A CASE STUDY ABOUT
CELL PHONE USE BY PEOPLE
IN RURAL KENYA

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ABSTRACT

The arrival of the cell phone in rural areas has taken Kenya by storm. It has turned out to be such an amazing transition happening since most people in the start, did not reckon its capacity to gradually become a lifestyle choice. It has certainly changed the way people communicate and becoming a natural necessity for people of Kenya. This can be seen from the numbers of cell phone units sold in the past years. The cell phones in Kenya have gone from 1 million in 2002 to 6.5 million in 2006. Some of this boost has found their way into the rural areas of Kenya and that is what this thesis focuses on.

Through a qualitative research approach presented as a case study provide both vigorous descriptions and exiting information. The case study is based mainly on material from telephone interviews that were carried out with a selected sample of the population living in the countryside to obtain their points of view. In addition some opinions received in email form from an organization based in the western part of Kenya is included. A related email questionnaire was administered to one of the companies that sell cell phones in Kenya. Reference has been made to previous research to present some insightful frame of reference on this subject.

In conclusion the people in rural parts of Kenya use the short messaging service (SMS) as the most cost effective way of communication. Furthermore, the M-Pesa function on that enables users to make money transactions is also widely used since most people in these areas do not have a bank account. The cell phone has transformed the job market and had a tremendous impact on running a business and made it easier to be available when looking for jobs.

It is clear that the cell phone has brought practical, social and economical change and contributing to cultural enhancement. There is however future needs as to solve the battery charging which is a main problem that rural inhabitant have to deal with. This thesis finally shows that the penetration of the cell phone in rural Kenya is of great success. The cell phone is a technique to bridge the gap between cities and rural areas in Kenya.

Keywords: Cell phone, rural Kenya, case study
Acknowledgements

I would like to thank the following people for their support, encouragement and practical assistance in diverse ways for me to write this thesis.

My Supervisor: Anna Wingkvist
First I would like to thank you for believing in me and secondly for all the support you have given on a practical level. There would not be a thesis if it were not for you.

The Opposition: Andreas Kahlroth & Magnus Telehagen
Thank you for your insightful feedback and encouragement given from you during the opposition of this thesis.

My Friend: Sadaf Salavati
Thank you for your consultations and moral support that has been of great help.

My Family: Emmanuel Denis & Doris Night
Thanks for your assistance in terms of suggestions and encouragement.

My Husband & Son: Torbjörn & Sebastian
Thanks to my loving husband for moral support and encouragement, above all for babysitting in the evenings when I needed to sit many hours. Your patience meant a lot. And to you my little sweetheart, Sebastian, you are precious.

My Participants
Finally, I would like to acknowledge all the people who participated in my case study, through telephone interviews and email questionnaires.

Thank you very much and I dedicate this thesis to all of you!
God bless!

Evanjeline Eriksson
April 2008, Växjö, Sweden
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1. Introduction

This section presents background information about Kenya as a country. Followed by relevant background information about the cell phone place and the reasons why it has turned out to be such a success in rural areas.

1.1 Information about Kenya

Kenya is situated in the eastern part of Africa, bordering the Indian Ocean between Somalia and Tanzania. The neighboring countries are Ethiopia and Sudan that lies in the north, Uganda in the west, Tanzania in the south and finally Somalia and the Indian Ocean eastern of Kenya. The current population is about 37 millions, out of which 3-4 million people lives in the capital city Nairobi (CIA 2007). Nairobi has grown rapidly over the past years as urbanization has kicked in. It is the process of people moving to the major cities in search of job opportunities, higher education and so fourth. The other major cities are Mombasa on the coast and Kisumu at the Lake Victoria in the west. The official languages used in Kenya are English and Swahili although there are 42 ethnical languages. Kenya got its independence in 1962 and economically the country has been progressively improving. The currency is Kenya Shilling (KSH). According the Central Bank of Kenya (2007) the exchange rate is 1 Kroner (SEK) = 10 Kenya shillings.

1.2 Information about the cell phone in Kenya

It is not long ago that cell phone was an unfamiliar item for the many inhabitants in rural Kenya. In less than a decade this has changed completely due to the cell phone arrival. In the beginning the cell phone was considered as a luxury item but that has changed and now more people than ever own a cell phone. The cell phone has become very important for all people and it has turned to be a necessity especially in the rural areas and the numbers of cell phone users are increasing tremendously. Arunga et al (2006) proposes that cell phone has changed the way people communicate and declare, “the gadget once considered for the rich businessmen and tourists is now affordable to everyone”.

Cell phone usage is escalating and out of the Kenyan population 37 million people, and in the year 2006 over 6 million people owned a cell phone (Market Africa Mid-East 2007). It is indicated at the same time that fixed lines telephony otherwise known as landlines, remain stagnant and it is mostly the governmental offices that own fixed-line telephony. “With one in three adults carrying a cell phone in Kenya, mobile telephony is having an economic and social impact which is hard to grasp if you are use to living in a country with good roads, democracy and the Internet” says BBC in Market Africa Mid-East (2007).

The Kenya map in figure 1 shows the magnitude at which cell phone service providers have provided the network coverage at the same time the map shows the penetration trend at which people in Kenya use cell phones. Eighty percent of Kenya is covered by cell phone network.
Telephone network in Kenya has been mainly the fixed line telephony. Statistically, people using the fixed line telephony were over 290 000 subscribers compared to over 6 million subscribers of cell phones. Internet use in Kenya is increasing but currently based in cities and the number of people using Internet is only 2.7 million users. Telecom Kenya is working forward towards privatization on this telecom sector. A variety of providers in the cell phone segment of the market are experiencing boost in mobile and cellular telephone usage nationally and internationally (CIA 2007).

It is also vital to declare that the demand for cell phones in Africa in general has been overwhelming and most people did not anticipate this, yet the trend continues to develop. Reports from the top cell phone providers claim that the market is expanding and with strong demands from both Asia and Africa (Virki 2007).
The rate at which the cell phones are selling shows that this technology is flourishing in Kenya. This is also because of the technique in cell phones that does not require a computer for Internet connectivity but can use GSM to access the Internet. Accessing Internet is becoming common with the new cell phones on the market. Also with the availability of the network there is the potential to supply the service in the rural areas as well. This is both cost effective and realistic for rural costumers. The cell phones can be the primary source to access information as Kennedy (2008) states. Demand for cell phone in rural Kenya has exceeded expectations and as the urban market becomes flooded, the rural costumers become the new target group indicates Fahamu (2007). It is estimated from Shah (2007) that every month 100 000 new subscribers enters the cell phone market in Kenya.

Cell phones are contributing to social and economical changes. Socially the cell phone is changing and creating new relationships and networks while it is used in strengthening the relationships that exists according to Fahamu (2007). Economically, the minibus drivers are experiencing the result of the cell phone as they argue that the device has “revolutionized” their business. To get costumers and to get hold of spare parts has become a phone call away meaning more efficient business and no need to pay a visit to check for spare parts. In the article Market Africa Mid-East (2007) BBC says “business happens faster” since money transactions has never been more straightforward as using cell phones has become acceptable in doing this.

The cell phone is used for job hunting, it is easier to contact the employer by cell phone and keep be in touch in case the job is available. In Kenya those who are looking for jobs can with some little subscription, be able to access job hunting information. There is a job service called “Kazi560”. “Kazi” means job in Swahili. Anyone who is looking for employment vacancies, the information is available through the SMS alerts (Fahamu 2007). Furthermore, Schofield & Sithole (2006) provide examples when the cell phone is used for organizing meetings with all business associates. The technique makes it simple to gather a meeting effectively and the business people can easily access business information concerning for example different prices on different products.

