

## **BENEFITS AND CHALLENGES OF MOBILE PHONE BANKING USAGE IN NATIONAL MICROFINANCE BANK DODOMA, TANZANIA**

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### **ABSTRACT**

*This study examined perceived benefits and challenges of Mobile Phone Banking usage in the National Microfinance Bank (NMB) Dodoma, Tanzania. A cross-sectional design was used in which questionnaire was administered to 85 MPB customers and management team. Purposive and convenience followed by systematic sampling techniques were used to select respondents. NMB reports were reviewed in order to extract secondary data. The findings reveal a significant difference ( $p < 0.01$ ) in transaction costs between MPB and ATM/traditional banking. Findings reveal that MPB has resulted into several perceived benefits to NMB customers including 24 hours availability, ease of use, high security, reduced queues, cheap, multiple services and transferability. Accordingly, network failure, theft of fund transferred, delay of fund delivery and reconciliation are challenges facing MPB usage. The study recommends to the NMB management that more promotional effort is required in order to attract new customers who are not subscribed to MPB. Also, Tanzania Communications Regulatory Authority (TCRA) needs to improve the stability of networks and enact laws against theft cases via MPB.*

**Keywords:** *Perceived Benefits, Challenges, Mobile Phone Banking, National Microfinance Bank, Tanzania.*

### **1.0 INTRODUCTION**

Mobile Phone Banking (MPB) or sometimes mobile banking (M-banking) or just phone banking is the term used to describe financial services delivered using mobile networks and interface between the user and the mobile device (Agwu & Carter, 2014). Normally, such services include depositing, withdrawing, sending and saving money as well as making payments. In the similar manner, m-banking refers to provision of financial services by the use of mobile phone as a device without physical contact with traditional banks (Adegbenjo & Akande, 2016). According to Ishengoma (2011), MPB refers to as banking business activities that is performing balance checks, account transactions, payments and credit applications via mobile device or Personal Digital Assistant (PDA). For a long time, the banking system has been much dominated by traditional banking, which has passed into different changes due to banking technological innovation and time (Ishengoma, 2011). Mobile Banking refers to offering of banking and financial services with the aid of mobile telecommunication devices (Chandran, 2014).

FinScope's Survey (2017) indicates that only 13% of Tanzanians use formal financial services in commercial banks as traditional banking system. This is the lost opportunity among traditional banks that might have been caused by either loans being too difficult to obtain and repay, lack of enough money to bank and many obstacle that they face when they go to bank; like long waiting time, withdraw fees and monthly fees, and introduction of mobile banking that seems to solve some of their problems like little money to take to the bank and time saving. Just after 2008, when MPB was introduced, Tanzania has marked high step in financial inclusion. In 2008, less than 1% of the adult population had access to mobile financial services, 90% had access by September 2013, an exponential increase as the result of the guidelines for electronic payment schemes issued by the Bank of Tanzania (BOT) which allowed mobile network operators (MNOs) to offer payment services (Di Castri & Gidvani, 2014). MPB is spread all over the country with a record of 31.8 million registered accounts along with an agent network of over 153,000 agents as at the end of December 2013 (Ndulu, 2014). In terms of access points, the 153,000 agents is much more extensive than the 500 bank branches, 1,400 ATMs, and 2,500 POS terminals, and has gone a long way in expanding access to financial services. A range of e-payment services that have been developed in Tanzania includes everything from remittances, bulk payments, bill payments and even government payments such as taxes and school fees that were initially done only through traditional commercial banks (Ndulu, 2014).

In Tanzania, 31.8 Millions of Tanzanians are subscribed into mobile phone banking that is approximately 54.4% of total population is in mobile phone banking system (Sheffu, 2010). NMB Dodoma branch has almost 28,253 customers with personal accounts and among them, 20666 customers have been subscribed into different mobile phone networks where they are also subscribed into MPB system (NMB Report, 2014). Mramba *et al.* (2014) point out that, since there is no direct relationship between mobile phone ownership and the application of mobile phones in business, there is a need to train teenagers, particularly primary school and secondary leavers on how to apply mobile phones in a business context.

