Mobile phone ownership was somewhat higher among men than women in all three locations. In the urban and semi-urban locations the gender differences were less than in the rural location where very few women owned their own phones.

Table 7. Mobile phone ownership per location

	Urban		Semi-urban		Rural		Total	
	No.	%	No.	%	No.	%	No.	%
Has a mobile phone	40	80%	34	68%	8	16%	82	55%
Does not own a phone	10	20%	16	32%	42	84%	68	45%
Total	50	100%	50	100%	50	100%	150	100%

To the question: “have you ever used a mobile phone?”, respondent 1, an older woman from Lomareho, accounted of having a phone but pointed out the limitations of using a phone without the know-how. However she had found a way to operate its communication functions: “Yeah I use it when someone calls me, I have a phone. But when it reaches dialling a number it becomes a bit difficult, I call on someone who knows how to operate to help me.” She considered the phone a big investment since she had to save a large sum of money to buy it. The reason for buying it was to communicate with friends who lived far away and to be able to call someone in emergencies such as when she gets lost. To the same question of whether she had used a mobile phone, respondent 2, a young woman who had a small shop in the same area, answered that she had never but that she wanted one however considered it expensive: “I have never [used mobile money], I only seen people using. My friend when she is at school, sometimes people send her money I hear. I also want, but the only way of accessing a phone is buying and it is expensive”. However she also mentioned that the next time they would share out the savings in the savings group she belonged to she would consider using the savings for buying a phone, implying that she found buying a phone among her priorities.

Another young woman from Lomareho explained that she had a phone that she used before but she needed to register her line again for it to work. The reason for not registering the line again was the expenses and that she did not have time to travel to Moroto. She mentioned that if there had been an agent where she lived she would go and register her line and use mobile money as well. As for now she goes to a person with a working phone and

uses that person's phone for sending money. She bought the phone for reasons of communicating with her far away friends even though it was expensive. She also noted that only a few of her friends had phones to which she could send digital money, usually she had to send them money in cash.

5.3.2 Being aware of mobile money

Knowledge about the existence of mobile money was at 100% in the urban location and almost total in the semi-urban location. However in the rural location awareness was low in comparison with less than 40% of the respondents knowing about mobile money.

When asked whether they knew about mobile money in the rural location, some reported that they had only heard about it or others that they do not know. Respondent 1, who accounted for the problems of using a phone without the know-how, was also asked whether she knew she could save money in her mobile phone. She answered: "No I didn't. I have not gone to school so I don't know those things that people who have gone to school know".

Respondent 3, a woman in her twenties from Lomareho was asked if she knew about mobile money and answered: "I don't really understand mobile money, I remember you mentioned it the last time we talked but I still don't know". And when asked whether she felt she needed a mobile phone she simply answered: "I have no idea, I have never used a phone so I don't know if it's good".

5.3.3 Affording mobile money

The survey showed that the most common reason for not using mobile money was of a financial character. There were 21 respondents out of the total 150 who knew about mobile money but did not use it. About half of these came from the rural location. The most common answer as to why they did not use it was "I have no money to save", with 11 respondents answering this. Another four respondents answered: "It's too expensive". The remaining respondents were divided between not understanding how it works and not having an agent were they live.

Many of the respondents in the rural location expressed that there was no money to save or send when asked questions about those subjects during the structured interviews. Respondent 4, a woman in her twenties who worked with small-scale mining,

like many of the other respondents from Lomareho, described in a semi-structured interview that she had difficulties of saving money and that even though she wanted a phone, other needs were more pressing. When asked about her possibilities of saving some of her income she answered that she could only save for short periods: “I’m not even a member of a VSLA or have any money for saving. If god helps me with some money, I come and keep and whenever I need some money for buying food I just buy, maybe after about a week I buy some food for the house”. When asked whether she felt she needed a mobile phone she said it would be useful for communicating with friends however because of more pressing needs she could not think of buying one at the moment “Yeah if I have friends to communicate with or if I also have money for buying airtime, then yeah I could think of a phone. It’s hard now to afford, it’s a lot of hunger and a lot of responsibilities, I don’t think of buying a phone right now”.

Both the quantitative and the qualitative studies therefore indicated lack of money as one of the more prominent barriers to usage.