Cell phone use for distance learners is indicated by Fahamu (2007). John Traxler who was part of the Fahamu (2007) project is from University of Wolverhampton in the United Kingdom has a project whereby he wants to develop a bulk SMS system. This system is intended to help structure study programs that will “address the isolation of distance learners and deliver learning simply, sustainably and cost-effectively”. That in the past they relied on postal return method that was slow, expensive and sometimes went missing. Hence, he continues to say that “the notion of using SMS as the main input medium and also the medium for exception-reporting is still very novel but a system has been specified, developed and trialled” (Fahamu 2007).

“M-Pesa” is allowing a person to send or receive money using the cell phones and to do different transaction as for examples pay bills. “M-” stands for mobile and “Pesa” means money in Swahili. Most people in Kenya utilize M-Pesa to transmit money to families and friends, as it is a swift, safe and effective technique of transferring money to anyone across the country, with no need of a bank account (Clark 2007).
Prior to M-Pesa, people used to send money using other cumbersome means. They waited until someone was traveling up-country by bus to be able to pass the money to their family and friends living there. Pulver of FSDK, a World Bank sponsored programme in AFP (2007) says "the majority of people in Kenya, 86 percent, send money through friends and family” and this is not necessary anymore, thanks to the cell phone.

Figure 2 Cell phone showing M-pesa function (Mason 2007)

In figure 2 there is a demonstration of a cell phone with the M-Pesa function. The M-Pesa function is a simple technique on the cell phones menu with an additional line that indicates “Send Money”. In order to carry out this transaction what one needs to do is to go to Safaricom shop and load money on the cell phone account, the cash is converted into “mobile money”. It is then transferred by SMS to the recipient, who could be family or friend anywhere in the country. Safaricom is Kenya’s leading cell phone operator who provides M-Pesa technique. This is benefiting people in Kenya in general, but particularly those who live in rural Kenya since most rural inhabitant do not have a bank account. The only thing the recipient needs to do is to go to a Safaricom shop, show the code and identification to collect the money (Mason 2007).

Airtime transfer using cell phone is another new technique that is possible with the cell phone. One person who has a cell phone can transfer call time to another cell phone to replace scratch cards. It is a supportive technique that makes it possible for people to help each other and it is seen as an added advantage particularly for those who otherwise would not afford to buy scratch cards. The technique is called Sambasa and is provided by the cell phone companies, Safaricom and Celtel and is predominantly used in East Africa. Furthermore, Sinha (2005) indicates that the low rates of cell phone penetration could underestimate the actual impact the cell phone is having during the “innovative and entrepreneurial ways, which the technology has been extended beyond the model of individual ownership”. The portable nature of cell phone offers the potential to being shared both in terms of access and payments.
The implication that has been brought by cell phones are most of the social context i.e. people are keeping in touch with each other. Economically the cell phone is helping in saving money in the long run as money was spent on traveling to different places to do errands. Business is happening faster and effective since in most cases physical presence is no longer necessary. Use of SMS is cost effective and it is an efficient way of communication as you can answer back when you ready.

The cell phone for sure is changing lives in Kenya. Looking at the cell phone penetration that shows that cell phone has the potential to empower people by providing efficient access to information. This can be seen as a catalyst for social changes in rural areas (Chakraborty 2007). Poverty is a problem in the rural area of Kenya and this has contributed to why it has poorly developed infrastructure regarding both communication systems as physical roads and this in turn lead to lack of electricity. This is the biggest threshold in order to give the people in rural area the same opportunities as their urban counterparts. The demand for land-lines from the rural people has then been low as it is expensive, took long time before getting it fixed and last but not least the lines frequently were not functioning because of poor maintenance, floods and stealing of copper cables. The cell phone has with great success penetrated beyond the urban boundaries reaching the rural areas and in a remarkable way solved the problems that rural Kenya in the past had to deal with (Maher et al 2003).

According to Shah (2007) the cell phone has a future as two-way communication tool to be used between the health authorities and the Kenyan people with cell phones to inform each other when diseases has been detected and prevent further outbreak. This can for instance be done by the use of SMS, where important information can be sent out to the general public. In case of dangerous infectious diseases like Tuberculosis, SARS and Ebola the cell phone could be important in informing the health authorities and the health authorities would also be able to use the cell phones on giving advice on how to handle such cases of infectious diseases to the general public. Health care workers could also get the advantage of using the cell phone because they could get training by using simple instruction sent by SMS. In rural areas where in the past it has been difficult to deliver such information efficiently can many rural inhabitants be reached trough this service and get the information as fast as there urban counterparts. Health communication surveillance could be done across Kenya using the cell phone and Shah (2007) is saying, “SMS technology could be a model to improve health communication worldwide. If CNN, ESPN, and American Idol can use such technology to communicate and analyze information, why can’t public health care?”

The cell phone is certainly a precious device for those who live in rural Kenya but charging it can at times be difficult. Lack of power is the main problem and poor infrastructure and poverty does not make it easy either. Maher et al (2003) stated that the need for electricity is fundamental in these parts of the country and alternatives must be sought after. One alternative that has been introduced is solar power. It has turned out to be very imperative in the rural areas, as other kind of power sources is not obtainable. The solar power hence plays an important role in rural development and these regions economic prosperity. Also as TV, radio and cell phones all need power it is must to stay informed and to be able to be reached.
However according to Jacobson (2006) far from all who live in rural Kenya have access to solar power and those who do not have that opportunity are strained to pay for the battery charging services. Another alternative for people in rural areas is charging the cell phone by connecting it to the car battery. This is mentioned by Schofield & Sithole (2006) that also talk about when it applies to friends, relatives and neighbors to the car owner to do the same. The notion of sharing resources, be it food, services or possessions, is rooted in the rural setting and people even have collective ownership of one cell phone, having it sent around and taking messages for each other. According to Venessa (2006) the cell phone is a realistic option for many people living in rural Kenya and quite the success and the reasons are:

**Availability**

- The cell phone coverage network service is available nationwide, making it easy for cell phones to work properly even in rural areas.
- The cell phone is easily available to whoever wants to buy one and even in any small town there are shops selling cell phones.

**Affordability**

- The drop in cell phone prices makes it possible for even people in poor rural areas to afford one.
- The SIM card needed for getting connected in not expensive.
- The tariff charges have gone down and that makes it cheap to call and yet cheaper to SMS.

**Simplicity & Flexibility**

- The cellular technology is simple to deploy compared to fixed-line telephony.
- Flexibility is obvious when using the cell phone. Its convenience and ability to access and be able to communicate whenever and wherever you are. Fixed-line telephones are usually restricted to major cities and towns bypassing the rural areas.

**Competitiveness**

- The competition between different cell phone service providers and operators makes the telecom sector focus on their customers and making them service minded.
- The prices on cell phones are low due to the competition to sell.
- Cell phone service prices drop due to the competition and liberalization in the branch.

**Pre-payment**

- This method of payment allows people to pay before they use their cell phone and not excluding anyone as sometimes the case with subscription. With pre-payment everyone is eligible and it is also the best way to have control on spending and not run into debt. Venessa (2005) reveals also that “an impressive 87 percent of mobile subscribers in Africa have chosen a prepaid service, the by far largest ratio worldwide”.


2. Case Study

This section starts with a personal inspired introduction and continues with the purpose of the study, the approach and the field procedures.

