

**POTENTIALS OF MOBILE BANKING ON PROVISION OF  
FINANCIAL SERVICES IN RURAL AREAS: EXPERIENCE  
FROM, TANZANIA**

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**ABSTRACT**

*This study examined the potentials of mobile banking in provision of financial services in rural areas of Tanzania. Specifically the study examining the types of financial services provided by mobile phone banking in rural areas, assessing the awareness of rural people on the use of mobile phone banking services and examining the challenges facing mobile phone banking in provision of financial services in rural areas. Both primary and secondary data were collected by using a stratified sampling method from a total of 92 respondents by using questionnaires and interview to obtain different opinions and reactions towards potentials of mobile banking on provision of financial services in rural areas of Tanzania. The findings show that financial services provided through mobile phone banking in rural areas are sending cash/money, cash withdrawal; buy credit/airtime, check account balance, and bills payment remain very low especially in rural areas. However villagers have little knowledge on how to use mobile banking. It is therefore recommended that mobile phone subscribers should extend education to rural areas on uses and significance of mobile banking services and network accessibility in rural areas should be improved*

**Key words: Mobile Banking, Financial Services, Poverty Reduction**

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## INTRODUCTION

Mobile banking refers the provision of banking services over a mobile network and accessed with a mobile device by a mobile carriers. It has been considered to be a potential new business opportunity for mobile carriers. It has been assumed that mobile banking represents the next evolutionary step. It was believed that the convergence of mobile telecoms and the internet would enable banks to simply extend their existing online banking services to mobile subscribers, with a host of benefits for all involved (Porteous, 2006).

Nowadays, mobile phone usage has spread in a very broad manner in the world, becoming the first communications technology to have more users in developing countries than in developed ones. Earlier this year, the mobile phone became the first communications technology to have more users in developing countries than in developed ones. More than 800 million mobile phones were sold in developing countries in the past three years (GSM Association, 2007). However, banking services using mobile phones have been available in developed countries for several years, but in developing countries it is recently defused slowly especially in African countries. Now day's new modality of applying mobile phone banking have started to diffuse very faster to the rural and unbanked peoples (GSM Association, 2007).

Africa has the fastest-growing mobile phone market in the world and most of the operators are local firms. Mobile phone Banking are recognizing the potential of reaching millions of prospective customers, especially the rural population who account for more than 60% of Africa's total population and have no access to banking services. Mobile phone banking (M-Banking) has great potential for extending the provision of financial services in rural areas through a technology that is both familiar and widespread (CGAP, 2006).

More than 50% of the adult population in Africa has access to mobile telephone, that situation could enable the rural population to have access to financial services. The limited access to financial services in Africa stems particularly from deficient infrastructure, physical-geographical isolation or inaccessibility, financial illiteracy, all of which culminate into exceedingly high cost of providing banking services. Ethiopia, Uganda and Tanzania for instance, each have less than one bank branch per every 100,000 people, Namibia having more

than four, Zimbabwe more than three and Botswana nearly four bank branches per 100,000 people. This ratio however shows a high disparity across the continent, with (AfDB 2010).

In African countries such as Tanzania and Malawi, mobile telephones are taking step in to the formal financial services. Almost one million active customers in Tanzania use mobile-phone payment to transfer funds to relatives, buy supplies, pay doctor's and save money for future emergencies. Only 12 percent of Tanzania have formal bank account, but half of Tanzanians hold mobile phone, through which they can save money and handle financial transactions without needing a bank account. The phones are relatively inexpensive to purchase; they are in fact the first technology in history to have low-income users than wealthy ones. (The Citizen, 18<sup>th</sup> Dec. 2010).

### **Statement of the Problem and Significance of the Study**

Evidence showed that access to financial services, and overall financial development, is crucial to economic growth and poverty reduction (Mwangi and Njuguna, 2009). Yet in Sub-Saharan Africa, only 1 in 5 households have access to financial services and only 88% of Tanzanians has no formal bank account relied on informal financial services, but half of Tanzanians hold mobile phone, through which they can handle financial services without need a bank account (The Citizen, 18<sup>th</sup> Dec. 2010).