5.4 The usefulness of mobile money

The third research question concerned the perceived usefulness on mobile money. In this section I have described accounts on how the respondents perceived the usefulness of mobile money, divided on different themes that were reoccurring during the semi-structured interviews. These themes include perceptions on safety of saving and sending money through the phone, the usefulness of mobile money in situations of emergency, the effect of mobile money on savings behaviour, the convenience and effect of mobile money on transport needs and thoughts on interest and loans.

5.4.1 Safety of saving and sending money

Mobile money was by some of the respondents mentioned as a safe way of keeping money. Some talked about the benefits of keeping money digitally in comparison to physically, since the risk of losing money in an accident or being stolen from were associated with keeping cash. Respondent 5, a woman in her twenties from Kangole who had her own hair saloon, expressed this when asked to compare saving cash at home to saving it in the phone. She

meant that physical cash could easily be destroyed or stolen, especially for people staying in grass-thatched houses:

In mobile money it is safe. Even if it is lost, you can call the urgency line of mobile money... But with saving at home sometimes maybe you are sleeping in a grass-thatched house. It can get burnt or sometimes someone can steal. That is why mobile money is better than saving at home. When you save at home anything can happen to your money. (Respondent 5)

Respondent 6, a man in his twenties from Moroto who was working in a small shop, talked of the same risks and mentioned that it could lead to conflicts in your family: “If you keep the money at home in a grass thatch house even fire can come and burn your money easily. Even rats can pull out some money and it brings out conflicts in your family and you think so and so have taken money, yet maybe it is the rats within the house”. The same man also talked of the differences between sending physical and digital money and accounted for conflicts related to sending cash. He told a story of when his friend was trusted to deliver money to him but instead the money disappeared. He meant this kind of problem is minimized when you can send electronic money immediately to the right receiver:

I had incidents with sending cash those days when I was in school. Even when I was studying my relatives sent me money. Maybe they would give this person money to bring to me, a friend of mine, but at times he would not even tell you he was given the money, now when you come back for holiday is when you're told, did you receive this kind of money? No...? We sent the money! When you try to follow up it ends up with a quarrel. Sending hard cash like this causes conflicts... ..When you have it in electronic money you are able to send to the right person that you want. Even if that person does not have a phone you get another person nearby or tell them to go to the mobile money agent and I communicate with them send them and the person can withdraw money, problem solved. (Respondent 6)

Accounts of the vulnerabilities of keeping cash could also be found in the rural area. Here the use of VSLAs was more common than mobile money and the comparison was made between saving in a VSLA and keeping cash in the house. Respondent 2 and 3 from Lomareho explained their worries of keeping money in the house and especially mentioned theft as a reason for worry:

I can't keep money home, there is a lot of thieves. People here are very sharp thieves, people come when you are not at home, you find when it has been taken. Especially when I go for mining maybe I left some money somewhere you find the whole house has been disorganised and the money is missing, you fail to identify who it is. It is people from the neighbourhood who monitor you when you go and come and rob your house. (Respondent 3)

Security was not good for that small box I had at home. Every time you needed to be available at home to make sure your box was safe, it was too stressing by then. But now I have freedom. I look for money Monday to Saturday and when it reaches Saturday I take the money to the group [the VSLA]. (Respondent 2)

However, it seemed that the VSLA was not always easily accessible for everyone.

Respondent 4, a young woman in her twenties from Lomareho who was working with subsistence mining and collecting and selling firewood, pointed out that the VSLA has limited room for members and that when the people came to help set up the VSLA in the area she missed out since she was not present. She meant that they came without notice and that people from another nearby group of manyattas secured their seats in the group before she could join. When asked why she is not in a VSLA she answered:

Because I have never got access to any group. There is groups in these villages for certain individuals, some people are not allowed to join because sometimes when they bring cashboxes they just write themselves, they don't think of other people outside their village... When we are not around and they come to register people we don't get registered. They only came once and in a secret way and don't tell others. (Respondent 4)

In Kangole and Moroto others talked about the benefits of private control of the savings experienced with mobile money in comparison to the much-used VSLA where the savings are dependent on other people's actions and honesty. Respondent 7, a man in his thirties from Kangole who was working as a radio repairer, said the risk with the VSLA was that those responsible for keeping the money safe would steal it, while with mobile money you kept it safe with your secret PIN code: "In mobile money I can save my money and no one can withdraw. Because I know my pin number... not even the wife or the father knows the PIN. But for the VSLA the keys to the money are given to different people, they can just go and open the [box with the] money and then they go with it".