2.1 Personal experience

In 2000 as I was trying to arrange my wedding from Sweden, which was to take place in Kenya some months away, I certainly remember life before the cell phone. I did most of the communication with my parents via letters. The down side to this was discovered as letters quickly were overlapping and each time a reply came from them, they had not read the letter I had recently sent to them. Still people in Kenya rely on letters, which is sometimes enough for its purpose but not a very effective means of communication. For some people in rural Kenya even letter writing is still not an option, given that most of them do not own a post box so the cell phone is really a good option. In 2002 when my husband and I went back to Kenya for a trip to my parents we rapidly noticed the cell phone arrival. It was as if everybody in the streets had one, and this scene was not only noticed in the capital city, it was a scene that was going to be seen across the country. Even the Maasais (ethnic group of semi nomadic people) could be seen heading their flocks with a cell phone in their hands. They had the need to stay in contact with their families as any other Kenyan. Communication had become simple and available. Letter writing to my parents is a problem of the past and we can now communicate using the cell phone.

2.2 Purpose

The purpose of this thesis is to find out how people in rural Kenya use cell phones and how it has influenced everyday life.

2.3 Approach

Choice of a case study approach should following the purpose of the study and the study should therefore generate new information throughout the process. According to Yin (2003) there are three different questions that help establish the strategy for research:

1. The type of question posed
2. The extent of control an investigation has over actual behaviour events
3. The degree of focus on contemporary as opposed to historical events

The focus of the question posed is contemporary in nature as to investigate how people in rural areas of Kenya actually use their cell phones. There are several methods for collecting information for a case study and Yin (2003) identifies six primary sources:

- Documentation
- Archival records
- Interviews
- Direct observation
- Participants observation
- Physical artefacts
It is important when conducting a case study to be familiar with all these sources even though not all might be valuable for a particular case study. In the process of collecting substantial information a mix of sources have been used. Theoretical as well as less scientific research publications have been utilised to form the basic frame of reference. To complement this, empirical data have been gathered using interviews, mail questionnaires and observation from both authors experience as well as the participants. Concerning psychical artefacts the cell phone and the features it possess is an obvious source of inspiration for this study.

With a descriptive single case study it is feasible to both confirm and get out new information concerning a specific area of concern according to Yin (2003). In this case study the focus will be on cell phone use in rural Kenya providing a comprehensive description of the phenomenon as possible. In an attempt to gather data Yin (2003) indicates that, properly designed field procedures are important since it raises significant issues in a case study, the data collection should for instance “cater to the interviewee’s schedule and availability not your own”. Questions were sent prior for the interviews to have the participants be prepared and the calls were scheduled in advance. The responses were noted down right away.

The five people that were interviewed were, Mr Elphace Ngongo who is retired officer in Salvation Army and he occupies himself with some small scale farming living in Mayoyo village in the western Kenya. Mr Alfayo Sindani who is a teacher and lives in Mayoyo village, Mr James Imbatu who is a business man and lives in Lugari, Mr Alfayo Maikuma who is a livestock care taker and lives in Mayoyo village and the last person among the individual interviewed by telephone was Mrs Neddy Sindani who is working as a teacher and lives in Mayoyo village as well. They were chosen as to gain access to data from a diverse set of individuals whose experiences and perceptions have a variation, which reflects rural society in general.

Furthermore, mail questionnaires were sent out as a suitable mean to get information from two representatives to increase the diversity of data for this case study. Mr Roland Nissfolk who is the Project Supervisor for Erikshjälpen in East Africa was selected to represent an organization based in the rural area since there are needs also from an organizations point of view for communication to work properly for the sake of meeting its goals, which is valuable to tap into. Also Miss Caroline Ngesa who works for Sunny Electronic and Mobile Sales was chosen to give information from a cell phone company viewpoint, giving more insight on how the cell phone trend is now and some future predictions.
3. Structures of Context

This section contains two context structures, one is about mobile Internet and the other is about the cell phone in rural Kenya. The first is used as an inspiration to make the second.

3.1 Context structure for mobile Internet

According to Kim et al (2002) mobile Internet, which includes the use of cell phones or personal digital assistance (PDA), is increasing around the world. It is further indicated that the way people use the mobile Internet is different from the stationary Internet and it is because it is mobile as the name states while the stationary is in a fixed environment. Just like in the cell phone case, mobile Internet gives flexibility, making it likely for people to access it wherever they are no matter the location. That is why Kim et al (2002) did this study to distinguish the context in which people use mobile Internet. For that reason the framework is mainly to analyse the mobile Internet context. The logic behind the structure is answers to how and why different people choose to use mobile Internet.

One of the key categories is personal context that has two sub-sections called internal and external context. Internal context applies to the goal of using mobile Internet and state of feeling, which is the emotion that the user has when using mobile Internet. The external context has the hand that is used when writing on the keypads and the leg signifying whether the user is walking or sitting. The other main category is called environmental context that implies both the physical and the social environments that the user is in. The physical context is about visual and auditory distractions that the user might face. Finally there is the social context that indicates the co-location which refers to how many people are in the user’s location and the interaction referring to the users interaction degree while using internet mobile (Kim et al 2002).

Figure 3 The context structure of mobile Internet
3.2 Context structure for cell phone

The context structure is an approach to demonstrate cell phone use in rural Kenya. Figure 4 is a structure of the empirical data collected from the interviews made with people living in rural Kenya. This context structure follows the mobile Internet context structure but has been altered to suit this case study.

This context structure describes two main categories thus personal and society context. Practical use, social & cultural categories are sub-category to the personal context. Economical and future needs category is a sub-category to society context.

![Cell Phone Context In Rural Kenya](image)

**Figure 4 The context structure for cell phone use in rural Kenya**

The personal context of the cell phone applies to the practical use of the cell phone, which includes the use of SMS, receiving/making calls, alarm clock and calendar. Moreover, the personal context of the cell phone also contributes to the social and cultural enhancement in people’s lives, which applies to keeping in touch with each other and providing social status. In the society context, the cell phone has an economical impact. Services as M-Pesa and Sambasa can be noticed as well as the cell phone as a business tool. In addition to the society context there are clear future needs that indicate the cell phone potential to become as a mass media that will provide information and entertainment and the future need for better lasting battery.
4. Frame of reference

The context structure in figure 4 is the foundation of this section describing the different contexts connecting it to other research about the cell phone use in rural Kenya.

4.1 Personal Context – Practical use

The introduction of cell phones has indeed bypassed many barriers that in the past restricted people in the rural areas. The cell phone is widely used in rural areas, and many people are realising the importance of having a cell phone. It is used mainly for communication reasons and Jacobson (2006) indicates that cell phones in rural Kenya are mainly used for long-distance rural-to-urban calls but also rural-to-rural calls. Calls made rural-to-urban are mainly between family members and the cell phone becomes the link between families and friends in terms of socialising while far apart. Thus, people are keeping in touch with each other using the cell phone. The cell phone owners can choose to call or receive SMS/calls from families or friends. Most rural people have realised the importance of the SMS function, as this is a cheap and effective way of communication. The use of alarm clock and calendar are also features that people started to utilize.

4.2 Personal context – Social and Cultural aspect

People in Kenya generally have a tendency of togetherness and in the words of Dholakia & Kshetri (2005) “cultural factors influence the propensity to share mobile phones in the community”. In the rural areas of Kenya people share things and even though a cell phone in general belongs to the person who bought it is common that the item is regarded as community property. There is a traditional and cultural way of sharing belongings. If people in Kenya had a strict individualistic way of thinking then the current level of penetration and the social benefit of the cell phone would have been much lower. It is for instance common that the cell phone owner’s children run to the neighbouring house and inform them about a relative of them living abroad calling back in a short while and handing over the phone. Dholakia & Kshetri (2005) indicate that cell phones have great potential in delivering social benefits.

