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Influence of Mobile Money Transfer Services on the Performance of Micro Enterprises in Kitale Municipality

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Abstract

Application of the mobile phones for money transfer, referred to as Mobile Money Transfer (MMT) has marked a new frontier in mobile phone technology with an ever increasing number of micro businesses using it in their transactions to enhance performance. The number of uses to which Mobile Money Transfer (MMT) can be put keeps increasing with time. However, it was not clear how Mobile Money Transfer use influences the performance of micro enterprises. The study sought to determine if its use in Kitale municipality, a rural town setting, has resulted in success and growth of micro enterprises. The study was based on a survey of 36 micro enterprises, from three major sectors of the Kenyan economy, agriculture, service and processing sectors. Micro enterprises that were studied are those that have been in existence for more than 5 years and have experienced business without Mobile Money Transfer (MMT), before 2007, and thereafter with it. The study used a questionnaire as an instrument for data collection. The data so obtained was analyzed using chi-square to establish the relationship between Mobile Money Transfer (MMT) use and business performance. The key findings are that use of Mobile Money Transfer for: B2B (business to business) transfer when making purchases from suppliers and C2B (customer to business) transfers when customers buy from the business and for debt collection for credit sales contributed to improved performance of the micro enterprises.

Keywords: Mobile Money Transfer (MMT), mobile phone technology, performance of micro enterprises, micro enterprises.

Introduction

Before the advent of Mobile Money Transfer Service (MMTS) that is sometimes referred to as mobile banking, Money Transfer Services (MTS) globally were through formal means that include commercial banks, that have been serving mainly businesses that operate across borders and continents; within and between the developed countries, electronic transfer of

funds through the internet and instruments such as credit cards have been in use. We have also had organisations that specialize in money transfer globally mainly for individuals working abroad who remit money back home like the Western Union and MoneyGram. In Africa formal and informal means have been in use. Formal means have been through commercial banks and informal means have been through friends and agents popularly known in especially in the Somali community as Hawalas. In Kenya, money transfer services were offered by entities that fall in three categories: formal providers (that include commercial banks and the Kenya Postal Corporation (POSTA)), by semi-formal providers (like, courier and bus companies), and by informal services or means (for instance, by bus conductors and friends) (Kabucho, Sander and Mukwana, 2003)

These money transfer services provided by formal and semi-formal providers are charged a high fee, that is, a minimum that is in excess of kshs.100 per transaction. The fee increases as the amount sent grows larger. Besides, these formal and semi-formal providers are located in distant urban centres and have a limited branch network, a fact that makes them not to be readily accessible to people in the rural areas. The banks, particularly, do not view the poor as viable customers because often their transaction sizes are small and many live in remote areas beyond reach of branch networks (Wambari, 2009). The informal means, on the other hand, are riddled with the risks of the money getting lost or being converted to personal use by those entrusted with the task of delivering money. As well, the use of informal providers may lack confidentiality because receipt of money will be known to those delivering and others to whom they may disclose.

These challenges made clear a huge gap that has been filled in part by the Mobile Money Transfer Services (MMTS), which cost less, from as little as kshs. 20 per transaction have a nationwide network of agents that make the service accessible to all Kenyans, and the service is largely secure for executing money transfers because a Personal Identification Number (PIN) is used to protect a subscriber account from abuse by other persons. In addition, these favourable features of MMTS account for the rapid adoption of the mobile money transfer services among Kenyans as seen by the ever increasing number of subscribers. By July 2010, M-Pesa, the leading mobile money transfer service in Kenya, provided by the mobile phone service company Safaricom, had been adopted by 11.9 million customers (corresponding to 54% of Kenya's adult population) and the level of activity is so high that M-Pesa now processes more transactions domestically than Western Union does globally(Mas, & Radcliffe, 2010)

Money transfer is a service that is used by many people and organisations, both small and large. Efficient and affordable money transfer and payment services are an important financial service most people require, including those who do not typically use financial or banking services (Kamau, Cerstin and Mukwana, 2003). Mobile money transfer has turned out to be efficient and affordable and is therefore preferred by many people,

Micro enterprise operators are in the Micro and Small Enterprise (MSE) Sector. Efforts have been made by academics (Mead and Morrison, 1996) in defining Micro and Small Enterprises. Micro-enterprises are those that employ 10 or fewer workers and small scale enterprises are those that employ 11-50 workers. According to the 1999 National Baseline Survey and many other prior studies, only a small proportion of MSEs employ 11-50 people. This therefore means that since microenterprises form the bulk of MSEs, when reference is made to MSEs this largely refers to micro-enterprises. The term MSE incorporates firms in both the formal and informal sectors. According to the 2003 Economic Survey, there was growth in the MSE sector, with employment in the Sector increasing from 4.2 million persons to 5.1 million

persons in 2002, accounting for 74.2% of persons engaged in employment. The sector contributes 18.4% of the country's Gross Domestic Product (GDP). This shows the importance of micro businesses to the Kenyan economy mainly as a source of employment to an ever increasing population.

