

# Effect Of Mobile Phone Financial Services Usage On Business Performance In Rural Areas: A Case of M-pesa Uses in Kisii County.

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## Abstract

The proliferation of mobile devices and technologies has brought about the introduction of a number of value added services, new technologies involving mobile transactions, while creating important commerce opportunities ranging from mobile banking to mobile payments. This study sought to establish the effect of mobile phone financial services usage on business performance in rural areas of Kisii County. The researcher used 30% of the target population resulting to 327 respondents. Data was analyzed using percentage mean, minimum, maximum standard deviation, cross tabulations and multi-linear regression. The study found out firms that use mobile phone financial services register higher profits compared to firms that don't use the mobile phone financial services. Therefore the researcher recommends that Mobile Network Operators to come up with more financial services that will be useful in the rural areas where the banking services are not common and come up with ways to ensure money sent to a wrong number can be retrieved even after the wrong receiver has withdrawn it.

**Key words:** financial services, mobile phone, M-pesa

## 1. Introduction

Mobile financial services refer to the buying and selling of goods and services through wireless handheld devices. It involves the storage, payment, receiving and sending of electronic currency through the use of mobile phones.. These transactions and services may include account balance inquiry, transfer of funds (from one's own account to another account or even between accounts at different banks), and payment of credit card bills, water bills and electric bills, and purchase of mobile phone loads charged to a bank account or a credit card. Prior to the creation of electronic currency for mobile phones, the seeds of m-Commerce had already begun with the development of Pasaload, or the capability of individuals to transfer between users load credits (Lallana, 2004). In Kenya, M-Pesa was launched early 2007 by Safaricom and established itself quickly as an accepted M-banking operator by reaching 300 000 customers within three months. (Safaricom Press Release, March 2008). The M-Pesa offer is unique in the sense that no bank account is needed; the customer gets an M-Pesa account instead. Vodafone, part owner of Safaricom, was the initial driver of the project that started at the concept level in 2003 (Hughes and Lonie, 2007).

In response to M-Pesa's success, the model has been imitated in other countries for example Africa's biggest mobile operator MTN has rolled out schemes in Uganda. Central banks in some countries, such as Brazil, have now created financial inclusion teams, with a vision for using similar systems to bring financial access to the poor and isolated. The Indian government has also shown determination to achieve this aim, and analysts predict, with its strong IT infrastructure and dense population to becoming a cash-light, financially inclusive economy in the near future (Hughes & Lonie, 2007).

Technology and its effective use in organizations has received much attention in the literature, firms have continued to invest large amounts of resources in mobile phone services hoping that good returns will be realized (Weil, 1992). A number of studies on the application of mobile phone services in firm operations has been published (Matskin and Tveit, 2001; Lee 2001; Balasubramanian et al.; 2002). A few of these studies found no relationship between ICT services and firm performance. However quite a number of studies revealed that there is a strong positive relationship between use of mobile phone services and firm performance. Contradictory findings have therefore emerged from these studies. It is not exactly known to what extent Mobile Phone Services contributed to firm performance. This study therefore sought to examine the effect of mobile phone financial services usage to business performance in rural areas of Kisii County.

## **2. Empirical Review**

### **2.1 Sending money services**

Remittances contribute to the financial and social inclusion of needy people world-wide and to the economic growth of a country and they also play an important role during financial crises. The recent World Bank report on remittances is a testimony to the fact that remittances flows have remained more resilient as compared to private debt and equity flows and foreign direct investment. Sending money also help in reducing poverty, as it could be the poor who migrate and send money to their families. Some may argue that it is actually the rich who can migrate and send back remittances. Remittances could also be used to promote literacy. Studies show that the school dropout rate is lower and enrollment rate is higher in households that receive remittances.

M-Pesa's success in Kenya has been driven by mobile operator Safaricom's ability to tap into a large domestic remittance market through its popular slogan 'send money home'. In just over two years since launch, M-Pesa has attracted 7 million subscribers (over a third of the population 15 years or older), and it is still growing. Users appreciate ease of access (anytime, anywhere), reliability and affordability compared to other channels and the flexibility of the service. More broadly, M-Pesa affords the scale and efficiencies of corporate capitalism, and the flexibility and contextual appropriateness of informal markets. It demonstrates the volume and profitability of low-income markets as expounded in (Pralahad, 2006).

