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THE ROLE OF MOBILE PHONES IN EMPOWERING RURAL RESIDENTS

Study in Katakwi district, Uganda

Master's Thesis
in Economic Geography

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CONTENTS

LIST OF ABBREVIATIONS

BOP – Base/Bottom of the Pyramid

CAQDAS – Computer-Assisted Qualitative Data Analysis Software

DOE – Degrees of Empowerment

FAO – Food and Agriculture Organization

FCA – Finn Church Aid

GDP – Gross Domestic Product

GNI – Gross National Income

HDI – Human Development Index

ICT – Information and Communications Technologies

ICT4D – Information and Communications Technologies for Development

IDP – Internally Displaced Person

ITU – International Telecommunication Union

LRA – Lord's Resistance Army

LWF – Lutheran World Federation

MTN – GSM cellular network operator

MDG – Millennium Development Goal

NGO – Non-Governmental Organization

UGX – Uganda Shilling Currency

UN – United Nations

UNIFEM – United Nations Development Fund for Women

UNDP – United Nations Development Programme

UTL – Uganda Telecom Mobile

WB – World Bank

WDR – World Development Report

WOUGNET – Women of Uganda Network

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1   INTRODUCTION

1.1   Background of the study

Approximately a decade ago Bill Gates, the founder of Microsoft, was rather sceptic about modern technologies' potential in poverty alleviation. He said that people living on less than $1 a day are only buying food and trying to stay alive. (Economist 2009.) Much has changed in ten years, as now it is acknowledged that Maslow's hierarchy[1] has turned upside down regarding poor people and their use of information and communication technologies (ICTs). Even the lowest salary is used on buying a mobile phone at the expense of not having food and shelter secured (Sinkari 2008, 33). Bill Gates has also changed his opinion since then (Economist 2009). Now, there is an increased awareness of the potentials of ICTs in poverty reduction. It is clear, however, that ICT will not solve poverty, and some people still do prefer basic needs over a mobile phone. But at the same time, it is clear that poverty will not be eradicated without ICTs. (DAC… 2003, 12.)

More and more economists believe that *mobile phones* are the ICT gadgets to revolutionize development in developing countries. This development derives particularly from the grassroots level. (Corbett 2008.) In fact, mobile phone use in the developing countries has been more rapid and far-reaching than any previous technology-based product including landline phone (Hammond, Kramer, Katz, Tran & Walker 2007). The ongoing praise by organisations, researchers, journalists etc. (ITU 2007; Bhavnani, Won-Wai Chiu, Janakiram & Silarszky 2008; Skarp, Bansal, Lovio & Halme 2008; Koskinen 2008) about mobile phones' excellence in creating possibilities for the poor makes this research topic extremely interesting. This study questions whether the praise is justified and sets out to find out *the role of mobile phones in empowering rural residents to rise out of poverty in Katakwi district, Uganda.* The research was carried out with the support of the *Finn Church Aid (FCA)*, which is a notable Finnish non-governmental organisation (NGO) in development aid. The local operating partner in Uganda was the *Lutheran World Federation (LWF).* The LWF

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[1] Maslow's hierarchy refers to the hierarchy of needs proposed by the psychologist Abraham Maslow. This hierarchy has five levels of needs: psychological (water, sleep, food), safety (security, shelter, and protection), belongingness (love, friendship, acceptance by others), ego needs (prestige, status, accomplishment) and self-actualization (self-fulfillment, enriching experiences). The order of development is fixed – a certain level must be attained before the next, higher, one is activated. (see, for example, Solomon, Bamossy & Askegaard 1999, 98–99.)

assisted in conducting and organizing the field study, which took place in November and December 2009.

The term *'developing country'* is used throughout the study. There is no unambiguous definition for the term. Most often countries are classified under the terms 'developed' or 'developing' countries by using economic criteria. (Koponen 2007a, 31, 35.) The World Bank, for example, uses gross national income (GNI) to indicate the categorization of different countries under 'low income', 'middle income' and 'high income' countries. 'Low income' and 'middle income' countries are considered as developing countries. According to the economic division, Uganda is a 'low income' economy alias a developing country. (WB 2010c.)

1.2 Uganda and Katakwi district

The study site *Katakwi district* is in *Uganda* in eastern Africa (Figure 1). Uganda is a landlocked, equatorial country with a population of approximately 33 Million, comprising the area of 241 038 sq. km. (CIA – The World Factbook 2010.)
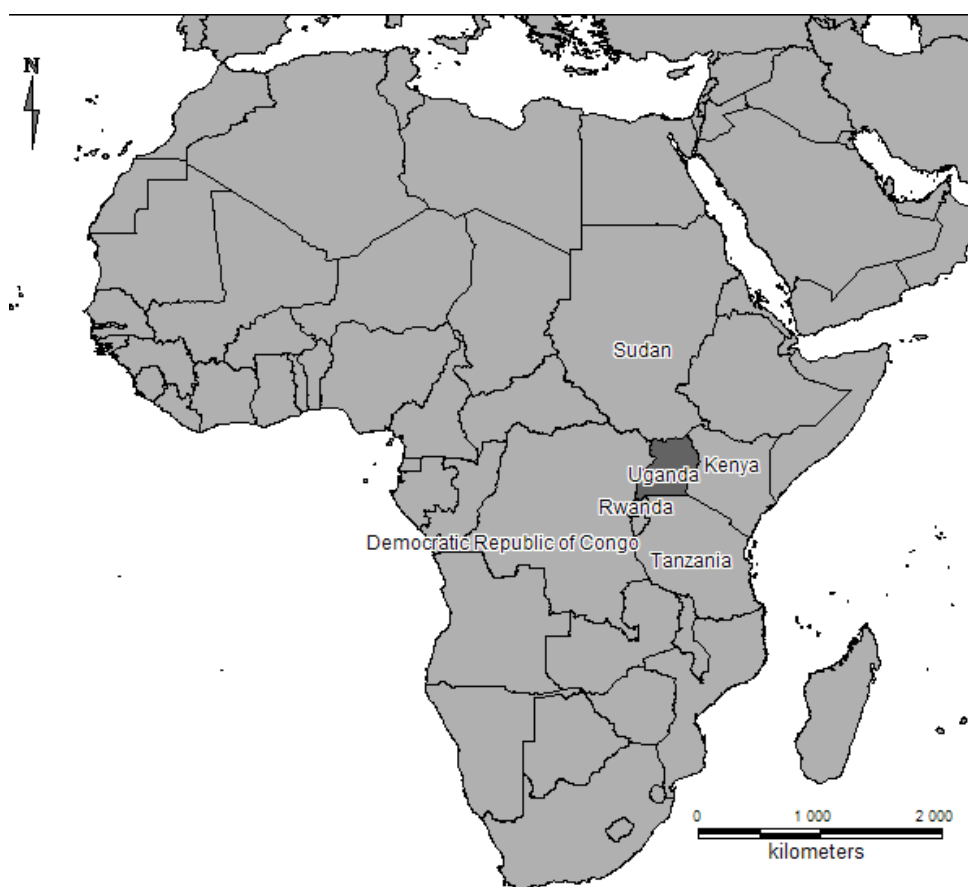
Base map: MapInfo

Figure 1   Map of Africa

Uganda has five border countries: Kenya, Tanzania, Rwanda, Democratic Republic of Congo and Sudan (CIA – The World Factbook 2010). Uganda gained independence from Great Britain in 1962 after almost 70 years of colonial rule. After gaining independence several decades of political unrest and widespread violence followed. (LWF Uganda Program … 2009–2011.) In the 70s the dictatorial regime of Idi Amin was responsible for 300 000 killed civilians during his eight years of presidency. Then, guerilla war and human right abuses under President Milton Obote claimed at least another 100 000 civilians lives in the 1980s. Since 1986 the rule of current President Yoweri Museveni has brought relative stability and economic growth to Uganda. (CIA – The World Factbook 2010.) Uganda has made progress in reducing income-related poverty and HIV/AIDS prevalence as well as increasing school enrolment, access to safe water and gender equality. However, more progress is needed, for example, in areas of combating infant, under-five and maternal mortality and reducing malaria. (LWF Uganda Program … 2009–2011.) Despite some improvements, poverty remains the greatest challenge facing the people of Uganda (UNDP 2010b).

Katakwi district, which consists of eight sub-counties, is situated in north-eastern Uganda (Figures 2 & 3), approximately 380 kilometres from the capital city Kampala (Katakwi district planning unit 2009). The whole district has a total area of 2 507 sq. km (Katakwi District Local Government 2007).
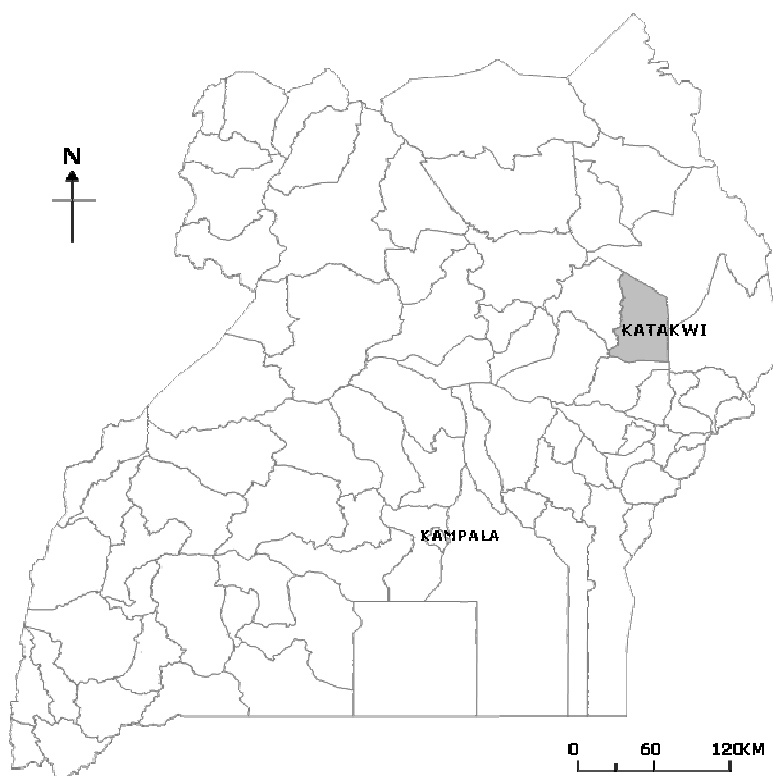
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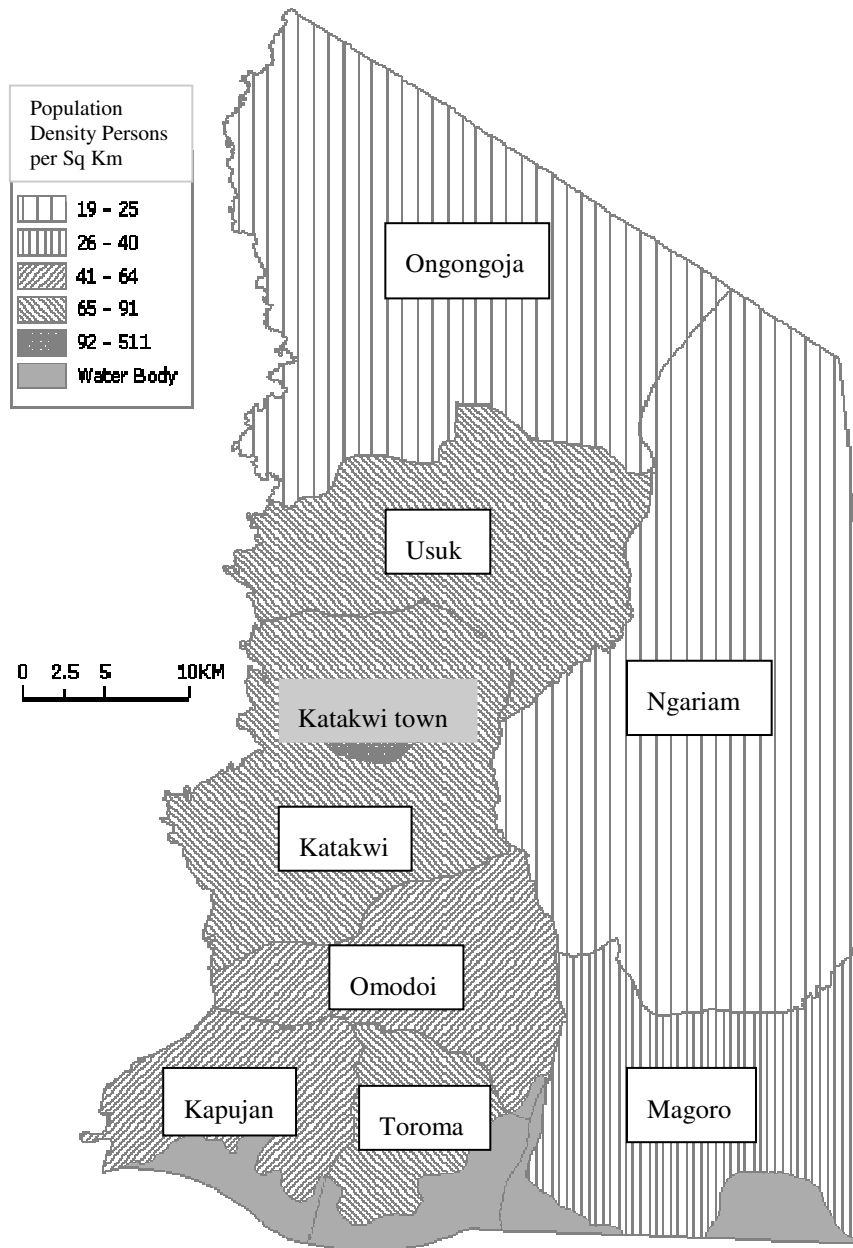
Figure 3   Katakwi district and its sub-counties with population density data from the year 2002 (Local and central government of Uganda, received from LWF Katakwi)

The eight sub-counties of Katakwi district are: Katakwi, Kapujan, Magoro, Ngariam, Toroma, Usuk, Ongongoja and Omodoi. The most populated areas in 2002 were Katakwi town, the sub-counties of Katakwi, Usuk and Toroma. The latest data concerning population is from the year 2002, according to which the total population of Katakwi district stood at 118 928 people of which 57 401 (48%) were males and 61 527 (52%) were females. (Katakwi District Local Government 2007.)

1.3 Earlier studies on mobile phones' impact in developing countries

Studies related to the use of mobile phones and their impacts have been conducted in several developing countries, for example, in Zambia, Rwanda, Tanzania and Egypt (Abraham 2009; Samuel et al. 2005; Donner 2005). Different disciplines including economics, communication, information science, anthropology, sociology, design and so on have carried out the studies (Donner 2007, 140). Some of the studies are done by researchers and practitioners (Kyomuhendo 2009; Bhavnani et al. 2008; ITU 2007). However, it is worthwhile to notice that some of the studies are done by mobile phone manufacturers such as Nokia or Motorola (Corbett, 2008) and by operators like Vodafone (Sameul et al. 2005; Goodman 2007). Previous work on mobile phones takes either a macro-level or a micro-level view. An example of a macro-level study is an analysis of mobile phones' contribution to gross domestic product (GDP). (Donner 2007, 146.) As for micro-level economic development, the studies can focus on the micro-level effects of mobile phones on productivity, particularly with small and medium size enterprises, or income (Diga 2007, 18–19).

A great amount of studies on mobile phones' impact in developing countries focuses on *economic impact*. Many researchers are interested in the ways in which mobile use accelerates, complicates or interacts with the process of economic development. (Donner 2007, 143.) Jensen (2007) studied the South Indian fisheries sector and found out that the use of mobile phones increased fishermen's profits and consumers' welfare, while also reducing the amount of waste. Boadi, Boateng, Hinson & Opoku (2007) examined how mobile commerce[2] is used to increase the business activities of small-scale entrepreneurs in Ghana. Their findings emphasized three aspects which mobile phones improved: cost savings, communication and convenience. Donner (2005) studied micro entrepreneurs' use of mobile phones in their business and social networks in Rwanda. He concluded that mobile phones are important for business even though the bulk of calls ended up being with friends and family. Mobile phones could also enable people to become self-employed, for example, by operating a payphone (Kyomuhendo 2009).

All the impact mobile phones have is not economic. Other perspectives have to be considered as well (Donner 2007, 147). Goodman (2005) analyses the *social impact* mobile phones have in rural South Africa and Tanzania. According to the study mobile phones facilitate the participation in social networks and enable people to invest in and

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[2] Mobile commerce stands for the new type of e-commerce (electronic commerce) transactions, which are conducted through mobile devices that use wireless telecommunications networks and other wired e-commerce technologies. (Siau, Lim & Shen 2001, 4.)

draw on social capital. The term social capital refers to the intangible value of a social group above and beyond the value of its individual members alone. The increase of social capital has many desirable socioeconomic impacts. In general, research about social impacts has been more biased towards the internet than any other ICT tool. Something important to notice concerning the use of mobile phones in the developing world is the high degree of sharing mobile phones. Even without owning a mobile phone it is possible to use one through sharing, which is extremely popular. James and Versteeg (2007) clarified the issue of owning and sharing mobile phones in their study.

Studies concentrating on *women's use of mobile phones* have also been conducted. Comfort & Dada (2009) studied rural women's use of mobile phones to meet their communication needs in Northern Nigeria. Their research pointed out that not all the effects of mobile phones are positive. Mobile phones have fragmenting effects on household structures. Mobile phones can also weaken the bonds in traditionally closely-knit communities when a phone call replaces face-to-face communication. Abraham (2009) surveyed whether mobile phone networks advocate women's rights in Zambia. Mobile phones can only have substantial meaning in networking for women's rights if two barriers are overcome. First, also the disadvantaged women, who cannot afford to sustain their participation in mobile phone hosted developmental discourses, have to be included to avoid ignoring the voices of the 'poor'. Second, women must uphold their individual and collective rights as women amid the patriarchal society. Sane & Traore (2009) revealed the role of mobile phones in increasing the self-sufficiency of Senegalese women working in the fishing sector. Mobile phones have had many positive effects: they have reduced travel, saved time, created an opportunity for quick contacts and increased client loyalty. Munyua (2009) in her research questioned whether the use of mobile phones increased entrepreneurial success and contributed to women entrepreneurs' empowerment. Mobile phones in particular appeared to have had a huge impact on the effectiveness and efficiency of micro enterprises owned by women. However, mobile phones had not changed fundamental issues of gender relations. Thus, technological invention did not guarantee empowerment. Tafnout & Timjerdine (2009) studied the use of mobile phones among other ICTs in the fight against gender violence in Morocco. According to their study ICT plays a role in raising awareness of gender-based violence by controlling and handling information related to it. The researchers saw ICTs enabling a step towards breaking the silence that surrounds gender-based violence.

Studies with similarities to the one at hand have been done before as well. Samuel et al. (2005) discussed the socio-economic impacts mobile communications have on households, rural communities and small businesses in Africa. This research was carried out by the operator Vodafone in South Africa, Tanzania and Egypt. According to their study the impacts – both economic and social impacts – mobile phones brought to

communities were very positive. These positive impacts occurred in the study sites even though they were amongst the poorest in their countries. People at all income levels were able to access mobile services and lack of income did not prevent mobile use. As discussed earlier Diga (2007), on the other hand, conducted a research about household spending behaviour with mobile phones in rural agricultural Uganda to find out how this spending behaviour affected poverty. According to her findings, mobile phones had many positive but also negative impacts on individuals. In case the phones were used inefficiently, they induced poverty instead of development. She also found out that gender inequality drove further digital divide[3] in the community. Burrell (2009) conducted a study on the uptake of mobile phones in rural areas in Uganda. She was interested in what value Ugandans have found in gaining access to mobile phones. Burrell had an ethnographic approach: she looked through address books and text messages to get an idea what people were doing with their mobile phones. She found out that the key to the significance of mobile phones was in their flexibility. Mobile phones could support any language, any topic of communication and it was easy to adapt to rural Ugandans. Her study brought up the issues around male female relationship: the tension mobile phones brought into relationships.

Despite some previous studies, literature on mobile phones in the developing world is still relatively new and limited (Donner 2007, 142). Especially little is known about rural residents' and small businesses' use of mobile phones and the impacts of the use (Samuel, Shah & Hadingham 2005, 32). The review of previous studies suggests that there is demand for the present study. First and foremost, this study was done to provide information for the FCA and its partner the LWF about mobile use and its impact in Katakwi district in particular. As mentioned before no such study has yet been conducted in Katakwi district. Thus, all the information about the use of mobile phones and their impact in Katakwi district was completely new. A great amount of the above-mentioned studies are concentrated on a certain issue like m-commerce, or economic development. Instead, this research aimed to take a more comprehensive approach and find out the diverse impacts mobile phones have in a rural area. Equally, it is interesting to compare the results of this study, gathered by an independent party, to other studies made by commercial organizations operating at place. Additionally, people who did not have a personal mobile phone at the time of the field study were interviewed. The researcher found this important, because these people could give comparative data for the analysis and bring up the reasons behind not owning a mobile phone and maybe just

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[3] Digital divide refers to the differences in resources and capabilities to access and effectively utilize ICT for development. Digital divide can exist within and between countries, regions, sectors and socio-economic groups. (UN 2005, 2.)

borrowing or not using one at all. No previous research where non-owners are interviewed has been done.

1.4   The objectives and structure of the study

As mentioned, there is a need for a comprehensive study on mobile phones' impact in rural areas. This study focused on a rural area called Katakwi district in Uganda. The purpose of the study is to analyse *what is or could be the role of mobile phones in empowering rural residents to rise out of poverty in Katakwi district, Uganda*. The main objective is divided into four sub-objectives:

1.   *How are mobile phones used, and how does the use contribute to the empowerment of rural residents?*
2.   *Which factors hinder the empowerment through the use of mobile phones, and how do rural users respond to the impediments?*
3.   *How do mobile phones disempower rural residents?*
4.   *What are the reasons behind owning, borrowing or not using a mobile phone at all?*

This study focuses on individual level impacts of mobile phone use. Besides, community level impact is included in reference to people living in Internally Displaced People's (IDP) camps. IDP camps were a home for many people escaping the insecurity in the country. More information about IDP camps follows in section 5.1. Several sources (UN 2005; Macueve, Mandlate, Ginger, Gaster & Macome 2009) state that women do not have an equal access to ICTs. Gender-issues are strongly embedded in poverty reduction and also in the use of mobile phones. Thus, in this research, the gender perspective is built in. However, this is not a feminist study in nature as it does not have the characteristics of a feminist study. This study does not have a normative framework and it is not reflexive about the exercise of power in the research approach (see, for example, Ramazanoglu & Holland 2002, 146–147).

   Next, the structure of the study is discussed. Chapters 2 and 3 provide the theoretical framework for this study. The concept of *empowerment* has been chosen as the theory due to its versatility and also due to the popularity of the concept in the development field. A model for analysing the impacts of mobile phone use in rural areas is developed by combining several listings and models. This model is presented in section 3.3. Chapters 2 and 3 also take a deeper look into the issues of poverty, development, gender, information and communication technologies and their use for purposes of poverty reduction. Chapter 4 presents the methodological decisions made in this study. The research approach, selection of the study area, data collection and analysis and also the quality of the research are discussed. The people interviewed are described in depth

in this chapter. Chapter 5 starts with descriptions of Uganda and Katakwi and the telecommunications sector in the country. Then, the findings of the study are analysed regarding all the sub-objectives. Chapter 6 moves on to discussion and theoretical conclusions. In this chapter also the model for the impact of mobile phone use in rural areas is developed. Conclusions and suggestions for further studies are discussed in chapter 7. Finally, chapter 8 gives a summary of the study.

2   UNDERSTANDING POVERTY REDUCTION

Today, buzzwords like poverty reduction and empowerment are widely used in reference to development. Despite the popularity, the definitions of the words are far from clear. A wide range of different meanings can be identified. (Cornwall & Brock 2005, 1046–1047.) Sections 2.1, 2.2 and 2.3 respectively discuss *poverty*, *development* and *empowerment*, and their relation to poverty reduction. Section 2.4 covers the *gender* perspective.

2.1   Poverty

Poverty is one of the most significant global challenges affecting the majority of the world's population (Kandachar & Halme 2008, 1). Yet, there is no simple all-embracing definition for the term. Two agencies, the World Bank Group and the United Nations, play a dominant role in poverty reduction discourse. (Mikkelsen 1995, 217.) Generally speaking poverty is something people want to escape (WB 2010a). Poverty is deprivation of well-being (WDR 2000/01, 15). Poverty can be, for example lack of food, adequate shelter, access to education and health, protection from violence and a voice in what happens in people's communities. Poverty is about individuals and households not having enough resources or abilities to meet their needs. (WB 2010a.)

In general, poverty can be divided into *absolute* and *relative* poverty. The poverty in developing countries is normally absolute poverty, which means the shortage of food, clothing and shelter. This kind of poverty normally includes undernourishment, hunger and sickness. The industrialized countries face mainly relative poverty. This means that certain individuals or groups of people are living in a more unfortunate situation than others; they are not able to surpass the standard of living popularly regarded as the minimum level. This minimum level often is the average standard of living in the country. The minimum level varies according to time and location. (Ministry for Foreign Affairs 2010b.)

Poverty is usually defined in relation to money and property (Ministry for Foreign Affairs 2010b). The World Bank has defined the *international poverty line*: people who live on less than US$2 per day are considered *poor* and people who live on less than US$1,25 per day (formerly US$1 per day) are considered *extremely poor* (WB 2010a). However, even relatively great amount of money in terms of the world standards can lead to absolute poverty as the cost of living varies in different countries (Sen 1999, 89). As poverty has many faces an economic definition is far from being adequate (WB 2010a).