Given the facts that the previous studies have shown an exponential growth of Tanzanians using mobile phone services and customers adopting MPB system in banking industry, (FinScope 2017:Mramba 2014), still there is a decrease in usage of traditional banking services, something that poses a number of unanswered question. For instance, FinScope (2017) indicates that the uptake of formal financial services in Tanzania through mobile money services has increased from 50% in 2013 to 60% in 2017 while the usage of commercial bank services has decreased from 14% in 2013 to 13% in 2017. This trend in uptake of formal financial services draws up a puzzle which needs academic inquiry in order to assess the benefits accruing from MPB usage and the associated challenges. This study therefore aimed at examining the benefits and challenges of MPB usage in the NMB Dodoma branch of Tanzania. The objective of this study was to assess benefits and challenges of mobile phone banking usage in the NMB Dodoma. The following research questions were used to achieve the objective; are there any benefits to customers by using MPB in NMB? If yes, what are they and what are the challenges associated with MPB usage?

## **2.0 LITERATURE REVIEW**

### **2.1 Technology Acceptance Model**

Technology Acceptance Model (TAM) was used to guide this study. TAM was proposed by Fred David in 1989 by adapting the Theory of Reasoned Action (TRA) developed by Fishbein and Ajzen, 1975 (Khan & Woosley, 2011). TAM has been widely used when investigating users' perceptions about new or existing software or other technological solution. It gives a good picture about how the users or potential users evaluate the solution and its adequacy in general (Mramba *et al.*, 2014). Davis shows that users' motivation to use and accept a system can be explained by three factors, the attitudes toward using a system, Perceived Usefulness (PU) which is defined as the degree to which an individual believes that using a particular system would enhance his or her productivity and Perceived Ease of Use (PEOU) which is defined as the degree to which a person believes that using a particular system would be free of effort, this describes users' expectations of how easy the application is to use (Mramba *et al.*, 2014). TAM theory summarizes that an individual's behavioral intention to adopt a particular piece of technology is determined by the person's attitude toward the use of the technology. Attitude, in turn, is determined by PU and PEOU. According to TAM, PU and PEOU form attitudes toward using a particular system, which in turn determines the intention to use and generate the actual usage behaviour. The relevancy of TAM in this study is that the MPB usage in NMB is the function of PU, PEOU and attitudes. Despite the applicability of TAM to technological studies, the theory has not linked the technological application in service industry such as banking. Further, TAM is relevant to this study as most of the variables in TAM such as technological ease of use and perceived benefits from using such technology were variables in this study to be measured.

### **2.2 Adoption of M-banking Globally**

Worldwide, Petrova and Wang (2013) in New Zealand indicate that retailer demand for m-Payment was motivated mainly by perceived customer expectations for a convenient faster way to pay using the ubiquitous mobile technology, as well as by the perceived efficiency of m-Payment leading to revenue increase. It is from the same study it was further argued that m-payment adoption in New Zealand was aimed at competing with already established point-of-sale payment technologies. The study of Awara and Anyadighibe (2014) in Nigeria reveals that security concern, service charges, perceived ease of use, resistance to change, accessibility and awareness influence customers' acceptance of e-banking. Further, the same study revealed that cost/price, infrastructure and competition have influenced e-banking implementation by banking service providers.

Nyangosi (2011) in Kenya shows that financial products through cell phones were found to have gained popularity. Customers found it easy, convenient, and efficient to transact conventional banking services which are non-monetary in nature such as balance enquiry, transfer of funds and changing of password. Further, the study of Chandran (2014)

in India about the banking sector revealed that e-banking has resulted into improved management decisions, quality of services, operational performance, productivity and profitability of banks under the study. In Kenya (Graham, 2011) argued that through MPB customer can have services such as account information—which entails mini-statement inquiry and checking of account history, alerts on account activity or passing of set threshold, monitoring of term deposits, access to loan statements, access to card statement, mutual funds/equity statement, insurance policy management and pension plan management.

Globally, despite benefits m-banking has brought to improve quality of services rendered to customers by service providers, a number of challenges have been experienced. For instance, in the study of Rahman (2013) in Bangladesh a number of barriers to M-commerce were identified including lack of literacy, trust and conflict of interest between telecommunication service providers and banks. In the same view, Chandran (2014) pointed out that inadequate guidance provided by banks to customers, high transactional charges, unstable networks, reported theft and illiteracy to citizens in rural areas were challenges of using e-banking in Indian banking sector.