The sessional paper no. 2 of the FY 2005 provides a policy framework that will support research and development that will boost MSE's (Micro and Small Enterprises') access to appropriate technologies. Mobile money transfer is one such technological development that came into existence in 2007 when M-Pesa was launched, has developed and is now readily accessible to micro enterprises and is widely used.

Micro enterprise operators in Kenya have adopted the use of the mobile payments as a way of transacting their business because of the relative affordability of mobile phones and the mobile banking services they offer (Mbogo, 2010).

"Mobile money" is money that can be accessed and used via mobile phone (Jenkins, 2008). Mobile money can be used to settle a variety of transactions conveniently and it transforms the mobile phone into a mobile wallet. To access Mobile Money Transfer Services (MMTS), a customer must first register at an authorized mobile money transfer retail outlet of a mobile network operator offering MMTS. The customer is then assigned an individual electronic money account that is linked to his phone number and accessible through a SIM card-resident application on the mobile phone. Customers can deposit and withdraw cash to/from their accounts by exchanging cash for electronic value at a network of retail stores (often referred to as agents). Once money is on the virtual account, the phone becomes a mobile wallet. Micro enterprises view payment through MMT as an easier form of cash delivery to their suppliers and business partners, a system which is relatively affordable, personal and can be used anywhere and at any time (Anurag, Tyagi and Raddi, 2009).

Mobile money transfer service systems fall in three categories:

i. Mobile money transfer converts cash into 'virtual' money that can be sent through the service provider from one person to another using a mobile phone. Mobile money transfer can be from one person to another person, p2p, like when money is sent to support members of a family back home by a working relative,

ii. Mobile banking - Mobile banking is service that a bank offers. It requires a bank account. Mobile banking makes use of a mobile telecommunications network as a platform to perform traditional banking activities such as performing balance checks, transferring money between accounts and making payments. Mobile banking is akin to Internet banking and is often included in the package a bank might offer its clients. Besides, there is a new dimension developing in Kenya where there's phone to bank transfer and vice versa. A case in point is a situation where a large number of financial institutions have opted for Safaricom's "pay bill" option to allow their customers primarily to deposit into their savings/ insurance/ pension/ investment accounts. Some of the more popular ones appear to be: PesaPap (from Family Bank); Pata Cash (from Kenya Post Office Savings Bank) and KCB Connect (from Kenya Commercial Bank). Faulu and SMEP have entered into agreements with Safaricom. Their clients can repay loans and deposit into their savings account using the "pay bill" option of M-PESA. Faulu Kenya, a deposit-taking microfinance institution, and Musoni MFI (microfinance institution) launched withdrawal service as well via M-Pesa (Sadana et al, 2011)

iii. Mobile payments are used for the payment of products and services. This can be C2B transfer, from a customer to a business as when paying utility bills and for purchases from a business, or B2C transfer, where a business disburses funds to customers for instance when a microfinance institution disburses loans to customers. This transfer of funds from one

business to another business is done through a verification process, which involves both parties.

In the report on 'Developing Mobile Money Ecosystems' Beth Jenkins Director of Policy Studies, CSR Initiative, Harvard Kennedy School, says that MMTS (Mobile Money Transfer Service) subscribers in markets such as South Africa, Kenya, the Philippines, Japan, and elsewhere are using mobile money for transactions and services including domestic and international remittances, bill payment, payroll deposit, loan receipt and repayment, and purchases of goods and services ranging from prepaid airtime to groceries to bus tickets to micro insurance. There is no limit to the range of transactions and services for which mobile money could eventually be used. This statement regarding the uses to which mobile money is put actually shows the three categories of mobile money in use, that is converting cash into virtual money and using it to make mobile payments and also use of M-banking in loan receipt and repayment, thus facilitating financial inclusion through m-banking. It is further observed in this report by Jenkins that it is mobile money's ability to facilitate financial sector inclusion that gives it its enormous potential for development impact. Given access, financial services can help poor people forge their own paths out of poverty in two primary ways. First, they enable one to obtain through savings or credit sums of money large enough to invest in income generation and asset creation (for example, through enterprise, housing, education or training which improves one's job market prospects, and so on). Second, they help reduce vulnerability to unexpected events such as accident, illness, theft, or drought. These benefits represent the gains of MMTS to MSEs

It is in the light of the foregoing discussion that this study seeks to establish the way Mobile Money Transfer Service has influenced the performance of micro enterprises in Kitale municipality, whether the influence has been significant, as in other parts of Kenya where studies have been carried out, especially in Nairobi, and whether it has incorporated all the aspects of mobile payments besides p2p (person to person) money transfer. The study also aims to find out ways in which mobile money transfer service providers can improve the services they offer to further enhance the performance of micro enterprises.