The Nobel Prize winner for economics, Amartya Sen (1999, 87), admits that lack of income is one of the major causes of poverty. However, he uses a wider approach to define poverty; poverty as *capability deprivation*. He perceives *capabilities as substantial freedoms he or she enjoys, to lead the kind of life he or she reasons to value.* These capabilities are, for example, good health, nutrition and education (Can Africa claim… 2000). Sen's approach concentrates on deprivations that are intrinsically important as opposed to money that is only instrumentally important. Sen acknowledges, though, that lack of money can be the principal cause for capability deprivation. The relation between lack of income and lack of capabilities varies between different communities, families and even individuals. Certain factors make it difficult to convert money into capabilities. For example, ill and handicapped people might need more money to get a treatment. This means that 'real poverty' (in terms of capability deprivation) can be much more intense as would be the case when only money is considered. Additionally, the distribution of money within a family can be unequal as the money is used in the interests of only some family members resulting, for example, in the discrimination of girls. Sen's approach to poverty alleviation takes the attention away from *means* to tackle poverty and instead focuses on the *ends* that people have reason to pursue. (Sen 1999, 87–90.)

Besides the widely accepted definitions, it is also interesting to consider how the poor people themselves define poverty (cf. WB 2010d; Slater & Tacchi 2004, 27–34). According to the United Nations Educational, Scientific and Cultural Organization's (UNESCO) ICT for poverty reduction project (ictPR) poverty has different perceptions specific to location and culture (Slater & Tacchi 2004, 27–34). Extreme poverty was often defined in terms of meeting basic needs including food, shelter and clothing. Other expressions for poverty were: material deprivation, insecurity, lack of education, inability to maintain social status, lack of capital or access to loans to fund ventures, poor access to health care, inability to fulfil their potential and restricted choice and opportunity. Powerlessness and voicelessness are also seen as central consequences of poverty.

In general terms, poverty is caused by economic, social and political processes that interact with each other and often also strengthen each other in ways which deteriorate the living conditions of the poor (WDR 2000/01, 1). It is difficult to differentiate the causes and effects of poverty. For example, population growth can be seen as one of the reasons for poverty in developing countries. On the other hand, poverty causes population growth as more children are needed for labour or to take care of the family in locations lacking social security. (Ministry for Foreign Affairs 2010b.)

The cost of being poor is high. The poor often have to pay a higher price for goods and services than their wealthier counterparts. (Hammond et al. 2007, 5.) The reason behind the high costs is *informality*, which is also one of the key issues to understanding

poverty. Informality means that there is no access to formal services like formal electricity or basic healthcare. Lack of formal piped water will cost the poor more as they have to buy the water from mobile vendors. Informality also means that poor people have to sell their labour or produce to local employers or middlemen who often exploit them because informality leaves the poor people without protection. (Kandachar & Halme 2008, 5.)

2.2 Development

Development is a relative and controversial concept. It is impossible to find universally applicable criteria for development. (Koponen 2007b, 49–50.) Development is usually understood to contain concepts of 'progress' and of 'growth' (Unwin 2009b, 7). The concept of development can be seen to have three main dimensions: *1) development as a goal, something to aim at, 2) development as a societal process which has already happened or is presently happening, or 3) development as an intervention which is intentional and rationally planned in aiming at something good* (Koponen 2007b, 50–51).

Thus, development can be viewed in several ways, for example, by measuring the growth of gross national product (GNP), the rise of personal income, the level of industrialization or modernisation, technological advancement (Sen 1999, 3), building of roads, the number of wells in a village, or the decrease in illiteracy and child mortality (Koponen 1995, 56). Development can also be measured by *Human Development Index (HDI).* HDI, the frame of reference for measuring development, was introduced in the first Human Development Report in 1990 (UNDP 2010a). HDI gives national level information and enables comparison between countries (Mikkelsen 1995, 228). HDI does not rely only on income levels but also examines social development. Three indicators constitute HDI: *life expectancy, educational attainment and income.* HDI is expressed as a value between 0 and 1. Each country is rated on this scale. HDI gives a more complete picture of nation's development than a mere GDP per capita. HDI is still not in any sense an exhaustive measure. It does not, for example, include issues like gender or respect for human rights. (UNDP 2010a.) Sen (1999, 3–4) on the other hand, sees *development as a process of expanding the real freedoms people enjoy.* Freedoms depend on several things, for example, facilities of education and health, political rights or income. Development itself requires the removal of sources of unfreedom: poverty, tyranny, poor economic opportunities, social deprivation, intolerance or repressive states to name but a few. Today, the fundamental freedoms are denied from vast numbers of people.

All these definitions are considered as development regardless whether they elicit any large-scale radical change in the society. Instead even small-scale changes are enough. This step-by-step change creates the foundation for the idea of *poverty reduction*. During the past 50 years the *modernisation* thinking has stepped aside and the idea of poverty reduction has gained ground in the mainstream development field. Modernisation refers to the idea that development is a societal process that has already been gone through in the industrialized part of the world, whereas the rest of the societies have not, and are thus called 'developing countries'. This definition is used in reference to countries that 'lack behind' 50 or 100 years from reaching a certain level at something. Modernisation has shaped the history in many ways. Today it is increasingly acknowledged that modernisation has not necessarily led to happiness and satisfaction, and especially the price paid by the environment is high. Nowadays, the idea of development contains only some elements of modernisation. The basic idea for mainstream development is that all developing countries do not need to 'reach' industrialized countries. Instead, the basic idea is to create better living conditions in developing countries, and they need not be the same as in the industrialized parts of the world. Development is rather defined as improvement that is referred to as poverty reduction. (Koponen 2007b, 54–56.)

The idea of poverty reduction is now globally accepted as the main objective in development work. In the 1990's the idea gained ground among the international organisations (for example United Nations, World Bank and International Monetary Fund) and in the conferences organized by them. (Koponen 2007, 57.) One of the outcomes of the world summits was the UN's eight *Millennium Development Goals (MDGs)*, which are set for the year 2015 (UN 2010). The goals respond to the world's main development challenges. The goals are:

1. to eradicate extreme poverty and hunger,
2. to achieve universal primary education,
3. to promote gender equality and empower women,
4. to reduce child mortality,
5. to improve maternal health,
6. to combat HIV/AIDS, malaria and other diseases,
7. to ensure environmental sustainability,
8. to develop a global partnership for development.

The eight MDGs are an action plan to reverse the grinding poverty. Both poorer and richer countries need to work together for the achievement of these goals.

An alternative for the traditional development aid for poverty reduction is the involvement of the private sector and the market-based approaches. In 1998 Hart and Prahaland (Hart 2008) introduced a new approach to tackle poverty: *base of the pyramid (BOP)*. The idea is to tap into the markets of the 4 billion poorest people in the world.

The poorest are considered as a huge market with plenty of potential for businesses. Besides being profitable to enterprises it also benefits the poor in helping them to rise out of poverty: it is a win-win situation. (Kandachar & Halme 2008, 2.) One of the products introduced to BOP-markets is the mobile phone.

2.3 Empowerment

Empowerment is linked to poverty reduction and development. Empowerment is a means for poverty reduction but also an inherent part of it (Stern 2002, 155). Empowerment is seen as a more effective and more inclusive development (Petesch, Smulovitz & Walton 2005, 39). In an empowering approach to development poor people are the centre of attention; they are perceived as the most important resource for development rather than a problem. The empowering approach relies on poor people's strengths: their knowledge, skills, values, initiatives and motivation to solve problems, manage resources and eventually rise out of poverty. This approach treats poor people as worthy of honour, respect and dignity. (Narayan 2002, 17.)

Empowerment is a complex concept with no clear definition to cover all situations and places (WB 2010b). The term 'empowerment' does not translate easily into different languages. When one takes a closer look at the local terms associated with empowerment various issues can be identified: self-strength, control, self-power self-reliance, own choice, life of dignity in accordance with one's values, being free, own decision making and independence among others. All of these are perceived through the local values and belief systems. (Narayan 2002, 13–14.) The World Bank defines empowerment as *the process of increasing the capacity of individuals or groups to make choices and to transform those choices into desired actions and outcomes.* Empowered people possess freedom of choice and action. They are able to better influence the course of their lives and the decisions which affect them. However, everyone does not see empowerment the same way; perceptions vary across time, culture and domains of a person's life. (WB 2010b.) Empowerment can also be considered at different levels; at the individual household, group, community, local government or national government level or at the global level. Empowerment is a relative concept; it is always defined in relation to one's former status or to others in one's reference group. (Narayan 2005, 18–23.)

Empowerment is an old concept, but the attempt to measure it in a systematic way is new. To be able to measure and monitor empowerment, a clear definition of the concept is essential, as is a framework that both identifies *the determinants of empowerment* and links them to *development outcomes*. The World Bank has provided this framework (Figure 4). (Narayan 2005; 3–4,7.) Figure 4 introduces the determinants of

empowerment. Even though the same framework also lists development outcomes, another, more suitable World Bank listing of the development outcomes (Figure 5) is used in this research. The World Bank's conceptual framework (Figure 4) outlines the four key factors that facilitate or constrain poor people's wellbeing and also enable development – the determinants of empowerment. These key factors are divided into two categories: *the opportunity structure* and *the agency of the poor.* (Narayan 2005, 5.) The extent to which a person is empowered is affected by the capacity to make purposive choice *(the agency of the poor)* and the institutional context in which the choice is made *(opportunity structure)* (Alsop & Heinsohn 2005, 4). *The agency of the poor* refers to seeing poor people as *agents* that are able to act and further their goals (Petesch et al. 2005, 42). The four key factors in the World Bank's framework are *institutional climate, social and political structures, individual assets and capabilities* and *collective assets and capabilities.* It is important to notice that this model is a rather simplified notion of empowerment. (Narayan 2005, 5.) To serve the aims of this study the individual and collective assets and capabilities are focused upon.

Opportunity structure   *Agency of the poor*
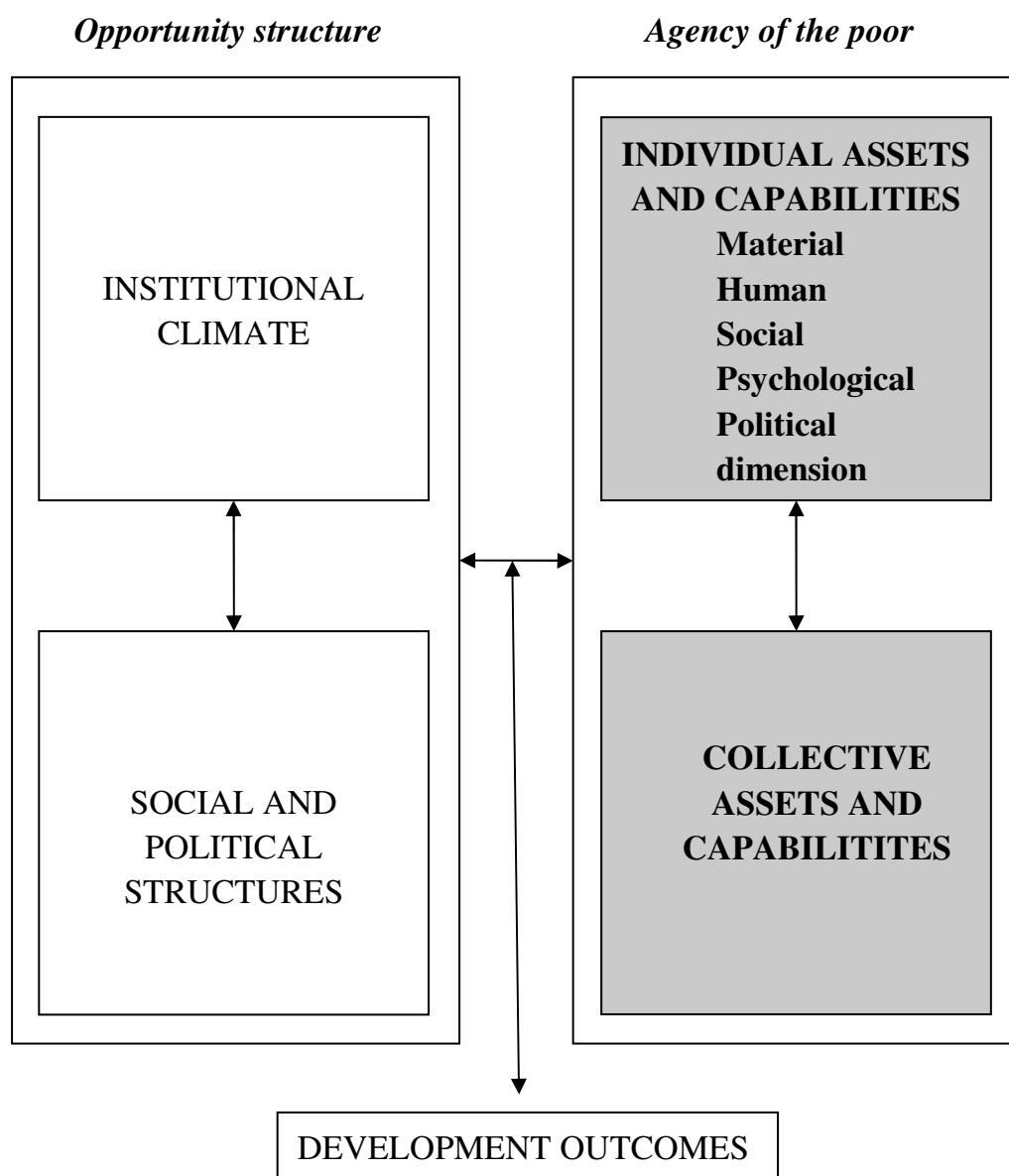
Figure 4   The conceptual framework of empowerment (modified from Narayan 2005, 7.)

The opportunity structure within which poor people pursue their interests and strive for empowerment includes both *institutional climate* and *social and political structures*. Institutional climate includes both formal (laws, regulations etc.) and informal (corruption, norms of social solidarity etc.) institutions. Social and political structures in a country can be open or closed, inclusive or exclusive, cooperative or conflicting. The nature of these structures affects empowerment outcomes. The removal of informal and formal institutional barriers and changes in social and political structures enables greater empowerment. (Narayan 2005, 6–9.) However, this study focuses mainly on individuals, and also on communities in certain case which are highlighted in Figure 4.

Agency of the poor includes both *individual and collective assets and capabilities.* Poor people live in a culture of inequality and they need assets and capabilities to improve their wellbeing. *Individual assets and capabilities* include material assets, human, social, psychological and political capabilities. *Material assets* mean both physical and financial assets. These assets refer to land, housing, livestock and savings. Through assets people can withstand shocks and expand their horizon of choices. Capabilities, on the other hand, are inherent in people. Capabilities enable people to use their assets in various ways for wellbeing enhancement. *Human capabilities* relate to good health, education and productive or other life-enhancing skills. *Social capabilities* can be defined as social belonging, leadership, relations of trust, a sense of identity, values that give meaning to life and the capacity to organize. *Psychological capabilities* refer to self-esteem, self-confidence and an ability to aspire for a better future. *Political capabilities* include the capacity to represent oneself or others, access information, form associations and participate in the political life. (Narayan 2005, 10; Narayan 2002, 14–15.) However, opportunities are not equally distributed among individuals. This is when the importance of social groups is emphasized. Poor people's *collective capabilities* are a means to break through constraints of powerlessness and voicelessness. Basically this happens through collective action to gain voice, representation, organization and identity. In this study, forming groups (for example in political terms to gain voice) is not taken into consideration. Collective assets and capabilities are, however, approached from a certain perspective, 'bonding'. In fact, bonding enables poor people's possibilities to increase their access to resources and economic opportunities. Poor people are often active in bonding social capital, networking: they have close ties and high levels of trust with others like themselves. (Narayan 2005, 6–17.) For example, a poor individual is able to access resources, like mobile phones, through social networks she or he has.

According to the World Bank (Petesch et al. 2005, 53) increased empowerment influences factors such as *health status, skills, incomes, security, freedom and self-confidence of the poor* (Figure 5). These outcomes are especially applicable for the poor.

Processes

Outcomes
(especially
for the poor)

Empowerment

Other development
factors, e.g. public
spending, price changes

Health
Skills
Incomes
Security
Freedom
Self-
confidence
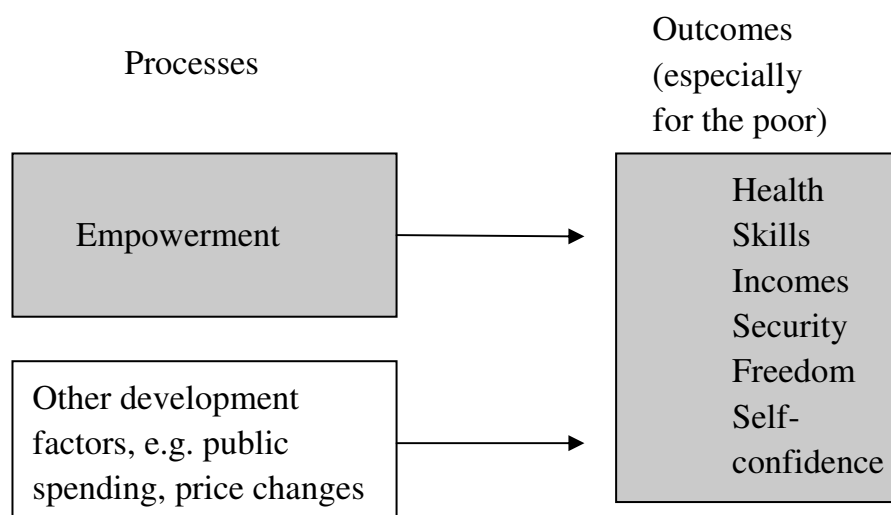
Figure 5   The simple hypothesis: empowerment affects outcomes (Petesch et al.
                2005, 53).

The hypothesis stresses that development actions, like public spending on roads, schools
and health centres etc, also affect these outcomes. Nevertheless, this study concentrates
on empowerment at an individual level or at a community level to a certain extent. It
needs to be taken into consideration, though, that there is no single, all-embracing
model for empowerment, given different sociocultural, political and institutional
contexts (Narayan 2002, 1). However, the World Bank model is particularly useful for
this thesis as the poor people are under examination.

    Alsop & Heinsohn (2005, 7, 10) define the *degrees of empowerment* (DOE).
Empowerment can be measured directly by assessing DOE, whereas examining agency
and opportunity structures provides only indirect indicators for development. DOE is
measurable by assessing 1) whether a person has the opportunity to make a choice
(existence of choice), 2) whether he or she actually uses the opportunity to choose *(use
of choice)* and 3) whether the choice made brings the desired outcome *(achievement of
choice).* For example, if a man wants to buy a mobile phone and use it in his business, is
there a possibility to buy a phone. If yes, will he actually buy the phone. If yes, will he
finally use the phone in his business. Figure 6 shows the relationship between
empowerment and development outcomes.
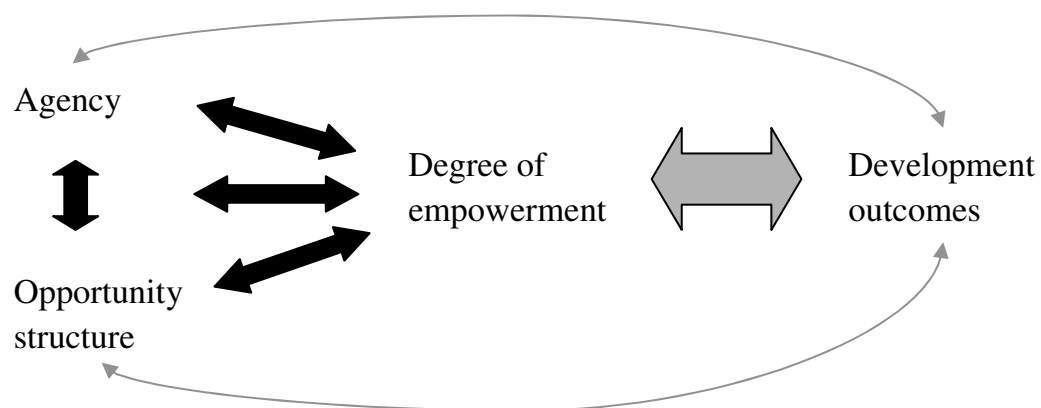
Figure 6   The relationship between outcomes and correlates of empowerment
               (Alsop & Heinsohn 2005, 6.)

However, due to paucity of data on DOE, the relationship between DOE and development outcomes is only a hypothesis. A great amount of data exists about the relationship between agency, opportunity structure and development outcomes. The relationship between DOE, on the one hand, and agency and opportunity structure, on the other, is reciprocal. Enhancements in one's DOE are expected to enhance the assets and opportunity structure. Similarly, improved agency and opportunity structure lead to higher DOE.

   The following discussion shows the difficulty of defining whether someone is empowered or not. A woman can be said to be empowered if she works hard and earns enough money to be able to buy a cow. She feels both more competent and has more assets. Assessing empowerment in another case, where the cow is received as a gift, is more problematic. In this case she has more assets but has not gone through a learning process. It can also happen that the cow is acquired through hard work but she still does not feel more self-confident nor that she has more choice or freedom. (Narayan 2005, 22–23.)

2.4 Poverty reduction and gender

Women are more likely to be poor than men. As a matter of fact, some estimates suggest that 70 per cent of the world's poor are women. (UNIFEM 2010.) Therefore, strengthening *gender equality* is a powerful tool for poverty alleviation (Ogana & Kibuka-Musoke 2007, 91, 99). *Gender equality* does not necessarily mean that women and men should be represented equally in all activities nor does it mean that women and men should be treated the same way. What gender equality means is the *equality of opportunity and a possibility for both genders to lead equally fulfilling lives*. However, women and men are not the same: they often have different needs and priorities, they

come across different kinds of obstacles and they also have different aspirations. All this is acknowledged in the aim of gender equality. (Momsen 2004, 8.)

Even though African rural women are major agricultural producers and they are active in the informal sector, they still continue to be hampered. Women have fewer economic rights and also lower access to economic opportunities and resources like land and credit facilities. (Ogana & Kibuka-Musoke 2007, 89–91.) Even though, women are the ones cultivating the land, they often do not have the right to own it (UNIFEM 2010). The poverty women face is not only in economic terms. In addition, women's chances to be HIV-positive are higher, women are the victims of violence both at home and in armed conflicts and women lag behind in education, to name but a few. (Ogana & Kibuka-Musoke 2007, 91.) The majority of the illiterate people are indeed women living in rural areas (Heyzer 2003). Since women lack education compared to men, women have fewer job opportunities and lower income levels. This results in women's dependency on men's earnings and a consequent need to be submissive to men's decisions and desires. (Mason 2005, 91.) Due to discrimination, women get a smaller share of resources and larger shares of work (Deshmukh-Ranadive 2005, 106). Even though women are participating more and more in the market economy, their domestic workload has not decreased. Women are still the ones taking care of the children and elders, cooking, fetching water and firewood, cleaning and so on. (Ogana & Kibuka-Musoke 2007, 97.) The average Ugandan woman spends nine hours a day on household chores such fetching water or firewood and caring for the ill (UNDP 2010b).

The *gender gap* exists in Africa because of the cultural and traditional context, which is anchored in beliefs, norms and practices, and these feminise poverty (Ogana & Kibuka-Musoke 2007, 97). The Uganda Participatory Poverty Assessment Process (MFPAED 2002, according to Bakesha et al 2009, 143) revealed that women are still considered as property by their husbands by virtue of dowry payments. Therefore, men control women's lives, their time, access to information and participation in politics, social groupings and training. A proper woman in Uganda should marry, provide services for her husband, including sex, be a mother and provide and care for her children. She should cultivate for the family and do other practical chores within the household. A wife should be submissive and deferential to her husband but also to his male relatives and other men in the community. The husband – not the wife – makes the decisions in the family. (Kyomuhendo & McIntosh 2006, according to Kyomuhendo 2009, 165.)

It is important to remember that development processes do not affect women and men the same way (Momsen 2004, 1). *Women's empowerment* has been given a great deal of attention and it is an important goal in development. The UN has declared promotion of gender equality and women's empowerment as one of its eight Millennium Development Goals. (UN 2010.) Empowerment of women considers

empowerment from women's perspective. Central to empowerment is to enable women to take control over decisions that shape their lives; access to resources, participation in decision-making and control over distribution of benefits. (UN 2005, 13.) Women's empowerment has some unique elements. Women are not just one group among other disadvantaged groups (like ethnic minorities, the poor and so on), but women are a cross-cutting category that overlaps with all these other groups. Additionally, women's empowerment is dependent on household and interfamilial relations in a way that is not true for other disadvantaged groups. To be able to consider that women are empowered, women have to be themselves the agents of change not just mere beneficiaries. (Malhotra & Schuler 2005, 71–72.) Generally in development it is believed that if a woman earns an income, it empowers her (Narayan 2005, 12). One of the papers supporting this view is the paper prepared for the African Partnership Forum (Ogana & Kibuka-Musoke 2007, 92.) They emphasize that women's economic empowerment is the key to achieving faster growth, development and poverty reduction. However, according to other studies earning an income does not necessarily lead to empowerment. Being able to earn an income does not mean that there is an increase in women's power in decision making, in social relations, in freedom or in movement. (Narayan 2005, 12.) This proves that *economic* empowerment is not the only type of empowerment. Empowerment can also occur at *social* and *political level*. Social empowerment refers to challenging social and cultural structures. Political empowerment is about the rights and abilities of people to participate as equals in decision-making processes, whereas economic empowerment has to do with the access to resources. (Patil, Dhere & Pawar 2009, 7.)