### **2.2 Receiving money**

According to Group Special Mobile Association (GSMA, 2009,) Mobile banking (or another form of mobile money transfer) provides a secure means of accessing and transferring funds, provides a channel for access to savings products and services, and gives access to credit for low-income housing or financing agricultural development and insurance products and services ( GSMA, 2009. People walk around with their virtual money knowing they can withdraw cash any time at a minimal fee. People also use M-PESA to receive contributions to events like pre-wedding parties and to fund drives for medical bills because it is convenient and available even in remote locations. It is also safer for the treasurers, who need not deal with cash. But the convenience has a downside: when people use technologies like M-PESA, they need not show up for meetings. Their absence removes the social bond as well as the peer pressure that is sometimes necessary to raise more funds.

### **2.3 Buying airtime**

A study by Wu and Wang (2005) on the costs of mobile commerce showed that perceived cost had minimal significance when compared to other variables such as perceived risk, compatibility and perceived usefulness. A study by Kim et al. (2008) found that when deploying a technology perceived by users to be high risk, managers need to emphasis 'ease of use'. When deploying a technology perceived to be low risk, managers need to focus on communicating the 'usefulness' of the technology (Kim et al., 2008).

Mobile operators in Kenya and SA offer popular airtime transfer services, such as Me2U (from MTN in South Africa) or Sambaza (Safaricom in Kenya). For a small fee, one pre-paid customer may transfer a portion of her airtime to another user on the same network. The characteristics of this service have led some to suggest that airtime is a *de facto* form of e-money or alternative currency. A BBC commentator comments on the launch of the Sambaza service in Kenya: "What (Safaricom CEO) Michael Joseph has actually done is to create a new currency a cyber- currency that can be sent anywhere in the country at the press of a button, without needing a bank account or incurring high bank charges. The Economist magazine in 2005 reported the story of a woman in Democratic Republic of Congo (DRC) who settled a bribe to officials across the country by sending them airtime (Faludi, 2005).

In a study by Lin and Wang (2006), brand loyalty is simply defined as the repetitive purchase of preferred brand products or services. It further defines customer loyalty as a customer's favourable attitude toward the mobile vendor that results in repeat buying behaviour (Lin & Wang, 2006). For the purpose of this study customer loyalty will be used. According to Reichheld and Schefter (2000), to earn customer loyalty in an online business it is critical to first earn customers' trust. A study by Harris and Goode (2004) found that trust is positively and directly associated with customer loyalty for online services. Since mobile banking is considered an extension Internet banking (Brown et al., 2003), it is therefore considered to be part of the online services.

### **2.4 Saving money**

Informal savings options are quite widespread but they may not always be reliable. Deposit collectors in places like India and West Africa also offer savings services for a fee. The service they offer is a combination of temporary safe-keeping of funds as well as discipline (through their daily visits to peoples' homes or stalls in the market). Informal savings groups exist in many low-income countries, especially among women. They entail nil or minimal fees (for record keeping and group formation services), but participants need to invest significant time in building group solidarity and monitoring performance. Other popular savings options are entirely intra-household (typically in the form of hidden cash, jewels, livestock or building materials), between friends and

family (typically in the form of loans) or within the community (through savings-led groups). Given the lack of reliability and/or high opportunity costs of informal savings options, a low-cost, widely available formal option would be very attractive.

Generally speaking, mobile money offers for savings are strongly competitive in relation to formal options for the mass market. For mobile money providers, the areas to watch out for are semi-formal services, and, in some cases informal services. These have developed highly efficient networks, especially in relation to remittances. Meanwhile it is interesting to note that, in Kenya, mobile services have been taken up initially by formal service users (70 percent of M-Pesa users are banked as opposed to 40 percent of nonusers (Pulver et al, 2009). Thus, M-Pesa did not acquire its initial critical mass through competition with the formal sector, but rather as a complement to formal services, for a clientele who were wealthier, more exposed to formal financial service options and less risk averse. However, as services move deeper into the market, volumes of unbanked will be likely to drive expansion, due to the competitive advantages of formal mobile offers over other options.

### **2.5 Payment of bills**

In a study by Aker and Mbiti (2010), they discussed that the proliferation of mobile devices has also brought about the introduction of a number of value added services, new technologies involving mobile transactions, while creating important commerce opportunities ranging from mobile banking to mobile payments (m-payments). However, the different payment solutions that can be administered through the use of a mobile device are promising alternatives for countries that are still cash driven, and they are referred to as mobile payment services. Mobile payment services are defined as, “paying for a product or service through the use of a mobile device and technology, including Near Field Communication (NFC), Short Messaging Services (SMS) and Wireless Application Protocol (WAP)”. Nevertheless, Dahlberg et al. (2008) argued that mobile payments have brought about an exceptional increase in service opportunities for individuals, businesses, and a country’s economy at large, especially in developing countries, which are currently implementing mobile payment services to aid financial inclusion.

