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## The Use of Mobile Money Transfer System in Savings and Credit Cooperative Societies in Tanzania

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### Abstract:

*Mobile Money Transfer is the transferring of money from one person to another through the use of mobile phones. The system gained popularity around 2007 in Tanzania, and it has been adopted by financial institutions and other service-oriented organizations as one of the channels for providing services. The main objective of this study was to assess the use of Mobile Money Transfer as a delivery methodology by looking at how it affects accessibility and timeliness. A*

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*case study design was used and data was collected using questionnaires and face to face interviews. A total of 93 respondents were interviewed to obtain the findings. Findings indicate that the use of Mobile Money Transfer has led to improved accessibility and has reduced the time to access financial services. Mobile Money Transfer also has helped to blur geographical barriers by making financial services available anywhere at any time. It is recommended that other financial institutions in Tanzania, especially those operating in rural areas should also consider adopting Mobile Money Transfer as a medium of transferring money and encourage the members to use this system as it is cheaper and quicker than other methods available today.*

**Key words:** MMT, financial services, SACCOS

## **1.0 BACKGROUND AND PROBLEM SETTING**

Ever since the introduction of money, people have been devising methods of sending and receiving it for various purposes which requires efficiency, reliability and affordability (Kirui *et al.*, 2012). Among the methods which used globally in sending and receiving money includes the formal methods (such as Bank Transfers and Western Union) and informal methods (such as sending money through friends and relatives). In developing countries like Tanzania, the informal method is more dominant because the formal methods suffer from structural weaknesses, which includes concentration in the urban centres and high processing costs do not favour the majority of low income earners (Kirui *et al.*, 2012). In an attempt to mitigate some of the aforementioned problems associated with money transfer, financial institutions took advantage of the developments in mobile technology and adopted Mobile Money Transfer (MMT) allowing customers to transfer and receive money using their mobile phones conveniently and easily track their finances (Munyange, 2012). Although the system ran into complications

when tried, it has been widely viewed as the most successful mobile phone based financial service in the developing world (Jack and Suri, 2011).

Since the introduction of MMT, financial institutions using the system especially commercial banks have reported an increase in customers due to convenience and ability to reach the rural areas (Dass and Pal, 2011; Bangens and Soderberg, 2008), profits and staff efficiency, a reduction in costs both on the side of institutions and on the side of customers, and a decrease in queues at the bank branches (Mugweru *et al.*, 2011; Kumar *et al.*, 2010). However, few studies have been conducted to assess whether the system has any significant effects on the quality of services delivered in member – based financial institutions such as Saving and Credit Co-operative Societies (SACCOS). Experience from early adopters of MMT (mainly commercial banks) have shown that it can be very useful in reducing costs for financial institutions as well as for customer, therefore providing value added services to the customers. This has been achieved through improved information sharing between customer and institution, reduced visits at financial institutions which leads to reduced staff, as well as the anywhere/anytime characteristic of MMT services which removes geographical barriers (Goyal *et al.*, 2012).

Nonetheless, as noted by Kirui *et al.*, (2012), many financial institutions do not normally venture into rural, hard to reach areas as it is more costly and risky to operate in such areas. It is the Micro Finance Institutions (MFIs) especially SACCOS which to a large extent operate in these areas. These smaller financial institutions however, seem to lag behind in terms of introducing and using MMT despite the benefits reported by the early adopters. In Tanzania it is reported that at least 63% of all households have access to a mobile phone, including at least one half of the rural poor. Despite a rapid increase in the number of mobile phone users both in urban and rural areas which provides an opportunity for financial

institutions to use MMT, so far, this opportunity has not been effectively utilized to the advantage of the SACCOS. Goyal *et al.*, (2012) and Mirzoyants (2013) observed that among the reasons given for the reluctance of SACCOS to use MMT as a way of facilitating money transfer include ignorance on how to set up the system and little knowledge on the actual benefits that may accrue to their institutions and members. As put forward by Rogers (2003), knowledge of how a new technology operates and its benefits are among the key factors in determining whether a person is going to accept or reject a technology. Moreover, since MMT is still a new system, there is little empirical evidence has been documented on MMT adoption and how it affects service delivery in SACCOS, especially by looking at the way in which it affects accessibility, security, cost and timeliness. This knowledge gap is what formed the basis of this research. This study was therefore conducted on a SACCOS that has taken the initiative to implement MMT as a medium for transferring funds, with the aim of finding out, whether the use of MMT affect accessibility of SACCOS's financial services and timeliness for accessing financial services from a SACCOS.