There is a great deal of evidence that societies that discriminate on the basis of gender face more poverty, slower growth and lower quality of life (Momsen 2004, 9). Gender equality is crucial to development. Men, too, benefit from a society where both genders are equal. If women are educated and earn an income, a bigger share of the money is used on children and the well-being of the whole family than would be the case with the money earned by men. A woman who is considered equal to a man has a more educated, smaller and healthier family. (Ministry for Foreign Affairs 2010a.)

3 IMPACT OF INFORMATION AND COMMUNICATION TECHNOLOGIES IN DEVELOPING COUNTRIES

This chapter combines the poverty reduction discourse to ICTs. First, in section 3.1 information and communication technologies (ICTs) are covered briefly. Then, section 3.2 moves on to conjoin the discussion of ICTs and poverty reduction. The subsections 3.2.1 and 3.2.2 analyse the impact of ICTs on development. First, in subsection 3.2.1 the possibilities ICTs offer for development are under examination. Then, in subsection 3.2.2 the developmental challenges are discussed. Subsection 3.2.3 goes through ICTs' impact on empowerment. The relationship between women and ICTs are analysed in subsection 3.2.4. In the last section 3.3 a model for assessing the impact of ICTs is presented.

3.1 Information and communication technologies

Information and Communications Technologies (ICTs) are often used to refer primarily to the use of computers and the internet (Unwin 2009d, 77). Nevertheless, ICTs contain a complex and heterogeneous set of tools, applications and services that are used to produce, process, distribute and transform information (UN 2005, 2). Basically, ICTs can be seen to have three main sets of interconnected processes: *capture of information, its storage* and *the ways in which people access and share that information.* Information captures are, for example, cameras, keyboards, voice recorders or scanners. Information is stored by films, servers, CDs, DVDs, Web and so on. Information is shared and communicated, for example, through radios, televisions, telephones – both fixed line and *mobile* – and computers. (Unwin 2009d, 79–80.) Thus, mobile telephones are only one means of ICT among many others (UN, 2005). When talking about modern ICTs, especially the internet, e-mail, computers, mobile phones, digital cameras, online databases and portals are referred to (Yonah & Salim 2007, 308). From ICT tools, applications and services especially mobile telephony and the internet enable low cost and fast interaction between network participants (Rahman 2007, 180). Mobile phones have several benefits compared to other ICTs. Mobile phone networks, for example, are cheaper to build than landline networks. Computers, on the other hand, require literacy skills. (Tenhunen 2008, 515.) The latest versions of mobile phones provide not only telephony but also cameras, radios, calendars, and they enable the use of internet. None of the ICTs can work without *physical infrastructure* that provides energy and generates and receives signals. (Unwin 2009d, 92, 109.)

3.2 ICTs for poverty reduction

3.2.1 ICT4D possibilities

ICT4D is an abbreviation of the words *information and communication technologies for development*. It is a widespread term, which is often used when referring to different ICT-related development projects in the developing world (see, for example, Unwin 2009c, Kleine & Unwin 2009, Mansell 1999.) Here, as the focus is not on development projects organised by different quarters, the discussion about ICT4D rests on the individual level.

ICTs are universally accepted as efficient tools for development (Rahman 2007, 180; Parkinson 2006, 96; Bakesha, Nakafero & Okello 2009, 143). There are, however, different views about the level of efficiency. Kandachar & Halme (2008, 12) claim that much faith is put on technology and it is believed that technological advances automatically lead to welfare for all. Heyzer's (2003) perspective, on the other hand, is less optimistic. She points out that ICTs can be a tool for either decreasing or increasing the inequalities that exist in the world. The inequalities are, for example, inclusion, the divide between women and men or even between women, and the divide between people who have the skills and education and who do not have them. Despite the negative aspects, Heyzer also believes in the tremendous potential of ICTs. Nevertheless, there are claims that the hype and enthusiasm about ICTs' potential for development has often been exaggerated and misplaced. ICTs do influence development but first and foremost economic development. (Unwin 2009a, 360.) It is important to notice that the actual technologies by themselves have little development impact. It is only when they are used effectively to serve the needs of people that they may be helpful in improving the lives of the poor. As a matter of fact, ICTs are often a financial drain on communities until they are able to provide enough profit for their continued use. (Unwin 2009d, 76.) ICTs are not a panacea for development problems. For example, handing out free mobile phones to nurses will never contribute significantly to sustainable poverty reduction in long-term. (Unwin 2009a, 362–363.) ICTs cannot turn bad development into good development, but they can make good development better (Yonah & Salim 2007, 317).

Modern ICT's are useful for poverty reduction in many ways. These characteristics are, for example, *interactivity, permanent availability, global reach, increased productivity and wealth or value, multiple sources of information and knowledge* (Spence 2003, Yonah 1999, Gates 1999; according to Yonah & Salim 2007, 310–311) and *lower costs* (Weigel & Waldburger 2004, 21).

Interactivity: ICTs have drastically changed the way individuals interact. ICTs are effective two-way communication technologies.

Permanent availability: The availability of new ICTs is 24 hours a day, seven days a week.

Global reach: Geographic distances hardly matter anymore, when people adapt ICTs in their daily lives. This has an effect on the nature of socioeconomic activities. Despite the benefit of global reach, it is important to notice that in some cultures face-to-face communication is preferred over a phone call (Comfort & Dada 2009, 50).

Creates increased productivity and wealth or value: ICTs add value and amplify products and services. In addition to reduced transaction costs, modern ICT can open completely new possibilities of creating wealth and value.

Multiple sources of information and knowledge: Modern ICTs embody a lot of knowledge, especially if such ICTs entail electronic networks. This information provides essential intermediate products and services, content in education and also human and social capital formation activities. The importance of knowledge creation and access to information cannot be underestimated, but it is a basis of new prosperity. Access to high-tech opportunities by the poor empowers them with important knowledge and provides them with productivity skills – all which are fundamental in any poverty reduction process. (Yonah & Salim, 2007, 310–311.)

Lower costs. The cost factor of ICTs is still a great impediment for many. However, the relative cost of ICT has decreased and it continues to fall. Compared to traditional use of information flows and communication such as newspapers and books, innovative uses of ICT are much cheaper.

The digital divide – the low use of modern information and communication infrastructures in the developing countries – keeps the poor away from information. Indeed, one cause of poverty is the *lack of information*. Fortunately, the digital divide has been closing. (Best & Kenny 2009, 177.) According to UNESCO's ICT for poverty reduction project (Slater & Tacchi 2004, 58) poor people feel that voicelessness is a major cause for deprivation as is the inability to access basic information that could have a role in improving the lives of the poor. Access to communication and information is one possibility for poor people to overcome voicelessness and powerlessness (Narayan 2002, 9). ICTs can be the means to access information in a timely manner (Beardon 2006). The essential information could be for example information about health issues or education. The cost of being uninformed is in itself very high. Even cheating can be the result of being uninformed. Information that everyone should be able to access by right can bear a high cost for the poorest: for example, applying for jobs can require bribes. (Slater & Tacchi 2004, 58.) However, it

has to be noted that mere information is not a magic cure for problems. Yet, right information at the right time can be vital for finding a solution. (Weigel & Waldburger 2004, 209.) As an example, a Ugandan doctor in a rural area can request information from a hospital in the capital city when faced with an emergency (Corbett 2008).

Approximately half of the world's population live in rural areas from which two billion live in villages without basic telephone services (Skarp et al. 2008, 307). *Mobile phones* are increasingly adopted in regions with no extensive prior form of communication technology (Tenhunen 2008, 515). Indeed, mobile phones are particularly important in rural areas (UN, 2005). Also, the impact of mobile phones has been greatest in regions where the fixed-lines have been rare (Unwin 2009d, 105). The simple facts that mobile phones are mobile and the start-up costs are low have made mobile phones a preferable choice over fixed-line phones. Fixed-line infrastructure is both expensive to install and not necessarily available everywhere. (Diga, 2007.) Rural areas have unique characteristics when it comes to mobile phones and their use. Mobile phones can be the only phones available. Sharing a mobile phone is important and economic scarcity is a paramount factor when deciding what and when to communicate. (Donner 2007, 151.)

Mobile phones are already part of African culture, and they are not just for the elite (Scott et al. 2004, 1). The fast adoption of mobile phones in the poorer countries of the world, and especially in the whole Africa, has encouraged the use of mobile phones for development purposes (Unwin 2009d, 106). The use of mobile ICT can be divided into two primary categories: *socializing use of mobile ICTs* and *business use of mobile ICTs*. In sub-Saharan Africa the socializing use of mobile ICTs is more prevalent than business use. (Meso, Musa & Mbarika 2005, 124.) Social networking is indeed extremely important to human empowerment (Unwin 2009d, 106–107), as social exclusion is a major indicator of poverty. The poorer people are, the fewer social connections they have. (Slater & Tacchi, 2004, 64.) The ability to use mobile phones for social purposes can be a great boost for the sense of being and identity of the poor people (Unwin 2009d, 107). Being part of social networks enables people to access information, gain social support and confidence. Overall, participating in collective life is possible through social networks. (Slater & Tacchi, 2004, 64.) Sometimes it can be important to possess, for example, modern technology to be a part of the community (Sen 1999, 89). According to Abraham's (2009, 99) study it is important, though, who you are networking with in terms of one's own development. Poor people with no resources are not of any help in a mobile phone's address book, as they cannot even afford to call back.

3.2.2   ICT4D challenges

Many challenges and obstacles are faced when ICTs are used for development purposes (Day & Greenwood 2009, 331). For ICTs to be a tool for empowerment and poverty alleviation, certain conditions have to be met. One of these is the existence of roads. Due to this and other requirements, most of the ICTs have an urban bias and discriminate against rural areas. (Yonah & Salim, 2007, 311.) However, mobile phones are inherently suited to remote areas with poor infrastructure due to the fact that mobile phones are mobile (Scott et al. 2004, 1).

Three factors (*connectivity, affordability, capability*) defined by Yonah & Salim (2007, 311) (Figure 7) determine whether information is accessible to the user through ICTs.
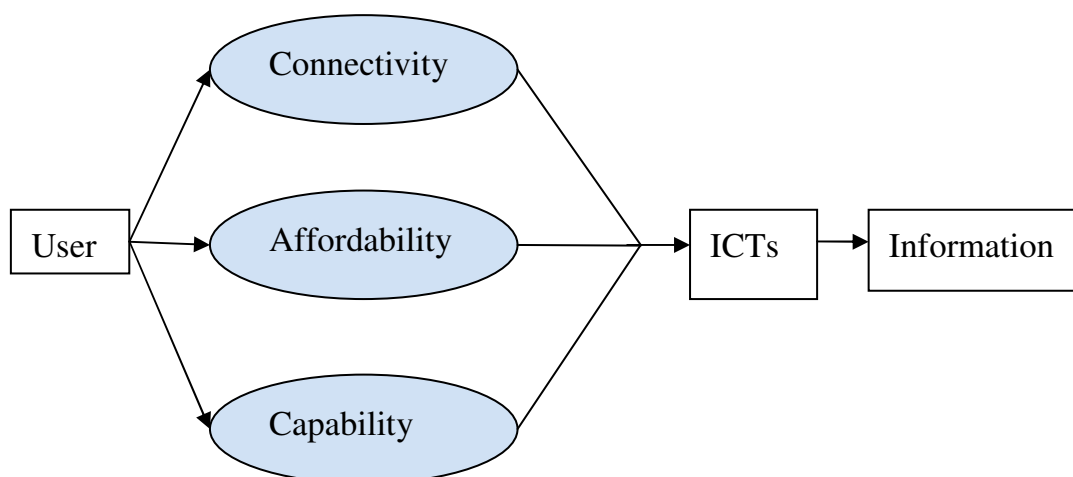
Figure 7   The factors determining the accessibility of information to the user (adapted from Yonah & Salim's listing 2007)

First, *connectivity* questions whether the services are available. Even though the network for mobile phones would be available in a certain place the service might, however, be off on occasion, or the reception might be very poor. Thus the use of a mobile phone becomes very difficult and frustrating. (Comfort & Dada 2009, 47–48.) Another challenge is the need for energy. Lack of electricity poses a great challenge for ICT systems in rural areas. Most of the rural residents in developing countries live without electricity. Investment in both infrastructure, maintenance and fee collection for the acquisition of energy to rural areas can end up being rather expensive. In recent years there has been a shift away from traditional large-scale centralized power

production systems to more decentralized ones. Among the alternative ways of getting electricity are renewable energy sources and hybrid systems. Hybrid power systems combine fossil fuel-fired generators (e.g. diesel generators) with wind and solar power. In the long run, renewable energy sources prove to be economical due to lower operating costs compared to fossil fuels. However, the initial costs are larger for renewable energy installations. (Weingart & Giovannucci 2004, 2–4.)

Second, *affordability* concentrates on the issue of poor users affording the access (Yonah & Salim 2007, 311). Even though the cost of access to ICTs has decreased, it does not mean that everyone can afford the access (Unwin 2009a, 361). There are more and more concerns that the cost of access to ICTs creates information rich and information poor (Rahman 2007, 207). Samuel et al. (2005, 42) found out in their research that even though income explains the level of usage, the lack of money does not, however, prevent mobile use. Among ICT tools especially mobile phones are suitable for the poorer people due to the prepaid system. In addition, mobile phones offer cheap means of communication like SMS (short message service) and 'beeping' (leaving intentional missed calls). (Scott et al. 2004, 1.) Koskinen (2008) discussed that different numbers of missed calls have different meanings. For example, two missed calls can mean 'send me money'. Due to the above-mentioned problem of 'poor connection', mobile phone users might get charged even when they do not succeed to get connected. This is a big setback for poor people. Occasionally, in order to be able to afford the use of mobile phones other household expenses are cut out. (Comfort & Dada 2009, 47–49.)

Third, *capability* refers to the user's required skills to support and utilise access profitably. The user's skills are linked to technical competence, language and literacy. Illiterate and people without an education are in a disadvantaged position when they face sophisticated ICTs. (Yonah & Salim 2007, 314.) People living in rural areas have *low literacy rates* (FAO 2004). Sending text messages via mobile phones has been found to be easy, cheap and popular. Nevertheless, this facility easily becomes useless when people are illiterate or the first language has not yet been digitized. (Comfort & Dada 2009, 46.) Being illiterate is a major challenge to those who limit their use of ICTs to text-based interfaces. However, there is proof that even illiterate people can quickly learn to use ICTs through icon-based applications. (Narayan 2002, 101.)

3.2.3   ICTs for empowerment

ICTs can be an empowering tool (Beardon, 2006, 45). ICTs provide opportunities for poor people in developing countries in terms of social, economic and political empowerment. Four broad areas where ICT empowers poor people, of which three are

discussed here, are: *provision of basic services; access to financial services* and *support for entrepreneurship*. The fourth aspect of ICTs empowering people is improving local and national governance. This is left out of the discussion, as the political aspect of empowerment is not included in the study. (Narayan 2002, 101.) In addition, disasters are covered in reference to mobile phones' usefulness in reacting to disasters.

Various ICT tools are used in *the provision of basic services* including education and health care for the rural poor. Particularly computers, TV and radio are considered to be helpful in providing education opportunities to isolated rural areas. Distance learning and virtual education are possible through internet. (Narayan 2002, 101.) ICTs are also helpful tools in tackling health care problems. Improved and faster communication and information sharing can make a dramatic difference. (Yonah & Salim 2007, 312.) According to Diga (2007, 76–77) the greatest effects that spending on mobile phones has on poverty reduction in disadvantaged homes are during unpredictable shocks like illness or death. Mobile phones drive much of the shock costs down and allow families to manage better financially and to cope with the unpredictable situations. If a family is not able to quickly recover from one shock after another, it falls into deeper poverty. A mere saving on transportation costs is a big help. The Economist (2009) presents a project in South Africa in which mobile phones and particularly a form of text messaging, similar to SMS, are used to encourage people to contact the AIDS hot line. This project has proved to be extremely successful: as mobile phones are personal, they bypass the stigma related to HIV/AIDS. Also, in South Africa public health workers remind tuberculosis patients via text messages to take their medication (Corbett 2008). Similarly, in Uganda a 40 per cent increase in people being tested for HIV was perceived thanks to mobile phones. Namely, Text to Change uses an SMS-based quiz to raise awareness about HIV/AIDS among mobile phone users.

People in the developing countries face major challenges regarding the *access to banking services.* There is a great amount of unbanked people. The reasons for not having a bank account can be high barriers to entry, or lack of trust in or knowledge about banking organisations and the services they offer. (Richardson & Callegari 2008, 70.) ICTs can be helpful tools in providing poor people with a *broader access to financial services* (Narayan 2002, 101). Even mobile phones have a role in providing this access, for example through. Mobile Money is a service provided by an operator, MTN. It is an advantageous service for the rural residents who might not have a bank account but can still receive money sent by another person. Through Mobile Money people can send and receive money anywhere in Uganda. Only the sender needs to be registered to the service. The receiver can be subscribed to any network. Cash can be withdrawn at any authorised MTN Mobile Money agent. The service also enables sending airtime to someone else. It needs to be noticed, though, that to be able to register to the service and to withdraw money one needs to possess an appropriate

identification document. A voter's card is considered as an appropriate identification document among others. (MTN 2010.) There are several examples how mobile phones are used in money transactions. In Zambia, for example, local Coca-Cola distributors receive the payment from their deliveries by text messages. In addition, restaurants, dry-cleaning firms and petrol stations receive payments through mobile phones. (Economist 2005, 74.)

ICT can be a *booster for entrepreneurship and business development*. Through ICTs people have access to vital market and business-related information. Layers of middlemen can be cut out. ICT saves time and makes work more efficient. (Narayan 2002, 109.) Thanks to mobile phones profits are increased, costs are saved, numbers of customers are increased and businessmen and women are available to customers all the time (Donner 2005, 40). The use of mobile phones in the business can also create increased client loyalty (Sane & Traore 2009, 114). According to Diga (2007, 76) the majority of the mobile phone subscribers believe that the mobile phone will increase their business opportunities and lower their costs. Several researchers prove the positive impact of mobile phone use in business. Mobile phones make the work of fishermen more profitable by reducing waste, as the fishermen they can land their catches where the wholesalers are ready to buy them (Best & Kenny 2009, 190). Farmers and fishermen can verify the prices at different markets before selling the produce (Economist 2005). A baker can call suppliers and the customers can place orders through a mobile phone (Donner 2005, 2). Mobile phones can also have a role in small business start-ups even though the firms are non-mobile phone related. The availability of mobile phones has an influence especially on the firms operating in the service sector. For example, more services can be offered or products can be ordered thanks to mobile phones. (Donner 2005, 41.) Mobile phones are also a means to search for work; both prospective employers and the job applicant can communicate on work-related issues (Samuel et al. 2005, 35).

Disasters are another important thing to remember. Disasters are a severe detriment to poverty alleviation especially in the least developed countries. The living conditions of the poor are severely weakened. When disasters strike they leave destruction, broken lives and economic damage behind. Those living in remote areas with no access to vital alerting information through basic information and communication facilities suffer the most. Emergency telecommunications play a crucial role in providing timely flow of vital information. This information is greatly needed by government agencies and other humanitarian actors that are involved in rescue operations and provide medical assistance to the injured. (ITU 2010a.)

3.2.4   ICTs and women

There is an increased awareness of ICTs' impact on women (UN 2005, 2). Even though Samuel et al. (2005, 42) and Scott et al. (2004, 1) denied that gender would be a barrier to access mobile phones, the general belief is that gender does have a role in accessing mobile phones. According to the United Nations (2005, 3, 6), ICTs are not gender-neutral; females do not have an equal access to ICTs compared to males. This is the so-called 'gender-divide'. Some of the factors hindering women's use of ICTs are the same as for men. However, the constraints can often be exacerbated for women. Potential hindering factors are oppressive gender relations, social culture barriers, distance to ICT facilities, poor infrastructure, cost for accessing ICTs (Patil et al. 2009, 6), poverty, lack of opportunities, illiteracy and language barriers (2005, 3). Interestingly, Comfort & Dada (2009, 54) found out in their research that women would actually drop their use of mobile phones in case the family needs money or time.

The UN General Assembly has accentuated the need of rural women to be involved in the use of ICTs as rural women are the ones worst affected by the digital gender divide. ICT can be an efficient tool for the promotion of gender equality and for the socio-economic empowerment of women, for example, in health and education. (UN 2005, 3, 16.) Some researchers discovered that women were empowered when they owned mobile phones: their mobility, decision-making powers, knowledge and confidence were enhanced (Best & Kenny 2009, 190). In Kenya ICTs played a positive role in promoting development of women's entrepreneurship, and especially the role of mobile phones was extremely important (Munyua 2009, 128). Tafnout & Timjerdine (2009, 93, 96) found out in their study that mobile phones and other ICTs were helpful for women in issues relating to gender-based violence. Someone even called mobile phones 'protection' and 'a solution to problems'.

However, the use of mobile phones by women is not that simple. Munyua's (2009, 126–128) study revealed that the access to ICTs can be empowering only to a small minority of women as mobile phones have not changed the fundamental issues of gender relations. According to Burrell (2009), women normally relied on men in attaining mobile phones. The wife had a phone if the husband had the money and he was willing to let the wife own a phone. The financial perspective was not crucial, but, instead, the fact that mobile phones provided access to other men. Kyomuhendo's (2009, 156–164) study on rural women's payphone business in Uganda equally raises the issues of gender-based inequalities. She studied eight women with very different stories about their sense of empowerment. Empowerment was a personal feeling for the women whether the researcher agreed with it or not. All the women were operating a payphone and thus earning their own income. The impacts of the businesses were diverse. Some women improved their living conditions also at home due to successful

business: self-confidence increased, the husband stopped beating and status rose. One woman even got married owing to her improved financial situation. However, other kinds of stories were also found: the status of women declined, tensions between spouses arose, violence ensued and the business even led to divorces. The dominant view was that women's social status is derived from marriage and how stable that marriage is not from running a successful business. As the marriage was finished and all the associated respect vanished, one lady did not feel empowered even though she had the income. Someone mentioned that a woman operating a payphone is seen as a disguised sex worker; the job is for failures in life. Despite the norms in the community, some of these women who lost their marriage or respect in the community still felt empowered as they themselves cared for economical survival. For these women, the sense of freedom from structures imposed on them by the prevailing patriarchy was seen as a position of empowerment. None of these women wanted to change the prevailing gender-roles even though they were now financial contributors in the family as well. Some women only exercised their power secretly, for example by using contraception. This study proved that women's sense of empowerment is shaped by a multiplicity of factors, including their individual circumstances and realities, needs, aspirations and the social context in which they operate.

Diga (2007, 78) points out that due to gender imbalance of mobile phone use women may actually feel that mobile phones are leading to poverty. This is because women may suffer under the exacerbated control of assets by the family's income earner or household head. Hence, women may feel that they do not benefit from the technology purchased. However, even when women are able to use the phone, the usage is limited as their partners control the use. Some husbands, for example, fear the women overuse the airtime. Besides, limiting the use, men might also attempt to find out the content of the communication conducted on the phone. This blurs the boundaries of private spaces and causes more tension in already unequal gender relations. (Munyua 2009, 124.) As a matter of fact, mobile phones are a mixed blessing for women's empowerment: the use of mobile phones contributes to both integration and fragmentation of existing family structures (Comfort & Dada 2009, 44). Thus the impact can be both empowering and disempowering.

3.3   Model assessing the impact of ICT

Research concerning the impact of ICT is predominantly at the macro (national) and meso (organizational) levels, rather than the micro (community/individual) level. However, Adam & Wood (1998) provide one of the few studies that equally covers the micro level. (Ashraf, Hanisch & Swatman 2008, 156.) Adam and Wood (1998)

identified four main aspects of the impact of ICT in sub-Saharan Africa: *"Actual impact", "Potential impact", "Constraints" and "Actions centred around users and their reactions"* (Figure 8). Their research indicates that understanding the ICT users' day-to-day pains in coping with problems of ICT in the local context is necessary for impact assessment. Adam's and Wood's model appears at five levels: government, education, business, organization and individual. In this study the social feedback model is analysed as it applies to individuals.
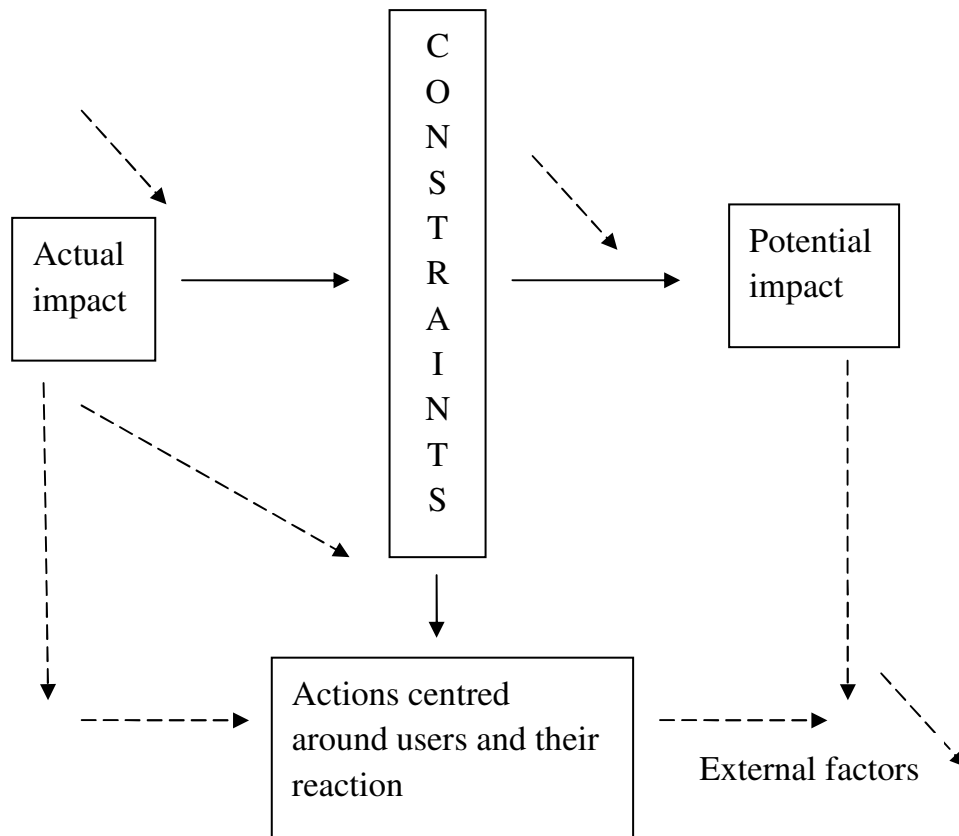
Figure 8   A social feedback model of four core categories and external factors (Adam & Wood 1998)

The *actual impact* of ICT refers to its benefits, current value, transformation and consequences in a complex social and organizational setting. The cultural and historical context and the infrastructure available influence the actual impact of ICT. *Potential impact* refers to the potential gains or values and the positive or negative consequences achievable through learning, development and by current actions, strategies and applications. Potential impact rests on a number of factors: for example current actual

impact, resources and on the constraints operating in the particular situation. (Adam & Wood 1998, 309–310.)