Respondent 8, a woman in her twenties working as a hair salon assistant in Kangole pointed out that if you lose the money you keep in your phone you can only blame yourself, as opposed to if you save in the VSLA where someone is to blame: “For safety with the mobile money you know it is you who has lost the money. In the VSLA you don't know if it is the person who has been keeping the money who has stolen or if it is someone else. With MM you can only blame yourself”. However, the same woman also expressed the worry that someone who knew her pin would steal her money when she left her phone to charge at church, a public place where there is electricity coming from a generator.

Respondent 9, a man in his twenties working as a clinic assistant in Moroto talked of the risk of losing the phone and at the same time all the money you saved within it: “Mobile money is risky because it requires you to handle the phone. Say you have huge amounts of money in mobile money and the phone gets lost. It becomes a very big loss. Risk of maybe losing the phone and you lost more money than the phone.”

5.4.2 Emergencies

Some respondents reported that mobile money was useful to access funds in case of emergencies. These emergencies could range from being able to withdraw money fast to buy food when having guests to saving the life of someone in need of healthcare.

Respondent 7, the radio repairer from Kangole, mentioned that when for example a child is sick he could withdraw at any time, while with the banks it was more difficult to withdraw quickly: “I can any time withdraw for any sickness, when someone in the family like a child is sick I just withdraw and take to the hospital. Maybe like clothing, just like that. Feeding, I can just go and get from mobile money. For the bank it's difficult”. However he also noted that the mobile network was not always working, a concern a few other respondents commented on as well.

Respondent 6 mentioned that he used mobile money for sending money when others are in need and said he usually sends money to his grandmother whenever she is sick:

I picked up interest in mobile money because I saw it was something that is quick, maybe someone is in an emergency and has a problem in Kampala, maybe someone needs money in a village. So I thought taking up mobile money was a good option because you send someone money very fast and he rescues himself or herself, you're helping... ..My

grandma is a Muteso [Muteso is an ethnic group], I always send her money when she's sick. She is suffering from ulcers. I always send her money in emergencies. (Respondent 6)

Respondent 4 from Lomareho explained that she had used mobile money for receiving money through another person's phone at a time when her sister needed healthcare. She had only used mobile money once but mentioned she had found it helpful at that time: "It has only happened once last year and since then they have not sent any money. They sent when my sister was very sick... Mobile money was good in the way that when you had an emergency they just send and you receive money quickly and you can save the life of a person".

5.4.3 The effect of mobile money on savings behaviour

Another theme of interest that came up during the semi-structured interviews was the effect of mobile money on the habits of saving and many made a comparison to saving physical money. These accounts mainly came from the urban and semi-urban locations where people were using mobile money to a high extent for different purposes, including for keeping savings. In the rural area, none of the respondents of the semi-structured interviews used mobile money for keeping savings.

Respondent 10, a man in his twenties who was working as a mobile money agent in Kangole described that he thought mobile money facilitated savings by allowing someone to save money from anywhere (where there is an agent): "You can save easily. It facilitates savings. You can save it at any time anywhere; you get money, you save, without having to travel home and put in the box. Say you are somewhere and you have a chance to get any money, you just save."

Respondent 5, the hair salon owner in Kangole, described that when she kept money in her phone she sometimes forgot that the money existed, while when she kept it in cash it kept getting used up.

Respondent 11, a woman in her forties who had her own clothes boutique in Kangole described that mobile money had reduced unnecessary spending by making the money less available since you had to go and withdraw it to use it.

I use mobile money also for saving. I think it is good for saving because when you handle liquid money you can misuse it but when you save it in the phone it is safe. You will not just use it anyhowly [recklessly, without thought]. By the time you want to misuse it maybe there is no way of withdrawing it from the mobile money so it is kept from there, so it is useful to keep money in the mobile money. (Respondent 11)

The view that mobile money had reduced unplanned spending was also shared by respondent number 6 and 9. Respondent 6 described similarly that when he had money in the form of cash it was easily spent, while when kept in mobile money it was always withdrawn for a purpose and therefore mobile money had reduced the unplanned spending of money. Respondent 9, the clinic assistant from Moroto described that he found it easier to manage the money he received in the beginning of the month when he could deposit it in the phone, since he then only withdrew money in time of need: “When you receive the money in the beginning of the month it is very hard to handle it physically like this. So you save it in the mobile money then in the middle of the month when you need it you go and withdraw it”.