Traditional banks unsuccessful for providing financial services in rural areas due to weak rural infrastructures; irregular income to many rural people; poor network and most of their earnings are too small to save. However, the traditional approach of branch-banking requires substantial investments in both infrastructure and personnel, and thus is not an effective in reaching millions of unbanked households, especially those in rural areas (Fincsope, 2006).

Mobile banking is seemed to be a solution to this problem, since real potential of "mobile phone banking" is to make basic financial services more accessible to millions of poor people across the world, where it takes the advantage of weak rural infrastructures through mobile phone operators to provide financial services in rural areas, at lower cost compared to traditional banking. With mobile phone banking, low-income people no longer need to use scarce time and financial resources traveling to distant bank branches (BAI and Booz, 2004). However, the information on the potential of mobile phone banking in provision of financial services in rural

areas was not well established. Currently, the study intends to assess the potential of mobile phone banking in provision of financial services in rural Tanzania. Specifically the study will; examine the types of financial services provided by mobile phone banking in rural areas, assess the awareness of rural people on the use of mobile phone banking services and examine the challenges facing mobile phone banking in provision of financial services in rural areas.

The findings are useful to the mobile phone operators, agents and stakeholders to improve or expand their services to the poor and rural populations in a way geared to economic growth and in advising government authorities together with policy makers on appropriate policy formulation, regulations and institutional arrangement that will enable mobile banking to operate well in provision of financial services.

## MATERIALS AND METHODS

Both primary and secondary data were collected by using a stratified sampling method from a total of 92 respondents ((holder of mobile phone, 7 telecommunication provider's agent of Vodacom, Airtel and TIGO as the key informants) by using questionnaires and interview to obtain different opinions and reactions towards potentials of mobile banking on provision of financial services in rural areas of Tanzania. The Sampling Frame included a total of 1200 households from both villages registered as holder of mobile phone and key informants. The study sampling Unit was the respondent with mobile phone in the study area and telecommunication provider agent of Vodacom, Airtel and TIGO as the key informants.

These methods give interviewee an opportunity to provide more information and get some clarification from the interviewer on issues about potentials of mobile banking on provision of financial services in rural areas. Documentary reviews were also conducted by reviewing from mobile phone agent's operator reports (TIGO, Vodacom, and Airtel) and internet café. The collected raw data from the field were processed and analyzed through SPSS programme. Descriptive statistics was mainly used to describe the problem under the study by presenting a combination of variables. A cross tabulation was used to simplify the understanding of potentials of mobile banking on provision of financial services in rural areas of Tanzania.

## RESULTS AND DISCUSSIONS

### Types of financial services provided by mobile phone

Mobile phone banking in Tanzania provides a great opportunity to people who are currently living in urban and rural areas, as well as for those who have low incomes. It offer services to those who have never access to financial services in the bank or Financial institution, but they use mobile phones to perform financial transactions as those who are using traditional/formal bank. Active customers in Tanzania use mobile-phone banking to transfer funds to relatives, buy supplies, pay doctor's and save money for future emergences. The study findings revealed that 38.7% of the respondents use mobile phone banking for sending/receiving money, 31% for cash deposit/withdrawal, 15.5% of respondents use for buying airtime/credit, 14% of respondents use mobile phone for check account balance and 0.8% of respondents pay electricity bills ( LUKU) (Table 1). This implies that many people in rural areas use mobile phone banking for sending and withdrawing cash and very few uses the technology for making payments of bills like electricity bills and water. The findings are in line with the study done by Finscope and Adongo (2007), on potential for mobile phone which shows that, the use of mobile phone banking to make payment of bills water bill and electricity bills is low among rural people due to unavailability of this services in rural areas, but mostly used by urban areas were this services are available.

**Table 1: Financial services provided by M. banking available in rural areas**

Financial services	Response	Percent
Buy airtime/credit	20	15.5
Sending money	50	38.7
Cash withdrawal	40	31.0
check account balance	18	14.0
pay electricity bill	1	0.8
<b>Total</b>	<b>129</b>	<b>100.0</b>

Source: Field data survey, 2012.



### Awareness of People towards Mobile Phone Banking

The attitude of people on the use of mobile phone banking on the study area appeared to be positive. Among the household who were surveyed in the study areas, 63% of respondents they accepted that they use mobile phone banking through their mobile phones while 28.3% of interviewed respondents did not use mobile phone banking because of unaware on technology and 8.7% of respondents were are not interested with mobile phone banking (Table 2). This implies that, many people in rural areas are aware of the issue of mobile phone banking but what is needed is education on how to perform these transactions.