In a study by Kim et al. (2009) which examined the effect of initial trust in mobile banking user adoption, trust was defined as a psychological expectation that a trusted party will not behave opportunistically. In Kim, Chung and Lee (2010), trust was defined as a feeling of security and willingness to depend on someone or something. Kim et al. (2009) further makes a distinction between initial trust and experience or knowledge-based trust. This study will focus on initial trust, as users are more likely to have less experience with service providers with regard to the use of mobile banking. A study by Siau and Shen (2003) classified trust into two categories: trust of technology and trust of mobile banking service providers. This is supported by Lee and Kim (2007) in a study that focused on three trust dimensions: trust in bank, trust in mobile network provider and trust in wireless infrastructure.

In the mobile banking context, trusting intentions represents users’ willingness to engage in subsequent transactions with the service provider (Bhattacharjee, 2002). Higher levels of trust in a service provider will therefore lead to greater intentions on the part of the user to engage in mobile banking transactions. A study by Gu et al (2009) verified the effect of trust on behavioral intentions in mobile banking, using the trust from the banks’ perspective. This indicates that trust helps reduce fraud and potential risks caused by opportunistic behavior and provides users the ultimate benefit of getting more reliable banking services from honest banks (Gu et al., 2009). To better understand the role of the customer trust on the adoption of mobile banking, the concept of brand loyalty and customer loyalty is also introduced in this study.

### **3. Methodology**

The researcher used descriptive research design since according to Ngechu (2004), descriptive studies are more formalized and typically structured with clearly stated hypotheses or investigative questions. It serves a variety of research objective such as descriptions of phenomenon or characteristics associated with a subject population, estimates of proportions of a population that have these characteristics and discovery of associations among different variables.

The target population was 73 self-help groups in Kisii County with total membership of 1090 members. The study targeted 327 respondents and the response rate was 100% as all the 327 questionnaires were returned. The independent variables were; sending money, receiving money, buying airtime, saving money and payment of bills as business performance was the dependent variable.

### **4. Findings**

The multi-linear regression model was  $Y=940.674+2.150X_1+3.160X_2+5.133X_3+ 8.391X_4+12.963 X_5$ . The standard beta coefficients in the model indicated that sending mobile money explained 15.6%% of the variation

in business performance holding constant all the other variables. Receiving mobile money explained 13.5% of the variation in business performance all the other variables are held constant. Buying airtime explained 20.5% of the variation in business performance when the other variables are held constant. Also saving mobile money can explain 13.1% of the variation in business performance if the other variables are held constant. Finally paying bills explained 24.8% of the variation in business performance holding constant all the other variables. This indicated that sending money, receiving money, saving money, buying airtime and paying bills by use of mobile phone has an effect on business performance and greatly increases business profitability.

## 5. Conclusion

The study found out that many self- help groups in the rural areas use mobile money financial services. As a result of this, there was growth and profitability in the groups under study. The study concludes that many self-help groups in the rural areas that have not embraced mobile money services should be sensitized on the use of mobile phone financial services usage to increase their profitability and enhance their growth. The study recommends that the Mobile Network Operators come up with more financial services that will be useful in the rural areas where the banking services are not common. Further the government of Kenya through the Ministry of Information Communication Technology to subsidize the cost of the mobile phones to enable majority of the people in the rural areas access them hence will be able to carry out financial services through the mobile phone. Further research should be carried out on effective ways of curbing network congestion and delays on the part of Mobile Network Operators because it seems to be a serious problem encountered when carrying out Mobile phone financial services and also come up with ways of retrieving money sent to a wrong number even after the wrong receiver has withdrawn it. This is because many respondents cited the two as major challenges when transacting using the mobile phone.