Problem Statement

In Kenya the vision 2030 proposes intensified application of science, technology and innovation to raise productivity and efficiency across its three pillars (economic, social and political) on which it is based. Mobile Money Transfer Service (MMTS) is one of the innovations in the ICT sector that may enhance the efficiency of businesses if properly used. Following the launch of mobile money transfer service M-Pesa by Safaricom, a Mobile Network Operator in Kenya, in March 2007, there was quick adoption of the service by many Kenyans through subscription to M-Pesa. The growth of M-Pesa users has been rapid over the years, within eight months of its launch, M-pesa had 900, 000 subscribers (Omwansa, 2009) and by September 2009, over 8.5 million Kenyans were registered users (Safaricom, 2009). Other Mobile Network Operators have come up with their mobile money transfer services, namely, Aitel, Yu and Orange. However, it was not clear how mobile money transfer use affects the performance of micro enterprises in Kitale municipality, a rural town setting. This is a real issue because queues of people paying utility bills like electricity bills are common at month ends at the Kenya Power and Lighting Company offices in Kitale yet these bills can be conveniently paid using MMTS. Many micro enterprises might not be utilizing fully the various forms of MMTS to their advantage. If this situation is allowed to continue, micro enterprises

may continue performing below what they are capable of by not fully utilizing the various forms of MMTS that are meant to enhance their performance.

Prior studies carried out elsewhere confirm the positive impact of mobile money transfer service on micro enterprises. Most of these studies were conducted in other countries and in Kenya, studies have been mainly in Nairobi – the capital city, thus they may not reflect the impact on the success and growth of different business environments and in particular the micro enterprises in Kitale municipality. In fact, it has been observed that, studies investigating the impact of mobile telephones on the performance of firms are very limited, particularly in developing countries (Donner & Escobari, 2010).

There existed a need, therefore, for a substantive research on the effect of mobile payments on the performance of micro enterprise operators who are among those who employ mobile payments in Kitale municipality.