### **2.3 Trend of adoption and use of MPB in Tanzania**

The emergence of MPB adoption in Tanzania can be traced back in relation to the increase of Tanzanians owning mobile phones. Until 2009, 28% (7,232,143) of Tanzania's 22.35 million adults owned mobile phones and 32% used someone else's mobile phone and the reach of the financial sector was still very limited; only 9% of adults (1,951,310) were bank users (Di Castri & Gidvani, 2014). At the end of September 2013, the Bank of Tanzania (BOT) reported 30,342,540 registered mobile money users and 9,856,440 active users on a 90-day basis and at that time, 714,930,074 transactions valued to US\$12.3 billion had been conducted since mobile money was launched (ibid). Moreover, the report indicates that Vodacom has the highest number of clients using M.Pesa (53%), followed by Tigo Pesa (18%), Airtel Money (13%), and Zantel with small number of subscribers and users of Ezy Pesa. As the matter of facts, this rapid growth of mobile money users through mobile phones has resulted into the rapid increase of MPB usage in the Tanzanian banking industry.

MPB is a term used for performing balance checks, account transactions and payment via mobile phones (Graham, 2011). The same study further argued that through MPB customer can have services such as account information—which entails mini-statement inquiry and checking of account history, alerts on account activity or passing of set threshold, monitoring of term deposits, access to loan statements, access to card statement, mutual funds/equity statement, insurance policy management and pension plan management.

In Tanzania, Di Castri and Gidvani (2014) suggest that mobile money technology has several benefits including: unbanked people would have an incentive to join the formal financial system via mobile money platforms, savings behaviors of Tanzanians who have mobile money account but are still out of the reach of the banking system would be rewarded, unbanked mobile money customers could become acquainted with the practice of storing value with a formal financial services provider, making them more willing and prepared to open bank accounts if the opportunity is offered to them, lowering the number and value of cash outs could ease some pressure on the liquidity management for the providers. According to Masamila (2014), most of customers join M-banking for their conveniences of time, distance to bank, long queue in banks and ATM and any other factors that may disturb them when trying to access their accounts.

In Tanzania, Mramba *et al.* (2014) indicates that street vendors commented that the language used in mobile phone devices should be Swahili (native language). They cited examples; like difficulties to buy airtime with M-money with an English menu in mobile phone. Rumanyika and Mashenene (2014) show that, poor telecommunication infrastructure, poor e-commerce security systems, lack of IT education and training, poor e-readiness and socio-cultural beliefs and lack of IT experts are significant impediments of e-commerce adoption among SMEs in Tanzania. Mkende (2014) finds out that delay in reconciliation of e-transactions, theft of transactions and network failure are challenges facing NMB. Ishengoma (2011) and Oonge (2012) indicate that banking industry lose income when customers transfer all the money to their M-banking and make transaction via mobile phone without their accounts.

## **3.0 RESEARCH METHODOLOGY**

A cross-sectional research design was employed in this study whereby data were collected at one point following financial and time constraints. Mlay *et al.* (2017) used the same research design due to the similar limitations under

the study. Questionnaire survey was used in which 80 questionnaire were administered to NMB customers subscribed into MPB and 05 questionnaire were administered to NMB management team in Dodoma region. NMB customers were used as unit of analysis. However, NMB managers were included in order to capture management efforts taken in tackling challenges facing NMB customers in using MPB. The choice of NMB Dodoma region was due to the fact that NMB Dodoma has big number of customers who use MPB. Purposive and convenience sampling techniques were used to select respondents. During the data collection, the researcher first purposively selected customers who use MPB and then further used systematic sampling to select final respondents. The response rate was 100% following the fact that questionnaires were administered to customers who visited the customer service department at NMB Dodoma in which purposive and convenience sampling techniques were used to select the respondents who were visiting the banking hall and ATM to make transactions. Respondents were being requested by the researchers to fill in the questionnaire and those who accepted spend 8-10 minutes filling in the questionnaire under the guidance of the researchers in order to maximize data validity and reliability. On the other hand, NMB management team including the branch manager, back office manager, customer service manager, commercial manager and customer service team leader were given questionnaires and given time to fill in them at their convenience. A special appointment was made to collect questionnaires from them. Also, documentary review was carried out in which secondary data were extracted from NMB reports provided by the management.