Constraints are the barriers between actual and potential impact. Constraints are the various inhibiting factors. They range from social and technical problems to the commitment levels in organizations and government. The interaction between actual and potential impact is dynamically altered by constraints and the actions centred around users and users' reactions. (Adam & Wood 1998, 310.) There can be various constraints, for example unequal gender-relations (Munyua 2009, 126) or lack of electricity and roads (Yonah & Salim 2007, 311). *Actions around users and users' reactions* serve as a feedback loop between actual and potential impact. It refers to participation, the social relationship between various actors and the creativity of users in dealing with constraints. The creativity of users, their actions, why they act, what implications their actions bring to the development and use of ICT within a variety of cultural, social, political and economic settings are crucial elements in the application of ICT. *External factors* play a remarkable role in stimulating and inhibiting the interaction among the four core categories. Some of the external factors that were identified and that cannot be controlled locally include new products or technological breakthroughs and natural or political crises. External factors are often difficult to control by actions centred around users and their reactions. (Adam & Wood 1998, 310.)

The theoretical framework for this study (Figure 9) is combined from the social feedback model (Adam & Wood 1998, 309–311), empowerment outcomes (Petesch et al. 2005, 53) and the factors determining the accessibility of information to the user (Yonah & Salim 2007, 311).
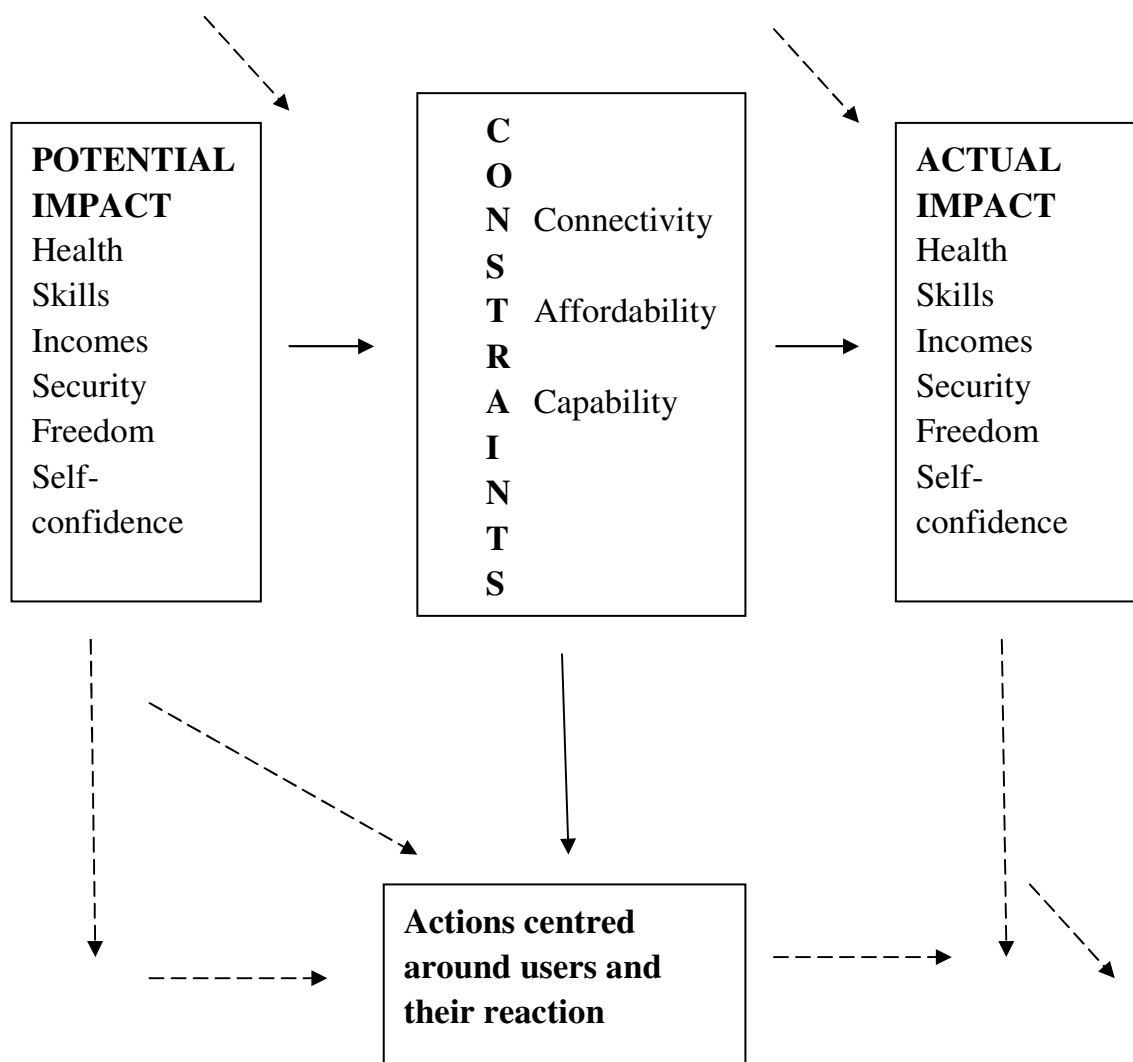
Figure 9   Theoretical framework for the study (combined from Adam & Wood 1998; Petesch et al. 2005; Yonah & Salim 2007)

The empowerment outcomes (Petesch et al. 2005, 53): health, skills, incomes, security, freedom and self-confidence are analysed as actual and potential impacts that occur when using mobile phones. Connectivity, affordability and capability (Yonah & Salim 2007, 311) are seen as constraints – the barriers between actual and potential impact. In this study the context, where the model (Figure 9) is used, is Katakwi district and the residents' daily use of mobile phones. Thus, the context is not a development project as could be the case for the social feedback model (Figure 8). Instead, the aim is to understand the potential and actual impact of mobile phone use, the constraints in between and the actions users take to sidestep the constraints. With this aim in mind, the places of potential and actual impact are shifted. Potential impact is seen as the best possible impact without constraints. However, as the constraints have an effect on the impact, the actual impact remains in force. External factors are left out of the model the focus being on individuals and also on communities in terms of IDP camps.

4 EMPIRICAL RESEARCH DESIGN

4.1 Research approach and data collection

The purpose of *qualitative research* is to study things in their natural settings, attempting to comprehend or interpret the phenomena regarding the meanings people bring to them (Denzin & Lincoln 1998, 3). The sense of qualitative research is a comprehensive description of real life with its varieties. Real life must be considered as an entity not as separated events. Qualitative research cannot be completely objective in nature. The researcher's values shape the way the research is done and how the phenomenon is understood. The findings can only be conditional related to a certain place and time. (Hirsjärvi, Remes & Sajavaara 1997, 161.)

This research was qualitative in nature, as the researcher attempted to get a comprehensive understanding of the mobile phone phenomenon in a rural setting in Uganda. Also Adam and Wood (1998) used qualitative methods in their research for analysing the impact of ICTs. They emphasized that ICT is largely a social construction and based on the understandings of people, their drive, knowledge structures and social interactions. Thus it is appropriate for qualitative research.

Qualitative research has four main data collection types: *observations*, *interviews*, documents and the use of audio-visual materials (Creswell 2009, 178). From these methods interviewing is an excellent method of gaining access to information about opinions and experiences (Dunn 2000, 80). To serve the aims of this study, interviews were chosen as the main data collection type. Interviews were extremely useful in gaining understanding of the rural residents' feelings and thoughts about mobile phones.

Three major forms of interviewing exist: *structured, unstructured* and *semi-structured.* Structured interviews are carried out according to a predetermined and standardised list of questions, whereas unstructured interviews are the opposite: the informant directs the conversation rather than the questions. Semi-structured interviews, on the other hand, are something in between. (Dunn 2000, 80.) Semi-structured interviews have open-ended questions. The questions are asked from a flexible checklist not from a formal questionnaire. Further questions are asked to go deeper into unexpected and relevant issues that come up during the interviews. Probing questions are extremely important: the interviewee can be asked for back-up information and he or she can be challenged to answer more in depth. (Mikkelsen 1995, 89, 169, 173.) Semi-structured interviews are suitable to study both 'how' and 'why' questions (Eriksson & Kovalainen 2008, 82). In this study, face-to-face *semi-structured interviews* were used as a research method to collect empirical data. First and foremost, semi-

structured interviews directed the interviews but still gave enough freedom for both the respondents and the interviewer to diversify the conversations. This proved to be extremely useful as new interesting issues came up that had not occurred to the interviewer before.

Besides interviewing, also some *non-participant observation* was carried out in Katakwi district. Non-participants try not to become a participant in the culture; instead, they try to be as 'invisible' as possible. Direct observation is about watching not taking part. (Eriksson & Kovalainen 2008, 87.) In this study, observation was used as a data collection method only to a limited extent: to get an understanding of the popularity of mobile phones in Katakwi district.

Uganda, the country for the study was chosen by the FCA. The operating partner in Uganda was the LWF, which operates in four districts in Uganda besides the capital city Kampala. The LWF suggested two districts as the potential study sites for the research – Sembabule and Katakwi. Katakwi was the chosen study site for several reasons. First, a major reason was the assumption that more people without mobile phones would be reached there as compared to Sembabule. This was important as the researcher also wanted to include the have-nots into the research. Second, no previous research on mobile phones had taken place in Katakwi district before. Third, the remoteness of the rural area, the history of the place, the widespread poverty and also the increased use of mobile phones created a suitable setting when analysing mobile phones' impact on rural residents. Fourth, also the fact that mobile phones were still relatively new in Katakwi made the study site more appealing. Besides, there was no knowledge whether the network covered the whole area. These issues together had an impact on the decision to carry out the study in Katakwi district.

The researcher arrived in Uganda on the 18th of November. The first five days were spent in the capital city Kampala preparing for the field study. The field study in Katakwi district took place between the 23rd of November and the 10th of December. After the field study, another five days were spent in the capital city. In total, the stay in Uganda lasted for a month. The time in Kampala was preserved for some interviews with experts and operators and for preparing for the research. However, only one interview was carried out in Kampala on the 19th of November with a senior programme officer of an NGO called Women of Uganda Network (WOUGNET). After the field study some additional information concerning Katakwi district and Uganda were received from the LWF Katakwi office via e-mail. That information is included in the study as well. In addition, to get information about the operators in the district one short interview with a commercial chief was carried out in Katakwi.

The researcher wanted to include people with different social and economic status into the research to get an extensive sample of the residents of Katakwi district. People from different walks of life were interviewed: sub-county leaders, teachers, a priest, a

tailor, a barber, various businesspersons, people at the weekly marketplace, farmers, housewives, jobless etc. This made it possible to understand the role of mobile phones in the district. Both women and men of varying ages were included in the research.

In Katakwi, the researcher had a meeting with one of the LWF staff members every morning to discuss the day. Occasionally, the day was already planned beforehand. Normally the day was organised in a way that the interviews took place in one sub-county in the morning and in another sub-county in the afternoon. All the eight sub-counties – Katakwi, Ngariam, Toroma, Kapujan, Usuk, Ongongoja, Omodoi and Magoro – were visited several times. The distances between sub-counties were long so the LWF provided a driver who took the researcher to the field every day. The process of choosing the respondents relied largely on the LWF. The researcher told the LWF what type of people she would want to interview that exact day or the following days. Then, an LWF staff member from the field – who was a different person at each sub-county – took the researcher to meet the interviewees. Occasionally, the people were informed beforehand and they were waiting for the researcher to arrive. Sometimes the persons were searched together with the researcher.

56 interviews concerning the use of mobile phones were carried out in Katakwi district, out of which only 50 were included in the study. Details of these 50 interviews are presented in Table 1.

Table 1   Schedule for the interviews

Date	Interviewees	Women	Men	Sub-county	Length/min
24.11.	2 households	1	1	Ngariam	40, 66
25.11.	1 sub county leader, 2 airtime vendors, 1 seller of phones & related equipment	1	3	Toroma and Katakwi	61, 38, 17, 47
26.11.	4 households (from one family both the husband and the wife were interviewed separately)	2	3	Kapujan and Usuk	30, 35, 26, 21, 22
27.11.	1 priest and 1 teacher		2	Ongongoja	30, 22
30.11.	4 households	2	2	Magoro and Omodoi	38, 24, 21, 24
1.12.	2 households and 1 teacher		3	Usuk and Katakwi	26, 46, 28
2.12.	2 households and 1 in charge of the camp phone		3	(*sub-county not mentioned for the privacy of the interviewee*)	41, 23, 13
3.12.	3 households, 1 tailor, 1 barber, 1 shop assistant and 1 restaurant owner	6	1	Katakwi and Magoro	30, 26, 20, 24, 22, 16, 36
4.12.	2 sellers at the market, 2 households	3	1	Market in Katakwi and Ongongoja	36, 31, 25, 24
7.12.	3 households	2	1	Ongongoja	11, 10, 14
8.12.	5 households, 1 nurse, 1 policeman	5	2	Magoro and Omodoi	19, 17, 10, 10, 14, 11, 10
9.12.	1 sub-county chief, 1 bodaboda driver, 1 in charge of the phone, 3 households	2	4	Usuk, Katakwi and Ngariam	27, 13, 18, 16, 12, 10
		24	26	Total=50	

All the interviews were carried out in various sub-counties of Katakwi district during
November and December 2009. In the table, some of the respondents are named as a
shop assistant, a restaurant owner and so on but also their personal use of mobile phone
was considered besides to business use. Thus, these people could also be named as
households but instead the researcher wanted to show their status and place in the
community. Also, the lengths of the interviews are mentioned. The interviews with
people who did not own mobile phones and did not know anything about mobile phones

were the shortest; only for around 10 to 15 minutes. Other interviews were longer, depending on the person. The longest interview lasted for 66 minutes. Thus, all the interviews were relatively short. The difficulty of interviewing is discussed later in section 4.3.

Five interviews with women and one interview with a man were left out of the study. The first interview was not completed after realising the respondent was too young and rather shy. The second interview was completed but not analysed owing to uncooperative attitude of the young respondent. The third and fourth interviews were left out of the analysis due to the similarity of the cases to other interviews done at the same time at the same place. The fifth interview with a nurse was not completed because one interview with a nurse was considered to be enough. Besides, the nurse in question interfered in the other nurse's interview and provided some extra information about the clinic's way of using mobile phones. Her few answers are analysed together with the other nurse's answers. Even though the interviews were individual interviews, in this case it did not interfere with the aim. First, she was also a nurse from the same clinic. Second, she was only answering to a couple of questions concerning the use of mobile phones at work. Third, the answers provided good information. Fourth, her voice could not be recognized from the recordings, so it could not have been cut out of the interview. One male respondent, who asked the interpreter whether he would get a mobile phone from the interviewer, was left out of the analysis in order to prevent any biased answers.

48 individual interviews (two interviews concerning collective IDP camp phones were excluded) were stratified into four categories (Table 2):

> *Category 1: Individuals who own a mobile phone*
>
> *Category 2: Individuals who do not own a mobile phone but want one*
>
> *Category 3: Individuals who do not own a mobile phone and do not want one*
>
> *Category 4: Individuals who once owned a mobile phone*

Table 2   Respondents in four categories

Category	Number of mobile phones		Remarks/ women
	Women	Men	
1. Has a mobile phone	10	14	2 shared the phone with their husbands, 1 phone was at repair
2. No mobile phone – but wants one	7	4	
3. No mobile phone – no interest	2 (+1)	2	The one in brackets was more or less unclear in her attitude. However, she can be considered to have a negative attitude.
4. Once had a mobile phone	4	4	
Total = 48	24	24	

During the field study 24 women were interviewed out of which ten had a mobile phone, seven women did not have a phone but wanted to have one, three women did not have a phone and did not want one, and four once had a mobile phone. 24 men were interviewed about their personal use of mobile phones. The men were divided into the four categories likewise. Fourteen men had a mobile phone, four men did not have a mobile phone but they wanted to have, two men did not have a mobile phone and they had no interest, and four men once had a mobile phone.

First, the women in four categories are discussed. *Category 1: women who own a mobile phone.* Half of the women who had a mobile phone bought it themselves. Some of the women had some sort of business (a tailor, an airtime vendor). One woman saved money through selling eggs and another woman prepared and sold local brew to be able to buy a phone. One of the ladies had a monthly income as a nurse. All these women earned enough money to provide themselves with a mobile phone. Other women with mobile phones got the phone as a gift from their sons or from a brother. One woman who shared the phone with her husband did not specify how they got the phone. Only one respondent told her husband bought the phone for her.

Category 2: no mobile phone – but want one. The interviewed women with no mobile phones but willingness to get one included a young girl, a single mother, widows, current or former IDP camp residents, financially disadvantaged, illiterate and peasants. Some of the women were married. These people did not have the means to buy a mobile phone.

Category 3: no mobile phone – no interest. Two of the people from this category were explicit in their unwillingness to get a phone. Another one lived in a camp. She earned her living by cutting grass for the roofs of the mud huts. Neither did she know anything about mobile phones nor had she never used one. She did not want to have a

phone because she did not have education, she would not know how to operate one, all her friends lived in the camp, and neither would she have the money nor the time. The other one was a widow with no education. The widow could not tell her age. She also came up with many reasons for not wanting to have a phone. First, she would not know how to use it. Second, she did not have the money; all the money went to educating the children. Third, all her friends had passed away anyway.

The third lady was not as clearly understood as the two previous women. She was 28 years old, a married farmer. Her attitude towards phones seemed to be overall negative. She did not want more people to have phones because people would just waste their money on them. According to her, the money should be used for educating the children, for clothes and food instead of phones. She did not like phones owing to their high price. When asked whether she would want to have a phone she denied at first due to many problems, for example lack of capital. When the researcher wanted her to imagine a situation in the future whereby she would be able to finance the phone, she was willing to consider buying one. Overall, her attitude seemed negative but her arguments were based on the expenses. Thus, the lack of money seemed to be the biggest problem for her. Two of those ten women who did not have a mobile phone had never even used one. The rest borrowed other people's phones when a need arose.

Category 4: once had a mobile phone. Two of the ladies bought the phone themselves with the revenues gained from small-scale businesses. The third and the fourth ladies got their phones as a gift from a daughter or from the wife of the husband's brother. The reason why three of the women no longer had their phones was the fact that the phones had dropped into water and broken down. Two of them were taken into repair. The third phone was broken by the male cousin of the owner. The cousin was not interested in fixing it or he did not have the money for it. The fourth lady's mobile phone got blocked after her having it for three days. She assumed the phone was stolen and was thus blocked after the owner reported the theft.

Next, the men in the four categories are presented. *Category 1: men who own a mobile phone.* Altogether fourteen men had mobile phones, out of which thirteen had bought the phones themselves. Two of them had bought a used phone for less, whereas five of the men already had their third, fourth or even fifth mobile phone. Only one of the men had got the mobile phone as a gift. He was young, physically challenged, illiterate, and not satisfied with his living conditions as he had dropped out of school after five years of schooling. He would not have had the means to buy a mobile phone himself.

Category 2: no mobile phone – but want one. Four of the twenty-four men interviewed did not have a mobile phone but were interested in getting one. All of them were in their 50s or 60s. Two of them were employed, and the other two were subsistence farmers; however, the other one mentioned selling little of the produce

occasionally. One of the respondents said that his children are planning to buy a mobile phone for him.

Category 3: no mobile phone – no interest. Two men were not interested in getting a mobile phone. The other one was a 56-year-old IDP camp resident. He said he does not know anything about phones but he had a negative attitude towards them. He felt phones take all the money, encourage people to lie and can even break families. The other one was a 26 year-old businessman who did not either know that much about phones. He did not want one because he wanted rather to use the money on basic needs to take care of the family.

Category 4: once had a mobile phone. Four men had lost their phones for different reasons. The first one's phone broke down and the repair was too expensive. The second one's phone got lost, a boy found it, but a soldier took it from the boy. The third phone the owner sold because it was useless since he did not do any business. The fourth one's phone was sold to someone as it had a weak battery. The owner sold the phone with a new battery he purchased.

Altogether seventeen interviewees out of 48 belonged to the LWF farming group. Eight respondents were completely illiterate, while three did only have limited reading or writing skills and the rest 37 were literate in Ateso, in English or in both. Only one of the eight illiterate people had a mobile phone at the time of the study. Six of the interviewees were IDP camp residents, and three had more or less recently moved out of the camp. In total, eight respondents did no business at all, whereas nine respondents said they sold some produce but not at a regular basis. Selling something every now and then, in case the harvest was plenty for example, could have enabled buying a mobile phone. The rest 31 did business or were employed. Only one of those eight persons who did not do any sort of business owned a mobile phone, whereas five of those nine persons who sold produce occasionally had phones.

The respondents were divided into different age categories (Figure 10 & 11).
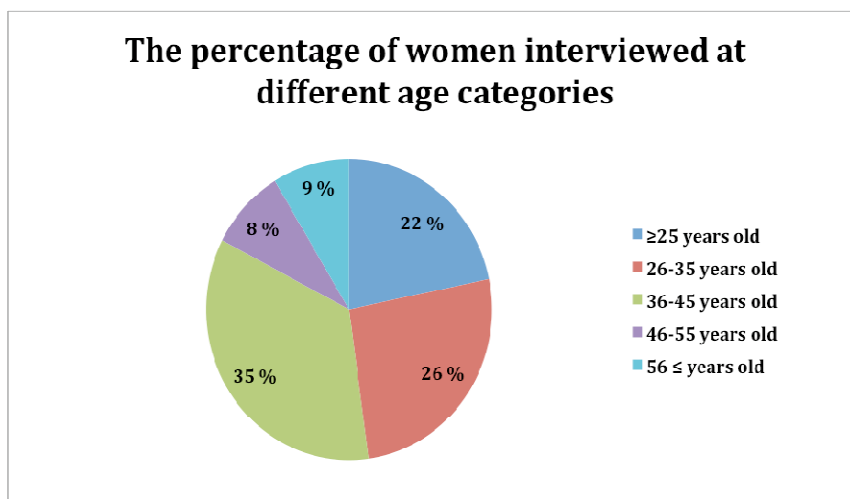
Figure 10   The percentage of women interviewed at different age categories
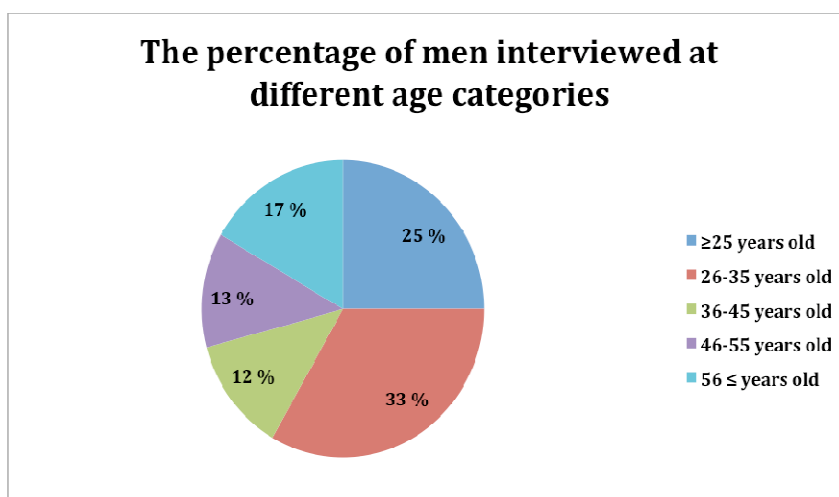
Figure 11   The percentage of men interviewed at different age categories

The youngest female was 22 years old and the oldest 60 years old. One older lady could not tell her age. The number of women in the different age ranges was: 5 women at ≥ 25 years old, 6 women at 26–35 years old, 8 women at 36–45 years old, 2 women at 46–55 years old and 2 women at ≤56 years old. Men were aged between 19 and 63 years old. All the men could tell their age. The number of men in the different age ranges was: 6 men at ≥ 25 years old, 8 men at 26–35 years old, 3 men at 36–45 years old, 3 men at 46–55 years old and 4 men at ≤56 years old

4.2   Data analysis

All the interviews were *recorded*. In addition, some *notes* were made during the interviews. Especially numbers and years were written done to have a backup in case some parts of the recordings were not audible. This method proved to be helpful later on when all the recorded interviews were *transcribed*; sometimes the wind or the background noise made the answers unclear. The researcher also kept a *diary* where she wrote all the important issues concerning the day's interviews. For example, if the researcher had a doubt about the respondent's answers, it was noted in the journal.