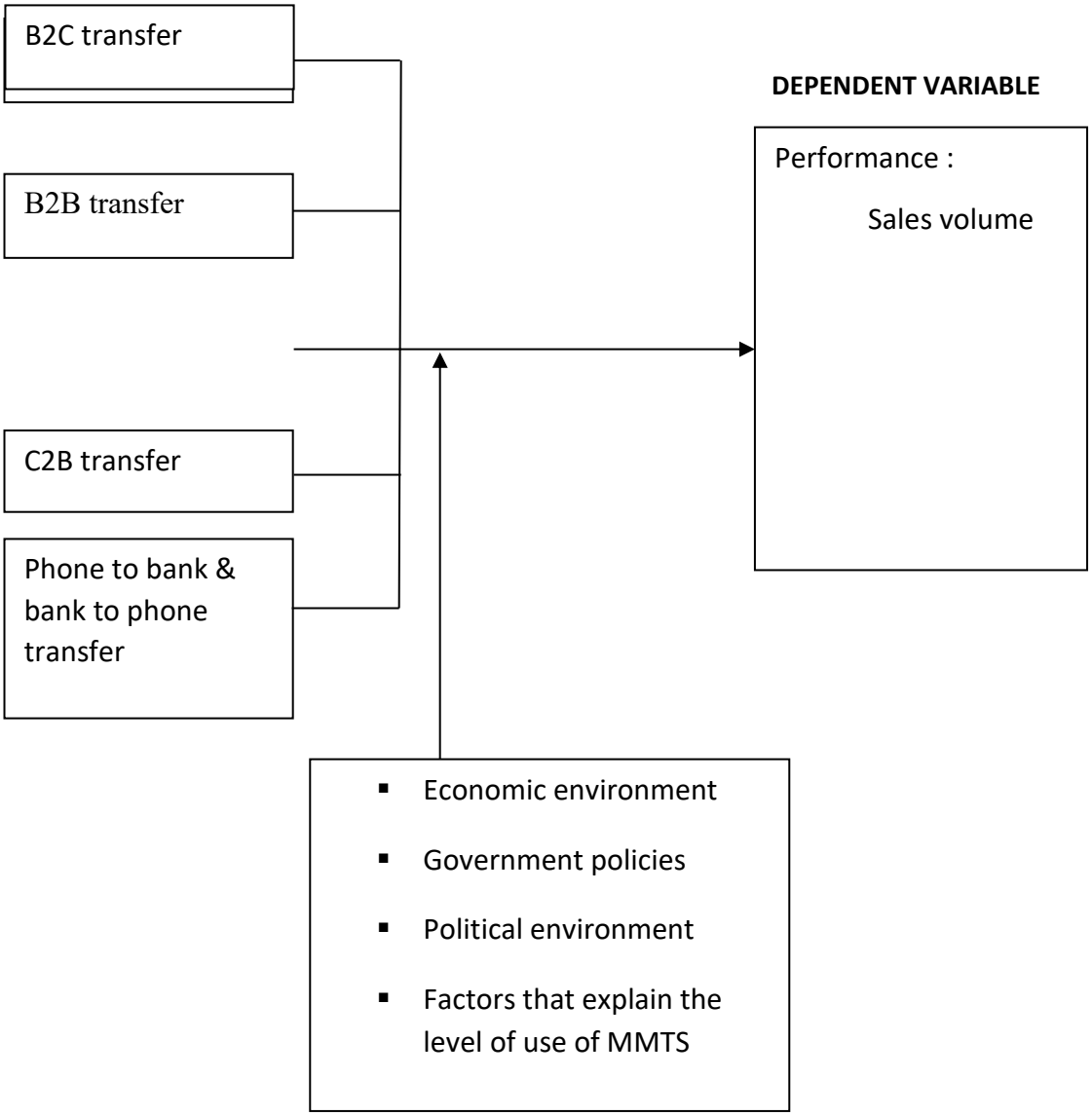
Objective

The general objective of the study was to determine the effect of MMTS (Mobile Money Transfer Services) on the performance of micro businesses in Kitale Municipality. This was done with the specific objective of determining the effect of the various forms of mobile money transfer on the performance of micro enterprises in order to propose ways through which the MMTS can be improved to enhance the performance of micro enterprises.

Literature Review

Figure 1: Conceptual Framework

Independent variable



Mobile Money Transfer Services (MMTS) are the independent variables. These services include the micro enterprise owners using: P2P (Person to person) transfer service where money is transferred from phone to phone for business or personal purposes, B2B (business to business) transfer service where money is transferred from the business to another business such as payment to a supplier for goods delivered, B2C (business to customer) transfer service where money is transferred from a business such as a micro finance institution transferring a loan disbursement to the micro enterprise owner, C2B (Customer to business) transfer service where the micro enterprise could be making a loan repayment to a microfinance institution or paying a utility bill or when the microenterprise receives payment

from a customer, or, further still, phone to bank and bank to phone transfer service as when funds are moved from M-Pesa to M-kesho account and vice versa when making a deposit to the bank account and a withdrawal from the bank account using a mobile phone. The dependent variable is a performance variable. It will enable us deduce if performance has improved. This is sales volume. Mobile Money Transfer Services' (MMTS) use can lead to improved performance of the micro enterprises through increased sales. However, this model assumes that there are moderating factors that are held constant otherwise they will lead to failure of MMTS use translating into improved performance of micro enterprises. These moderating factors include the economic conditions in the country, the government policies and the political environment all of which should be conducive to business activities in the country, otherwise, MMTS use may not influence performance of the micro enterprises positively.

(Mas, 2009) and this has led to increased use of the service by MSEs. The central bank governor Njuguna Ndungu during the launch of M-Pesa international money transfer service in 2009 reiterated that the Central Bank will strive to provide an enabling legal and regulatory framework to encourage innovations by all payment service providers to enhance access to payment services and to modernize the national payment systems.

Level of MMTS use

The level of use of MMTS in Kenya is high. Now it is 5 years since M-PESA was launched by Safaricom. Within 5 years M-PESA has spread quickly and has become the most successful mobile phone-based financial service in the world. Today 15 million Kenyans use M-PESA (O'Sullivan, 2011). Among the users are proprietors of micro businesses. Today over 700 businesses have integrated with M-PESA to extend various innovative services to all Kenyans at a lower cost, including to people in remote areas. In microfinance, Women Enterprise Fund is using M-PESA to provide easier, faster, efficient and secure loan repayment method. In business, Kopo Kopo is enabling small and medium sized businesses process M-PESA payments. In a study done, mainly in Dar es Salaam, Tanzania MMT use is high (24% for business use and additional 15% for personal use), actually double compared to the national average (Bångens & Söderberg, 2011)