Before data analysis, reliability and validity of data were carried out. For the case of reliability, a Cronbach Alpha ( $\alpha$ ) was performed. Many researchers have used Cronbach  $\alpha$  to test reliability of data (Mashenene, 2016; Lawson, 2014). The reliability scale was performed by computing Cronbach's Alpha for each MPB benefits. Normally, Cronbach's Alpha reliability coefficients are scaled from 0 to 1 with a higher internal reliability for the result approximately to 1 (Mashenene, 2016). The interpretation of the size of coefficient Alpha is that 0.90 or above indicates a "high" reliability coefficient and it is considered to be very good or excellent. An Alpha between 0.80 and 0.89 is considered good whereas that between 0.70 and 0.79 is adequate or acceptable. Alpha between 0.60 and 0.70 is questionable, that between 0.50 and 0.60 is poor; and values less than 0.50 are considered to be unacceptable (Lawson, 2014).

Further, validity of data was tested in order to make the study findings valid. Triangulation was used to ensure validity of data in which multiple methods of data collection were used (Mungai, 2013). During data collection, questionnaire and documentary review were used to collect data and ensure validity of data collected. Moreover, the questionnaire was pre-tested to NMB customers and management in Dar es Salaam region. It is the pre-requisite to pre-test the data collection instruments to different sample which will be used in study (Mashenene, 2016).

Data were analyzed using Statistical Package of Social Sciences (SPSS) version 23 as a tool for data analysis in which findings were presented using tables, frequencies, percentages and bar graph. Before data analysis was performed, data were edited and validated in order to sort out useful from non-useful data. The useful data thereafter were subjected into data analysis whereas they were coded and later entered into the SPSS and cleaned. After data entry and cleaning, descriptive analysis was performed to analyze data. To analyze challenges facing MPB system, multiple responses was performed. Further, t-test for independent samples using transactional costs was performed to compare transactional costs incurred by NMB customers between using ATM/banking hall and MPB systems.

## 4.0 FINDINGS AND DISCUSSION

### 4.1 Cronbach Alpha Results

All of the MPB benefits had an Alpha above 0.70 (Table 1); this is the recommended Cronbach Alpha value and it confirms that the measurement instrument used was reliable. As the result, the researcher proceeded with further data analysis as the data were reliable as confirmed by Cronbach Alpha values.

**Table 1: Reliability Analysis**

Benefits	Cronbach's Alpha	Number of items
24 hours service	0.889	6
Ease of use	0.933	5
Security	0.776	6
Reduced queues	0.865	6
Cheap MPB services	0.861	7
Multiple services	0.911	5
Transferability	0.876	8



#### 4.2 NMB Dodoma Customers Subscribed to MPB

In this study, we asked NMB management to provide us with data regarding NMB customers. The findings (**Table 2**) show that there are 28,253 NMB Dodoma branch customers of which the majority 20,666 (73.1%) are subscribed into MPB while only 7,587(26.9%) are not subscribed into MPB. The implication of these findings suggests that the majority of NMB Dodoma branch customers are subscribed to MPB and this suggests that the NMB management has made outstanding efforts to promote the product. However, there is still a room for NMB management to strategically improve promotional campaigns on MPB usage in order to attract 26.9% of customers who are not subscribed into MPB to join MPB. These findings are in harmony with those in Mramba *et al.* (2014) which find out that 68% of respondents use mobile phones for M-Money, something embedded in MPB.