Hence, the cell phone has brought some social changes and to be able to stay in touch with family and friends is one of the foremost social advantages the cell phone is providing. As Schofield & Sithole (2006) say “it has become quicker to communicate with friends or relatives”. In addition the cell phone is making owners feel a sense of well being, and turning it into an important symbol of status. Owners of cell phones feel safe, because they can easily call for help in case of an emergency. This is especially so in the rural areas where distances and people are far apart compared to the urban settings.

Another advantage closely related mentioned by Dholakia & Kshetri (2005) is that parents can much easily get in touch with their adolescent sons and daughters either directly or through their friends when they are out socializing in the evenings. In reverse the teenagers can call if they are running late or need some assistance to get home.
4.3 Society context – Economical aspect

Although the growth of cell phone use has been tremendous over the last years not much empirical research has been done on the macro-economical effects in Kenya. However, Gyimah-Brempong et al (2007) are implying that Africa might be the region of the world where the cell phone could make the biggest economical difference considering the poor infrastructure making other technologies e.g. personal computers, difficult or even impossible to access. Something that is clear according to Arunga & Kahora (2006) is that the telecom industry is doing very well as cell phone users are rapidly increasing.

On a more micro level Jacobson (2006) is stating that the cell phone is playing a significant economical part in the rural and small town business. Shopkeepers, auto mechanics, electricians, farmers, open-air market business people have realised the value of having a cell phone as it makes is possible to strike deals with customers, place orders, contacting business associates and so on.

Despite the fact that in the countryside the economical growth might be on a very small range, it is important to note that there are observable facts. People do not need to take a trip to places to check prices on different products or asking for appointments or even search for a job - all these tasks can be done via the cell phone. In a study from Arunga & Kahora (2006) a businesswoman almost cut the expenditures in half on travels. Before, she spent equivalent to SEK 750 a week on meeting business associates and agents to ensure that her supplies would arrive to Nairobi with no problem. Now she spends only SEK 400 a week to do the same thing and she says it has become easier since she “just call (the suppliers/agents) and strike deals”. The costs in terms of time and travel expenses are is exceptionally thanks to the cell phone. The economical impacts of cell phones use is felt on individual levels, in businesses and on overall activities that are undertaken by different people according to Fahamu (2007).

Still on the economical aspect there is a money transfer function called M-Pesa, this function is helping people to send and receive money via the cell phone. Regarding Sambasa, this function that allows people to transfer airtime to another person is also an aspect of economical flexibility as this transfer can be made between anyone but usually done from parents to their teenage children. These functions of sending/receiving airtime/money are quick and convenient and very helpful for people in the rural areas where they the infrastructure in terms of telecom shops and banks are less available than in the urban setting.

The M-Pesa function is booming because many people in Kenya need to send money to their families who usually live upcountry to help them out. According to AFP (2007) the M-Pesa function is making bank institutions re-think on how to handle those who live in rural areas, as they often do not have bank accounts. Nonetheless more than half the population in Kenya now owns or has access to a cell phone providing a great potential for banks and other financial institutions to utilize the prospect to attract new kind of customers. “By providing this service, we're, in a sense, bringing banking to the unbanked” Baillie told AFP (2007).
Another financial transformation mentioned by Dholakia & Kshetri (2005) is about how cell phones have started to be utilised in buying and selling stocks online and tracking agricultural prices, both nationally or internationally.

It is realised that cell phones has enabled small business owners in rural Kenya to promote or advertise their products and communicate with their customers and business associates efficiently. It is because of the cell phone that small-scale farmers can choose when to sell their goods when demand is high and in that way the cell phone is contributing to economical development. Furthermore the cell phone is helping farmers, fishermen, small-scale business owners and other common people to initiate activities and several business models that are evolving. The cell phone is helping in running the business effective and efficient, which is an important aspect in all businesses according to Dholakia & Kshetri (2005).

In the business world there is usually a middleman who does surveillance on product prices in the world market and report back to sellers and buyers making a profit in providing this service. This role has been reduced because via the cell phone you can obtain the same information. It is known fact that larger farms in developed countries squeezes profit margins from the farmers in developing countries and that is why the cell phone plays an important role so the information is accessible for everybody. Dholakia & Kshetri (2005) state that the cell phone has now made it possible for small farmers to sell crops while world prices are in their favour.

The growth of cell phone use in Kenya has caused a fast increase in business possibilities and Gyimah-Brempong et al (2007) ague that personal computers transformed the economy in the industrial world and Asian countries and that the same is happening in third-world countries especially Africa and this because of the cell phone. Nyamnjoh, professor in sociology department at the University of Botswana, means that African cell-phone vendors have realised there are big profits to be gained from the cell phone market. They are changing the telecommunications services into “mass market products” making even more profit and Nyamnjoh “attributes the explosion of cell-phone usage to the privatization of telcoms across Africa”, and that this in itself has contributed to huge private capital investments in the growing industry of telecommunication according to Wachira (2003).

4.4 Society context – Future needs
Based on the high demand and penetration of cell phones in Kenya it has become widely accepted and used by people in rural areas. Cell phones, however, cannot take the position of the radio and TV as the mass medium but the current penetration makes them more accessible than the Internet. With the new cell phones in the market, that provides information and entertainment is not far fetched but it is at present used by only a few who have the newest models. Okoth (2006) is meaning that there is a need of a deliberate and strategic approach looking into how to utilise the potential of the cell phone characteristics to fit the issues in rural areas.
Cell phones can be used to look into health issues that need to be addressed in rural areas and in Kenyan slums. It is indicated in the article in the Yale Journal of Public Health (2007) that it is possible to interrogate a family about their health, sitting miles away, and entering that information into a PDA and sync that data wirelessly to a database for real-time study and analysis. Release of health information to local people in rural areas or slums that are located in big cities and towns by SMS is likely. At the same time tribal headmen across rural Kenya who do not have Internet but owns a cell phone could be used to without difficulty mediate reports about dangerous infectious diseases to health authorities using SMS. “These scenarios are neither far-fetched nor imaginary. The Kenya’s Ministry of Health are using PDAs and cell phones in unprecedented ways” according to Shah (2007). In the future using SMS can be a very important way to keep surveillance and report outbreaks of diseases while people affected can be able to receive updates, alerts, trainings and delivery of health messages to the public wherever they are, no matter there physical locations.

In an other scenario provided by Sundelof (2006) a dangerous situation as for instance a terrorist attack it could be proficient in this case to alert others by blogging the news using the cell phone instead of running to an Internet cafe. He continues by saying that in the last decade the cell phone network is covering most of the world even in countries that previously were at disadvantage when it came to technology. The cost of a cell phone unit is falling and it is cheaper to buy a cell phone than a laptop and to cite Sundelof (2006) “Therefore cell phones play and will continue to play an essential role in the ongoing paradigm shift towards communications and relationships between citizens of our world with the use of technology”. Sundelof (2006) clearly sees the prospective where the cell phone could become a “thin client of the World Wide Web”.
5. Summary of empirical data

This section describes all the aspects of cell phone use in rural Kenya divided on personal and society context done based on the empirical data collected.

5.1 Personal context

Mr Roland Nissfolk who is Erikshjälpen’s Project Supervisor for East Africa describes the cell phone entering rural Kenya. He says that the cell phone has improved communication in ways that never has been experienced before. That it makes their work from the organisation point of view, very flexible in terms of communicating with people living in the villages. Additionally, he indicated that the use of SMS is an effective and affordable way of communication. Also that the cell phone is making people have a feeling of well being in regard of safety and he thinks that in the near future every household on the countryside will own a cell phone.