## **2.0 EMPIRICAL AND THEORETICAL LITERATURE SYNTHESIS**

### **2.1 Empirical Review**

#### **2.1.1 MMT and Service Accessibility**

Accessibility is among the key problems hampering the penetration of rural areas by financial institutions (Kirui *et al.*, 2012). In a study conducted by Lemma (2010) covering Tanzania and Kenya, the researcher had the objective of analyzing the types of financial services used in the two countries and the barriers to access the services. The findings indicate, among other things that access barriers reduce the

probability that an individual will save by 8% up to 10% and the probability that an individual will borrow by 2% to 3%. Sohel *et al.*, (2011) views MMT as the solution for reaching poor people who are not considered viable by the formal financial sector. He argues that for the people who live in remote areas beyond the reach of bank branch networks and Microfinance, MMT is the only option to bring these people into the banking system. Another key issue on accessibility as stipulated by Goyal *et al.*, (2012) is the fact that MMT is “always ON” which means that a customer can do banking virtually anywhere and anytime.

### **2.1.2 MMT and Service Timeliness**

The most argued benefit of MMT is how this technology can help customers and financial institutions save time in providing financial services. In their study, Jack and Suri (2012) found out that 79% of the people interviewed concerning MMT responded that it took them less than one day to withdraw money from an MMT agent. In the study by Sohel *et al.*, (2011), the findings indicated that 70% of the respondents said MMT saves time as it is available anywhere and anytime, and does not require people to stand in queues to wait for services unlike in traditional banking services. Similarly, Goyal *et al.*, (2012) mentioned that since a mobile phone is always in a customer’s pocket, it can be used over a vast geographical area without the necessity of a customer having to visit a bank’s ATM or branch.

### **2.1.3 Summary and Research Gap**

The studies cited above indicate that MMT is an efficient and simple channel which can be used to transfer funds from one person to another or between a person and a financial institution. The system is easy to use by majority of people and is compatible with even the cheapest low – end handsets due to the technology used. Moreover, MMT has been found to possess the potential to reduce operational costs for financial

institutions as well as for the customers who are using those services. This can be achieved through eliminating the need for a customer to visit the financial institution hence incurring travel costs and wasting time. MMT has also been seen as a solution for financial institutions aspiring to reach the poor people living in rural, hard to reach areas where it is unviable to establish brick and mortar branches.

The potential benefits of MMT cited by various authors notwithstanding, so far only formal financial institutions, such as banks, have actually shown a positive response in adopting this system in Tanzania. Smaller financial institutions especially SACCOS have been very reluctant to adopt MMT due to various reasons including, as mentioned by Goyal *et al.*, (2012) the benefits of MMT. This can be resulting from the fact that no significant research has been conducted on a SACCOS using MMT to establish the extent to which this system can affect the quality of financial services delivered in a SACCOS, such that other SACCOS can use this as a benchmark for making their decision on whether to adopt MMT or not. It is due to this reason that this study is going to be conducted in an attempt to fill this research gap and establish whether MMT can contribute positively towards quality financial service delivery in SACCOS.

## **2.2 Theoretical Review**

This study drew from three well known theories / models; The Technology Acceptance Model (TAM), Diffusion of Innovations Theory and the Service Quality (SERVQUAL) model. The Technology Acceptance Model model has been used to shed some light on the reasons for the adoption of MMT in SACCOS, and this has been seen as resulting from perceived usefulness, perceived ease of use, system quality, social influence, perceived credibility and perceived financial cost of the service. Diffusion of Innovations theory has been very useful in two ways; firstly, it offers an in-depth explanation of why there are variations in

the time taken to adopt a technology among individuals/institutions and secondly, the theory throws light on the importance of bringing to light the advantages and disadvantages of a technology before majority of the population can accept it, which is exactly what this research was trying to accomplish. The SERVQUAL model in this case was used to anticipate the results of adopting the technology with respect to service quality and helped to provide benchmarks for measuring quality of financial services provided to SACCOS members, especially in terms of timeliness and security. Since the institution under study in this case (TANESCO SACCOS) has already adopted MMT, much emphasis was put on identifying the results (effects) of the adoption of the system towards financial service delivery.