**Table 2: NMB Dodoma Customers Subscribed to MPB**

Category of customers	Frequency	Percent
Number of customers subscribed to MPB	20,666	73.1
Percent of customers not subscribed to MPB	7,587	26.9
<b>Total</b>	<b>28,253</b>	<b>100.0</b>

#### 4.3 Frequency of using MPB

In this study, we asked respondents on the frequency they use NMB services using MPB. The findings (**Figure 1**) indicate that the majority (73.8%) of respondents often use MPB while 26.3% rarely use MPB. The implication of these findings suggests that the majority of respondents use MPB and there is a need for NMB management to strengthen marketing efforts in promoting MPB usage in order to transform 26.3% of customers to become often MPB users.

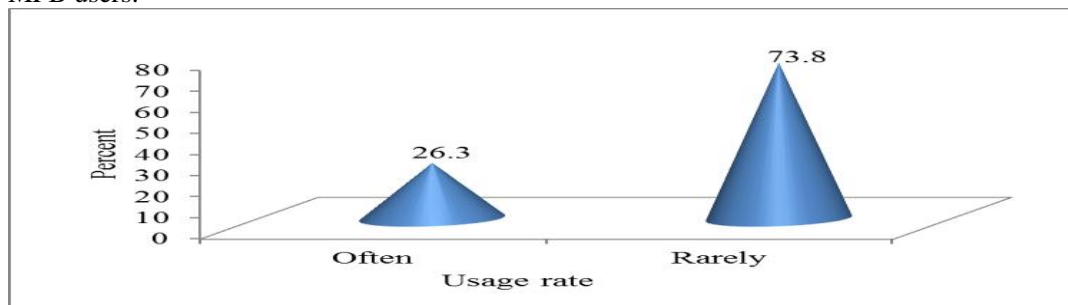


Figure 1: Frequency of MPB usage

#### 4.4 Perceived Benefits of Using MPB to NMB Dodoma Customers

In this study, we wanted to measure the effectiveness of MPB services. The findings (**Table 3**) shows that 96.3% of respondents agreed that MPB is available 24 hours, 1.3% of respondents disagreed that MPB is available 24 hours and only 2.5% of respondents were neutral. This implies that the MPB services are available anytime for users to make their transactions. Also, the findings show that 97.5% of respondents agreed that MPB is easy to use, while 1.3% of respondents disagreed that MPB is easy to use and only 1.3% of respondents were neutral. The implication of the findings is that many customers opt for MPB because it is easy to use. These findings are supported by TAM on the basis of ease of use. Moreover, the findings shows that 96.3% of respondents agreed that MPB is safe for use while 2.5% of respondents disagreed that MPB is safe of use and only 1.3% of respondents were neutral. The indication of these findings shows that using MPB is safer than MNB ATMs or banking halls. Additionally, the findings shows that 100% of respondents said that the use of MPB help them to reduce queue in ATMs or banking halls. The implication from such findings is that, the customers can make transactions on their own without wasting their time contrary to the use of ATMs or banking halls. Also, the findings show that the management has successfully succeeded on using this marketing strategy. Also, the findings show that 92.5% of respondents use MPB because it is a cheap service while 2.5% of respondents disagreed that using MPB is cheap and 5% of respondents were neutral. This implies that most customers use MPB because it is cheaper than using NMB ATMs or banking halls. In line to perceived benefits of MPB services, the findings shows 92.6% of respondents agreed that MPB provides multiple services while 3.8% of respondents disagreed that MPB provides multiple services and 3.8% of respondents were neutral. This implies that the MPB is useful in provision of multiple services that satisfies its customers through giving them a number of alternatives including balance inquiry, mini statement, fund transfer, bill payment and many others. Finally, the findings show that 98.7% of respondents use MPB to transfer the fund within

banking industry and across money mobile phone providers such as M.Pesa, Tigo Pesa, Airtel Money and only 1.3% of respondents disagreed to use MPB for fund transfers. These findings are supported by the technology acceptance theory which argues that customers tend to favour the technology which is ease to use and that offers benefits to them. The implication of these findings reveals that MPB has helped most customers to transfer the fund within banking industry and across money mobile phone providers such as M.Pesa, Tigo Pesa and Airtel Money. These findings are supported by those in Mramba *et al.* (2014) which indicate that 68% of the respondents in Tanzania use mobile phones for M-Money, something which is sometimes transacted through MPB system.