All individuals that were interviewed in this case study said that they mainly use their cell phone for communication purposes. Mr Elphace Ngongo who is a retired Salvation Army officer mean that the cell phone have really helped him getting in touch with his doctor whenever he has health problems. He also says in the past when his wife got sick in the night, he prayed that the morning would come so he can be able to go to the doctor, but with the cell phone he can call the doctor right away in case of emergency and he can do that at anytime no matter day or night. He also uses his cell phone to be in touch with his children who are “scattered all over the world” and other people too. Mr Elphace Ngongo also uses the SMS function way much more than calling since calling is so expensive. For him and his children SMS becomes the only affordable effective way of communication. He also uses the calendar, alarm clock and has the Sambasa function on his cell phone at times. He implies that the Sambasa function allows him to send airtime to his children who have no income at the moment.

The use of SMS is highly appreciated since it is affordable and efficient and in particular Mr James Imbatu who is businessman mentioned, “Text Message Service is an excellent idea”. Also mentioning that one SMS can reach many people at the same time, which is more effective, compared to calling, since calling one needs to talk to one person at a time. On the question about the calculator he implies that the calculator is also one of the important function the cell phone has, he calculates quite much in his business therefore the calculator becomes a necessity that he often uses. Mr James Imbatu also mentioned that he uses the calendar and that he finds it very handy since before the cell phone he was forced to have ordinary calendars in book form.

Another service observed was the Sambasa function that allows cell phone owners to get airtime filled on their cell phones virtually, which means that they do not need to go and buy the scratch card for their cell phones. Mr Alfayo Maikuma who is livestock caretaker is one of those who utilise the Sambasa function and he mean that he appreciates this function because at times when he has no money someone can send him airtime to his phone. He also uses mostly SMS because he says that it is affordable and he indicates that he rarely calls since calling is expensive, also he has a calendar on his cell phone and he can use it to book when people need his service.
Mrs Neddy Sindani who is a teacher says that apart from using the cell phone for communication purposes she stresses the importance of SMS meaning that SMS is cheap and efficient. She is one of those who use the alarm clock on her cell phone, saying that it is a dependable function that she can rely on when it comes to waking up the time that she has set and no longer depending on the rooster crow. She also sometimes uses the calculator and the Sambasa function.

Mr Alfayo Sindani who is a teacher as well and participated in the interview that was carried out in this case study has two cell phones and the reason is that it is important for him to be able to reach his wife at home therefore it was necessary for him to get two cell phones. He said he uses his cell phone for communication purposes and that makes him stay in touch with his family and friends. He uses SMS frequently, but about other functions on the cell phone he did not use them since they were not available on his phone.

Miss Caroline Ngesa who is sales representative at Sunny Electronic and Mobile Sales mentioned that cell phone usage in towns and rural areas is estimated to reach 60 and 40 percent respectively, in the next five years. She means that there is a difference concerning urban consumers compared to the rural consumers and that people living in the cities use higher units when buying scratch cards for their cell phone. In rural areas people would rather buy lower units to their cell phones. She confirms that most people prefer using SMS as it is much cheaper than calling. Miss Caroline Ngesa also expressed her observation saying that the cell phone had improved people's lives in the way that people are now able to communicate easily and are well informed of what is happening around the country.

Based on social impacts Miss Caroline Ngesa says that the cell phone is helping in making friends meet and also keeping in touch within families. She confirms that the cell phone is improving people social status and which kind of cell phone they own is starting to matter. She also made an observation saying “on the negative side it has also been able to break may families since spouses easily cheat on each other and one can easily get a message that is incriminating thus increasing the rates of divorces in society”.

5.2 Society context

Mr Roland Nissfolk however, expresses his concerns when it comes to charging the cell phones. In the countryside he says it is common that most people do not have power and that could pose a challenge for those who have cell phones. Therefore, he adds that most of those who have cell phones charge it in the nearest shopping centre and a fee is taken for providing that kind of service. At the same time there are those who use solar power to charge their cell phone.

Mr James Imbatu who is a businessman signified that his business would not be as successful if he did not have a cell phone. He had a fixed-line telephone before but the problem with this kind of telephone is that he could not get in touch with his customers since they did not have one. In addition whenever he was not at his house he could not make calls concerning his business, but this is no longer a problem, since with the cell phone he can call anytime and anywhere.
He expresses his gratitude to the cell phone because it is flexible and most of his customers have managed to get cell phones, which mean he can have direct contact with them at any time and anywhere. Also he can easily get in touch with his business associates whenever he needs. The cell phone is basically used a business tool.

M-pesa usage was also observed during the interview and it was Mr Alfayo Sindani who has this function and uses it occasionally. He mean that M-Pesa is a good function because if he wants to sent money or receive money from his children, then they can use M-Pesa instead of waiting and sending the money at the end of the month or using someone to take the money to or from him. He added that not every one could use this function, as they have to be members of M-Pesa to be able to use this function on the cell phone. Miss Caroline Ngesa gives another view saying “money transfers are now easily done by cell phone and one does not have to travel to take money upcountry to the relatives. Banking has been made easier through the cell phone technology”.

When it comes to entertainment it was only Mrs Neddy Sindani who listens to music on her cell phone and Mr Elphace Ngongo who listens to the news. Although there was great interest from all the interviewed in buying modern cell phones with all new functions e.g. chat function, write e-mails, video conversation TV, MMS etc. they still thought that it was an extra expense that was not necessary at this time. But they all would consider buying a modern cell phone if their current one broke down. Miss Caroline Ngesa adds that people are able to subscribe to news services and getting updates on their cell phone on what is happening around them locally and in the society at large.

Mrs Neddy Sindani talked about the battery-charging problem specifying the need for either long lasting batteries or a cell phone with no need for charging, as this certainly would be the ultimate solution for rural people. She was not the only one concerned about the battery problem as there is expensive to charge the phone buying power service.

Miss Caroline Ngesa has noticed an increase of cell phone sold per month and that the fascinating thing is that it is mostly women are buying. A high number of these women will use it in their business. She continues with saying that people have the possibility to save allot on travelling expenses and at the same they can work from the comfort of their homes while they carry out business using their cell phones. She also claims that “As the economy continues to improve and as the cell phone costs go down due to competition in the market, the sale of phones will also increase”. Concerning future needs she says that “the technological aspects are also continuing to vary with the coming of better phones that have radios, MP3 Players which is an attribute that many young phone users prefer, this is also going to increase usage”.
6. Discussion

The data collected shows that cell phones in rural Kenya have an enormous impact on all levels of society but especially for people in rural areas. The success of the cell phone in rural Kenya is due to decreasing prices, as many can now afford to purchase one and because of the efforts done by cell phone service providers to provide network for the cell phone to work properly even in the rural areas. This was not the case in the beginning when the cell phone was first introduced. For instance ten years ago, people who had cell phones were really rich and the network was restricted to the cities and towns. In rural areas it was not possible to use a cell phone and prices for the cell phones were so high that most common people could not afford one.

However, in 2002 the situation completely changed and since prices had gone down many people realised the advantage of having a cell phone. Amazingly enough, the network was soon available even in the very interior areas in the rural Kenya and the cell phone has crossed all the social boundaries as it is not only for the traditionally financially and economically developed world; it is also for the developing countries and rural areas too. Availability affordability, simplicity, flexibility, competitiveness and pre-payment are the core factors to why the cell phone is a success story in the rural part of Kenya.

This thesis has examined the cell phone use in rural Kenya. It demonstrates that the cell phone is a favoured communication tool among the rural population. Those interviewed in this study shows a similar pattern in the cell phone perception. All individuals who took part in this study use their cell phone mainly for communication purposes. The illustration given by the context structure proves that families and friends can keep in touch via the cell phone, making communication within families and between friends simple. For distant families and friends, using the SMS function is cheap and convenient way of communicating. It was indicated from all the participants that SMS is most widely used on the cell phone.