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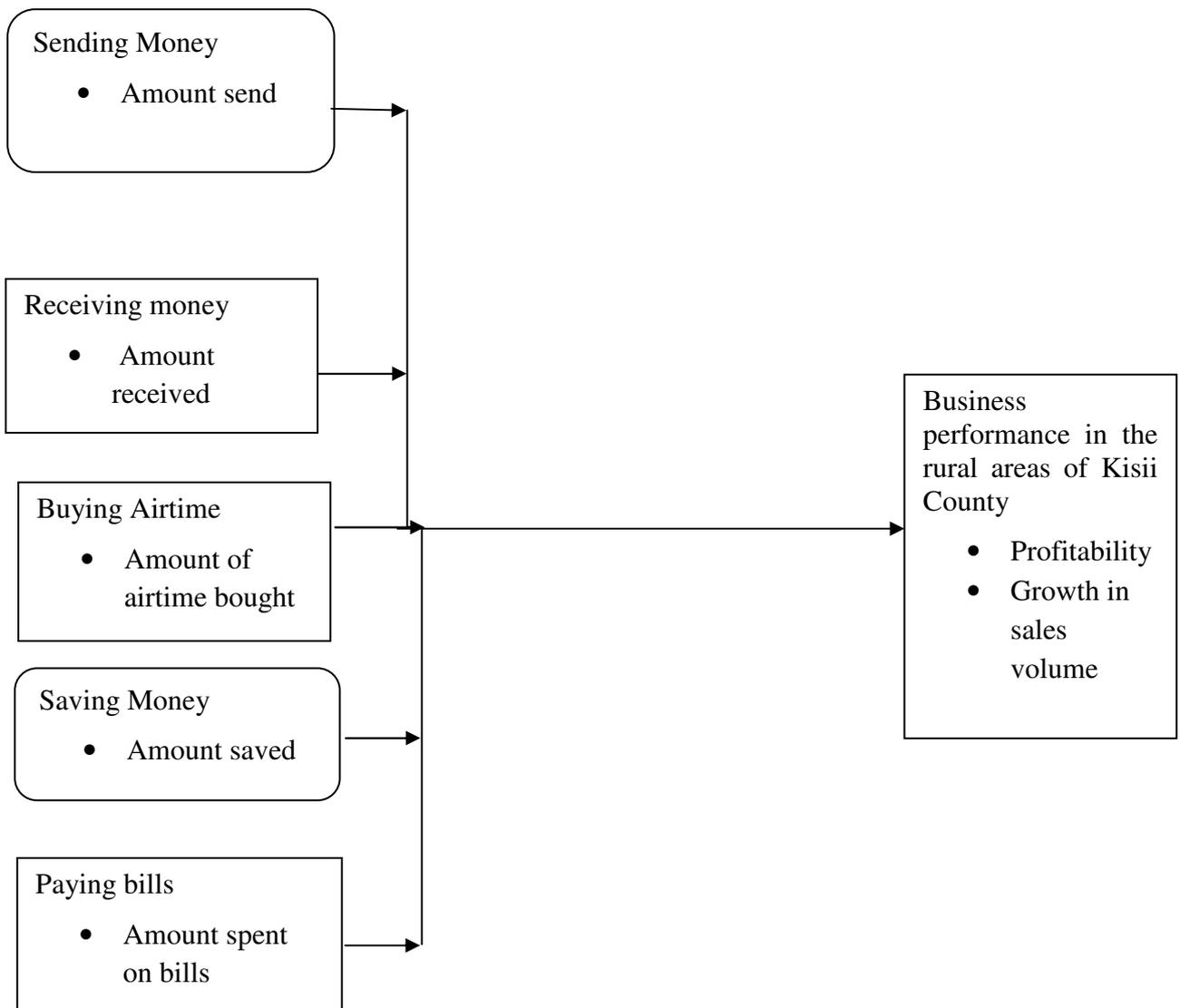


Figure 1: conceptual framework

**Table 1. Multi-linear Regression Coefficients**

Model	Unstandardized Coefficients		Standardized coefficients		
	<b>B</b>	<b>std. error</b>	<b>Beta</b>	<b>t</b>	<b>Sig.</b>
<b>1 Constant</b>	940.674	75.808		12.409	.000
<b>AMTSEND</b>	2.150	2.741	15.6	7.860	.004
<b>AMTRCVD</b>	3.160	3.161	13.5	9.991	.033
<b>AIRTIME</b>	5.133	4.315	20.5	11.921	.025
<b>AMTSAVED</b>	8.391	2.842	13.1	29.543	.007
<b>PAYBILL</b>	12.963	5.013	24.8	59.174	0.00

**Table 2. Multi-linear Regression ANOVA**

Model	Sum of Squares	df	Mean		
			Square	F	Sig.
<b>1 Regression</b>	116743.498	5	23348.700	209.251	.000
<b>Residual</b>	2677.969	321	111.582		
<b>Total</b>	119421.467	326			

**Table 3. Multi-linear Regression Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of The Estimate
<b>1</b>	.989	.978	.973	0.010

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