**Table 3: Benefits to Customers for using MPB**

Variables	Strongly Agree	Agree	Neutral	Disagree	Total
24 hours service	45(56.3%)	32(40.0%)	2(2.5%)	1(1.3%)	80(100.0%)
Ease of use	42(52.5%)	36(45.0%)	1(1.3%)	1(1.3%)	80(100.0%)
Security	53(66.3%)	24(30.0%)	1(1.3%)	2(2.5%)	80(100.0%)
Reduced queues	58(72.5%)	22(27.5%)	0(0.0%)	0(0.0%)	80(100.0%)
Cheap MPB services	44(55.0%)	30(37.5%)	4(5.0%)	2(2.5%)	80(100.0%)
Multiple services	39(48.8%)	35(43.8%)	3(3.8%)	3(3.8%)	80(100.0%)
Transferability	48(60.0%)	31(38.7%)	0(0.0%)	1(1.3%)	80(100.0%)

These findings are consistent with those of Albarq (2014) which indicate that 81 percent of Saudi consumers' intentions to continue shopping online were due to ease of use of the technology. Moreover, these findings are supported by TAM in the aspect of ease of use and perceived usefulness of the technology. Accordingly, these findings are supported by those in Di Castri and Gidvani (2014) which indicates that customers use mobile money because it is cheaper (87%), quicker (83%), easier to use (82%), safer (78%) and convenient (75%).

#### 4.5 Transactional Costs for using NMB ATM or Banking and MPB

Moreover, in this study we asked respondents to show their agreement or disagreement on the statement that using NMB ATMs or banking halls is cheaper than using MPB in terms of transactional costs. The findings (Table 4) show that 50.0% of respondents disagreed that using NMB ATMs or banking halls is cheaper than using MPB. Likewise 38.8% of respondents strongly disagreed that using NMB ATMs or banking halls is cheaper than using MPB. Generally, the implication of the findings indicate that 88.8% of respondents disagreed that using NMB ATMs or banking halls is cheaper than using MPB. However, only 2.6% of respondents agreed that using NMB ATMs or banking halls is cheaper than using MPB whereas 8.8% of respondents were neutral. Regarding to these findings, it shows that the transactional costs of using MPB is be cheaper than using NMB ATMs or banking halls. In this view therefore, NMB customers subscribed to MPB enjoy perceived benefits as far as transactional costs are concerned.

**Table 4: Transactional Costs for using NMB ATM or Banking and MPB**

Transactional Costs	Frequency	Percent
Strongly agree	1	1.3%
Agree	1	1.3%
Neutral	7	8.8%
Disagree	40	50.0%
Strongly disagree	31	38.8%
<b>Total</b>	<b>80</b>	<b>100.0%</b>

#### 4.6 Comparison of Transactional Costs between MPB and NMB ATMS or Banking Halls

Furthermore, we asked the NMB management to show us the comparison of charges charged by the bank to customers when using MPB and NMB ATMs or banking halls in order to get the rationale of perceived benefits accrued from MPB usage. The findings (Table 5) show that using MPB is cheaper than using NMB ATMs or banking halls. The managerial implication of these findings is that NMB customers need to use MPB services as it is cheaper than using ATMs or banking halls. This implication suggests that NMB management adopts marketing strategy which seeks to reduce queues at ATMs or banking halls and empower customers to carry out transactions at their convenience with the purpose of enhancing customer satisfaction and remain competitive in the banking industry. These findings are in harmony with those in Bångens and Söderberg (2011) which indicate that the use of mobile money transfer is cheap since it saves time.

**Table 5: Comparison of Transactional Costs between MPB and NMB ATMS or Banking Halls**

Type of transaction	MPB charges (TZS)	NMB charges (TZS)
Balance inquiry	200	600
Mini statement	350	1150
Fund transfer	Minimum 3,000	Minimum 10,000

***T-test for Independent Samples Results***

Table 6 indicates a significant difference ( $p < 0.01$ ) in transaction costs between MPB and ATM/traditional banking. The mean for MPB transactional cost is 0.5243 compared to 0.2134 ATM/traditional banking transaction cost implying that the use of MPB is about 2.5 times cheaper than ATM/traditional transactional cost. These findings are supported with the technology acceptance model which argues that customers are likely to favour the technology which is easy to use and that offers high perceived benefits.