People living in rural Kenya embrace the cell phone because it is a communication option that has been almost unavailable. Before they needed to make cumbersome walking to pass a message to someone who lives far away, now they can simply use SMS to pass the same message. And fixed-line telephony is still not an option for everyone, very expensive and often takes long time for installation as for the case of Mr James Imbatu the business man so in the near future approximately 40% of the rural population will have a cell phone according to Caroline Ngesa, the sales representative. In Kenya as a whole 100 000 new cell phones user are added every month.

Most people use the cell phone mostly for communication purposes. Many people are using their cell phone to look for job opportunities, as this is cost effective way of doing the job hunting. Those searching for jobs can use their cell phones and the subscribing function called “Kazi560”. This has become a convenient way of searching for job vacancies. In the business sector the cell phone has practically revolutionised the way to run business activities.
Customer can be contacted by cell phone, advertisement of new products can be done via cell phone and striking business deals with and keeping in contact with business associates is possible too. This trend is improving the economy not only for the person in business but for the whole society.

Cell phone can be used in health issues for example spreading health awareness information or breaking news in general via SMS to the general public as it can simultaneously reach people across the whole country. Since cell phone is able to provide various functions and those who choose to receive information through the news that is channelled via the cell phone. Cell phone owners can also choose to listen to radio and music as part of entertainment. Some distance learning is also possible with cell phone via SMS.

Another observation that was addressed in this study concerns business tasks. The cell phone has the potential to provide access to new business information for business people. For example fishermen purchase a cell phone as soon as they can afford them as it enables them to choose to land at a port with buyers willing to purchase their catch (Donner 2005). A statement made from a fisherman in rural Kenya proves this "we call fishermen on the other beaches to see if the fish are plentiful, if there are fewer fish, we can try to get a better price" (Chakraborty 2007). Also the cell phone can be used to locate new customers and enlarge the business networks, while it can be used to strengthen the relationship with the already existing customers (Donner 2005).

For small business in rural areas that would include traders, craftsmen, herdsmen, the cell phone can be used to advertise products and later on sell the products not only nationally but internationally to expand the market in their field (Alzouma 2005).

Surveillance of different products prices e.g. crops, coffee, tea etc is possible with cell phone bypassing the before so important middleman. A middleman’s role was to observe different product prices on the world market and report back to sellers and buyers earning a commission. With the cell phone businessmen can check for prices themselves. Other customers use the cell phones to compare prices on different products while advertisement can be done via the cell phone too. Travelling expenses has been eliminated thanks to the cell phone and many people are saving both time and money.

It is important to note that the cell phone is also giving social status and security and this in sum a sense of well being for their owners as they can use it in case of emergencies and they can be able to reach whomever they want and from wherever they are. In the example of the retired Salvation Army officer, Mr Elphace Ngongo he can easily get in touch with his wife’s doctor and get help as quickly as possible.
Mr Alfayo Sindani who is a primary school teacher embraced the cell phone implicating that the cell phone has made the world a small place, that from his fingertips he can talk to anyone in other parts of the world, for example the interview, he noted that it would not have been possible if he did not a cell phone. Mr Alfayo Sindani indicated that the cell phone has become so important that he has to have it everywhere he goes, that he has become “addicted to it”.

Charging of the cell phone poses a challenge for many people in rural Kenya and those who have no charging alternative need to pay for that service. This kind of service is usually available at the nearest shopping centre and is quite expensive to use. Teachers for example charge their cell phone at school but the same opportunity is not available when schools are off so sometimes they must pay for charging service. On the other hand, those who have solar power use it to charge the cell phones as Mr Elphace Ngongo who was interviewed. Mr James Imbatu, the businessman charges instead his cell phone using electricity since has been installed recently at home.

6.1 Further reflection

Invention of a cheap cell phone with a long lasting battery or a battery free cell phone would be appreciated among people living in rural Kenya. In respect of cheap cell phone the technology behind the “100 dollars computer” maybe could be used. The invention of simple computers aimed to cost no more than USD 100 is an effort that has been made to equip poor countries and if deployed on cell phone it would be an added benefit to the people living in such countries. Since power is still a major problem in developing countries efforts has been formed to make sure that the computer does not run out of power and a string is connected to the computer that is connected to the computer generator, when the string is pulled several times the computer charges. OLPC (One laptop per child) mean that this technique is “a flexible, ultra-low-cost, power-efficient, responsive, and durable machine with which nations of the emerging world can leapfrog decades of development” (2008).

Cell phone developers and manufactures could use the same technique to solve the problem with battery, and this would be particularly for those who live in places where there is insufficient electrification. Alternatively, solar power could be an option. The idea is that the cell phone will automatically charge when it comes in direct contact with sunshine. Based on the many hours of sunshine that Kenya have, this would be simple and realistic for cell phone owners and also profitable for cell phone developers and manufacturers. Since this system is used successfully in certain calculators, it would be also possible to be applied in cell phones. The solar power would also be user friendly as well as environmental friendly considering the current global worming debate that is discussed on daily basis.
6.2 Future research

Cell phone charging problem could be a field to do a further research on. One could look on how to develop a cell phone with long-lasting battery or even better a battery free cell phone. A few people who were interviewed in this thesis brought up the dilemma and it would be important to research on different possibilities to solve this problem. Another area that could need future research is on the M-Pesa function. It would be interesting to look deeply into how M-Pesa function has influenced the financial sector in Kenya. It is a unique function that is specifically used in this country and helps people transfer money using their cell phones. In this study it is indicated that bank institutions are willing to utilise this function especially targeting people with no bank accounts but no killer application has been presented yet. There are also quite a number of people who live abroad and want to send money to their families who live back in Kenya so if M-Pesa could be launched globally, it could provide possibilities to transfer money without using bank services, as usually is the case now.
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Appendix A – Interview questions

*Five people living in the western part of Kenya in Mayoyo and Lugari have been called and asked the following questions:*

What is your name?
What is your occupation?
And if retired what are you doing at the moment?
What made you buy a cell phone?
Which model or kind of cell phone did you buy?
Where did you buy it?
How much did it cost?
How do you charge your cell phone?
What more can you do with your cell phone?
Before you bought the cell phone, how did you communicate?
Would you invest in a more sophisticated and extra functions on a cell phone? (Chat/E-mails/Video conversations/TV/MMS)
Do you have any disadvantages on cell phone?
What do you think you can improve on the cell phone given the opportunity?
Appendix B – Questions and answers from Mr Elphace Ngongo

Name: Elphace Ngongo
What is your Occupation: I am a retired Salvation Army officer (Lieut-Colonel)
What do you do now? Small-scale farming

What made you buy a cell phone? I use my cell phone mainly for easy communication to family, friends and other people. Family: My children who are scattered all over the world Nairobi, Canada, Sweden, Scotland and Dubai. My brothers and sisters and the entire family. Friends: Living here in Mayoyo or anywhere else in Kenya. Other People: My Salvation Army officials, Politicians, Help organization leaders, Government officials. Another reason why I bought the cell phone is because in the past I had a very sickly wife, with the cell phone I could call for help from the doctor at any time no matter day or night. The cell phone has reduced the burden of walking miles just to be able to call. Now we can call from anywhere we are. This is very good.

Which model or kind of cell phone did you buy? I bought a Safari com - Siemens.
Where did you buy it? I bought it in Nairobi.
How much did it cost? That time it was KSH 5000 but now the prices have gone down.