### **3.0 METHODOLOGICAL UNDERTAKINGS**

This study was aimed at finding out how the use of MMT affects the quality of financial services delivered to SACCOS members. As such, the study was descriptive in nature as it was geared towards finding member's perceptions and feelings about the problem in question. To be able to gather the required data, a case study design was employed. The design is particularly useful to this kind of studies since it seeks to describe the problem in more detail, to look at it as a whole and through it conclusions can be made. The study was carried out at TANESCO SACCOS headquarters in Dar es Salaam though some of the data was collected from members living in Morogoro, Arusha and Kilimanjaro Regions which had majority of members. The study had a sample size of 93 respondents including SACCOS members in the selected Regions whereby respondents were drawn by using purposive and multi – stage sampling techniques respectively. Data was collected using key informants interviews and survey questionnaires containing close ended questions as well as likert scale in order to capture

the member's perceptions. Data analysis was conducted using both qualitative and quantitative methods. Qualitatively, data analysis was done through reflexive and interpretive analysis whereas descriptive statistics were used for quantitative analysis.

## **4.0 RESULTS AND DISCUSSION**

### **4.1 MMT and Accessibility of Financial Services**

#### **4.1.1 Member's Location**

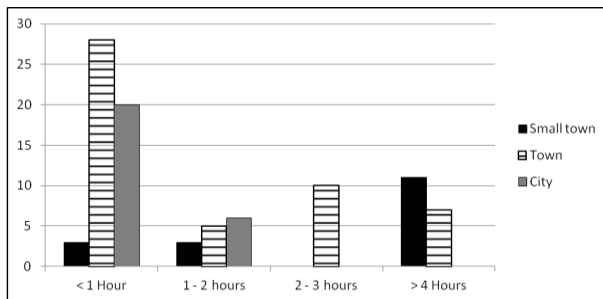
Data obtained from the SACCOS members indicate that no surveyed respondent lives in a rural area. Majority of the respondents (54%) reported that they live in towns, whereas 18% said they live in small towns and 28% said they live in cities. This is due to the fact that the data for this study were mainly collected from members who live in Dar es Salaam, Arusha, Morogoro and Moshi town where TANESCO has Regional and District offices only. Absence of respondents from rural areas will have a negative implication on the issues of accessibility and costs of financial services as it appears to be more difficult and expensive to access such services in rural areas than in urban areas. However, the researcher is convinced that the respondents from small towns do share some characteristics with those from rural areas and hence they can provide a useful insight regarding the research problem. Moreover, since there are no clear-cut boundaries between cities, towns, small towns and rural areas the researcher felt that some of the respondents were not very sure as to whether they lived in a city, town, small town or rural area per se.

Findings also indicate that there is a direct relationship between the area of residence of a member and the time taken to access financial services from the SACCOS, as can be seen in Figure 1. Majority of the respondents who live in cities and towns reported spending less than 1 hour to access services



from the SACCOS whereas those who live far from town (in this case, small towns) reported spending more than 4 hours to access the financial services (Figure 1). Even though there were no respondents from rural areas, but these results indicate that distance from the urban centres negatively affect the time needed to access financial services. Therefore, one can confidently conclude that for those living in rural areas the time to access financial services and consequently the cost will be higher.

**Figure 1: Relationship between member’s location and time to access services**



#### 4.1.2 Types of Services Accessed from the SACCOS

Respondents were asked to mention the service that they have accessed most frequently in the past one year. More than half of all the surveyed respondents (50.5%) reported that they have accessed a loan from the SACCOS in the past one year, which is the same time that MMT started operating in the SACCOS. The remaining members were split between savings/deposits (8.6%), loan repayments (15.1%) and emergency loans (25.8%). According to findings obtained through interviews with SACCOS staff and information available at the SACCOS website, currently the services that are offered via MMT includes emergency loans and education loans. This implies that at least 76% of the respondents presented in Table 6 below have used MMT either to access loans or to access emergency loans.

### **4.1.3 Member's Perception on how MMT Affects Accessibility**

In order to capture the respondent's perception on how MMT affects accessibility, a five – point likert scale (strongly agree to strongly disagree) was drawn. From the findings obtained, it can be seen that about 98% of the respondents are in agreement with the fact that the use of MMT simplifies accessibility of financial services in the SACCOS (Table 1). These results are in line with those of Sohel *et al* (2011) who also came with the conclusion that MMT can be used to improve accessibility of financial services especially to those who live beyond the reach of financial institutions.