Factors that explain the level of use of MMTS (Mobile Money Transfer Services) among micro enterprises

In the study by Muriuki (2011) and Mbogo (2010), factors that were found to make the use of M-Pesa to be high were low transaction costs, the costs associated with the sending of money using the mobile payment services is also very low as compared to those from the commercial banks and other money transferring companies (Omwansa, 2009); ease of operation of the money transfer process; easy accessibility of the money transfer service, today M-PESA has over 35,000 agents countrywide within easy reach of Kenyans, and about 70 per cent of financial transactions are now handled by M-PESA(O'Sullivan, 2011); speed of transaction, money is sent and received by the recipient immediately; efficiency in use of the M-Pesa service; and Support from the Mobile Payments Provider is essential. Payment systems exhibit network externalities as the value of a payment system to a single user increases when more users begin to use it (Mallat, 2007). Consumer decision to adopt a payment system is therefore significantly affected by the amount of other consumers and traders using it. This is crucial in creating a critical mass which if not reached will lead to discontinuance of a payment system, as the case was with several smart card systems. In their study on MMT use

among MSEs in Tanzania, Bångens & Söderberg (2011), found that MSEs are not happy with bank services which made the switch to mobile money easy; and MSEs engaging in mobile money transfer show certain characteristics such as long-term business relationships that build trust, geographically separated from the buyer/seller, goods fairly standardized, and amounts transferred in the medium range (i.e. 3- 400 000 Tshs). Volumes are much higher, sometimes reaching the ceiling amounts set by BoT (Bank of Tanzania), and sending /receiving as often as 2-3 times a week in the B2B (business to business) money transfer. The increased use of MMTS due to these factors that explain the level of use has no doubt influenced the performance of micro enterprises.

Effect of MMTS on the performance of micro businesses

In the study by Muriuki (2011) use of MMTS was perceived to enhance profitability moderately.

Also, Davies (2007), evaluating the multiplier effect of a cash transfer programme in Malawi notes that when cash is injected in a region from outside and used to make purchases of goods and services produced in the region, will stimulate local sales hence better performance for local businesses.

In their study on MMT use among MSEs in Tanzania, Bångens & Söderberg (2011), focused on business usage such as paying suppliers or receiving payments from customers. The results were based on MSEs mainly located in Dar es Salaam but partly in Morogoro, Singida, and Mwanza, the impact was mainly seen in time saved and improved logistics though there were indirect effects on liquidity;

Pagani (2004), states that accessibility (ability to reach the required services) is one of the main advantages of mobile payment services. The micro-business operators go to the bank less often and spend more time running their businesses. Equally, many unbanked Kenyans can now receive or send money wherever they are in the country (Omwansa, 2009). Majority of the micro business operators are familiar with the use of the mobile payment services as they are easy to use and require no formal training before use. With more time in the business, more customers are served leading to increased sales and therefore growth of the business.

The transaction costs of sending money through the mobile payment technology are lower than those of banks and money transfer companies (Omwansa, 2009). The cost of the mobile payments is affordable to most of the micro business operators and far below what the banks normally charge for their bank transactions. The reduced cost of transactions positively influences the growth of the business.

Methodology

The study was conducted by means of semi structured interviews of micro enterprises located in Kitale municipality, a rural town setting. The key variables about which data was collected were the various forms of MMT (mobile money transfer), level of MMT use, and level of sales - a variable representing effect of MMT on performance

Findings

Detailed information on the use of MMT

The study objective was to find out the extent of use of various forms of MMT and the effect on business performance. A four-point Likert scale was used to interpret the respondent's answers regarding the extent of use an aspect that was considered in the study. According to the scale those factors which were disagreed with were awarded 1 while those factors which were agreed with strongly were awarded 4. Within the continuum are 2 for agree to a low extent and 3 for agree to moderate extent. To rate responses for all respondents, an average was computed and interpreted as per the scale for each aspect for all the respondents.
The sampled population provided responses to the following statements.