**Table 2: Use of mobile banking by the respondents**

Response	Frequency	Percent
Yes	58	63.0
No, but i will use if am aware	26	28.3
No, not interested	8	8.7
<b>Total</b>	<b>92</b>	<b>100.0</b>

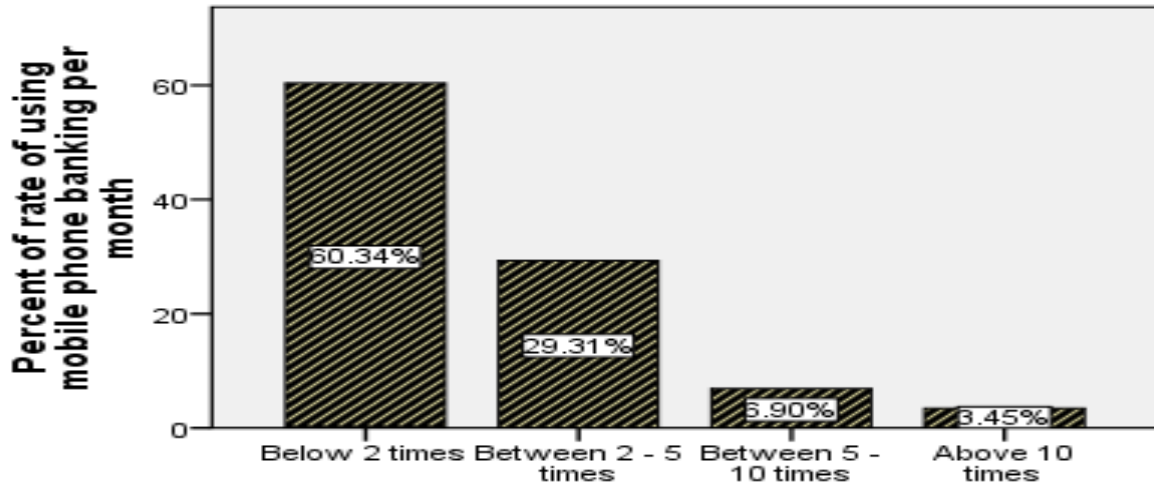
Source: Field data survey, 2012.

### Urban Rural Access

Concentration of mobile phone banking services is evidently heavier in urban settings than rural counterpart. It was observed that few agents over mobile phone banking services in the study area. For example in the area surveyed there are one agent of Tigo-Pesa, 2 ZAP agents and 5 Vodacom M-Pesa agents. These results in line with studies carried out by (Finscope, 2007) which illustrated that there is limited services of mobile phone banking in remote area where network signals are extremely scarce.

### Current Usage of Mobile phone Banking Services

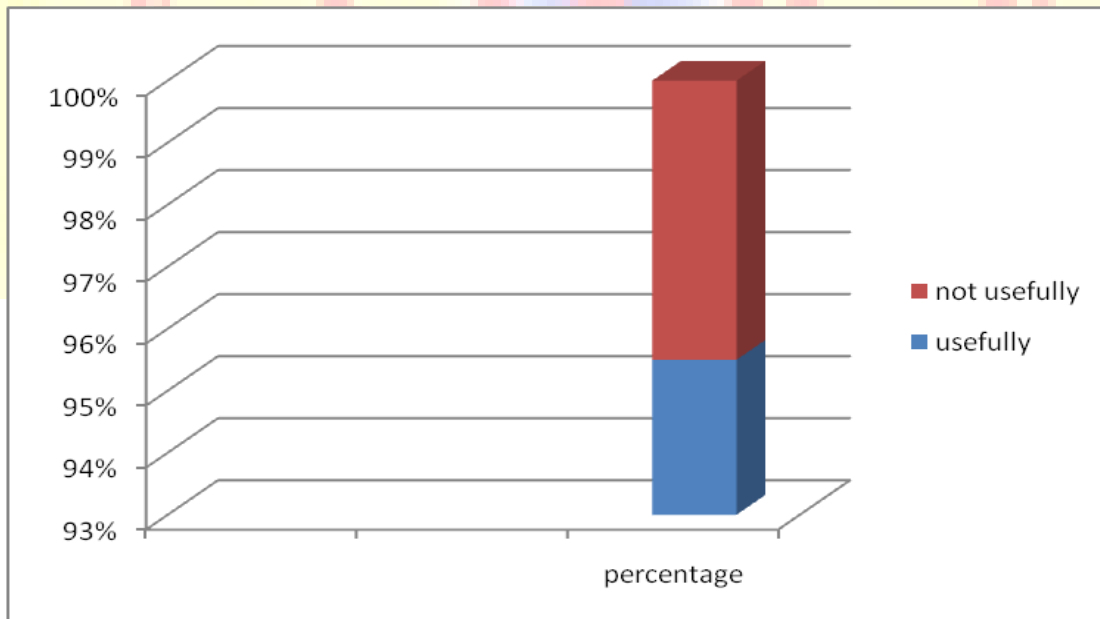
The study findings revealed that majority of respondents (60.34%) conduct mobile banking 2 times a week, 29.31% of respondents conduct mobile banking between 2 to 5 times a week, 6.9% of respondents use mobile banking services between 5 to 10 times a week and few (3.45%) used mobile phone banking more than 10 times a week (figure 1).