What more can you do with your cell phone? I use my cell phone to send text messages because it is cheaper than calling. Especially for my children who live abroad, it is important that I can write a message to them and it is affordable. Calling abroad would be very expensive but calling within the country I do but not very often because I have SMS that saves me from calling. I also use the calendar that is not so often.

The alarm clock is also an important thing I have on my cell phone. I just need to set it and it will wake me the right time not like depending on the cockcrow, which can be very unpredictable and unreliable. I have some children who haven’t had a job yet and for that matter sometimes they don’t have credit on their cell phone. I can use my cell phone to send money on their phone to feel credit cards so that they can be able to call or sent SMS when they need to do that. This service is called “Sambasa” in Swahili.

-Sent SMS -Yes
-Camera - No
-Calendar - Yes
-Calculator - No
-Alarm - Yes
-M-Pesa/Sambasa - Yes
Before you bought the cell phone, how did you communicate? *It was hard because you had to walk many miles to call from a public phone in the post office.* Letter writing was not that easy too because you needed to walk a long distance to buy the stamps and to post the letter. And collecting letters from the post office depends on if you have transport money to go and get letters that has been posted to you. Collecting letters from the post office needed planning since it could be a whole day’s work.

*The first thing you do it walking to the nearest road to pick a bus or mini-bus that will take you to the nearest town that has a post office.* At the post office usually it’s congested with many people wanting different services, when you are done at the post office, you might require waiting for the bus to take you home and with home means where you took the bus in the morning and the rest of the journey you have to walk. It is a very tedious transaction and inconvenient too.

Do you have any disadvantages on cell phone? *No I have only advantages.*

How do you charge your cell phone? *I use the Solar battery that I have.*

What more can you do with your cell phone? *I use my cell phone to send text messages because it is cheaper than calling.* Sometimes when am away from home I can use the radio to listen to the news. I’m not so interested in listening to music so I do not listen to music.

Would you invest in a more sophisticated and extra functions on a cell phone that includes the following services? (Chat/E-mails/Video conversations/TV/MMS) *Of course I would, that way instead of just calling then I can be able to see the person I’m talking to. E-mail service would be good, but I don’t know about watching television on the phone. Am a bit skeptical about that, maybe the picture and sound quality might not be so good and for goodness sakes I don’t want to see TV on a small screen, I guess I would do that on my TV at home. The answer to your question is yes but I have only one problem and that is lack of money.*

What do you think you can improve on the cell phone given the opportunity? *I would manufacture cheap cell phones so that anyone who wants it can afford it.*
Appendix C – Questions and answers from Mr Alfayo Sindani

Name: Alfayo Sindani What is your Occupation? I am a primary school teacher.
Which model or kind of cell phone did you buy? I bought Siemens.
Where did you buy it? I bought both of them in Nairobi.
How much did it cost? The first one I cost me KSH 9000 and I bought it in year 2001. The second one cost me KSH 5400 and I bought it in year 2002.
So you have two cell phones? Why is that? I needed to buy another one so that my wife would have, just in case we needed to communicate while I was at work or something.
What more can you do with your cell phone?
- Sent SMS - Yes - Camera – No - Calendar - No - Calculator - No - Alarm - No

Before you bought the cell phone, how did you communicate? It was very difficult. Communication was just a project on its own that required lot’s of traveling in the case of buying stamps and posting the letter itself. This really was a time consuming issue. The cell phone to me, it has changed my life in away that I can talk to whoever I want from whenever I am. It’s amazing! If I want or when I want to visit my children in Nairobi, I just give them a call instead of just showing up with no notice. I can use my cell phone to call my wife and tell her something before I come home. When she gets a visitor who has come suddenly she calls me and informs me instead of sending someone to come and tell me at work. I must tell you that the cell phone has made the world a small place. The world is just at your fingertips. For instance like now this very juncture that I’m talking to you in Sweden, a place so far I could not afford coming over but with the cell phone you could reach me right here in Mayoyo.

Do you have any disadvantages on cell phone? The cell phone as such is only good but now when I have had it for sometimes I think charging the battery is somewhat nuisance. You know the battery is not lasting at all so you must do the charging all the time. Another thing that I can say that it is a disadvantage is that you get addictive to it. You can’t go anywhere without it. You must have it all the time. And that to me I think is not a good thing always.
How do you charge your cell phones? I use battery when I am home otherwise I try to charge it at work because we have power there.

What more can you do with your cell phone? I use my cell phone to receive calls and calling too. M-Pesa helps me to receive money from my children but you must be a member of M-Pesa, which I am. This is a very good function because in the past it was rather difficult to get money from Nairobi, because it meant that they sent it with someone who is traveling home so now it is very much easier.
Would you invest in a more sophisticated, more function cell phone? (Chat/E-mails/Video conversations/TV/MMS) On the points above I would very much like to but the issue here is the money.
What do you think you can improve on the cell phone given the opportunity? I would make cheap cell phones so that people can afford it.
Appendix D – Questions and answers from Mr James Imbatu

Name: James Imbatu. What is your occupation? I am a businessman

What made you buy a cell phone? Since I am a businessman communication must work otherwise I could not get in touch with my customers or other business associates. Therefore the cell phone main purpose is for communication and especially to my customers and people who work in the same business. I don’t mean that I don’t use my cell phone for other things I do but it is in business that I use my cell phone most. Cell phone has brought revolution in the business industry. You can talk with your associates, customers, family members and anyone you want just by using your cell phone. This is a business advantage technology not only that the cell phone is mobile therefore you can use it anywhere making it flexible to work.

Which model or kind of cell phone did you buy? I have a Nokia 23
Where did you buy it? I bought my cell phone in Kisumu.
How much did it cost? It was KSH 6000

What more can you do with your cell phone? I use it to sent text message (SMS). I use the calendar then I don’t need to carry my diary all the time. I use the calculator, calculator for a businessman is very important. But those other functions you mentioned I don’t have them on my cell phone. I don’t have the camera and the alarm.

-Sent SMS - Yes -Camera - No -Calendar - Yes -Calculator - Yes -Alarm - No

Before you bought the cell phone, how did you communicate? I used a fixed-line telephone provided by Kenya telecommunication Agency. This is because of my business. If I was not in the business branch may be I would not have needed a telephone.

What to improve on the phone? Nothing it very good just the way it is and Text Message Service is an excellent idea.

How do you charge your cell phone? I use power from electricity
So you have electricity at your house? Yes this was installed just a few years ago.
What more can you do with your cell phone? But those other functions you mentioned I don’t have them on my cell phone. I don’t have the camera, the alarm and I have no radio on my cell therefore I can’t listen to music.

Before you bought the cell phone, how did you communicate? I used a fixed-line telephone provided by Kenya telecommunication Agency. This is because of my business. If I was not in the business branch may be I would not have needed a telephone then,

Would you invest in a more sophisticated, more function cell phone? (Chat/E-mails/Video conversations/TV/MMS) Yes if I had some extra money otherwise it’s ok the way it is.