Use of various forms of MMT in enhancing business performance

Table 1: Statements on the extent of use of various forms of MMT

Serial Number	You use MMT
1	For personal purposes(P2P – person to person money transfer)
2	To pay suppliers (B2B – business to business money transfer)
3	To pay bills e.g. electricity, water etc.(C2B – customer to business money transfer)
4	To receive and pay loans(B2C & C2B money transfer)
5	To receive payment from customers (C2B – customer to business money transfer) and increase in debt collection
6	To move money from phone to bank and vice versa(e.g. from M-Pesa to M-kesho and vice versa)
7	Overall frequency of using MMT : (disagree – monthly and beyond, agree to a low extent- fortnightly to less than a month, agree to moderate extent- weekly to less than a fortnight and strongly agree- daily to less than a week)
8	To store money in MMT/virtual account

Table 2: Responses on the extent of use of various forms of MMT

Sn	Disagree	Agree to a low extent	Agree to moderate extent	Strongly agree	Mean	Standard deviation
1	1(2.8)	5(13.9)	17(47.2)	13(36.1)	3.17	0.775
2	7(19.4)	6(16.7)	8(22.2)	15(41.7)	2.86	1.175
3	17(47.2)	13(36.1)	4(11.1)	2(5.6)	1.75	0.874
4	27(75)	5(13.8)	3(8.3)	1(2.8)	1.39	0.766
5	6(16.7)	2(5.6)	15(41.7)	13(36.1)	2.97	1.055
6	17(47.2)	6(16.7)	10(27.8)	3(8.3)	1.97	1.055
7	1(2.8)	4(11.1)	14(38.9)	17(47.2)	3.31	0.786
8	4(11.1)	12(33.3)	11(30.6)	9(25)	2.69	0.980

Key: Figures in brackets are percentages (%)

Regarding the extent of use of various forms of MMT, disagree refers to not using or using a form of MMT over period that is beyond one month or not using at all, agree to a low extent refers to use between three weeks to a month, use to moderate extent refers to use between over a week to three weeks, while strongly agree refers to use from daily to within less than a week time's use.

P2p (person to person) money transfer is for personal money transfer between the micro enterprise owner and family members and friends. It enhances business performance because it saves the business owner interruption of business had he used the postal service or banks to send the money or receive money because he would have to close the business to go to post office or bank to transact the money transfer process. The interruption would have led to failure to serve customers because of closed premises or failure by the micro enterprise to meet orders due to stoppage or slowing down of the production process. P2p money transfer is executed without having to leave the business premises. 1(2.8%) of the respondents disagreed that they were using p2p money transfer, 5(13.9%) of the respondents agreed to be using p2p to a low extent, 17(47.2%) of the respondents agreed to be using p2p to moderate extent and 13(36.1) of the respondents agreed to be strongly using p2p. only 1(2.8%) of the respondents disagreed to be using p2p while 35(97.2%) of the respondents agreed to be using p2p money transfer in enhancing the performance of their business. A mean of 3.17 approximately 3 implies that on average the respondents agreed to be using p2p to a moderate extent in enhancing business performance, the use was with a low standard deviation of 0.775.

B2b money transfer is used by businesses to pay their suppliers for purchases. This was seen to be the case for businesses that are far from their suppliers. Money is sent by MMT and the supplier dispatches goods to the buyer. This saves the buying business time and money of having to travel to the supplier and such resources are used to enhance the performance of the business. 7(19.4%) of the respondents disagreed that they use b2b money transfer, 6(16.7%) of the respondents agreed to be using b2b to a low extent, 8(22.2%) of the respondents agreed to be using b2b to moderate extent and 15(41.7%) of the respondents agreed to be strongly using b2b. 7(19.4%) do not use this form of MMT while 29(80.6%) of micro entrepreneurs agree to using it. The use of this form of MMT has a mean of 2.86 that is approximately 3. This shows that the service is used to a moderate extent with a standard deviation of 1.175. The mean is lower and standard deviation higher than in the use of p2p because some businesses that were close to suppliers could buy their supplies by cash only like 7(19.4%) of the businesses that did not use the service while others used it to a low extent 6(16.7%) because only a small proportion of supplies were acquired from far and paid for by MMT.

Use of c2b to pay for bills like water, electricity, etc. had a high number of respondents 17(47.2%) disagreeing to be using it and 13(36.1%) agreed to be using it only to a low extent. Only 6(16.7%) used this form of MMT with a high frequency. The low mean of 1.75, approximately 2, and standard deviation 0.874 show that there is low use of this form of MMT. This form of MMT is relatively new and some microenterprise owners said that despite knowing of its existence, they did not know how to use it while others want physical cash receipt to be sure that they have discharged a liability and have tangible evidence. Also, use

was rare because most bills are paid only once a month and that is why a majority of those who use the service, said that they use it only to a low extent.

Some financial institutions advance loans to their customers through MMT and also receive payments for the loans from their customers by MMT. This form of MMT, to receive and pay loans (B2C & C2B money transfer) is relatively new. 27(75%) of the sampled businesses do not use the service. 5(13.8%) use it to a low extent and 3(8.3%) use it moderately with only 1(2.8%) business using it strongly. The mean and standard deviation of the level of use are low, 1.39 and 0.766 respectively. This shows that this form of MMT is hardly used by microenterprises in Kitale Municipality.