Computers can be helpful in analysing qualitative data. *Computer-assisted qualitative data analysis software* (CAQDAS) is a universally applicable title for a range of software that is specifically designed to handle unstructured, qualitative data. This type of analysis involves a three-way relationship between the researcher, the research process and the hardware and software. (Peace & Hoven 2000, 236.) In this study a software called *NVivo* (version 8) was used to help sorting and analysing the data. NVivo is software that continues to be updated and upgraded (Peace & Hoven 2000, 237). NVivo was chosen to be used for the analysis for several reasons. Nvivo enabled to manage a large quantity of data as 50 interviews were carried out. Nvivo made analysing the data faster and more flexible than using a mere 'copy – paste' method. It was easier to double-check and retrieve data concerning different issues.

NVivo was used to *code* the data. Coding is a way to reduce and organize data but also a substantive process of data exploration, analysis and theory building. Different types of coding exist. *Descriptive codes* are like category labels. They reflect themes that are obvious on the surface or are stated directly by research subjects. Descriptive codes answer questions like 'who, what, where, when and how'. *Analytical codes*, on the other hand, dig deeper into the processes and context of phrases and actions. Analytical codes reflect themes that have become important. (Cope 2000, 223–225.) In this study, both descriptive and analytical codes were used. The transcribed interviews were coded under various themes, for example sub-questions and important issues that emerged from the data.

Respondents were categorized according to different attributes to make the analysis easier. These attributes were: gender, age, literacy, categories 1–4, involvement with NGOs, former or ex-residents of IDP camps and the fact whether the respondent did business, sold occasionally some produce or did not do business at all. People were also categorized money-wise. Occasionally, people are referred to as 'the poorest of the poor' or 'the wealthier' residents of Katakwi district. This division is done based on the amount of money saved per month and the fact whether the individual earns a monthly salary. The money approach as a poverty indicator is taken due to the fact that buying and using mobile phones always demands money. Some of these people, categorized as

'the poorest of the poor' said, however, that they were satisfied with their living conditions, for example due to having children. Thus, this categorization considers only the financial situation. In case no money could be saved (or the money saved was extremely little), the individual was considered poor. Even though this person earned a little money, for example by cutting grass for the roofs of mud huts, he or she was still considered poor as the money earned was so little. Normally, if a monthly salary was earned, the person was considered to belong into the wealthier part of the residents, even though he or she said not to save any money. Some of the respondents could not be categorized at all due to the missing information. A major part of the poorest of the poor was women. The poorest of the poor were included in all the four categories, did business, sold some produce occasionally or did no business at all, and some of them were IDP camp residents. A majority of them were literate.

Finally, the coded interviews and attributes were used to retrieve matrices. These matrices contained information on how a particular theme appeared in relation to different attributes. As an example, all the empowerment outcomes were studied in reference to all the age categories. The contemplation of matrices enabled to see whether any consistencies appeared in the data.

4.3   Evaluating the research

The quality and trustworthiness of the research have to be proved to the reader. Several evaluation criteria exist. (Eriksson & Kovalainen 2008, 290.) The criteria listed by Mäkelä (1990, 47–48) have been used in this study as it is suitable for studies trying to describe people's lives. The four evaluation criteria are: *the significance of the data and societal and cultural place, adequacy of the data, scope of the analysis and measurability and repeatability of the analysis.*

The first evaluation criteria: the significance of the data and societal and cultural place. The data-gathering situation and the researcher's possible effect on the nature of the data need to be clarified. It is certain that the interview situation affects the respondents' answers. (Mäkelä 1990, 48–50.) Next, the interview situations and the possible impact of the researcher are discussed.

The researcher always had an interpreter with her to be able to communicate with people who could not speak English. The other spoken language in Katakwi district was Ateso. Slightly less than 50 per cent of the interviews were conducted in Ateso with the help of the interpreter. Occasionally, even though the interview was held in English, both the interviewer and the respondent needed help from the interpreter to understand what the other person was saying due to cultural differences or the pronunciation. At times, if the respondent was not able to express himself/herself, he or she changed the

language into Ateso in the middle of the interview. Occasionally, the drivers were also helping with the interpretations. Without the help of the interpreter, the study could not have been carried out.

The interview always started with introducing the interviewer most often by the interpreter but at times by the researcher herself. The introduction was planned together with a staff member of the LWF. It included introducing the researcher, her country of origin and that she was here to learn from the residents' use of mobile phones. The introduction was always held in Ateso. Thus, the researcher could not tell whether it was done the same way each time. Occasionally, it appeared to be shorter. One afternoon, after interviewing three people, the researcher started to have a feeling that maybe these people were expecting her to give them mobile phones. Assumptions were confirmed when the interpreter told that one of the men actually asked her whether the researcher would get him a mobile phone (this interview was left out of the analysis). The objectives of the study needed to be clear and no biased answers were accepted. From that moment on the strategy was changed and the interpreter also added that the interviewer was only a student and not there to provide any mobile phones. However, at least once the interpreter forgot to add this information.

The previous incident demonstrated that *the interpreter did not always provide the researcher with important information.* In the above-mentioned incident, the interpreter only told the researcher about the man's special wish after the researcher contemplated about the respondent's real intentions and expectations. It is most likely that occasionally some crucial information did not reach the researcher and was only expressed in Ateso. When the researcher noticed that some information was not translated into English, she broached the subject. After the field study, it can be concluded that the role of the interpreter and her tasks should have been defined more clearly at the beginning of the process.

All the interviews were *individual interviews*: the questions were directed to only one person at a time and only that person was allowed to answer the questions. Occasionally, an outsider (a driver or a villager) attempted to interfere and answer, but the researcher always attempted to get the answers from the interviewee. Often during the interviews, other people gathered around to listen. At times, the interviewees were drawn aside to have more privacy. In addition, the arrival of a white person into a rural village made people curious, and especially the small children wanted to come close. In case the children were too loud, they were driven away by their parents or by the drivers. The interviews took place in many different places; outside interviewees' mud huts, in the trading centres, in a school, in the sub-county offices, in the car (when the strong wind or noise were disturbing the recording or there simply was no other place to sit on) and in the business premises etc.

Cultural differences between the researcher and the interviewees were self-evident; different race, different language and different living environment were all apparent. Prerequisite for a successful interview is the need for the interviewer and the respondent to be able to understand each other (Rastas 2005, 78–79). Both culturally and linguistically it was sometimes difficult and even impossible for the researcher to understand the respondents. Great benefit for the study was that the interpreter shared the culture with the locals. All the questions were gone through together with an LWF staff member to be able to phase out questions that were not culturally appropriate. Also extra questions needed to be added, for example "how many dependents do you have?" In some cases, the researcher could not be sure whether the interviewee understood the questions the way intended or even if she herself understood the answers correctly (cf. Rastas 2009, 80–82). Here again the contribution of the interpreter was priceless. If the data was partly unclear, that part of the interview was left out.

During the interviews the researcher felt that it was rather difficult to probe for more in-depth responses. Only few respondents were extremely talkative and came up with long detailed answers. Instead, some respondents appeared shy. Probably they were not used to answering questions and especially about such a topic as mobile phones. It might have seemed weird for them to tell a white person about their way of using mobile phones. Immediately after the first interview, it was noticed that more energy needed to be invested to tackle this problem. In order to get more information out of the respondents, the interviewer always asked further questions until she got answers that were detailed enough. Occasionally the further questions did not lead to more information. This is also one of the reasons why over 50 interviews altogether were made – to have enough good answers in the end. At times this ongoing probing led to leading questions. These were left out of the analysis in case the respondent could not give a personal explanation to the issue.

The method of choosing the interviewees may have had its weak points. First of all, the researcher did not know what the LWF staff told the people when they were asked to participate in the interviews, as she either was not there herself or did not understand the language. Second, the motives to participate in the research were not revealed. It cannot be told whether the respondents were expecting to receive something from the researcher. In most cases it was unlikely. As mentioned, at least one person asked the interpreter later whether he would get a mobile phone from the researcher. Another person also joked about getting a phone from the researcher during the interview.

A study on 'the role of mobile phones in empowering rural residents to rise out of poverty' has a significant *societal value,* as mobile phones are claimed to revolutionize development in developing countries. Mobile phones have especially great impact at the grassroots level. When choosing the respondents, as a wide variety of people as possible

were chosen. This enabled the researcher to get a comprehensive representation of the *culture* in Katakwi.

The second evaluation criteria: adequacy of the data. Adequacy of the data considers, how much data is enough. The saturation point signifies the point when a bigger amount of data no longer provides new information. (Pyörälä 1995, 20.) Several reasons could be stated as to why as many interviews as, in total, more than 50 were conducted and, why they improved the quality of the research. First, as the aim of the study was to understand the role of mobile phones in the whole Katakwi district, all the eight sub-counties had to be studied. Several interviews in one sub-county were carried out. Second, as mobile phones were widespread among the residents, people with different backgrounds, social and economic status were included so that the role of mobile phones in different settings could be studied. Third, the researcher came up with four interesting categories of people and interviewing all these categories made the number even higher. Four, the IDP camps were a different kind of living environment and also an important part of life in Katakwi district. Fifth, as the environment and the culture were new for the researcher, more interviews made the researcher more familiar with the environment and also proved that no important issues were ignored. Nonetheless, if the saturation point was reached in an interview, the interview was left out of analysis. A great advantage for this research was the adequacy of time in Katakwi district, which enabled as many interviews as possible to make sure that enough data was gained.

The third evaluation criteria: scope of the analysis. Scope of the analysis refers to the issue of not making sporadic interpretations (Mäkelä 1990, 53). 50 respondents provided several pages of transcribed interviews to analyse. To make the analysis easier, CAQDAS was used. The data was reduced by coding the important issues and focusing the analysis on them. However, during the analysis the whole interview of a person was taken into consideration – not just random individual sentences. The researcher considered this to be extremely important, as, occasionally, the respondents' answers were contradictory. That is why the researcher had to be extremely accurate with the respondent's answers. After double-checking the answers they might have changed. For example, someone said it was easy to use a mobile phone. When asked whether he or she could send text messages, the answer was no. In case the responses were party unclear, that part of the analysis was left out.

Also *counting* of incidents prevented making sporadic interpretations. Working with qualitative data does not preclude counting. Estimations on events that occur a number of times or consistently happen in a specific way are done. This enables judgements on what is recurrent in the data. (Mikkelsen 1995, 184.) In this study incidents that were recurrent or only one-off are clarified.

The fourth evaluation criteria: measurability and repeatability of the analysis. Measurability means that the reader has to be able to follow the researcher in making conclusions and being able to agree or disagree with them. Repeatability refers to the fact that analysis is expressed clearly enough for another researcher to be able to arrive to at the same conclusions with the same methods. (Mäkelä 1990, 53.) In this study, each step of gathering the data and analysis are clearly stated so as to provide the reader with as much information as possible. A number of quotes and descriptions of the respondents' answers are provided so that the reader can understand why some conclusions are made and is also able to disagree or agree with them.

5 DESCRIPTION OF THE STUDY SITE AND FINDINGS BASED ON THE STUDY

In this chapter, all the sub-questions are analysed one by one. Prior to the analysis, more information concerning Uganda, Katakwi and the telecommunication sector are provided in section 5.1. The most important issues concerning the study site and the country are brought up. The findings of the interviews are then gone through carefully. The first sub-objective *'how are mobile phones used, and how does the use contribute to the empowerment of rural residents?'* is analysed in sections 5.2 and 5.3. First, the various ways of using a mobile are discussed in section 5.2. Then, section 5.3 analyses how the use of mobile phones empower rural residents. The empowerment is covered by using the World Bank's (Narayan 2005) listing of empowerment outcomes: health, skills, income, freedom, self-confidence and security. Section 5.4 continues with the second sub-objective *'which factors hinder the empowerment through the use of mobile phones, and how do rural users respond to the impediments?'* by looking at the impediments mobile phone users face in their everyday lives and how residents respond to them. These constraints are studied through connectivity, affordability and capability (Yonah & Salim 2007). Section 5.5 tackles the third sub-objective *'how mobile phones disempower rural residents?'* The final sub-objective *'what are the reasons behind owning, borrowing or not using a mobile phone at all?'* is discussed in section 5.6.

5.1 Uganda, Katakwi and telecommunications sector

Poverty remains the greatest challenge facing the people of Uganda (UNDP 2010b). According to the former extreme poverty line, one US dollar per day, 31 % of Ugandans live in extreme poverty. 20.4 % of Ugandan children are underweight and go to sleep hungry. 6.4 % of Ugandans are infected with HIV/AIDS. (UNDP 2010b.) The HDI data from the year 2007 places Uganda among 'the medium human development countries' (the scale being very high, high, medium and low human development). In 2007 the life expectancy at birth in Uganda was 51.9 years. Adult literacy rate reached 73.6 % in the country. Combined gross enrolment ratio was 62.3 %. Gross Domestic Product (GDP) per capita stood at US$1,059. These rates combined give Uganda (0,541) a rank of 157 out of 182 countries. (UNDP 2010a.) The population in Uganda is predominantly rural and agricultural based (UNDP 2010b); only 13 % of the population lives in urban areas (CIA – The World Factbook 2010).

Katakwi district is one of the deprived areas in Uganda that receives help from the LWF and other NGOs. To get an idea of the life in the area some facts about Katakwi district are presented. HIV/AIDS remains a major constraint to development in Katakwi

district. The HIV prevalence rate stands at 6.4 %. Due to the remoteness of the villages, all the residents are not within an easy reach to health services. Population living within a five kilometre radius from health services is approximately 56 %. Life expectancy in Katakwi district is 52 years. The enrolment in schools at primary level has increased from 36,845 in 2006 to 40,156 in 2008. The past three years, the ratio of boys and girls has been 51:49. The dropout rate for girls is higher compared to boys: 26 % and 18 % respectively. (Katakwi district planning unit 2009.) Most of the dropouts are due to lack of money, family responsibilities, illness, early marriages and pregnancies (UNDP 2010b). In 2002, 43.4 % of the population were self employed, 39.8 % were unpaid family workers, 12.1 % were paid employees and 4.7 % were looking for work. 68 % of the household heads in Katakwi district are male as opposed to 32% of female household heads. In 2002, the residents of Katakwi district owned communication facilities as follows: 29 % owned a radio, 0.5 % owned a mobile phone, 0.3 % owned a television, 0.0 % owned a fixed phone and 0.5 % owned a postal address. The main source of information at household level in Katakwi district was 'word of mouth' (71.5 %) followed by the use of radio (27 %) in 2002. (Katakwi District Local Government 2007.) Table 3 presents some comparing figures between Katakwi district and Uganda.

Table 3   Comparison of 2002 census, major socio-economic indicators (Katakwi District Local Governement 2007)

Indicator	Katakwi	Uganda
Mean household size	4.6	4.7
Children below 18 years	54 %	56 %
Literacy rate (population aged 10 years and above)	55 % (female 31.3 % male 68.7 %)	68 %
Households with access to safe water	66 %	61 %
Households with no access to toilet facility	76.3 %	17 %
Households that depend on subsistence agriculture	86 %	68 %
Households access to electricity for lighting	0.4 %	8 %
Household use of firewood and charcoal for cooking	99.5 %	97 %
Households using 'word of mouth' as their main source of information	71,5 %	49 %
Households that owned a radio	29 %	48%
Households that owned a bicycle	44 %	33 %

Some of the figures of Katakwi and Uganda are close to each other such as mean household size, children below 18 years, household access to safe water and household use of firewood and charcoal for cooking. However, some figures show that living

conditions in Katakwi are much worse than the average in Uganda. Big disparities can be found in households' access to toilet facilities and households using 'word of mouth' as their main source of information. Smaller but still remarkable disparities can be found in literacy rate, dependency on subsistence agriculture, access to electricity for lighting and the ownership of radio and bicycle.

Katakwi district has a dim history of violence. The violence was caused by two reasons: conflict caused by the rebel army, the Lord's Resistance Army (LRA), and violence and theft caused by cattle rustlers, Karamojong, from the neighbouring district, Karamoja. Due to the insecurity caused by the Karamojong and the LRA, people fled to Internally Displaced Person's (IDP) camps. Life in the camps was confined and often dehumanizing. As the security situation began improving in 2006, IDPs have been in the process of returning to their areas of origin. (LWF 2009.) Despite the resettlement process, 4,209 people were still living in IDP camps in November 2009. 42 camps were closed, but still 25 camps had people living in them. (Katakwi district 2009.) However, returning to home villages is not easy after living in camps for many years – some even for over ten years. The district has gone through huge human and infrastructural destruction at the hands of the LRA. Some returnees claim that life in the home village is no better than it was in the camps. (LWF 2009.)

The government of Uganda has acknowledged the importance of ICTs as a tool for developing the country (Tuominen & Lyabandi 2009, 39). The rapid expansion of mobile phones in Uganda has sparked *an information revolution,* which is especially apparent in rural areas (Kyomuhendo 2009, 154). Uganda's communication sector is one of the fastest growing in Africa today, largely due to the dramatic expansion of mobile phones (ITU 2009a). In 2003, Uganda had approximately 776.000 mobile phone subscriptions, whereas in 2008 the number of subscriptions had already risen to 8.555.000 (ITU 2010b). In 2008, the mobile phone penetration rate in Uganda stood at 27 %. 22 African countries outweighed Uganda with penetration rates as high as 101% for Seychelles and 92 % for South Africa. Neighbouring countries lacked behind with lower penetration rates: Tanzania (25%), Rwanda (13%), Democratic Republic of Congo (14%) or Ethiopia (4%). Only western neighbour Kenya (42%) reached a higher penetration rate than Uganda. (ITU 2009b.) However, due to the fast diffusion of mobile phones the measurement of mobile phone subscribers is problematic, as the data becomes outdated as soon as it is published (Burrell 2009). The popularity of mobile phones over fixed-line phones is not a new phenomenon in Uganda. Already in July 1999, the number of mobile users surpassed that of fixed-line subscribers. Only a dozen countries with such statistics existed in the whole world at the time and in Africa, Uganda was the first one. Today, Uganda's major mobile phone providers are MTN Uganda, Orange Uganda Limited, Zain (formerly Celtel), Uganda Telecom Mobile (UTL) and Warid Telecom. (ITU 2009a.)

Mobile population coverage in most African urban areas is adequate, while the coverage in rural areas remain much lower. Huge improvement has been made to provide connectivity to villages and rural areas. (ITU 2009b.) The objective is to ensure that all Ugandans have access to basic communication services of satisfactory quality, at affordable prices and at realistic distances. The future prospects for Ugandan's communication sector are far from being dim. Analysts anticipate that, by 2014, 70 % of Ugandans are the owners of mobile phones. Appraisals state also that over the next few years Uganda will face Africa's second highest percentage rise in mobile subscriptions after Cameroon. (ITU 2009a.)

In general, mobile phones seemed to be quite ordinary gadgets among the residents of Katakwi district. The advertising of operators was extremely extensive and visible. In Katakwi town and in trading centres, most of the shops were painted in the colours of different operators: MTN in yellow, UTL in blue and Zain in pink. Even though a particular shop had nothing to do with mobile phones, it was still covered in the colours of one of the operators. MTN, UTL and Zain signs were also everywhere. In general, plenty of mobile phone users were spotted. As all the sub-counties had some sort of network, mobile phones had spread everywhere. Despite the popularity of mobile phones some people who had neither ever used nor held a mobile phone in their hands, were still found. In 2009, Katakwi district had no public power-distribution network. The residents relied on solar panel and diesel generators for charging their phones and getting electricity in general. The lack of landline phones made mobile phones very useful in Katakwi district. An interview with the commercial chief of Katakwi district revealed some facts concerning mobile phones in Katakwi. Katakwi is served by three mobile telephone networks: MTN, Zain and UTL. Landline phones were available in Katakwi district in 1998, approximately five years before mobile phones. However, mobile phones were widespread among the locals, whereas fixed-line phones remained very few. The reason behind the decline of fixed-line phones were the outstanding invoices that resulted in people being disconnected.

5.2 Use of mobile phones

The interviewees had various reasons for the purchase of a mobile phone or for receiving the phone as a gift. Now, the reasons behind the purchases are gone through briefly. Each one of them is discussed in more depth later. The most common reason was not for business purposes – instead the phone was purchased for *easier communication* with various people. Communication was difficult, as families lived far away or the husbands were often out of home. As an example, a male respondent told, that before he got his mobile phone, he used to ride his bicycle up to Katakwi town the

distance of 20 kilometres to use a payphone three times a week. If a travelling husband wanted to talk to her wife staying at home, he needed to call someone else, and then ask this person to go to his wife and give the phone to her so they could talk with each other. This was not easy and efficient. That is why mobile phones were important in making communication easier with friends and family, in work-related issues or even in spare-time activities, for example with people who could help the drama group to show drama on HIV/AIDS. One reason for the purchase of a mobile phone was also t*he need to call other people in case of problems or for help*, like in the case of Karamojong attacks. Mobile phones were also purchased in order *to help the whole community*. A priest bought the phone to serve the needs of the community besides his own personal needs. As a priest he saw the need to help the rural residents to communicate by lending his personal mobile phone for free. Nevertheless, also the *business purposes* were important for some. One respondent bought a mobile phone because he figured the phone would be beneficial. He used the phone for two years after which it became useless as he did no business. He ended up selling the phone. Mobile phones could also have been bought to enhance one's status in the community. A teacher was asked what he thought about why the locals had bought mobile phones. Among other reasons he mentioned that some people had it for luxury and prestige – to feel big. Several phones were *received as a gift* from family members, or the family members suggested the purchase of a phone. The simple reason here again was to ease the communication. These family members lived far away and they wanted to stay in touch with their relatives. These people could cut down on their own travelling as they could reach their family members via calling.

Meso et al. (2005, 122) distinguished between *business use of mobile ICTs* and *socializing use of mobile ICTs*. These two are now analysed in the context of mobile phones and Katakwi district. Thereafter, the uses of mobile phones are completed with a discussion about the *functions* and *applications* of mobile phones. Table 4 specifies the different uses of mobile phones in Katakwi district.

Table 4   The various uses of mobile phones

BUSINESS USE	SOCIALIZING USE	FUNCTIONS	APPLICATIONS
Business opportunity	Maintaining social networks	Calling	Torch
Using mobile phones as a booster for non-mobile phone-related business	In need of assistance or in case of emergency	SMS (short message service)	Radio
Using mobile phones in work-related communication	Spreading information	Beeping	Internet

The business use of mobile phones can be divided into three categories: *business opportunity, using mobile phones as a booster for non-mobile phone-related business and using mobile phones in work-related communication.* Mobile phones can *create business*: selling mobile phones and related equipment, repairing broken phones, selling airtime, operating a payphone or even putting up a charging system for the residents to charge their phones. All these services are needed at a daily basis in a rural area and thus create a considerable amount of employment. Besides the fact that mobile phones create jobs, they are also highly needed in various businesses *to ease the work or to make it more* efficient, for example, help to contact suppliers and customers. The utility of mobile phones in income-generating activities together with business opportunities is discussed in more detail in subsection 5.3.3. It needs to be taken into consideration that *employees also use mobile phones diligently in their jobs.* Sub-county chiefs, teachers, a pastor and a nurse were all interviewed about their use of mobile phones at work. Everyone considered it to be important to have a mobile phone – a teacher said, though, that he could do his work without a mobile phone. A pastor pointed out that life without a mobile phone would be hard as the communication becomes more difficult. Mobile phones are used in contacting colleagues, bosses and other community members; teachers called each other when they fell sick or called the parents to discuss about the children, sub-county leaders organized meetings, nurses asked help from their superiors and a pastor helped the community through borrowing his phone free of charge, to mention but a few. Lack of a mobile phone would have made their work more inefficient.

The use of mobile phones can also have socializing purposes: *maintaining social networks, spreading information – both receiving and giving and using phones in need of assistance or in emergency situations. Mobile phones were actively used for maintaining social networks.* One of the active members of the community emphasised the importance of people owning a mobile phone as it enables networking.

"I hope, in the end, it goes to so many hands that networking becomes very very easy."

People called their husbands and wives, children, parents, other relatives, friends, NGOs or other community members. Mobile phones enabled contact with people who otherwise would have been out of touch and with people who otherwise would have forgotten about you. Some people stayed in contact with their family or friends who lived abroad. This, however, was not very common among the respondents. Mobile phones were even used for greetings and chatting with friends. Even some of the poorest of the poor used mobile phones for greetings. Someone mentioned sending Christian verses to his friends by text messages. Someone beeped his friends to remind them that he is still around.

Mobile phones enabled the spreading of information. Sharing information about trainings, education and religious meetings was possible via mobile phones. In addition, people communicated about the good and bad things that went on in their lives, for example about burials or how things were at home, like the weather conditions for cultivation or about the health situation. People also informed relatives about on the progress of their journeys. Someone even called the local radio to greet people. However, everyone did not use the phone for chatting: one lady, who could be categorized as the poorest of the poor, said she used the phone only when she needed to communicate something important, which was asking for assistance.

Indeed, mobile phones were actively used to ask for assistance. When someone was in need of assistance, for example if there was no food to feed the children due to weak harvest, people called their friends and relatives and asked to send in money or food. In case of emergencies, like sickness or raids, mobile phones could assist in saving lives. Besides using mobile phones to ask other people for assistance, mobile phones were also used to take care of the family living further apart. They called to relatives to ask about their health statuses and about any problems they were facing.