Interviews conducted with the SACCOS staff revealed that the use of MMT has reduced much of the disturbance to the members as now they do not have to visit the SACCOS to obtain those services that can be accessed by MMT. This is also confirmed by the findings from members (Table 7) which indicate that about 94% of respondents agree or strongly agree that MMT has reduced disturbance in accessing financial services. Among the other factors examined was that raised by Goyal *et al* (2012) that MMT provides the possibility of clients to access financial services anytime and from anywhere. Majority of the respondents (93.5%) agreed, most of them strongly, that MMT does allow them to access services anytime and from anywhere. Gilman *et al* (2013) also supported this viewpoint that MMT enables people to send / receive money anytime and from anywhere. This was also confirmed by the staff members of the SACCOS during interviews and they explained that the SACCOS has set up a special account with Vodacom Mobile Network which is accessible anytime within Tanzania, though they have not yet allowed members to deposit money into that account. In general, more than 85% of the members are convinced that using MMT is better than using the traditional methods of sending and receiving money from the SACCOS.

**Table 1: Level of agreement of the respondents (in % terms) with accessibility issues**

Accessibility issue	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Use of MMT improves accessibility of financial services	69.9	28	0	2	0
Use of MMT reduces disturbances in accessing financial services	48.4	45.2	4.3	2.2	0
MMT allows anywhere / anytime service access	59.1	34.4	6.5	0	0
Using MMT is better than using traditional methods	50.5	34.4	6.5	8.6	0

## 4.2 MMT and Timeliness in Accessing Financial Services

### 4.2.1 Service access time and waiting time while using MMT

The findings indicate that all respondents (100%) reported that it takes a shorter time to access funds sent via MMT than any other transmission method. Furthermore, respondents were asked whether since the introduction of MMT the waiting time to access financial services from the SACCOS has increased or decreased. Results indicate that about 96% of all respondents said that the waiting time has decreased, whereas about 4% replied that the waiting time has actually increased. Kumar *et al* (2010) also found out that MMT has greatly reduced the waiting time especially by removing the need for a person to travel to the nearest service center, but also it saves the hours that would be wasted on queues while waiting for ones turn to be attended in financial institutions. Gilman *et al* (2013) gave similar remarks when citing some of his respondents (small business owners) who said that MMT is a beneficial system as it allows them to be at their respective business locations at all times, other than wasting time on queues and this helps them in their business. Similar results have also been reported by Sohel *et al* (2011) who found out that about 61% of his respondents said that MMT takes a shorter time than conventional money transfer methods, while 34% said it takes

the same time as other methods and only 5% of the respondents said it takes more time than other methods.

#### **4.2.2 Member's Perception on Speed of MMT**

Respondents were asked to give their perception of the speed of accessing financial services using MMT as opposed to that of using other traditional methods. Findings indicate that about 82% of the respondents said that MMT has a high speed in transmitting funds than any other method. The remaining 18% were of the opinion that the speed is medium / small (see Table 2). These findings coincide with those of Gilman *et al* (2013) who found out that speed is among the key factors that influence people to use MMT as a money transfer solution. The respondents in that study said that MMT offers a more time – efficient and safer payment option by reducing or eliminating the require travel time and allowing business owners to travel without carrying large sums of cash.

**Table 2: Member's perception on speed of MMT (n = 93)**

<b>Category</b>	<b>Frequency</b>	<b>Percentage %</b>
Small speed	2	2.2
Medium speed	15	16.1
High speed	54	58.1
Very High speed	22	23.7

## **5.0 CONCLUSION**

Accessibility has always been a major challenge in developing countries especially due to the problem of underdeveloped infrastructure. Findings obtained from this study indicate that through the use of MMT, financial institutions can overcome the problems associated with accessibility by enabling their clients / members to access all services without necessarily having to move from one place to another in search of such services. Furthermore, the use of MMT has the ability to provide services promptly without any delays or wastage of time. In most cases, the traditional money transfer methods

involved wasting a lot of time on the road and in queues while waiting to access financial services. Findings indicate that the use of MMT has made access to financial transactions faster than ever before, while at the same time it has reduced waiting time for accessing financial services. Therefore, the study concludes that MMT has improved the quality of financial services offered by MFIs in terms of accessibility and timeliness. Transactions which used to require hours of a member's time now can be accomplished in a few minutes, thus allowing the member more time to engage in other productive activities. This is an opportunity which needs to be embraced by other financial institutions in Tanzania in order to enjoy the benefits brought by the use of MMT.

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