Receiving payment from customers (C2B – customer to business money transfer) and increase in debt collection is a form MMT that involves receiving payment for cash and credit purchases by customers using their phones to transfer money to the seller. This form of MMT enhances business performance by first of all reducing the risk associated with handling cash, and secondly, it enhances debt collection for credit purchases since even customers in distant places can easily pay without travelling to the business premises. It also reduces the cost of following up debtors. 6(16.7%) of the respondents do not use this form of MMT. 2(5.6%) of the respondents use it to a low extent. 15(41.7%) and 13(36.1%) of the respondents use this form of MMT moderately and strongly respectively. The mean level of use is 2.97 that is approximately 3, this means that micro enterprises use this form of MMT to a moderate extent. This form of MMT is greatly used among micro enterprises.

Use of MMT to move money from phone to bank and vice versa (e.g. from M-Pesa to M-kesho and vice versa) is a form of MMT that is relatively new. 17 (47.2%) of the respondents do not use the service. 6(16.7%) use this form of MMT to a low extent. 10(27.8%) of the respondents use it moderately and 3(8.3%) of the respondents use it strongly. The mean level of use is 1.97, approximately 2, is low and standard deviation of 1.055 shows a low variation in the use of this form of MMT by micro enterprises. On average this form of MMT is used to a low extent. Some respondents reported that they are not familiar with the way this form of MMT works and this could account for the low use of this form of MMT.

The overall frequency of using MMT rated respondents' use of all MMT forms combined. Only 1(2.8%) of the respondents disagreed to be using MMT. 4(11.1%) agreed to be using MMT to a low extent. 14(38.9%) of respondents use MMT to a moderate extent and 17(47.2%) of the respondent frequency of using MMT s use it strongly. An average of 3.31 and standard deviation f 0.786 show that micro enterprises use MMT greatly to enhance the performance of their businesses.

The storing of money on MMT/virtual account had 4(11.1%) of the respondents disagreeing that they do not use this form of MMT, 12(33.3%) of respondents agreed to be using this form of MMT to a low extent, they store small amounts, usually less than 1000 shillings, on their virtual accounts mainly to enable them purchase airtime. 11(30.6%) use this form of MMT to a moderate extent, they store between 2000 shillings and below 5000 shillings for use in the business to pay for supplies and 9(25%) strongly use this form of MMT, they store between 5000 shillings to the maximum amount allowed to be stored on a virtual account for business purposes. The mean of 2.69, approximately 3, and standard deviation of 0.980 show that the storing of cash on virtual account to aid in business operation and hence performance has use that is to a moderate extent.

Relationship between use of various forms of MMT and business performance

Use of various forms of MMT was tested by chi- square to see if they are independent or they have a relationship with increase in sales, and therefore improved performance of the micro businesses. Tables were extracted.

Table 3: Chi-square test on use of p2p for personal purposes (P2P – person to person money transfer) and its effect performance

	Use of p2p for personal purposes				
sales increase	disagree	low extend	moderate	strongly	total
Low	0	2	1	3	6
Moderate	1	2	11	3	17
Strongly	0	1	3	9	13
Total	1	5	15	15	36

Table 3 shows person to person transfers (P2P) when transferring money to family and friends. The value of calculated chi-square was 12.1336 which is more than 10.645 the table value of chi-square for degrees of freedom of 6 and at 10% level of significance. This shows that P2P transfer of money does lead to improvement in the performance of micro enterprises.

Table 4: Chi-square test on use of B2B in paying suppliers and its effect performance

	use of B2B in paying suppliers				
sales increase	disagree	low extend	moderate	strongly	total
Low	5	1	0	0	6
Moderate	2	3	5	7	17
Strongly	0	0	5	8	13
Total	7	4	10	15	36

Table 4 shows business to business transfers (B2B) when making purchases from suppliers. The value of calculated chi-square was 23.8493 which exceeds 10.645 the table value of chi-square for degrees of freedom of 6 and at 10% level of significance. This shows that B2B transfer of money boosts sales and therefore the performance of micro enterprises.

Table 5: Chi-square test on use of C2B to pay bills and its effect performance

	Use of c2b in paying bills				
sales increase	disagree	low extend	moderate	strongly	total
Low	5	1	0	0	6
Moderate	6	8	2	1	17
Strongly	5	3	4	1	13
Total	16	12	6	2	36

Table 5 shows use of c2b in paying bills. The value of calculated chi-square was 7.57584 which is less than 10.645 the table value of chi-square for degrees of freedom of 6 and at 10% level

of significance. This shows that Use of c2b in paying bills and sales increase are independent, therefore use of P2P does not lead to improvement in the performance of micro enterprises.