5.4.4 Convenience and reduced transport

One of the most commonly expressed thoughts of mobile money was that it was a convenient way of handling money through being able to save at any time, withdraw at any time as well as pay bills and school fees without the need of travelling or standing in a line.

Respondent 8, the hair saloon assistant from Kangole, was noticeably positive to mobile money. She explained that before she started using mobile money she was only using the commercial bank. If she needed to send money to someone she had to travel to Moroto to withdraw and send it, and the receiver would have to be patient. She perceived it as tiresome to use the bus, expensive and as a long journey. She described the convenience of being able to send money fast to people in need as well as the benefits of being able to withdraw money at any time without having to travel to the bank:

Mobile money is good, because it's very easy to send money. No one can struggle and be stranded somewhere without money reaching quickly, when you send they receive immediately. The bad thing before mobile money is you had to struggle and wait for the means to go. It was difficult before mobile money. People would get tired of sitting there and waiting for means to use, the other person is suffering. Mobile money is very efficient, there is no stress... Another good thing is that when food is over from home

you can still go and withdraw quickly and you buy food, even when someone does not have transport to go somewhere. There is no stress to go to the bank to withdraw, right now you just withdraw and you give the person the money, before it was very hard. I'm very happy that mobile money came. (Respondent 8)

Respondent 7 in Kangole described the convenience of paying school fees through the phone instead of through the bank. One of the benefits was to not have to pay transport money:

I use it to pay school fees. I save my money inside mobile money. Before mobile money we went to the bank and deposited to the account of the school and then the school gets the money. At that time I needed to go to Moroto and you then spend transport money. For mobile money you just send at home and it goes directly to school. (Respondent 7)

Respondent 11, the clothes boutique owner from Kangole, compared having money in the phone to having money in the bank and meant that it was convenient to have money with you all the time that you could withdraw or send whenever you wanted, especially since the bank she was using only has branches in Kampala:

I started using mobile money because it is easy to use. It is a prompt system to use, it can send very fast to another side. Another reason is it keeps money within you, together with you more than a bank because the bank is far away from where you are, but with mobile money when you put money in your mobile the money is just together with you in your house. At any time you want to send or withdraw you just do it [more] promptly than a bank. I still use the Barclays bank in Kampala. It is very far, which is a problem. (Respondent 11)

She mentioned that it was hard for the rural people to use mobile money since no agents had established themselves in the villages. She had thought of this and suggested that mobile money agents should be trained and subsidised for setting up businesses in the remote areas, as to extend the services also to those places. She also mentioned that the charges for withdrawing and sending money through the mobile money agents were a bit too high, especially since mobile money is aiming to provide services also to the “lay person” as she described it. Respondent 6 and a few others also found the charges too high.

5.4.5 Interest and growth of savings

Many respondents reported they found saving money in VSLAs or in banks better because of the interest or growth on the savings these institutions provide as opposed to mobile money accounts where the money stays the same. Many described the VSLA as a good place to save because, provided no one steals the money they get back more than they expected at the time of sharing out. Respondent 6 concluded what was also expressed by some of the other respondents who had experience of both mobile money and banks or VSLA, that there was no interest or growth of the money in the mobile money accounts. He also mentioned that people with businesses preferred financial institutions that offered interest on the savings:

Putting [money] in VSLA is more profitable than mobile money because you don't profit there. VSLA is both savings and credit association, people bring interest, which you share. The money you save in the phone doesn't generate more money, it's just there intact and doesn't grow. That's why you see people with businesses save in the VSLA and in the bank. (Respondent 6)