Mobile phones could be used in three ways: calling, SMSing and beeping. All the three methods were used in Katakwi district. SMS can also be used to send airtime and Mobile Money, which is discussed in subsection 3.2.3. Beeping refers to leaving intentional missed calls. Beeping is used when the caller does not have enough credit on the sim card. The missed call is a sign for the receiver to call back. Besides being a communication tool, mobile phones also offer *other kinds of applications*, namely *internet, radio or torch*. It was possible to use the internet on mobile phones in Katakwi district. However, it was expensive and the connection was slow. Mobile phones also needed to be of a high quality to be able to open large files online. Only three men with regular income mentioned to have used the internet on their mobile phones. Some models had a radio. Using it wore the battery out fast and recharging was again expensive. Instead, a special feature that fitted perfectly into a rural area was torch.

When no power was available, a torch came in handy during night-time. Mobile phones with torches were extremely popular in Katakwi district.

5.3   Mobile phone as an empowering tool

The World Bank (Petesch et al. 2005, 53) defines six empowerment outcomes which are now discussed, as they apply to empowerment realized by mobile phones. In these six sectors – *health, skills, income, freedom, self-confidence and security* –, as the World Bank's definition of empowerment states, individuals were able to increase their capacity to make choices and transform those choices into desired actions and outcomes. The interviewees were also asked what *the most important information* is they can access through mobile phones. The answers related directly to five of the six empowerment outcomes – only one, the freedom aspect, was not mentioned directly.

5.3.1   Health

Health-related problems were a daily struggle among the rural residents. Most people interviewed reported to have used mobile phones in case of sickness. Some of them expressed that getting information about family members' sicknesses was the *most important information* one can reach through a mobile phone. With mobile phones people were able to contact their relatives to ask money for treatments or just to inform them about the situation like a 59-year-old widow explained:

> *"…if I am sick, if I don't have money, I ring to them, they bring the assistance. So there is no difficulty again on my side."*

Mobile phones could even save lives, as another 53-year-old widow expressed:

> *"If she would not have a phone, she could even easily die, because she could not call for help in case she falls sick." (interpreted)*

As people were living in remote areas, the distance to the closest health clinic could be unbearable even though there was one in each sub-county. The only possible means of transportation might have been a bicycle or a bodaboda (a motorbike used as a taxi). Neither of them was a real option when the person in question was seriously ill. This was when mobile phones were extremely helpful in calling an ambulance or even calling the doctor for a home visit. Contacting healthcare personnel through mobile phones made health care accessible for the people living in remote villages. Due to mobility of mobile phones, they also proved to be essential in road accidents, like bodaboda accidents, as the injured could call assistance. Mobile phones also reduced the need to change place and this was really helpful for the physically challenged people.

Additionally, the nurses used mobile phones in their work when communicating with the person in charge of the health clinic, district director of health or the ill. The interviewed nurse did not, however, use the mobile phone to inform locals about HIV-related issues. Nevertheless, information about HIV transmission was spread to people who were not yet infected through drama group shows. A useful tool for the organization of the drama group activities was indeed a mobile phone. One of the sub-county leaders pointed out that he can also use a mobile phone in case there is a disease outbreak somewhere – he would call the local authorities to intervene.

5.3.2 Skills

According to this study, mobile phones did not directly contribute to skills enhancement like could be the case with some other ICT tools. Instead, mobile phones appeared to be a valuable *instrument in enabling access to skills enhancement*. Several NGOs were present in Katakwi district. NGOs organized trainings and meetings for the rural residents and informed them through mobile phones. Several respondents wanted to be attainable for NGOs and not to miss out on any training opportunities. This was considered as *the most important information* attainable through mobile phones by some of the interviewees. Also, important information about education was shared through mobile phones. For example, a wealthier person stayed in contact via mobile phones (and also via internet) with a university in Liverpool about distance learning. The university called him to inform about courses and when to begin. A 23-year-old man stayed in contact with his friends who had gone further in studies, concerning education and how he could go back to school. Additionally, accessing news was possible through text messages. A teacher reported requesting for news twice a week, and the price was convenient: 200 shillings per request. He also considered this to be the most important information a mobile phone could offer him.

5.3.3 Income

Mobile phones were used for business purposes; most actively it happened among the people aged ≤25 and 25–36. Some of the interviewees perceived business-related information as *the most important information* one can get when using mobile phones. In general, mobile phones seemed to have a twofold role in income-generating activities. *First, mobile phones created business directly*: selling mobile phones, airtime or related equipment, putting up a battery charging system, repairing broken phones and charging others for the use of one's personal mobile phone. Solely airtime vendors were

numerous. However, starting an airtime selling business may not be realistic to everyone, as it demanded initial capital, worth of 150,000 UGX according to one of the sellers. In this study only two airtime vendors were interviewed. Other airtime vendors were interviewed as well but they also sold other phone-related items like phone covers and mobile phones. Thus, this study did not reach as far as investigating whether mere airtime selling business is enough to earn one's living in a rural area. Selling airtime seemed to be only a side-business for one of the persons interviewed. She also operated a restaurant and a small lodge. Another airtime seller, a 19-year-old boy, had been employed by someone else to sell airtime only two weeks back. This boy actually wanted to quit and go back to school. It is important to recognise that more customers are reached at trading centres whereas women often have to stay at home to take care of the children. This limits the scale of women's businesses, as more customers would be reached somewhere else. One the female respondents who sold airtime was lucky as she operated a restaurant at the same time in the trading centre and was thus not tied to home but instead could operate where the customers were. However, all the women did not have to stay at home and some women also lived in more populated areas instead of remote villages. Battery charging business seemed to be an additional business among the people interviewed. Instead, selling mobile phones seemed to be a profitable business according to one of the sellers, who bought the phones in the capital city and resold them in Katakwi town with a good profit.

Second, mobile phones were an essential part of business and enabled more efficient working methods and gaining of more profits. Mobile phones can simplify work: make communication to customers and suppliers easier, save time and travelling costs. Sometimes the phone is even bought for business purposes. Mobile phones were useful in many sorts of businesses. Owning a mobile phone enabled private communication and nobody else, except the owner of the phone, could benefit from the information. Sometimes a businessperson could even lose customers if he or she did not have a mobile phone. As an example, when operating a restaurant, customers could call and make reservations for a large number of people during workshops. One of the restaurant owners said that mobile phones have changed her business. Previously, when the customers could not call her, they sent someone to inform about an order of preparing food for several people. Instead of bringing this information, that person took it to someone else. Thus, the owner missed out on many customers and income. Another example of a more prosperous business was a shop assistant, who was called to the shop when customers arrived. Here again, missing out on customers and income would have been possible without a phone. Also bodaboda drivers benefited from owning a mobile phone. Drivers with a phone received calls from customers and got more clients than the ones without a phone. Farmers, on the other hand, could call someone to inquire the price in the market or to inquire whether the price was higher at the other end of the

market. A person who fixed boreholes got phone calls when he was needed. A barber called to the radio station to advertise his business. One of the sub-county leaders mentioned that they were listing all the people with mobile phones and their skills. Thus, if a certain person was needed at the sub-county level, he or she could be contacted.

Several respondents had *plans on starting a new business and using mobile phones for it,* for example when searching for customers. One of the respondents named buying a mobile phone to be a priority for him. When using a mobile phone in his bodaboda business he could make more money. This money would be reused on educating the children. Thus, the phone was seen as a means to earn more money to provide for the family. Also the poorest of the poor had ideas about acquiring a mobile phone and using it for business purposes.

Despite the several benefits mobile phones offered for income-generating activities, they were not always essential. As mentioned, businesspersons contacted their suppliers and ordered products, which was easy through a phone call. Everyone did not prefer doing it this way, though. One of the persons interviewed preferred travelling personally to meet the suppliers to make sure the quality of the products was good enough. When ordering products through a phone call, he could have been cheated. Sometimes mobile phones were not essential in communicating with suppliers, especially if the contacts were already there. One of the saleswomen said that she got her products even though she could not call due to low battery. The suppliers knew already what she wanted and delivered the produce for her anyway. One of the interviewees, who operated her business at a certain place, said that running the business did not pose a problem before either as the clients just arrived at her shop. After the purchase of a mobile phone, however, she could improve her business by communicating with the customers.

As mentioned before, *women did use mobile phones both as a booster for various businesses and as a business opportunity.* Even though women were the ones staying at home and taking care of children, mobile phones did offer women a possibility for business. One of the ladies interviewed prepared and sold cassava chips to earn money. Previously, she used her mobile phone to call the supplier to bring her cassava so that she could prepare the chips. The customers came to her home as the location was good. Now her phone was broken. There was no way she could get cassava for her business as she had to stay at home to take care of the children. If the children had not been at home, she would have ridden her bicycle up to where she could buy cassava. The mobile phone would have made it possible for her to operate a business and take care of the children at the same time and stay at home. Mobile phones were also helpful to peasants staying at home. If they got good harvest, they could sell some of the produce. Mobile phones were used to inquire the price on the market. In addition, information about the products on sale could be spread to potential customers. Mobile phones made

the work of a barber, a shop assistant and a restaurant owner more efficient – even more profitable to some.

In Katakwi district, there were still plenty of people that had not heard about *Mobile Money* or were not using it. Others were using the service and finding it good. People were sending money to their children studying far away, to parents living in Katakwi, to friends, or some were sending money to wives through friends with mobile phones. Mobile Money was especially useful in business. One businessman told he used Mobile Money to pay for his suppliers. This method was much safer than carrying big amounts of money. One female respondent also brought up the issue of stealing money. If one sends money through someone to reach another person, the intermediate may take some money and claim that this was all he or she got. Mobile Money could eliminate this problem. One businesswoman claimed that she could not totally move into using Mobile Money as her customers pay her in checks. However, Mobile Money service is not completely trouble-free in a rural area. First of all, Mobile Money needs to be converted into cash at an authorised MTN Mobile Money agent where one might have to travel a long distance. Second, to be able to register or withdraw money one needs to possess an identity card. This might not be the case with everyone. However, as a voter's card is a valid identity card for MTN, as big number as nine out of ten residents in Katakwi district could access Mobile Money (Onyait, email 23rd of February, 2010).

Both the poorest of the poor and the wealthier residents used mobile phones for business purposes. Even though some of the poorest people were already using phones for business purposes, they were still classified as the poorest of the poor. This proves that to be able to really benefit financially from the use of mobile phones in business, the phone has to be used efficiently. Thus, the nature and scale of business dictates the usefulness of the phone together with how the phone is used in the business in question.

5.3.4   *Freedom*

Mobile phones were seen as an important means of communication. They offered possibilities to contact various people – people who otherwise might have been out of reach. One of the interviewees said that with a mobile phone, he even could have contacted a minister. Even though the idea was unrealistic, this reflected the attitude of the locals: they saw the possibilities and freedom mobile phones offered. They had a chance *to 'move' outside their normal living environment*. Even though they could not move physically, they could get information from the outside world. This could be seen as something especially important for women who mostly stayed at home. As the senior programme officer, Janet Achora, from WOUGNET (Women of Uganda Network) envisioned, the exposure to the outside world is extremely important to women as new

opportunities open up for them. *Women no longer lived in a vacuum.* Women could communicate with their faraway relatives and friends. One of the ladies interviewed said:

> *"Mobile phones have changed something in my life. They have changed, because I can also communicate to many people."*

In addition, using mobile phones for income-generating activities, like selling airtime, *gave women a possibility to earn money.* This might be important to women. Mobile phones also offered *privacy* to communicate secrets whether personal or business. One of the women interviewed said that she did not like the fact that the communication with her husband was not a secret, as the husband, while working far away from home, had to use a payphone to call her.

The combination of women, mobile phones and freedom is, however, not that simple. At the same time when mobile phones offered women freedom via creating new opportunities for them, this freedom could also be taken away from them easily due to gender inequalities. A lady gave an example of a woman who wanted to keep secrets in her mobile phone. Her husband came and read the messages. This made the woman feel distrusted by her husband in her own home. She did not have the possibility to use her own mobile phone privately, as the husband was supervising what went through the phone. In addition, the husbands limited or restricted their wives' use of mobile phones. The challenges and restrictions women face will be discussed more in detail in subsections 5.4.1 and 5.4.2.

5.3.5 Self-confidence

Mobile phones enhanced the psychological capabilities of respondents. The majority of the interviewees had positive thoughts about mobile phones. Most of those who did not yet own a mobile phone could imagine phones improving their lives. Mobile phones brought hope. The ability to aspire for a better future was connected to mobile phones. In general, people felt good to own mobile phones. Some of the interviewees felt that owning a mobile phone brought *respect*, other people might consider the owner as 'powerful someone', and the owners were considered to be above those who did not own a mobile phone. One of the respondents even mentioned this to be one of the most important effects mobile phones had. One male respondent considered it to be of utmost importance for him to own a mobile phone, as he was the oldest person in his family. Another claimed that people with mobile phones are considered richer. A teacher said that certain families considered mobile phones as prestige or something luxurious. One of the sub-county leaders had a similar reason for buying the phone when he was in university studying. He said that phones were just coming and it was like fashion – you

had to own one. It has to be noted, though, that this was not in Katakwi district. One of the wealthier and more active members of the community praised the phone when asked about his feelings to own a mobile phone:

> *"It makes me complete, that there is nothing missing about me."*

The same respondent continued:

> *"If I see my friend has a Nokia without a camera, I will be ok. Tomorrow, if I see her with one with a camera, I also want it. I feel this is now really outdated and now I want the state of art with recorders, so that you are still in the class."*

This kind of thinking did not come up in other interviews. Other respondents did not value phones with the newest features as highly.

Additionally, the owners felt *they were important as they could be of great help to others who wanted to borrow their phones*. The phone owners could help the whole village. Instead of focusing on personal gains from mobile phones, a couple of respondents perceived helping others to communicate through them and delivering messages to be *the most important information* that went through their mobile phones. One female owner felt that the soldiers communicating through her phone to their wives, was the most important information she received. Helping others also increased the social capabilities among residents.

If the husband had a positive attitude towards women owning a mobile phone, the wife's self-confidence could get a boost from owning a mobile phone. A lady who had got her personal mobile phone as a gift from her husband stated:

> *"I feel loved, because if the husband buys you a phone, it means, he really loves you. " (interpreted)*

One lady said that, since she had a phone, her husband was able to appreciate her, as most of the women did not own mobile phones. A woman in a relationship might have felt to be someone important when she owned a phone. In case there was only one phone in the family, the wife could still be proud to have a communication gadget at home. Someone mentioned that having a mobile phone at home gave a good image – development – of the family. The family members were brought closer and the phone made everyone happy.

Everyone did not agree on the connection between status and owning a mobile phone so strongly. A businessman agreed on people considering mobile phones as prestige. However, he said that the appreciation a phone owner receives is not directly linked with owning a phone – it is more a question of how the individual uses the phone. One of the sub-county leaders, who bought the phone at the time it was fashion in university, clarified his point of view by saying that when mobile phones spread they were more of a prestige but not anymore so – except maybe among younger girls and boys. Instead, now when someone's phone rang, other people could be found staring at the owner of

the phone, and therefore people preferred putting the phone in silence. In that case showing off the phone to others was not considered important. It has to be noted that this was an opinion of a sub-county leader who can be classified to belong to the wealthier part of the society in Katakwi district. As a sub-county leader he and the people around him were probably more accustomed to mobile phones than the poorer people who did not have personal mobile phones. Equally, the businessman, who appreciated more the way the phone is used than mere owning, could not be classified as the poorest of the poor. However, those who considered mobile phones as prestige were people with very different living conditions – both poorer and richer, both women and men, both peasants, employed and businesspersons.

5.3.6   Security

At the time of the field study life in parts of Katakwi district was still unsecure due to the raids by the Karamojong people. Some people were still living in Internally Displaced Person's (IDP) camps even though the resettlement had started. Despite the poor living conditions in the camps, mobile phones were existent. To get a better understanding of the role of mobile phones in the camps, two persons in charge of the camp phones were interviewed from two different IDP camps in two sub-counties. Additionally, more information about security issues was acquired through any other interview when a person was affected by the Karamojong attacks.

In the first camp, the phone was given free of charge by the government in 2006. The residents of the camp came together for collecting money for the airtime and charging of the phone. The phone was used in this way for 18 months. However, due to poverty, people found it hard to collect the money. They gave up. The sim card ran old after not being used, and finally the phone got lost. During those 18 months the phone was used for two purposes. First, in case the Karamojong attacked, soldiers from other camps were called in for backup because the soldiers in one camp were only few. Second, when people fell sick, they used the phone to call an ambulance. Ever since the phone was lost their method of alerting people during attacks was blowing into a whistle. The person in charge of the phone preferred the time when they had the mobile phone.

In the second IDP camp the purchase of the mobile phone was initiated within the camp. Once again cattle had been stolen. However, the soldiers got the cattle back and came up with an idea of selling one or two of the cows to be able to buy a mobile phone. This way they could contact the district whenever there was a raid. The phone was bought in 2003. In this IDP camp, people were pleased to have a mobile phone available to everyone. The phone was also used for personal calls, and the person in question was charged for the use. This income was reused for buying airtime and

charging the phone. Hence, using the phone during the raids and in case of sickness was free of charge. This method seemed to be working well, since the phone was still in use six years later. Once the phone got a technical problem, but the camp residents collected money to fix it. Another example of the residents' enthusiasm was collecting money for a solar plate to be able to charge the phone within the camp. This solar plate broke down, though, three years ago. Thereafter, the phone had been charged at the trading centre. The person in charge of the phone confessed that life in the camp would be harder without a mobile phone. When he compared the time with the phone to that without a phone, he felt there is a small change:

> *"…like those days, when they did not have a phone, if they come and attack you, you can't alarm the army men or the police you just hear the gun shots but there is nothing you can do. You cannot alert the other people. So the phone has helped them in case of such situations, they communicate to the police." (interpreted)*

At the time of attacks, they were able to call the army and the police, or the soldiers could call the camp to alert them and tell them to take the cattle to a safe place when the Karamojongs were approaching. The person in charge of the phone always carried the phone with him. He made sure the phone was always charged and had airtime on it.

In addition, households living in the villages and in the IDP camps raised the issue of raids and insecurity. They also used the phones to call army forces. The phones were considered helpful – one even felt that the most important information they could receive through mobile phones were the messages concerning Karamojong attacks. Without a phone, running was the method to escape, at the same time alerting other people. Mobile phones were considered important also at the sub-county level. At one sub-county office, they were combining a list of all the people with mobile phones. Thus, in case of emergencies at least one person from that particular area could be contacted.

Mobile phones provided other kind of security than just protection from violent attacks. Deprivation was severe and *mobile phones could be the one thing offering some sort of guarantee of help and secure life*. Some people moved with mobile phones in case there would be a need for an emergency call. When people faced problems, friends and relatives were contacted for assistance. Food or money could be provided thanks to one phone call. Mobile phones provided security by enabling the contact to a network of people – also to the ones living far away. Some of the interviewees considered the possibility to have contact to various people in various situations as *the most important benefit* mobile phones provided. One of the respondents said that when she did not have a phone, she could not stay in contact with her children studying far away. With the phone she could send them money via Mobile Money, ascertain about their health conditions and buy them school books. She told about her son, who now lives with

another family. Thanks to her mobile phone, she could now stay in contact with the child and pull him back if the living conditions in that family were not good enough. Also, the possibility to contact the LWF for assistance in case of dying animals was considered extremely important by one of the respondents in an LWF farming group. One phone in a family can secure the life of the whole family. According to one sub-county leader, it is important for each village to have a mobile phone as without one it would be difficult to overcome problems. Additionally, another sub-county leader emphasized the importance of staying in contact with the residents through mobile phones in case of raids or even flooding to make sure that all the people were safe and nobody died.

Table 5 combines all the essential issues concerning empowerment through health, skills, income, security, freedom and self-confidence. In the utility column, the positive impact of using a mobile phone is listed. In the remarks column, some important issues are discussed. The owning/borrowing column defines whether borrowing a mobile phone is enough for the empowerment to happen or whether owning a personal phone is more beneficial.

Table 5   Utility of using mobile phones at each of the six empowerment outcomes

OUTCOMES	UTILITY	REMARKS
HEALTH	-Asking for help in case of sickness (calling an ambulance, or a doctor, calling someone to ask for money for the treatment). -Reduce the movement for a physically challenged person.	-Mobile phones could be used, for example spreading information about HIV-related issues.
SKILLS	-Mobile phones offer access to information about skill enhancement opportunities.	
INCOME	-Business opportunities. -Using mobile phones for work-related communication. -Communication to customers, suppliers, whole sellers or other community members who are important for the business. -Save time and travelling costs. -Enables privacy in business. -Brings in more customers and profits. -More efficient working methods. -Mobile money is safer in money transfers.	-Despite the many empowering aspects, mobile might not always be necessary for the business. Someone prefers to travel to meet up with the suppliers. The contacts might be established already. Sometimes customers can easily visit the business premises. -Mobile money has to be converted into cash at MTN office.
FREEDOM	-Contacting the outside world. -Possibilities for women to earn personal income. -Privacy.	
SELF-CONFIDENCE	-Hope of a better life. -Status. -Respect. -Feel powerful through helping other members of the community. -Women feel loved and are proud.	
SECURITY	-Call for assistance in case of emergencies. -Call for help when faced with serious deprivation.	

5.4 Obstacles of empowerment

The challenges people face when using mobile phones are discussed in terms of *connectivity, affordability and capability* (Yonah & Salim 2007). From these constraints, connectivity and affordability proved to be more recurrent.

5.4.1   Connectivity

Connectivity refers to the availability of the services. Three operators, namely MTN, UTL and Zain operated in Katakwi district. Network reached all the eight sub-counties. However, *the network was not stable everywhere.* At times the network was off. This made communication more difficult. The poor network seemed to be bothering most people, affecting both women and men. This research did not go as far as investigating whether men who move around more have access to better networks than women who stay at home more. The fact is, though, that also women did have an access to networks, whether it was stable or not.

   Airtime was sold at each sub-county by several vendors. However, it was challenging for some people to buy it. People living in the farthest villages of Katakwi district had to travel long distances to be able to buy airtime. Besides, the travelling expenses were an additional cost.

   In Katakwi district *mobile phones were sold in Katakwi town and at the markets.* Even though the access to shops or markets selling mobile phones was there for all, there was something else that prevented some women to own mobile phones. Indeed, *some husbands denied their wives either owning or borrowing mobile phones.* One of the reasons seemed to be the fear of the women cheating by using mobile phones. Nevertheless, nobody confessed this to be the reason in their family instead they suspected that it happened in other families. The reason why the wives of the respondents did not have mobile phones was always the lack of money – not the fear of the wife cheating. The next comment by a male respondent reflects clearly the inequality between genders:

> *"…men have authority over everything at home, so they can pick whatever they want, they sell and buy a phone. They can get whatever they want at home. Women are limited, they do not have authority."* (interpreted)

A male respondent figured it was mainly men who needed mobile phones. One interviewee said that his wife does not borrow his mobile phone because she does not know how to use it. When further probed about the importance for his wife to use the phone, he thought that it was important as he might fall sick, in which case the wife could call help for him. This example shows the indifference of men: the idea of the wife needing the phone for her personal purposes did not occur to the husband. *If a woman had somehow gained a possession of a mobile phone, the husband might still have grabbed the phone away from her or put restrictions on the use.* One male respondent said that men did not tolerate women asking for airtime all the time. One male respondent brought up the issue of men buying mobile phones for their girlfriends, as they wanted to stay in contact with them. However, it is essential to recognise that

several men also had a positive attitude towards their wives owning a mobile phone. One of them wanted his wife to own a mobile phone to ease the communication between them. Nevertheless, it can be concluded that there was an imbalance in the availability of mobile phones between women and men.

Even though the services were available to users in the beginning, some challenges might have appeared later on to hinder or prevent the use of mobile phones completely: *technical problems and insecurity*. Technical problems appeared after using mobile phones for some time. Weak batteries seemed to be one of the biggest problems in a rural area, where charging a phone is an additional cost. At times, technical problems were due to accidents, for example phones falling into water. Besides technical problems, stealing phones was another way to lose a phone. Interviewees said that stealing did happen in Katakwi district. Some people said that in that particular area stealing did not happen. Also the money acquired through mobile phone business was not safe. One of the persons selling mobile phones said that taking home the day's income exposed him to robbery as people assumed he had a considerable amount of money with him.

5.4.2 Affordability

Affordability is about affording the access. Buying and using mobile phones demands a considerable amount of money that all cannot afford. The price range for a *new mobile phone* was around UGX65,000–28,0000 (circa €24–102) [4]depending on the model of the phone. A used phone was cheaper. New *batteries* for the phones were priced between UGX7,000–18,000 (circa €2.5–6.5). The cheapest batteries were duplicates, meaning the battery would last only for two to three days. *Prepaid airtime* was sold at UGX500, UGX1,000 and UGX2,000 (circa €0.20, €0.40 and €0.70) in Katakwi district. These were small amounts compared to the capital city Kampala where you could buy airtime for example at UGX10,000(circa €3.60). Besides buying airtime, money was also needed for *charging* the mobile phone. Since there was no electricity network available in the whole district, people relied on solar panels and generators, which were

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[4] Exchange rate in November 2009: €1 equals UGX2,760. To get an idea of the price level in Katakwi district a few monthly salaries and prices of livestock are presented. Monthly salaries: work in people's gardens UGX45,000 (circa €16), nurse paid by the government UGX350,000 (circa €127), sub-county leader UGX400,000 (circa €145), teachers in primary schools UGX200,000 (circa €72), teachers with diplomas in secondary school UGX305 000 (circa €111) and teachers with degrees UGX370,000 (circa €134. Market prices for livestock vary depending on the age and size of the animals. A few examples: chicken UGX3,500–5,000 (circa €1.30–1.80), goat (female) UGX20,000–45,000 (circa €7.2–16), goat (male) UGX30,000–70,000 (circa €11–25), heifers UGX300,000–500,000 (circa €109–181) and bulls for ploughing UGX350,000–800,000 (circa €127–290). (Epel, email 6th of May, 2010.)

expensive. Thus, most people had to go to trading centres to charge the phones at special 'charging stalls', where one had to pay UGX400 or normally UGX500 (circa €0.10–0.20) for each charging. Besides, mobile phones might get technical problems and needed to be repaired. One respondent claimed that he was charged as much as UGX50,000 (circa €18) for the repair, an amount which he could not afford.