Table 6: Chi-square test on use of b2c & c2b to receive and pay loans (B2C & C2B money transfer) and its effect on performance

	Use of b2c & c2b to receive and pay loans				
sales increase	disagree	low extend	moderate	strongly	total
Low	6	0	0	0	6
Moderate	9	3	3	0	18
Strongly	12	2	0	1	12
Total	27	5	3	1	36

Table 6 shows use of b2c & c2b to receive and pay loans. The value of calculated chi-square was 6.6065 which is less than 10.645 the table value of chi-square for degrees of freedom of 6 and at 10% level of significance. This shows that use of b2c & c2b to receive and pay loans and sales increase are independent, therefore its use does not lead to improvement in the performance of micro enterprises.

Table 7: Chi-square test on use of C2B in buying and debt collection and its effect performance

	Use of c2b in buying and debt collection				
sales increase	disagree	low extend	moderate	strongly	total
Low	2	2	2	0	6
Moderate	4	0	12	2	18
Strongly	0	0	1	11	12
Total	6	2	15	13	36

Table 7 shows customer to business transfers (C2B) when making purchases from suppliers and debt collection by the business for credit sales. The value of calculated chi-square was 34.8718 which exceeds 12.592 the table value of chi-square for degrees of freedom of 6 and at 10% level of significance. This shows that C2B transfer of money in buying by customers and debt collection for credit sales boosts sales and therefore the performance of micro enterprises.

Table 8: Chi-square test on use of phone2bank and vice versa to move money from phone to bank and vice, versa (e.g. from M-Pesa to M-kesho and vice versa) in buying and debt collection and its effect performance

	Use of phone2bank and vice versa				
sales increase	disagree	low extend	moderate	strongly	total
Low	5	0	0	1	6
Moderate	8	3	6	0	17
Strongly	4	3	4	2	13
Total	17	6	10	3	36

Table 8 shows use of phone2bank transfer and vice versa. The value of calculated chi-square was 8.4799 which is less than 10.645 the table value of chi-square for degrees of freedom of 6 and at 10% level of significance. This shows use of phone2bank transfer and vice versa and sales increase are independent, therefore its use does not lead to improvement in the performance of micro enterprises.

Table 9: Chi-square test on overall level of use of MMT in business and its effect on business performance

	Overall level of use of MMT in business				
sales increase	disagree	low extend	moderate	strongly	total
Low	1	2	3	0	6
Moderate	1	2	9	6	18
Strongly	0	0	1	11	12
Total	2	4	13	17	36

The researcher at this point, sought to know from the micro entrepreneurs the frequency with which they use MMT in general without having a specific form of MMT in mind. From this, table 9 was derived it had a computed value of chi-square was 18.4344 which exceeds the critical value of chi-square. This shows that the general level of use of MMT enhances sales and therefore the performance of microenterprises

Table 10: Chi-square test on storing money in MMT account and its effect sales increase

	To store money in MMT/virtual account				
sales increase	disagree	low extend	moderate	strongly	total
Low	0	3	2	1	6
Moderate	4	5	6	2	17
Strongly	0	4	3	6	13
Total	4	12	11	9	36

Table 10 shows storing money in MMT/virtual account and its effect sales increase. The value of calculated chi-square was 9.1311 which is less than 10.645 the table value of chi-square for degrees of freedom of 6 and at 10% level of significance. Storing money in MMT/virtual account and sales increase are independent, therefore its use does not lead to improvement in the performance of micro enterprises.

Conclusions and recommendations

The key findings are that the use of MMT for P2P transfer of money for personal purposes, B2B transfer when making purchases from suppliers, C2B transfers when customers buy from

the business and for debt collection for credit sales and overall use of MMT in business contributed to improved performance of the micro enterprises. However, other forms of MMT use (to pay bills and phone to bank transfer) were independent of increase in sales and therefore did not boost the performance of micro enterprises, that is, their contribution to increase in sales was not statistically significant, at 10% level of significance.

These forms of MMT may have not led to statistically significant improvement in business performance because they are relatively new and micro entrepreneurs had not fully adopted them like the paying of utility bills by MMT and phone to bank transfers and vice versa. The fear among some potential users is the lack of a physical receipt which is permanent evidence of the transaction.

MMTS providers should popularize their relatively new products like payment of utility bills by MMT and phone to bank and vice versa money transfers especially among the older micro entrepreneurs who have not adopted them because they either do not know how to execute transactions or they experienced problems when trying the transactions which made them give up yet they stand to save a substantial amount of time from using these forms of MMT

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