6. Discussion

According to the African Development Bank, mobile money is a potential game changer for financial inclusion in Africa (Triki & Faye, 2013, p. 107). This is given credibility when looking at statistics on, for example, the increasing number of mobile money accounts in sub-Saharan Africa (GSM Association, 2013, p. 62; 2015, p. 33), the big increase in mobile phone subscriptions in Uganda (International Telecommunication Union, 2014) and the fact that most Ugandans are financially included due to mobile money (Economic Policy Research Centre, 2013, p. 63). However this study emphasizes the importance of investigating the potential of mobile money adoption also on a lower geographical scale, and paying attention to the situation in less developed areas such as Karamoja. In the rural area of study only a few of the respondents were using mobile money, and the conclusion can be drawn that although widely used in the urban and semi-urban areas, mobile money has only marginally introduced formal financial services to the rural location in the selection of study sites. This is unfortunate since the clear majority of the financially excluded in the survey were from the rural area. Mobile financial services are believed to be a solution for providing the remote and poor populations with access to finance through lowering economic and geographic barriers. However in this case it seems like the use of mobile money among the rural poor is still limited and that the barriers are similar to the documented barriers for financial inclusion described by Demirguc-Kunt et al. (2014, p. 15). The results showed that a lack of money to save, lack of phones, lack of knowledge of mobile money and lack of nearby mobile money agents are barriers for mobile money use, and that these exist largely in the rural area.

Respondent 11's suggestion of deploying subsidized mobile money agents in remote areas (see page 41) might increase the knowledge about mobile money and increase access for the people in rural villages such as Lomareho. That would require cooperation between mobile network operators and the government or another source of funding such as donor- or foreign aid organisations. The issue of lack of phones and money is part of the poverty problem in Karamoja. It becomes a kind of catch 22 where mobile money services are believed to help people move out of poverty, yet the costs for

acquiring a phone prevents its adoption. Nevertheless it should be noted that there were at least a few phones and a few mobile money users in the rural area, indicating that the financial innovation has actually penetrated this location, albeit to a very low extent. During the semi-structured interview some respondents noted that they were interested in purchasing a phone and one mentioned she had seen a friend use mobile money and that she wanted the same thing. This indicates that there is demand for mobile devices that of course precedes mobile money usage and that there might be an interest also for the services. Perhaps is the use of mobile financial services in Karamoja only a matter of time as expressed by Burns et al. (2013, p. 62).

According to the questionnaire survey, about half of the mobile money users were not using any other formal financial service than mobile money. The results do not provide an answer to why they do not use other formal financial services, such as banks, and therefore no conclusions can be drawn on whether mobile financial services has brought financial inclusion to them, but it can be concluded that these people find mobile money either the only or the best option. The considerably higher portion of respondents who had mobile money as their only formal financial service provider in the semi-urban area suggests that there might have been a financial gap which mobile money have filled in this bank-less location. While mobile money use were very high in both areas, more people were using mobile money on other people's phones than on their own phones in the semi-urban area compared to the urban area. One possible explanation is that this is related to the fact that there were a higher proportion of people of low-income in the semi-urban than in the urban area since a majority of those who owned a phone were of the relatively high-income class. This implies that although people need to use another person's phone they will still use mobile money.

In the semi-urban and urban areas where mobile money was widely used, the perceptions of its usefulness were mostly positive. During the semi-structured interviews in the semi-urban location many respondents mentioned the convenience of having access to withdrawing and sending money at any time without being dependent on the bank and also commented on the reduced need of transport for financial errands. Similarly to Porter (2016, p. 440)'s argument that a mobile phone call can often substitute physical travelling in an African context, also mobile phone based banking seem to have

substituted physical travelling, by providing easily accessible financial services to those who reside far away from traditional brick and mortar financial institutions. Note that the accounts of reduced transport mostly came from the semi-urban area where people live far from the bank in Moroto, in which they had a bank account. The urban residents already lived in the vicinity of financial institutions such as banks and the reduction in transport because of mobile money might therefore be less evident. In the rural area, except for the fact that there were very few mobile money users, there was no mobile money agent and therefore using mobile money required the same trip to Moroto as using a bank would require.

As was stated in a report by the World Bank (2012, p. 63), it seems like the digitalizing of money can enhance the security of handling money by reducing savings and money transfers of physical money. Cash was perceived as vulnerable as it could burn or be destroyed in other ways and a few respondents also meant that using the phone for handling money had reduced reasons for conflicts since you need not trust another person to carry your money or trust other members in a savings group with it. This indicates that keeping money digitally and secured by a PIN code may increase the safety in comparison to keeping money physically in the house or trusting others with your money, such as in the case of the VSLA. In line with the literature (Klapper et al., 2016, p. 2), the results indicate that a switch from keeping cash to using a formal way of saving, such as putting money in the phone, might help people manage their income by reducing the unplanned spending. This seems to be largely attributed to making the money less available, specifically by introducing the necessity of having to withdraw the money to access it, and by making the money more designated for savings.