Do you have any disadvantages on cell phone? No I would not say so, so far so good and no disadvantages.
Appendix E – Questions and answers from Mr Alfayo Maikuma

Name: Alfayo Maikuma

What is your occupation? *Takes care of cows and goats and can help in digging the land.*

What made you buy a cell phone? *For communication purpose*

Which model or kind of cell phone did you buy? *Motorola T190t*

Where did you buy it? *I bought it in Kakamega town*

How much did it cost? *It cost KSh 5500*

What more can you do with your cell phone? *Receiving calls and calling other people*

- Sent SMS - *Yes*  
- Camera - *No*  
- Calendar - *Yes*  
- Calculator - *Yes*  
- Alarm - *No*

Before you bought the cell phone, how did you communicate? *I used to write letters or alternatively send someone to take the message that needs to be passed to that person. Or when you cannot find someone to send then you have to go yourself and inform the concerned people about what you had in mind.*

How do you charge your cell phone? *I must go to Luandet to charge and it cost KSh 20*

What more can you do with your cell phone? *Mostly receiving calls and limited calling other people*

Listen to the radio/music Music? *No it is not on my cell phone*

Credit cash function/Sambasa? *Yes but it is me who needs someone to send some cash on my cell phone because I don't have so much money for credit. This function is useful for people like me.*

Would you invest in a more sophisticated, more function cell phone? (Chat/E-mails/Video conversations/TV/MMS) *Of course I would but you know the problem here is money.*

Do you think that the cell phone invention is a good idea in telecommunication technology? Which percentage would you give to the cell phone? *Very good idea and I give it 100 percent. It is very important piece of property I have right now People can call me for instance from my customers if they need me to go and help with something they just call me and that means they can reach me whenever they want.*

Do you have any disadvantages on cell phone? *The only disadvantage that I would give the cell phone is its charging system is very bad. The battery does not last long it gets finished very quickly. That is the only problem I have with my cell phone.*

What to improve on the phone? *I would make a cell phone with a long lasting battery. Charging it once a month would be ok.*
Appendix F – Questions and answers from Mrs Neddy Sindani

Name: Neddy Sindani

What is your occupation? I am a Teacher

What made you buy a cell phone? To communicate with other people

Which model or kind of cell phone did you buy? Motorola 116

Where did you buy it? I bought my cell phone at Kakamega town

How much did it cost? It cost me KSH 5000

What more can you do with your cell phone? I receive calls and off course I use for calling sometimes. I sent SMS and use the calculator. Not to forget the alarm is very good when you must go up at a certain time you just set it and you can trust that it will go on. Yes I have the Sambasa function it enables other people to send a little cash to fill in the credit on my cell phone.

-Sent SMS - Yes -Camera - No -Calendar - No -Calculator - Yes
-Alarm - Yes -Credit cash function/Sambasa - Yes -Listen to the radio/Music - Yes

Do you think that the cell phone invention is a good idea in telecommunication technology? Which percentage would you give to the cell phone? Oh yes it is 100 percent good. You almost need to leave the way we do to realize the goodness of the cell phone. It is a very good invention, sometimes I think that they were thinking about poor people living in the interiors, because I tell you it suits us very much.

How do you charge your cell phone? I use power to charge my cell phone.

So you have power? Oh no I do it at the market and they have power, we pay KSH 20 for charging service.

Before you bought the cell phone, how did you communicate? I could write letters or go there myself if need be or sometimes I could send my children to go and convey the message.

Would you invest in a more sophisticated, more function cell phone? (Chat/E-mails/Video conversations/TV/MMS) No I don’t think so because whenever you get money you have priorities. I think it is enough just having this one unless it breaks down then I would buy one that has more functions.

Do you have any disadvantages on cell phone? The cell phone credit is not lasting you know a hundred shilling is nothing, you must put over KSH 500 for it to last just a bit and that is very expensive.

What to improve on the phone? Long lasting batteries or invent a cell phone with no need for charging meant for rural areas that don’t have power.
Appendix G – Mail questions and answers from Mr Roland Nissfolk

Occupation: **Project Supervisor for East Africa**

- What is the name of your organisation?
- What is the name of the place where you are working?
- Which kind of communication channel did you use before the cell phone?
- Do the local people have cell phones?
- What benefit has the cell phone brought?
- Who has the cell phone most?
- What is your personal observation about the cell phone trend?
- How do the people there charge their cell phone battery?

The name of the organisation is Erikshjälpen. Erikshjälpen has many offices in Kenya but this particular one is situated in western Kenya in a place called Maseno. We choose this location because there were a little communication resources since it is an agricultural university. We could use the fax and there was electricity when we started to work in this location. We are seeing more and more people having cell phones. The cell phone is doing a lot for the people living in rural areas remembering the fact that people in this areas has not had the possibility to communicate as they are doing now with the cell phone arrival.

What we are observing now is that the cell phone has improved the communication channel in a very incredible way and we can see that people who have the cell phone have a positive attitude to having or owning a cell phone. It is fantastic progress in the level of communication. It makes it flexible and easy for us to work with the people on the countryside. If for example we are late for some reasons we simply call and inform that we are coming late and people can do other things rather than sitting and waiting for us. With the cell phone people can access the Internet via their cell phone, this brings new possibilities to the countryside than one could imagine. We can’t tell exactly which categories of people who have a cell phone because we see all kinds of people having one, that is to say men, women, and mostly young people have it. In general it’s all people who have been to a school or have some kind of education that acquired a cell phone. It might be difficult for an illiterate person to handle a cell phone but that is going to change.

Charging the cell phone is not as easy as one could think most of those who don’t have any electricity do it at the nearest shopping centre and they pay for that service and most of them do the charging on their solar system. This is a challenge for cell phone owners who don’t have power. My personal observation is that cell phone use is going to explode since more people are striving to own one and in a few years to come I think every household will own a cell phone for the sake of the family in the household.
Appendix H – Mail questions and answers from Miss Caroline Ngesa

Occupation? Sales representative, Sunny Electronic and Mobile Sales
How many cell phones do you sell per month? 70
Who buys the cell phones most, women/men/boys/girls? Women
Do you think people in rural Kenya have joined the trend of cell phone ownership? Yes
What kinds of people are buying the cell phone? (Working class/students/Common Man/farmers/business people) Business people
Which impacts does the cell phone have on the people, e.g. socially, economically?
Socially it is easy to meet with friends and knowing how they are as well as keeping in touch with family. Also depending on the kind of cell phone one has, it improves his/her social status. On the negative side it has also been able to break many families since spouses easily cheat on each other and one can easily get a message that is incriminating thus increasing the rates of divorce in society. Economically; People tend to save allot on travelling and they can also work from the house and also do business using their phones. Money transfers are now easily done by cell phone and one doesn't have to travel to take money upcountry to their relatives. Banking has been made easier through the cell phone technology.

Could you say that the cell phone has improved people's lives? If so how? YES it has really improved people's lives in that people are able to communicate easily and well informed of what is happening around the country. One is also able to get to subscribe to the news services and they are able to get updates of what is happening around them and the society at large. There is also a service of mobile banking where the people don't have to go to the bank to deposit their small savings as they can do it from the comfort of their homes using the cell phone.

Which type of phone is being bought or sold? Most and why is that? Nokia because it is user friendly and to some extends it is cheap.

Do you have any future prognoses? Basing on the escalating high number of cell phones sold. The number of cell phone users is going high and it is anticipated that each and every household will have at least two cell phones in the coming 2 to 5 years. As the economy continues to improve and as the mobile costs go down due to competition in the market, the sale of phones will also increase with the trends. The technological aspects are also continuing increase usage with the coming of better phones that have radios, MP3 players that is an attribute that many young phone users prefer.

Do you have any data showing the statistics about cell phone business in Kenya and especially rural Kenya? At the moment we don't have any since our company is still very young. But I estimate that the cell phone is growing gradually and it is now selling allot in the rural areas because of rural based business enterprises that are coming up. Mobile usage in towns and rural areas is estimated at 60 and 40 percent respectively. The urban consumers are in terms of credit buying high while text messaging is also very high. This is attributed to the high sales of lower unit credit cards, which mean that the consumers in the rural areas had rather use smaller units of credit than the urban counterparts.
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