Respondents used different amounts on charging and airtime depending on their economical status. Some claimed that a big part of their income and – actually too much – went to mobile phones. Someone mentioned that money goes to waste if one gets no profit from using the phone. One of the male respondents sold his mobile phone because he could not afford it with his seasonal brick making business. Instead, he used the money on food and schooling the orphans. Others, especially those using mobile phones for business or at their work, said that all the money spent on mobile phones was worth it as phones were beneficial in a number of issues:

> *"It is expensive to use, but you love to bear with it like that because it serves a lot."*

If one did business, the business income could partly be directed to mobile phone expenses. A sub-county leader claimed to use over UGX50,000 (circa €18) per month for airtime. He did not consider it to be too much as he could settle a great amount of issues with that money – the money spent was worth it. In general, especially transportation costs were saved. Respondents had different priorities concerning using money either on mobile phones or on basic needs. Locals with no fixed income bought airtime and charged the phone by selling goats, chicken, eggs or local brew. One lady saved money through selling eggs for three months until she was able to buy herself a mobile phone. Others used some of their savings for mobile phones. Some people stopped buying sugar, salt, soap or alcohol and instead used the money on mobile phones. One interviewee confessed that the money used on mobile phones – particularly buying new models – is away from helping the dependents who were orphans and HIV positive. One respondent listed food, education and clothing for the children to be the priorities before using the money on phones – as he could not communicate all the time. People with limited means used mobile phones mostly for emergency situations. That was why the phone needed to have airtime all the time. It is essential to recognise that if the prepaid sim card was not used for a certain period of time, it got blocked.

Throughout the field study, it became clear that even though men struggle with money, there was evidence that women were even more financially disadvantaged. It was the men who possessed the money in the families. The little money women got went to the family upkeep. When asked about the equality of the access, one of the male interviewees answered:

> *"They (women) do not have equal access because women do not have enough effort of gaining money. Women have so many children. They do not earn money."(interpreted)*

According to one of the male respondents, only few of the women who were depending on their husbands had phones, and instead, those women who were able to generate income had more access to phones. Businesswomen were able to afford a phone, but the husband also had to approve the wife owning one. Nevertheless, a few men also bought phones and airtime for their wives.

5.4.3 Capability

Capability means the required skills the users need to possess to be able to support and utilize profitably the access. The skills in question cover technical skills, literacy and language. This study, however, found out that surprisingly many respondents were incapable of benefitting fully from all the functions that mobile phones offered. Most people claimed that it was easy to use a mobile phone, but several respondents, both women and men, were *not able to type out text messages*. Most of these people were literate and had been attending school from four to ten years. One of the male respondents with only limited reading and writing skills said that he failed to type out a text message due to the lack of technical skills not due to his weak writing skills. These people were, however, willing to learn. Also, some people mentioned *not knowing how to operate mobile phones at all*. These people were the ones not owning personal mobile phones but who were borrowing from other people.

In the airtime selling business one has to handle money with care to be able to gain profits from the business. One airtime vendor had problems in her business. The money gained from selling airtime did not balance; instead, she had continuous losses. She could not specify what caused the losses, but she suspected that it might be the girls who she let sell the airtime as well.

The capability of older people to use mobile phones was also brought up during some discussions with the residents. One of the respondents was interested in acquiring a fixed-line phone and creating business through using the phone as a payphone. Many other respondents were willing to start the payphone business with a mobile phone, while this particular lady claimed fixed-line would be better as even older people could be able to handle fixed phones.

It is important to acknowledge the *fears* people connected to mobile phones. This did not necessarily hinder the use of mobile phones, but the fears were at the back of people's heads. There were rumours that scratching the airtime with a finger brought cancer. Instead the airtime should have been scratched with a coin. There were also

talks that mobile phones in general brought cancer or at least reduced the life span and made men impotent if the phone was put on vibration and placed in a pocket. Two of the interviewees talked about tracking people through mobile phones. The first one was just afraid of it. The second one – who was active in politics – claimed that he was already being tracked. He claimed that as he criticized often, the government had already tracked his phone calls and movements.

5.4.4   Sidestepping obstacles

Several constraints, mainly connectivity and affordability but also capability, limited the access or use of mobile phones as discussed earlier. The rural residents had their ways of overcoming the constraints in reference to connectivity, affordability and capability. These methods were *sharing, borrowing, beeping, having multiple sim cards, calling at night-time, searching for a better connection and asking help for operating mobile phones.*

As all the people did not have personal mobile phones, *sharing and borrowing* was common. Some couples *shared* mobile phones. In two families the mobile phone normally stayed at home with the wife when the husband was out of home. In the other family the wife wanted to get her own phone, as communication with the husband proved to be difficult when he was away. There was only one occasion whereby the wife actually used the shared phone more than her husband. This phone was, however, the old phone of the wife's brother. Defining sharing or borrowing mobile phones between couples is not unambiguous. In some cases, the husband let the wife use his phone once a week – in other cases only once a month. Nevertheless, there were two clear occasions whereby the wife also could use the phone for a significant portion of time.

More people had an access to mobile phones through *borrowing*. Phones were borrowed in case of emergencies or just to run errands. Sometimes borrowing was free of charge, sometimes people put in their own airtime or refunded the money used. At times, the owner charged some extra to make profit. One of the respondents mentioned that he would no longer borrow phones as the owner charged too much for it; it was simply too expensive. Sometimes the access to other people's phones was not self-evident, like in the case of one of the women interviewed. She was married and used to own a phone. Her husband did not allow her to borrow his phone. She explained:

> *"My husband does not want me to use his airtime. He thinks I would waste it."(interpreted)*

All the people could not afford continuous communication. Instead of calling or sending messages people *'beeped'*: called and hung up before someone answered. This

was a sign for the person to call back. When a phone had beeping power, the person could beep but not call. Beeping was rather popular among the rural residents – both poorer and richer members of the community. The respondents beeped when they had no money, or as someone put it: "since I am poor". One of the respondents, who can be considered as the poorest of the poor said, he only used his phone for beeping – he never called. One wealthier respondent considered beeping to be for a certain class of people, referring to the people who did not have any use for the phone; they just had it because other people had it as well. A majority of those who claimed never to beep or only to beep rarely were in fact people with permanent jobs. It has to be noticed, though, that people did not call back every time after being 'beeped' or it took a long time for them to call back and maybe the person needed to talk immediately. Besides, some were even annoyed by beeping.

Both men and women used *several sim cards*. It was more expensive to call from one operator to another – switching sim cards proved to be cheaper. A prepaid sim card was worth UGX 3,000 (circa €1.10). In the long run, the purchase was profitable. Switching sim cards was also common when the network was unstable: certain operators had better connection at certain places. A few respondents confirmed they called at night time when it was cheaper to communicate than during the day. Another option was to *search for better connection*. For example, in Ongongoja there was a certain spot with better network, where the interviewee waited for a phone call or went there to make a phone call himself. If someone was not capable of operating a mobile phone, *other people stepped in to help*.

5.5   Mobile phones as a disempowering tool

Despite the several positive effects mobile phones had on the rural residents' lives, as discussed earlier, they unfortunately also had some negative impacts. Disempowering happened in various fields: *health, security, freedom* and *self-confidence. Especially women felt the negative impacts, but also the whole family was put under tension* (disempowerment in health, security, freedom and self-confidence)*; at times the opportunity cost was extremely high* (disempowerment in health and security)*; also criminals were able to use mobile phones* (disempowerment in security); and *mobile phones could be also seen to bring tension between locals* (disempowerment in self-confidence)*.

Gender inequality has been discussed throughout this research. Mobile phones gave women several possibilities, but besides, women also confronted several impediments that enforced the disempowerment caused by mobile phones. Mobile phones gave men a new way to impose their authority over women. Men restricted women's use of

mobile phones and read their personal messages. Also using money on airtime could bring about quarrelling:

> *"When a man has a phone and the lady does not, and he has to buy airtime so he has to force the lady to give him the money and it can bring quarrels, misunderstandings..."* (interpreted)

Some husbands were unwilling to buy mobile phones for their wives due to the fear that the wife would have an access to boyfriends through a mobile phone. If the husband caught his wife on the phone with another man – whether a boyfriend or just someone dialling wrong number – quarrelling was evident; in the worst case the phone call led to domestic violence. One male respondent gave an example of a woman who was cheating her husband. Others called the husband, who was in the capital city. He came back and almost beat his wife to death. He did not see that this would have happened without a phone, as the husband was so far in Kampala and travelling there to inform him would have required money. This is an example of how men can supervise women better through mobile phones – whether the wife is cheating or not. Through all these actions, men limit or take away women's freedom, health, security and also self-confidence.

Besides only considering disempowerment from women's perspective, mobile phones also affected the *cohesion in families* by enabling a new type of communication with different people and within families. One lady, who shared the phone with her husband, told she once answered the phone and the caller was a woman who claimed that the lady's husband was also hers; this caused a quarrel between the couple. A critical non-owner of a phone, who did not even want to have one, saw mobile phones even breaking families as they can be used for *lying*: the husband can say that he is going somewhere and instead he is going to his girlfriend. He felt mobile phones encouraged people to lie. This person confessed not to know anything about phones, but he did borrow other people's phones. These tensions within families can diminish the feeling of security.

Sometimes the *opportunity cost* was high, when the money was used on mobile phones. As mentioned before, one wealthier respondent confessed unhappily that the money he used on mobile phones – especially on new models – could not be used for the treatment of HIV positive or the schooling of the dependents. Thus, when the respondent used more money on mobile phones, the dependents suffered more. Sometimes respondents said they save less money now due to mobile phones. This means that, in case they are not making any profits through mobile phones, they are more vulnerable when a crisis arises. Mobile phones might have consumed the money meant for emergencies like treating sick children. In this sense, mobile phones caused disempowerment in the fields of security and health. However, mobile phones can again

be used to ask help from other people, but this results in people not being self-contained.

Mobile phones could also be used to cause *insecurity*. In subsection 5.3.6 mobile phones were considered helpful to protect people from the raids. However, one male respondent from one of the IDP camps brought out negative information concerning mobile phones. According to him, once when the Karamojongs attacked, they communicated first with someone in the camp. They had collaborators. The respondents suspected that a mobile phone facilitated their attack. The mobile phone is an efficient means of communication also for the criminals.

Some *tension* can be seen to arise *between the owners and non-owners*. One of the respondents talked about the issue of non-owners envying those who own mobile phones:

> *"Because you also feel like owning and yet you do not have. Why her and not me? She is the same colour, same age etc."*

Jealousy can be disempowering as it divides people. Another respondent said that they do not want mobile phones to create cliques; the haves and have-nots. On the other hand, a sub-county leader mentioned that mobile phones have diminished the gap between the sub-county and the residents. However, as mobile phones are also considered to bring respect and status – even though not by all – they can be seen to divide those who own mobile phones and those who do not in a way that makes the residents unequal and diminishes their self-confidence.

5.6   Owning, borrowing or not using mobile phones at all

This section starts with a comparison between *owning* and *borrowing* a mobile phone. In this research, the interviewees were divided into four categories. *The analysis moves on to understanding the feelings of each category in reference to losing the phone, getting a phone or comparing the times with and without a phone.* The discussion gives an understanding of how each category of people feels about mobile phones and thus, how important phones are.

People in the rural areas of Katakwi district had several means of communication: they sent letters, they sent someone to deliver the message, they travelled to meet the person, they used public phones, they borrowed other people's mobile phones free of charge or they paid for the use, or they owned a mobile phone. However, not all these methods were trouble-free. Letters sent with someone take time and may even disappear on the way. If the person receives the letter, the message might already be expired. If someone is sent with the message, it is likely that the message will never reach the person in question. Travelling personally is time-consuming, as the distances are long.

Travelling brings in extra cost and, besides, the person might not even be there. Thus, calling seems an advantageous means of communication. Next, owning and borrowing a mobile phone in reference to empowerment outcomes are analysed in more depth to gain understanding of how utile they are.

Section 5.3 discussed the six empowerment outcomes: *health, skills, income, freedom, self-confidence* and *security*. Table 6 sums up whether it is essential to borrow or own a mobile phone in reference to each empowerment outcome.

Table 6   Owning versus borrowing a mobile phone

OUTCOMES	OWNING/BORROWING
HEALTH	Borrowing enough Owning necessary in an accident
SKILLS	Borrowing enough in outbound calls Owning useful for inbound calls
INCOME	Owning necessary Occasional borrowing helpful
FREEDOM	Borrowing enough Owning necessary for privacy
SELF-CONFIDENCE	Owning necessary
SECURITY	Borrowing enough Owning necessary in emergencies

Borrowing a mobile phone might be enough in *health issues,* for example when phones are used for calling assistance. However, if a person is injured and alone, for example in case of bodaboda accidents, a personal phone is needed to be able to receive help as fast as possible. For *skills* enhancement opportunities, it is not necessary to own a personal mobile phone in order to call someone and receive information. However, being attainable, for example for NGOs or other organizations is easier with a personal mobile phone. Owning a personal mobile phone seemed to be essential in *income-generating activities* for many respondents. Borrowing other people's phones would have made working less efficient and time-consuming for some businessmen and women, and even the possibility of losing customers would have been more likely. Also, customers can reach the businesspeople easier when the businessperson in question owns a mobile phone. However, borrowing other people's phones occasionally can help, for example in ordering products. In reference to *freedom,* getting access to the outside world did not require the possession of a personal phone. The possibility to call was there for all through borrowing or using payphones. However, borrowing a mobile phone is not enough if the privacy of phone calls is given a high importance. The *self-confidence* of people could get a boost through mobile phones. However, self-confidence was enhanced only through owning a mobile phone. Borrowing a mobile phone did not have any effect in improving users' self-confidence. It is worth noting, though, that sharing a

phone in a family is enough to raise the self-esteem of the whole family. Mobile phones are used actively for *security* issues. Borrowing a mobile phone might be enough when the mobile phones are used in case of emergencies, e.g. if the phone owners are close enough.

Next, the feelings about phones in each category are discussed. *Category 1 – the owners of mobile phones* – were asked to imagine their life without mobile phones. Respondents were already used to having mobile phones around and could not be without them anymore –not even for one day according to some. People felt they would feel backwards or lost without a mobile phone. If they did not have their mobile phones, they would lose a lot of information and could not contact other people. Someone even had the fear of losing her phone. Life would simply be very difficult without a phone. However, a couple of respondents seemed to forget that mobile phones are just tools for communication and that phones themselves do not have anything to do with the content of the communication. Instead, they thought that a good or a bad message delivered via mobile phone is down to mobile phones. For example, a female respondent considered that phones have changed her life, as she has got good messages via calling, and those messages have made her happy. The opposite can be observed as well according to another female respondent:

> *"…others who have experienced something bad from the phone like getting bad news. You have that trauma in your head and don't want to own that phone again…"*

In general, mobile phones created hopes of a better life. One lady who had just bought a mobile phone also expected to benefit from owning it as she said:

> *" I will give the phone number to people in the community, maybe someone in the sub-county will need to call me."*

Another respondent thought that people without phones are worse-off because they do not have any ways of solving their problems.

Category 2 – people who were interested in owning a mobile phone – were asked to picture how their lives would change if possibly owning a mobile phone in the future. Male respondents felt that receiving help in emergency situations could be a life saving change, messages would be received faster, and moving from one place to another would be reduced. Female respondents also saw the importance of mobile phones in asking for assistance. Someone would have wanted to make money out of a mobile phone through charging others for the use. This money would have helped her. Others saw mobile phones making work and communication easier and also improving communication. The fact that they would no longer be blocked out of information was important as well. Two females said that mobile phones could change their lives, but they could not describe how. One of the female respondents thought that owning a

mobile phone would not improve her life, as all the available money would go for the maintenance of the phone.

Category 3 – people who did not want to own mobile phones – were also interviewed. The reasons behind their attitude were manifold. Some of them *did not know anything about mobile phones,* maybe not even having ever seen one. Others borrowed mobile phones approximately twice in a month mostly to ask for assistance from relatives. Some of them did not know how to operate a mobile phone. They *did not have money* either to buy or to use it. All the money they got was used for the basic needs of the family, like school fees, food, clothing, treatments etc. People also heard the phone owners' continuous complaining about buying airtime and charging the phone. One male respondent had several reasons not to own a phone: the charging place was far, the network was bad and phones encouraged people to lie among others. He had once encountered an unfortunate situation, where he travelled to meet up with a person who owed him money. He called this person first to let him know he was arriving. Once he arrived, the man was nowhere to be found. Thus, he concluded that without a phone this man would not have been able to escape and he would have got his money. Two of the male respondents who were brought to the interview as persons who do not want to own mobile phones changed their mind during the interview. The reason behind their sudden change of mind was that during the interview they realised the utility of mobile phones. Before, they did not know anything about phones. This proved that the reason behind not wanting before was mere ignorance – there were still people who did not know anything about mobile phones. Most of the people who did not want to have phones borrowed other people's phones in case they needed help from someone. One of the female respondents did not want to have a phone herself but wanted others to have phones so that they could bring her information as well.

Category 4 – people who once had a mobile phone – were asked to compare the time with a phone to that without a phone. They elicited important information. All the people who once had a mobile phone wanted to have a new one. Phones reduced travelling costs and enabled the access to information, for example. Some of them saw that mobile phones were not of any help unless you did business. Without business, people had less money and thus no money for mobile phones.

> *"I used it for two years. Since I had no business, it became useless. I sold it. Back then I did not have any business. Now I have the bodaboda."*

After starting with the bodaboda business, this person saw an immediate need for the phone. Another respondent with a brick-making business considered the work easier when he had a phone. Without a phone, it took longer to sell his bricks. One camp resident used his phone as a payphone. Now, when the phone was broken, there was no way for him to get money. He wanted to get a new phone and continue with the payphone business. One of the businesswomen pictured that if she got her phone back,

it would help her in earning money to take care of the children. For others mobile phone was a less essential part of the work, but the phone still eased communication. However, the work could be done without a phone as well. Like a teacher at a camp said, life would not change due to owning a phone. Life would stay the same even though communication would improve.

6 DISCUSSION AND THEORETICAL IMPLICATIONS

In Katakwi district, there was a common belief that mobile phones were good and beneficial. Mobile phones brought hope of a better life. Several respondents thought that more people should own mobile phones. Opposing arguments and criticism were also brought up, but the majority of the people wanted to own mobile phones and felt they were useful. However, the utility of a phone depends broadly on how the phone is used. Additionally, husbands had a pronounced impact on the utility of mobile phones for women. Using mobile phones made life easier in regard to communication or reducing costs and time involved with travel. However, making life more convenient did not necessarily correspond to empowerment. Certainly, people were satisfied when it was easier to chat with friends or contact a husband, but the content of communication was what mattered in reference to empowerment. Whether someone perceives being empowered or not depends on what this person considers to be important in his or her life. As Kyomuhendo (2009) discussed in her study some women considered success in business as empowerment, while others valued marriage to a much greater extent.

Mobile phones were utile and empowered both women and men in *health, skills, income, freedom, self-confidence* and *security* issues. Also disempowerment occurred in regard to both women and men. However, the disempowerment women faced was much more intense compared to men. Men themselves felt the increased tension within families and between friends. Also, the criminals using mobile phones affected men. Equally, the opportunity cost of using money on mobile phones instead of basic needs effected men and especially children. The possible *disempowerment* of women could be seen to occur in four fields: *health, freedom, self-confidence* and *security*.

The UN (2005) claimed that ICTs could be an efficient tool for the promotion of gender equality. In reference to mobile phones, this study found opposing results as well. Mobile phones could be seen maintaining and even enforcing the inequality of some women, depending on the head of the family. According to the study by Best & Kenny (2009), the decision-making power of women was enhanced when they owned mobile phones. This was true to an extent; only the unequal gender relations limited the decision-making powers of women. At times women's DOE (degrees of empowerment) stopped already at the first level – existence of choice – as they did not have any opportunity to choose. The results of this study showed that some men restricted or denied their wives' use of mobile phones. Mobile phones were a new way for men to exercise their power over women and control the assets in the family. This did not increase the capacity of women to make choices to improve their lives – quite the contrary. The men interviewed claimed that their wives did not have mobile phones due to lack of money. Nobody confessed that their own wife would have used the phone for

accessing other men. These are opposing results to Burrell's (2009) research, as she found out that the main reason behind men not buying phones for their wives was not money, but the possibility for women to misuse the phone. The restrictions denied women the opportunities mobile phones offered them. The freedom to socialize and network with people was taken away from women. Most women who had got phone as a gift got the phone from another family member than the husband. However, after getting possession over a phone, the husbands could still restrict the use.

Being denied from opportunities is one aspect and being influenced negatively by mobile phones is another. *Disempowerment* happened as well: the use of mobile phones brought tensions and arguments into relationships. One female respondent said she was able to run her business more efficiently with a personal mobile phone. Her husband did not let her borrow his phone after her phone broke down because she would waste his airtime. Interestingly, according to this lady, this fact did not, however, cause any arguments, nor could she see any tension in their relationship caused by mobile phones. Occasionally, the arguments unfortunately led to *domestic violence*. Domestic violence caused disempowerment in the fields of health and security. Tafnout & Timjerdine (2009) accentuated in their study that, in regard to domestic violence, mobile phones could actually provide protection. This study found out that the use of mobile phones did the opposite by increasing arguments and domestic violence between couples. It has to be recognized, though, that none of the women interviewed revealed that they were themselves the victims of domestic violence. Both women and men always talked about someone else in the community. None of the respondents, however, brought up the issue of using phones to reach for help in reference to domestic violence. As women caught their husbands going through their messages, their relations of trust were shattered. Altogether, the oppressive behavior of men diminished women's feelings of self-esteem. However, if a woman had a possibility to use or own a mobile phone, also her own decisions on how to use it affected the potential disempowerment. In case, a woman decided to have a boyfriend, she was not using the phone in a constructive way herself. Thus, also women affected the potential disempowerment themselves. It has to be noted that all the men did not restrict their wives' use of mobile phones. Single women or widows did not face the oppressiveness caused by husbands. Thus, some women – also some married women – were indeed empowered through mobile phones. For example, phones were used in emergencies or phones made their business more efficient. Nonetheless, individuals perceive empowerment differently.

In general, three types of *constraints* were apparent, from which especially *affordability* and *connectivity* were more recurrent and from which everyone suffered. In reference to *capability,* this study found opposing arguments to Comfort's and Dada's (2009, 46) study, in which they claimed that sending text messages has been considered easy. Instead, this research found out that surprisingly many could not send

messages. In fact, slightly more women than men seemed to have problems in typing text messages.

As indicated, some people were empowered through the use of mobile phones. This empowerment can be divided into *short-term* and *long-term* empowerment. Short-term empowerment can be perceived to happen when a family is lacking food, and they use the phone to call for assistance from relatives. Short-term empowerment can be life-saving and thus extremely important, but it does not make people independent or give them control over their lives in the long run. Short-term empowerment does not solve the root of the problem. For example, in case Karamojongs attack, mobile phones can be used to call assistance that particular moment. However, in the long run the problem is still unsolved as Karamojongs can attack in the future as well. Long-term empowerment, on the other hand, is more sustainable as it gives individuals the chance to control their lives and make choices that have desired outcomes within a longer time frame – for the rest of their lives at best. Several studies praise mobile phones' effectiveness in income-generating activities (Best & Kenny 2009; Donner 2005; Sane & Traore 2009). These income-generating activities could indeed enable long-term empowerment. Long-term empowerment can occur, for example, by using mobile phones efficiently in business to acquire more income and direct this income to educating the children. That would have an impact over generations. For this to be able to occur, the income needs to be high enough. Mostly, in Katakwi district it seemed that the income generated was small-scale but it still improved the provision of basic needs for families. Another example of a long-term empowerment effect of mobile phones would have been to use mobile phones to inform locals on HIV-related issues. The interviewed nurse did not use the phone for these purposes. This sort of action has been reported in other studies (Economist 2009). Additionally, continuous access to information could have a long-term impact. Having an access to information is extremely important. Without information people did not know what was happening outside their living environment and they could easily miss out on things that were of great importance for their personal lives. In addition, if phones are used for maintaining social relationships that give meaning to life, people are empowered through enhancing their social capabilities. This has a great meaning also in the long run.

Unwin (2009a, 360) claim that, first and foremost, mobile phones affect *economic development*. It is true that mobile phones create great potential in economic development, but it is not self-evident that mobile phones are always financially beneficial. *Financially*, the empowering effect of using a mobile phone depends on three things. *First*, the opportunity cost affects the wellbeing of the family. The use of mobile phones demands money. Where this money is derived from also has an impact on empowerment. Money used on mobile phones can be away from basic needs. The opportunity cost could be high and the use of mobile phones can actually increase

poverty in the family – in case the phone is not used wisely. As an example, one of the respondents sold his phone, and after that he was able to use the money for the family upkeep. *Second*, potential empowerment depends on the business in question. The phone can be used to either ease the burden of work or to actually make the work more profitable. If the income derived from business is not enough, it is impossible to maintain a phone without reducing the money used on something else. *Third* how the extra income derived from more profitable business is used has an impact on empowerment. This extra income would empower the whole family if used wisely. The money used on family upkeep can increase.