Some respondents from both the urban and semi-urban areas commented on an unreliable mobile network with timeouts as well as high charges for withdrawing and sending money. These are supply-related issues that it is upon the mobile network operators to influence, and this implies that there are areas they could improve to increase the satisfaction of the mobile money services. As discussed in the chapter on mobile phone adoption, lacking mobile network connection can restrict the spread of ICT in rural areas (Williams, 2011, p. 17), and indeed network is a large supply-related restriction to the use of mobile money in Karamoja. The rural location of study was not far from

Moroto but was nevertheless the last outpost before the mobile network coverage becomes unavailable, which make mobile technology of little use among residents in rural locations further away than studied in this case.

A negative aspect of mobile money as a savings instrument was the lack of interest on savings and some respondents mentioned they preferred the bank for this reason. In addition to mobile money, the VSLA was also widely used and this far it seems like this kind of informal financial institution is the most logical choice for residents in the rural area. As compared to the bank you can keep very small amounts and it is often available at the exact location you live. As compared to the mobile money you can take a loan and it doesn't need an investment in a mobile phone, a registered line and access to a mobile money agent for depositing. At the same time there are many negative aspects of the VSLA, such as the risk of theft and the dependence on other people's financially sound actions. Also, even though the VSLA seems to be the most available and easily accessible provider it is not always available to everyone, as was shown in the example of the woman who missed out on the chance to join the VSLA (see respondent 4, p. 30).

7. Conclusions and research recommendations

The positive accounts of the usefulness of mobile money are many and that shows that it can be seen as a useful financial tool. However, there is still a portion within the poor category of respondents in this study area that seem to be far away from adopting mobile money to any larger extent for different reasons. The typical mobile money user, according to the survey, is someone aged between 20 and 39 with a relatively high income and some level of education who lives in an urban or semi-urban area. A majority of phone owners and mobile money users were also men. For the rest, socioeconomic, geographic and technical barriers prevent the adoption of mobile financial services. Large institutions like the World Bank and the UN stress the possibilities of mobile financial services for including “the last mile” of financially excluded poor in the formal financial system, and as described in the literature, the World Bank and a group of partners aims to achieve universal financial by 2020. However, while a large portion of more or less poor people in sub-Saharan Africa probably has the capabilities of adopting mobile money and making great use of it, there is still a group of people with too little income to afford a phone, who reside in remote places where mobile money agents see no profitability in establishing themselves and where the phenomenon of mobile money seem to still be unknown to many. For this group of rural poor the informal savings groups such as VSLAs might be the more viable option for managing finances at the moment, despite its disadvantages. Hopefully, the insights on local geographical differences in the viability of mobile money for providing financial services gained from this study can be a useful complement to the large-scale studies that are made on the topic of mobile financial services and function as a current small-scale example of the diffusion and usefulness of this technology in an underdeveloped region.

Research recommendations

From the quantitative results it seems as if men were using mobile money to a somewhat higher extent than women in all three locations however the gender difference was a bit too small and the total number of respondents were too few to make any strong conclusions about this fact. Also mobile phone ownership was generally lower among

women. Since a pattern of gender difference in mobile money use was indicated in the survey it would be interesting to do further inquiries on this in the region, especially since mobile money is also seen as a potential tool for women's economic empowerment and control over their own finances. Such a study could include further quantitative research on the differences in mobile money adoption between the genders as well as qualitative inquiries into possible benefits on women's economic independence and empowerment. Drawing on the suggestions of respondent 11, an experimental study where a mobile money agent is subsidized for facilitating mobile financial services and training in a rural area similar to the one included in this study could be interesting for purposes of evaluating the potential results such a measure could have for financial inclusion of the remote and poor populations.

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Appendix 1 - Questionnaire

First ask where they stay to make sure respondents live in the place of inquiry!

(1) LOCATION _____ ID _____

(2) Do you have a mobile phone?

YES NO

(3) Do you know what mobile money is?

YES NO

(4) Do you use mobile money on your own phone or other persons phone?

Own Other Don't use

(5) What mobile money services do you use?

Save Send
Receive Pay

Other: _____

IF DONT USE:

(6) Why don't you use mobile money services?

Can't read Don't understand it
Don't need it Too expensive
No Agents where I live Other reason _____

(7) Do you use:

Traditional/Commercial banks
Microfinance Institutions
Savings and Credit Associations (SACCOS)

(8) What services do you use in this/these institutions?