**Table 6: T-Test for Independent Samples using Transactional Costs**

Variables	Type of services	n	Mean	Std. Deviation	Std. Error Mean	t
TC	MPB	30	0.5243	0.3241	0.03113	3.4188***
	ATM/Traditional Banking	40	0.2134	0.3878	0.03914	

\*\*\* denote significant level at 1%

**4.7 Nature of Transactions made using MPB**

Regarding nature of transactions effected by MPB users, the findings (Table 8) show that 83.8% of respondents use MPB for bill payment, 82.5% of respondents use MPB for balance inquiry, 76.2% of respondents use MPB for airtime recharge and 70.0% of respondents use MPB for fund transfer. On the other hand, only 47.5% of respondents use MPB for mini statement request. The implication of these findings shows that balance inquiry, bill payment, airtime recharge and fund transfer are mostly used by MPB users. However, the findings reveal that mini statement menu is underutilized. The implication of this underutilization of mini statement menu suggests that there is a need for NMB management to aggressively create awareness to the customers through promotional activities. These findings are supported with the findings of Njenga (2009) in Kenya which indicate the mean scores in brackets in the variables measured; balance inquiry (0.42), pay store account (0.96), bill payment (0.33), money transfer (1.00), cash deposit (0.90), cash withdrawal (0.87) and airtime recharge (0.78). Accordingly, the findings of Ivatury and Pickens (2006) in South Africa reveal that the use of m-banking allows users to check balance, do payments (inter-account, person-to-person, bill payment and airtime purchase) and most common activity is to buy airtime followed by balance inquiry and lastly money transfer.

**Table 8: Nature of Transactions Transacted Using MPB**

Nature of transactions	Responses		Percent of Cases
	n	Percent	
Fund transfer	56	19.4%	70.0%
Balance inquiry	66	22.9%	82.5%
Mini statement	38	13.2%	47.5%
Bill payment	67	23.3%	83.8%
Air time recharge	61	21.2%	76.2%
<b>Total</b>	<b>288</b>	<b>100.0%</b>	<b>360.0%</b>

**4.8 Challenges Facing MPB Systems*****Challenges Facing MPB users***

In this study, we asked MPB users about the challenges facing them. Findings (Table 9) show that 72.4% of respondents are constrained with network failure while 31.6% of respondents are constrained with delay of service delivery. Generally, network failure and delay of service delivery can be grouped together to mean network related challenges. The implication of these findings is that MPB system is greatly affected with network failure. In view of these findings, NMB management is required to take serious measures by re-engineering the network systems in order to maximize MPB system utilization and curb network associated hurdles. These findings are supported with those in the study of Nicholaus and Venkatakrishnan (2013) which points out that agents and customers of mobile phone money transfer are faced with challenges including network failure in terms of network outage and frequent hanging transactions and lack technical support from mobile phone operating companies' representatives and

aggregators. In the same line, these findings are consistent with those in Mtaho and Ishengoma (2014) which indicate that inadequate network infrastructure is among the factors affecting Quality of Services (QoS) in Tanzania cellular networks which in return affect MPB system.

**Table 9: Perceived Challenges Facing MPB Users in Tanzania**

Challenges Facing MPB Users	Responses		Percent of Cases
	n	Percent	
Network failure	55	69.6%	72.4%
Delay of service delivery	24	30.4%	31.6%
<b>Total</b>	<b>79</b>	<b>100.0%</b>	<b>103.9%</b>