Modern ICTs were claimed to be useful for poverty reduction due to many characteristics: *interactivity, permanent availability, global reach, increased productivity and wealth or value, multiple sources of information and knowledge* (Spence 2003, Yonah 1999, Gates 1999; according to Yonah & Salim 2007, 310–311) and *lower costs* (Weigel & Waldburger 2004, 21). Next it is discussed whether these were crucial in reference to mobile phones in Katakwi. First, interactivity – the efficiency of communication has changed drastically due to mobile phones. Time-consuming letter sending and messages sent via someone else are no longer needed. The respondents valued mobile phones due to easier and faster communication. Second, permanent availability is important, for example in emergency situations. However, a wealthier resident of Katakwi district said that he was annoyed by the fact that he had to be available permanently and that his boss was expecting him to answer the phone all the time. Third, global reach is very important as families were scattered around and even families living abroad could be contacted for assistance. Fourth, mobile phones indeed created increased productivity and value. This happened especially in relation to business activities. Fifth, mobile phones enabled access to information. However, mobile phones did not create content for education as could be the case with some other ICTs. Finally, the use of mobile phones demands money, but mobile phones can also lower the costs used on transport.

The aim of this research was also to analyse the impact of mobile phone use on community level in relation to IDP camp residents. None of the current IDP camp residents had personal mobile phones at the time of the study. However, as discussed, collective mobile phones did exist and were found helpful. Current and ex IDP camp residents seemed to use mobile phones mostly for health and security purposes. IDP camp residents ideas about mobile phones varied: some of them wanted to have phones, some of them just borrowed and some of them did not know anything about phones and did not want to have one. However, having at least one phone in each IDP camp is very important. One phone can help the whole community in emergency situations.

As mentioned above mobile phones were widespread in Katakwi district. Still there were people who had never even held a mobile phone. The *division between the haves*

and have-nots was there. The have-nots were mainly financially deprived and ignorant about mobile phones. However, the division between the haves and have-nots is vacillating, as mobile phones can be actively *borrowed* between families, friends or even within villages. Some of the benefits mobile phones offer are there for the have-nots as well. This is definitely one of the empowering effects of mobile phones: *mobile phones empower also those who do not own a personal phone*. This empowerment can occur in different ways. In case of serious deprivation or insecurity borrowing a mobile phone can have a life-saving impact. Borrowing a phone also enables an access to information and connecting with a network of people. The ones who borrow mobile phones also have many purposes for their phone calls. One purpose is, however, more prevailing than others – asking for assistance. Other than asking for help, the phones are also borrowed to call families far away to ascertain about their conditions or just to chat.

The theoretical framework introduced in section 3.3 is further modified to fit the findings of this research (Figure 12). The model introduces the potential, actual, positive and negative impacts, constraints, actions centered around users and their reaction and the relationships between these different factors.
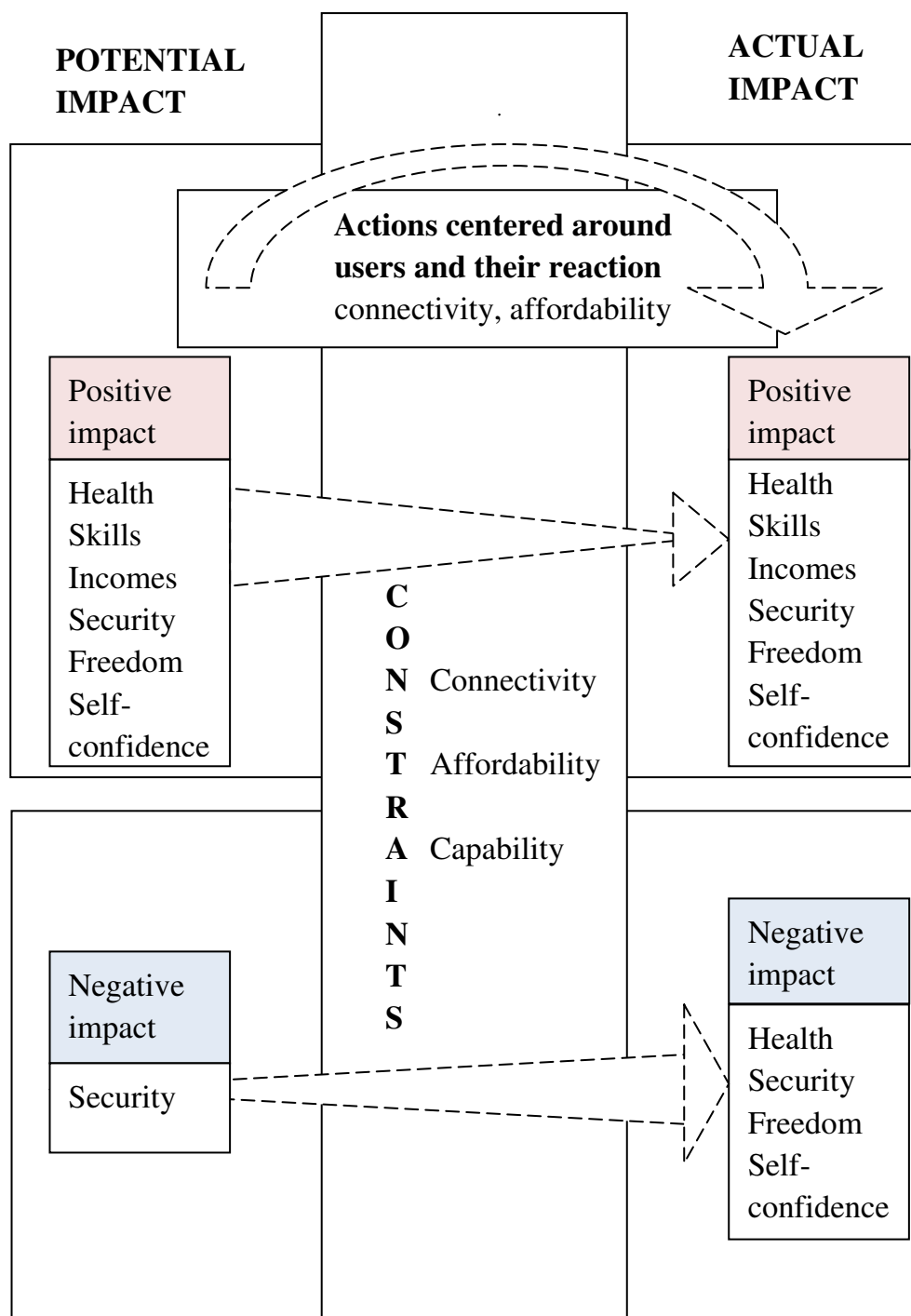
Figure 12   The impact of mobile phone use in rural areas

The potential and *actual impacts* are divided into *positive* and *negative impacts*. The potential impact is the best possible impact that mobile phones can cause: as much positive impact and as little negative impact as possible. The actual impact is the impact that remains after rural residents confront *constraints*. The constraints *(connectivity, affordability* and *capability)* hinder the positive impact – *empowerment* – and increase the negative impact – *disempowerment. The potential and actual positive impact* occur in reference to *health, skills, income, security, freedom* and *self-confidence*. The

empowerment can be felt in all of the six sectors with and without the constraints. However, the size of the impact fluctuates. *The potential negative impact* occurs only in relation to *security* whereas *the actual negative impact* occurs in sectors of *health, security, freedom* and *self-confidence*. That is because without the constraints mobile phones cause negative impact only through criminals using mobile phones (*security*) or through causing arguments and misunderstandings within families (*security*). Instead, when the constraints (*connectivity, affordability* and *capability*) are faced the negative impact is much greater: due to gender inequalities women confront disempowerment in the sectors of *health, security, freedom* and *self-confidence*, tension between friends – the haves and have-nots – decreases *self-confidence* of the have-nots and also the high opportunity cost disempowers in the fields of *health* and *security*. Thus, it is clearly seen that the constraints cause much more disempowerment than would be the case without facing any constraints when using mobile phones.

The sizes of the arrows reflect the differences in the degrees of the impact. The actual positive impact is smaller after going through constraints and the actual negative impact is bigger after facing constraints. The beginning of the arrow in potential positive impact is bigger than the beginning of the arrow in potential negative impact, as negative impacts only occur in relation to security. *The dash lines* in the arrows illustrate the difficulty of defining the size of the impacts, as the impact on each individual depends on his or her situation in life, family and how he or she uses the phone. As an example, the negative impact caused by mobile phones can be bigger than the positive impact gained for some individuals: a woman argues more with her husband due to mobile phones, and she only benefits little from the phone as the husband uses it the most for his own personal purposes. At the same time the positive impact can be bigger for another individual who might get only limited negative impacts: a widow has more profitable business due to mobile phones, and she only feels the negative impacts when she has to cut out on other expenses to be able to finance the use of her mobile phone. However, it always depends on the person which outcomes of empowerment one perceives as the most important. It is important to notice that the impacts, both positive and negative, have an influence on other people as well besides the user. People in the community may benefit from someone owning a mobile phone in the IDP camp when they use it to call army forces. On the contrary, children may suffer from the decrease of money used on basic needs.

Actions centred around users and their reaction reflects the actions users take to sidestep the constraints. These actions relate mainly to *connectivity* and *affordability* but also to capability. The actions are sharing, borrowing, beeping, having multiple sim cards, calling at night-time, searching for better connections and asking help from others to operate the phone. As the constraints can be sidestepped to only a certain extent, the users are able to benefit more from the phones, and thus the actual positive impact can

be bigger than the case would be without any actions. For example, beeping is a way to sidestep money-related constraints and still use mobile phones and benefit from the use. This study did not come across to any methods for sidestepping the constraints in reference to disempowerment, like sidestepping oppressive gender-relations. That is why the actions centred around users and their reaction is only applicable with regard to positive impact.

7 CONCLUSIONS AND SUGGESTIONS FOR FURTHER STUDIES

The aim of this study was to find out what is or could be the role of mobile phones in empowering rural residents to rise out of poverty in Katakwi district, Uganda. *The most important roles mobile phones had can be identified as follows:*

> income generator
> information transmitter
> enabler of social networks
> intermediate in emergencies
> booster of self-confidence

In the future, mobile phones will have even a more remarkable role, as more people are interested in owning them. However, these roles do not automatically come true to every user of a mobile phone. The issue of empowerment and disempowerment is much more complex. The model developed in this study (Figure 12) *'the impact of mobile phone use in rural areas'* explains this complexity. The varying *constraints* stand as a barrier to access the *potential positive impact* that mobile phones *could* offer. Constraints, for example an oppressive husband or lack of capital, decrease empowerment and increase disempowerment. What the final impact of mobile phone use on an individual is depends on the constraints he or she confronts, and also on *the actions* he or she takes to sidestep the constraints. In relation to mobile phones, the empowerment and disempowerment caused is not only limited to users; instead, the family and whole community can be and most often is affected.

As mentioned, the potential of mobile phones to empower residents to fight poverty is there. The end result can be, however, very different depending on *the user, people around the user and that particular situation in life*. To some, phones can do nothing but to increase poverty: phones take all the money, bring in no benefit and even part couples. *The winners of the mobile phone revolution* are those who comprehend how to benefit from mobile phones in that particular situation in life.

This study could not divide people into groups – to those who could always benefit from mobile phones and to those who could not. Even a wife that gets beaten up by her husband due to misunderstandings caused by mobile phones can still be empowered through mobile phones in another way, such as having emergency contacts. Thus, the ones losing out are not necessarily only those without an access to mobile phones but also those who own them but live with an oppressive husband. Indeed, a core problem that emerged in this study was the access of women to mobile phones, but also the challenges they faced when using them. As the traditional gender structures still prevailed in Katakwi district, mobile phones could be empowering only to some of the women. The role of mobile phones in empowering rural residents could be more

significant if also women were able to benefit from the versatility of mobile phones. From this perspective, it can be concluded that generally, men benefited more from mobile phones than women did.

An important characteristic of mobile phones is the ability to borrow them for occasional use. Borrowing has an impact on the whole community. Mobile phones can be used in business and in socializing. The utility of owning in comparison with borrowing a mobile phone fits with the same categorization. When doing business it is, in most cases, more profitable to own a mobile phone, whereas in socializing, borrowing a mobile phone might be just enough.

This study is not in any way exhaustive. There is demand for further research. Both qualitative and quantitative studies are needed to get more information on mobile phones' impact on rural residents in developing countries. The aim of this study was to get a comprehensive understanding of the use and impacts of mobile phones in a relatively small area, Katakwi district. To get more generalized results in relation to rural areas, various countries and areas need to be studied. The model developed in this study should be tested further in different rural areas and in different countries. In addition, it should be studied whether rural residents take action to sidestep the constraints in reference to negative impacts. This study did not come up with any findings in reference to sidestepping negative impacts. As mobile phones are spreading at a fast pace it would be interesting to repeat the study in Katakwi district in couple of years time so as to see the impact caused by mobile phones.

Additionally, a study concentrating on income-generating activities would be essential. This research did not answer the question whether selling airtime is enough to make one's living in a rural area. The number of clients in rural areas stays quite low. Also, the amount of competition affects the profitability of the business. A study questioning whether airtime selling business is really enough to make one's living in rural areas is needed.

Furthermore, it would be important to reveal how the money women earn through mobile phones is used. Can the women actually decide how the money is used, or do men have authority over the money women earn? If men do have the authority, women might not be empowered through the money they have earned.

Research on Mobile Money or money transfers on mobile phones in general, would be needed. This study found out that Mobile Money does bring some benefits but it was not completely trouble-free and most of all not yet widely known in rural areas. The usefulness of Mobile Money to the users should be analysed in more depth.

This study concentrated only on rural areas. However, it would be interesting to compare the use and impacts of mobile phones in rural and urban areas. Mobile phones have reached urban areas before rural areas. Thus, the adoption of mobile phones in

urban areas must already be at a different level. For example, a study on mobile phones as a status symbol could have very different results in urban and rural areas.

8   SUMMARY

Mobile phones have spread to developing countries at an extremely fast pace during the past decade. It has been surprising how even the poorest people are willing to use their low income to buy a mobile phone and maintain it. The Maslow's hierarchy of needs does not apply to poor people and their use of mobile phones in developing countries as the money is not used on basic needs but instead on ego needs. At the same time when mobile phones have gained ground in the developing part of the world it has been globally acknowledged that mobile phones have a great impact on poverty alleviation. Mobile phones do not solve poverty on their own but they do have a role in improving the living conditions of the poor.

As the research topic is relatively new and little studied, there was need for a study on the use and impact of mobile phones in developing countries. This study concentrated on Katakwi district in Uganda. The objective of the study was to find out *what is or could be the role of mobile phones in empowering rural residents to rise out of poverty.* Katakwi district was a suitable study site for several reasons: the district was remote, rural and the residents were living in poverty and also because mobile phones were a relatively new phenomenon but already widely spread, for example. A notable Finnish NGO, *the Finn Church Aid*, enabled the study together with their local operating partner, *the Lutheran World Federation*. The field study was conducted at the end of 2009 during a one-month period.

In this study the term *empowerment* played a pivotal role. Besides empowerment, also poverty and development are discussed in more detail. This study also considered the use and impact of mobile phones from women's perspective without, however, being a feminist study. As a matter of fact, the majority of the world's poor are women. That is why women are the key to poverty reduction. In addition, women do not have equal access to mobile phones. *A theoretical framework* for the study was combined from the social feedback model, empowerment outcomes and the factors determining the accessibility of information to the user.

The study was *qualitative* in nature. The main method for data collection was *face-to-face semi-structured interviews.* In total, 50 individual interviews concerning the use of mobile phones were included in the study. Besides those 50 interviews, also *observation* was used in Katakwi to get an idea of the popularity of mobile phones. Additionally, a commercial chief and a senior programme officer were interviewed. The former provided information about the operators in Katakwi district. The latter was an expert on women in developing countries and thus her ideas concerning women and mobile phones were considered important. After the field study the LWF was contacted via e-mail to get additional information about living conditions in Katakwi district. The data was analysed using *computer-assisted qualitative data analysis software*.

The objective of the study was divided into four sub-objectives, which are next analysed individually. *The first sub-objective questioned how mobile phones were used and how did the use contribute to the empowerment of rural residents.* Mobile phones were mainly used for *business* and *socializing* purposes. Mobile phones made work more efficient but also created business opportunities including charging phone batteries or selling airtime, for example. Additionally, mobile phones had an important role in social networking, spreading information and in emergencies. Mobile phones had special applications including radio, internet and torch. Especially the torch was suitable for a rural area that had no electricity for lighting. In reference to the functions of a mobile phone they were used for calling, sending text messages and also for 'beeping' – leaving intentional missed calls.

Mobile phones *empowered* rural residents mainly in the sectors of *health, income freedom, self-confidence* and *security*. In reference to health mobile phones could be even life saving as a doctor or an ambulance could be called to the village. However, mobile phones could have been even more efficiently used in Katakwi district's health care sector. Indeed, mobile phones could have been used to spread information about HIV/AIDS, for example. Mobile phones were a booster for business activities for many – they even created income-generating activities. Mobile phones simplified work: the contact with customers and suppliers was made easier, time was saved and transportation costs were reduced. At times, even the possibility to lose out on customers was there for those not owning a mobile phone. However, mobile phones were not always essential in business. Mobile phones also gave the users a chance to 'move' outside their living environment and contact various people. This could be seen as something really important especially to women who were normally tied to home. Owning a mobile phone brought respect and status – it raised people's self-confidence. The wife was proud if the husband bought her a mobile phone. The residents also felt that helping others via their own phones was of a great importance. In reference to security, mobile phones were also a life-saving tool. Help could be called in emergency situations, for example during the Karamojong raids.

The *second sub-objective analysed the factors that hinder the empowerment through the use of mobile phones, and how rural users responded to the impediments.* The users of mobile phones faced several constraints – *connectivity, affordability* and *capability*. These impediments included unstable networks, men denying or limiting the use of mobile phones from their wives, lack of capital to finance the use or even the lack of skills to use the mobile phones. One explanation for the men's behavior was actually the fear of wives having an access to other men. However, through actions the users were able to sidestep the constraints to a certain extent. Actions included sharing and borrowing mobile phones, beeping, having multiple sim cards, calling at night-time, searching for a better connection and asking help for operating mobile phones.

The third sub-objective considered how mobile phones disempowered rural residents. Disempowerment occurred in the sectors of *health, security, freedo*m and *self-confidence.* Especially women felt the negative impacts due to gender inequalities but also the whole family was put under tension. Arguments between couples could even lead to domestic violence. At times, the opportunity cost for using a mobile phone was too high and the use actually caused poverty. This happened, for example when the use of mobile phones took all the income and no money was left for feeding the children. In addition, also the criminals had an access to phones. Mobile phones caused tension also between locals.

The fourth sub-objective examined the reasons behind owning, borrowing or not using a mobile phone at all. Owning a mobile phone is not always essential for the empowerment to occur – at times borrowing might be just enough to get the benefits needed. For example, when calling for assistance personal mobile phone is not needed if a mobile phone is within an easy reach. Instead, when raising one's self-confidence a personal mobile phone is normally needed. In general, it was considered important to own a mobile phone. Most of the people without a mobile phone wanted to have one. However, some people who did not want to have a personal mobile phone were found. The reason behind their attitude was mostly lack of capital and ignorance.

Finally, a model was created to assess the impact of mobile pones in a rural area – i.e. the empowerment and the disempowerment caused by mobile phones. The model reflected the varying impacts: for some the prevailing impact was positive while for others it was the negative impact. The actual impact depended on the way each person used the phone and on the constraints each individual faced. The constraints decreased the empowerment and increased the disempowerment. For example, unequal gender relations increased women's disempowerment. Actions were only applicable to sidestepping constraints in relation to positive impacts.

In general, both short-term and long-term empowerment was perceived to happen, from which the latter is more sustainable. Short-term empowerment does not give the individual control over life in the long run whereas long-term empowerment can have an impact on the future generations as well. The long-term empowerment is something to aim at. However, everyone does not use the phone efficiently enough to reap all the benefits mobile phones have to offer. In general, mobile phone use can be defined to have the following roles in reference to empowerment: *income generator, information transmitter, enabler of social networks, intermediate in emergencies* and *booster of self-confidence.*

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INTERVIEWS:

Commercial chief, interview concerning the operators in Katakwi. 9.12.2009

Janet Achora, Senior programme officer, Women of Uganda Network (WOUGNET). Interview 19.11.2009.

50 interviews concerning the use of mobile phones in Katakwi district, Uganda, between November 24th and December 9th 2009.

APPENDIX 1   INTERVIEW THEMES 1

The following themes were used when interviewing *people who own a mobile phone or who once owned a mobile phone* (categories 1 and 4).

Personal information, social and economic status

Age, sex

Marital status

Number of children and dependents

'Profession'

Schooling, literacy

Living conditions, (saving money)

Involvement in the community

Facts about the mobile phone and use

The reasons for the purchase of the phone

The time & place of the purchase

Price of the phone

Airtime, charging

Operator, network

Type of the phone & special features

Using the phone

The ways of using the phone (calling, beeping, sms)

The purpose of the use

The business use of mobile phone (if applicable)

- o   The ways of using it
- o   The people to communicate with
- o   Importance of the phone

The people to communicate with

Calling abroad

Mobile money

The frequency of using the phone

Easiness to use the phone

Technical problems

Sharing the phone

The most important information available through using mobile phones

The impact of mobile phones

Positive/negative change in life due to mobile phones

Changes in relationships due to mobile phones

Dislikes about mobile phones

Hopes/fears

Feelings and thoughts about being a mobile phone owner

Status symbol

Comparative information

The communication methods before having the phone

Frequency of women to own a mobile phone

Presumptions on how the opposite sex uses the phone

Imagining life without a mobile phone

Thoughts about mobile phone owners and non-owners in general

Profession-related questions (if applicable)

Nurse, teacher, priest, sub-county leader

The ways of using the phone at work

The people to communicate with

The importance of the phone

Comparing the work before and after having the phone

New ideas of using the phone in the sector/at work

Additional questions for people that once had a mobile phone but not anymore (category 4)

The reason for not having a mobile phone anymore

The means of communicating now

Willingness/plans to get a new phone

Plans about the ways of using the new phone

Comparing different periods of life: the past (with a phone) to present (without a phone) and imagining the future (possibly with a phone)

APPENDIX 2 INTERVIEW THEMES 2

These themes were used when interviewing both *people with no mobile phones but willingness to get one and people with no phone and no interest in getting one* (categories 2 and 3).

Personal information, social and economic status

Age, sex

Marital status

Number of children and dependents

'Profession'

Schooling, literacy

Living conditions, (saving money)

Involvement in the community

Background information

Means of communicating at the moment

(Borrowing mobile phones)

Wants and expectations

Knowledge/thoughts about mobile phones

Willingness/plans to get a mobile phone? The reasons behind them

The plans on how to use the mobile phone, if willing to get one

Thoughts about the importance of owning a mobile phone

Impact of mobile phones

Likes/dislikes about mobile phones

Hopes/fears

Comparative information

Thoughts about people who own a mobile phone

Women's access to mobile phones

Presumptions on how the opposite sex uses the phone

APPENDIX 3   INTERVIEW THEMES 3

These themes were used when interviewing the two *in charge of the IDP camp phones*

Background information

    The role of the in charge of the IDP camp phone

    Acquisition of the camp phone (means, time etc.)

Using the IDP camp phone

    The ways of using the mobile phone for security matters

    Other ways of using the mobile phone

    Buying airtime and charging

    The importance of the phone

Additional questions to the camp that no longer have its phone

    The means of communication now without a mobile phone

    Plans to buy a new mobile phone

    Comparing the life/security with and without the mobile phone

APPENDIX 4   EXTRACTS FROM AN INTERVIEW

Extracts from an interview with an older lady who could not tell her age. The whole interview is interpreted from Ateso. The interviewee talked a lot – at times maybe all was not translated into English.

-Can she read or write?
-She cannot.
-Is she satisfied with her living conditions?
-She is not satisfied. She cannot educate the kids. Even she does not have the energy to dig…to farm.
…
-She does not have a phone, right?
-She does not.
-How does she communicate with her family and friends, when they are far away?
-She borrows people's phones.
-Does she have to pay for it?
-Sometimes she pays, sometimes she does not.
-How often does she borrow the phones?
-Once in a month.
-Who does she call?
-Her relatives.
-For what purpose?
-She calls to ask for assistance
-Is it easy or difficult to use a phone?
-She cannot use, it is difficult for her.
-Does someone help her?
-Yes, someone does it for her.
-What about writing letters? Does she write letters?
-No, she does not. She cannot even read or write.
-What does she know about mobile phones?
-The only thing she knows is that it is used for communication.
-How did she communicate with her friends before she borrowed her friends' phones?
-There was no way. She could only communicate to those near her…her neighbours.
…
-Would she like to have a mobile phone?
-She does not wish to have, because she cannot operate and even there is no money maintaining it. ...She is still talking about the money, that she does not have money. Any money she gets she uses for educating the kids and most of her people have died.

[Talk in Ateso]

-What did she say?

-The same thing about education.

-Not new examples?

-No

-What if she would have the money would she then consider buying it?

-She does not even hope to get the money

-Is she willing to keep on borrowing her friend's phones then?

-Not willing to keep on borrowing, just stop and stay at home.

[Talk in Ateso]

-What did she say?

-That education takes most of the money.

-Is there something she does not like about mobile phones?

-What she does not like is that it demands a lot of money.

-Is there something she likes about them?

-It makes communication easy.

-Does she want more people to have phones?

-She wishes more of the people should have phones.

-Why?

-So that they can bring for her any information. That she can get information through them.

-How does she get the information now from her far away relatives? Are her relatives calling her friends and they bring the information to her?

-They just come to her to bring for her the information.

-They call her?

-They come to her where ever they are they travel where she is.

-Does she have any fears in relation to mobile phones?

-No, she does not have.

[Talk in Ateso]

-What did she say?

-She is talking about education. She wants her kids to get education and maybe they would by the phones for themselves.

…