Credit Savings
Sending Receiving
Paying bills
Other: _____

(9) Do you save money (cash) at home?

YES NO

(10) Do you send money (cash) with the help of friends and family?

YES NO

(11) Do you lend/borrow money (cash) from family or friends?

YES NO

(12) Are you a member of a Village Savings and Loans Association (VSLA)?

YES NO

(13) Gender

Male Female

(14) Age

<20 20-29
30-39 40-49 50+

(15) Income sources

A _____
B _____

(16) Level of completed education

Pr. educ. Sec. educ. High. educ No educ

(17) Ethnicity/tribe

(18) Religion

Islam Christian Traditional Other

(19) Can I contact you again for more questions on this subject?

YES NO

Tel. Nr: _____ Name: _____

Appendix 2 - Interview guide

Presentation

Hi I asked you a few questions a few weeks ago about mobile money and the use of banks. I am a student from Sweden and I am here to do research on mobile money as part of my studies. I now follow up these questions with another interview with some of the persons I interviewed before. I wanted to ask you if it's okay to interview you again? It will take about 20 minutes of your time and the questions are mainly about your use of mobile money, banks and the ways you handle your money. If you allow the interview will also be recorded to make it easier to remember what was said.

Mobile money usage

How long have you been using mobile money?

What is the reason that you use mobile money?

What do you think of mobile money as a way of saving money?

What do you think of mobile money as a way of sending and receiving money?

What do you think of mobile money as a way of paying bills, school fees?

If you could take a very low cost loan through your phone that you had to repay in one month, would you do it?

Traditional bank usage

What are the reasons that you use a traditional bank? What do you use it for?

What is the difference between saving money in the bank and on the phone?

VSLA usage

Why are you a member of a VSLA?

What do you use the VSLA for?

What is good and what is bad with the VSLA?

Questions concerning mainly rural areas

Are you able to save any money from your income?

How long are you able to save money before you need to use it?

Have you ever used a mobile phone? Why? Why not?

Do you think you would need a mobile phone? For what?

Did you buy your phone yourself?

Did you find it expensive?

Questions on the use of physical money, cash

How do you find saving money in the house?

How do you find sending hard cash with family and friends?

How do you find saving cash compared to keeping it in the phone?

How do you find sending money cash through family and friends compared to keeping it in the phone?

Appendix 3 - Respondents of the semi-structured interviews

Location character

Moroto – urban

Kangole – semi-urban

Lomareho - rural

Respondent 1

Location: Lomareho
Gender: Woman
Age: 50+
Income source: Artisanal gold mining
Level of education: No education
Date of interview: 6/6-2016

Respondent 2

Location: Lomareho
Gender: Woman
Age: 20-29
Income source: Shopkeeper, small shop
Level of education: No education
Date of interview: 6/6-2016

Respondent 3

Location: Lomareho
Gender: Woman
Age: 20-29
Income source: n/a
Level of education: n/a
Date of interview: 7/6-2016

Respondent 4

Location: Lomareho
Gender: Woman
Age: 20-29
Income source: Artisanal gold mining
Level of education: No education
Date of interview: 7/6-2016

Respondent 5

Location: Kangole
Gender: Woman
Age: 20-29
Income source: Hair Salon Owner
Level of education: Higher education
Date of interview: 2/6-2016

Respondent 6

Location: Moroto
Gender: Man
Age: 20-29
Income source: Shopkeeper, small shop
Level of education: Higher education
Date of interview: 30/5-2016

Respondent 7

Location: Kangole
Gender: Man
Age: 30-39
Income source: Radio repairer
Level of education: Secondary school
Date of interview: 5/6-2016

Respondent 8

Location: Kangole
Gender: Woman
Age: 20-29
Income source: Hair Saloon assistant
Level of education: N/A
Date of interview: 2/6-2016

Respondent 9

Location: Moroto
Gender: Man
Age: 20-29
Income source: Clinic assistant
Level of education: Higher education
Date of interview: 31/5-2016

Respondent 10

Location: Kangole
Gender: Man
Age: 20-29
Income source: Mobile money agent
Level of education: Secondary school
Date of interview: 5/6-2016

Respondent 11

Location: Kangole
Gender: Woman
Age: 40-49
Income source: Clothes Boutique
Level of education: Secondary School
Date of interview: 2/6-2016