#### ***Challenges Facing NMB in MPB Adoption***

In this study we investigated the challenges facing NMB in MPB adoption. The responses from the NMB management team (**Table 10**) reveal that the critical challenges facing NMB in MPB adoption are transactional reconciliation delay (100.0%), theft of transacted fund (100.0%), network instability (100.0%) and delay of fund delivery (60.0%). In reality, the challenges facing the NMB management with regard to MPB system can be broadly groped into network failure (transactional reconciliation delay, network instability and delay of fund delivery) and security issues (theft of transacted fund). For the case of network failure, the outcomes include delay to reconcile transactions, network instability and delay of fund delivery. As a result, NMB employees tend to spend long hours to reconcile transactions, something which seems to frustrate and discourage employees. Accordingly, network instability either results into delay to reconcile transactions or necessitate MPB users to visit NMB banking hall in order to get solutions for their transactional problems which causes customer dissatisfaction with the product. For the case of theft of transacted fund, customers are likely to complain to the bank and some to third parties, something which tarnishes the image of the bank through negative word of mouth spread by dissatisfied customers. Also, customers who lose their money through using MPB tend to avoid using it again and resume to the traditional banking system. The implication of these findings suggests that NMB management needs to seriously find solutions to the MPB system in order to mitigate such challenges and consequently enhance customer satisfaction and bank's profitability. These findings are in harmony with those in Nicholaus and Venkatakrishnan (2013) which show that unavailability of network coverage and fraud issues are challenges of mobile-phone money transfer services' market penetration and expansion in Tanzania. In the same view, these findings are supported by those of Bångens and Söderberg (2011) which reveal that poor network coverage and lack of security arrangement are among constraints confronting mobile money transfer and usage among micro and small businesses in Tanzania. These findings are supported with those in Ericsson (2012) which show that lack of awareness of opportunities offered by m-commerce, false impression about aspects such as safety and lack of trust on e-commerce systems are barriers of m-commerce in Tanzania.

**Table 10: Challenges Facing NMB in MPB Adoption**

Challenges Facing NMB in MPB Adoption	Responses		Percent of Cases
	N	Percent	
Transactional reconciliation delay	5	27.8%	100.0%
Theft of transacted fund	5	27.8%	100.0%
Network instability	5	27.8%	100.0%
Delay of fund delivery	3	16.7%	60.0%
<b>Total</b>	<b>18</b>	<b>100.0%</b>	<b>360.0%</b>

## **5.0 CONCLUSION AND RECOMMENDATIONS**

### **5.1 Conclusion**

The purpose of this paper was to examine the perceived benefits and changes of using MPB in NMB. This paper concludes that MPB is convenient to its users due to its 24 hours availability, ease of use, high security, reduced queues, cheap, multiple services and transferability across banks and telecommunication service providers. MPB as a new technology in current financial markets in Tanzania, has transformed the way banking activities are being undertaken in NMB. This has resulted into introduction of new products such as fund transfers, payment of bills, airtime recharge, balance inquiry and mini-statements. As the findings indicate, such innovation have played a significant role in enhancing customers' satisfaction and loyalty since customers have been empowered by MPB to enjoy self-services at their own convenience. However, services like money deposits and withdrawals from bank



accounts, loan applications, transfer of huge amount of fund national and international wise are still taking place in the NMB banking halls. As the matter of facts, MPB has not replaced traditional banking activities but rather it should be viewed as a bank's competitive tool. The implication of these findings to the bank management is that more promotional effort is required in order to attract NMB customers who are not subscribed to MPB system. This will be achieved through positioning MPB services by addressing the perceived benefits offered by MPB.

On the other hand, network failure, theft of fund transferred, delay of fund delivery and reconciliation of transactions are challenges facing MPB usage in NMB. As the result, these challenges have resulted into customers' fear and distrust to use MPB services. Accordingly, sometimes NMB employees spend long time to reconcile transactions and handle customers' complaints due to network failure, theft of fund transferred and delay of fund delivery.

## 5.2 Recommendations

The paper recommends to the Tanzania Communications Regulatory Authority (TCRA) to improve the stability of networks and enact laws and regulations against theft cases via MPB usage. Moreover, NMB should reconsider investing in risk and compliance functions in order to rescue them on major losses resulting from theft of data and fraud. Furthermore, effort is required by NMB to educate users on how to use MPB correctly in order to reduce customer complaints as sometimes customers erroneously transact fund through MPB and later complain to the bank as theft case.

## 5.3 Areas of future research

Based on the research findings, the following are the recommended areas for future research. First, quantitative study should be conducted in order to measure customer satisfaction toward MPB usage in banking industry in Tanzania since satisfaction is among the factors that can improve or destroy organizational reputation and performance. Second, another study needs to be conducted by including many commercial banks for sound generalization.

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