**Figure 1: Rate of using mobile phone banking in a month**

**Usefulness of Mobile Phone Banking to the People in Rural Areas**

Mobile phone banking is seen to be useful to many people especially in rural areas where people have no access to banks and other financial institutions. The majority of respondents (93.5%) opined that mobile phone banking is mostly useful to them while 6.5% of respondents said not useful to them ( Figure 2).



## Figure 2: Usefulness of Mobile Banking

### Challenges Facing Mobile Phone Banking

Mobile phone banking is a powerful way to deliver financial services to billion of people worldwide. However, this technology faces a number of challenges as results majority of rural population fails to enjoy services provided by the mobile banking. The result from the study revealed that 41.1%, of respondents faces a problem of network as major challenges and ignorance/illiterate of people on how mobile phone banking is operated as reported by 28.8% of respondents. This implies majority of cell phone holders affected by networking availability (Table 3).

**Table 3: The challenges facing mobile phone banking**

challenges	Response	Percent
Physical Loss of cell phone	25	15.3
Loss of password unsecured	9	5.5
Problem of network	67	41.1
Ignorance of people on how to use.	47	28.8
<b>Total</b>	<b>163</b>	<b>100.0</b>

Source: Field data survey, 2012.

### CONCLUSIONS AND RECOMMENDATIONS

Mobile phone banking provides financial services outside conventional bank branches using mobile phone technologies and non-bank retail agents. Some of the financial services offered by mobile phone banking in rural areas as reported in the survey includes: transfer payments within or outside the country, cash deposits, cash withdrawal, check account balance and buy airtime/credit. Others were payments of electricity bills, water bills, DSTV etc. but this were not accessible in the surveyed area.



The study revealed that many people in rural areas are aware on the issue of mobile phone banking, but no education or are illiterate on how to use the mobile phone banking technology. Mobile phone banking is a cost effective, reliable and simple way of conducting business. The potential of mobile banking in Tanzania is huge, especially with a large unbanked population especially in rural areas. The service is viewing to increase uptake in urban areas with the increasing mobile penetration in rural areas. Several leading banks are tying up with telecom operators and handset manufacturers to provide this facility in order to enhance customer service and facilitate branchless banking. Recent examples include the National Microfinance Bank (NMB) partnerships with Airtel, Tigo, and Vodacom to provide some of the financial services through mobile phones. It is recommended that telecommunication providers such as Vodacom, Airtel, Tigo, Zain and Zantel should ensure that there is full network in all areas particularly in some remote areas where the large population faces the problem of network.

Government through TCRA and telecommunication providers should educate their customers on mobile phone banking to make them aware on this new technology in order to avoid theft, because others take the advantage of unawareness and illiterate of many rural people to steal their money.

The policy makers, ministry of finance, and mobile service providers should educate the masses more about the benefits of integrating and using mobile phone banking in provision of financial services to enhance small businesses, farmers, and other people to speed up their financial transactions and to save the time spent in conducting these services in the banks or other financial institutions. Also the Tanzania government must provide a supportive policy framework that matches the growth rates in demand for microfinance and adoption rates of mobile phone banking.

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