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## Adoption of Mobile Financial Services by the Banking Customers in Tanzania

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### Abstract

The spread of mobile financial services has been driven by rapid advances in network technology and the use of mobile phones. The uptake of mobile financial services varies from country to country. This study examined the variables that influence the adoption of mobile financial services by bank customers in Dar es Salaam, Tanzania. The study hypothesised that the following factors influence the adoption of mobile financial services: perceived usefulness, perceived ease of use, perceived network coverage, perceived risk and perceived cost. One hundred and thirty-three participants were selected in Dar es Salaam city. Cronbach's alpha coefficient was used to determine reliability (all values were above 0.8), while multiple regression analysis was used to test the hypotheses, explaining 55.6% of all variances (adjusted  $r^2$ ). The adoption of mobile financial services was found to be positively related to perceived usefulness, perceived ease of use and perceived distributed network services, and negatively related to perceived cost and perceived risk ( $p < 0.001$ ). The results show that the five identified predictor variables from the literature review: perceived usefulness, perceived ease of use, perceived coverage by distributed network services, perceived risk and perceived cost can predict the intention to adopt banking services.

**Keywords:** adoption, mobile financial services, banking customers, Technology acceptance model, Tanzania

### 1. Introduction

Technology is changing the way customers see, use and perceive products and services. Technology has helped to change the way banks deliver their services and interact with their customers in the delivery of their services. Telecommunications companies offer unique



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advantages over traditional banks. These include the fact that they focus on the different financial capabilities of their customers, rather than focusing only on profitable customers. Telecommunication companies have direct access to their customers at all times through mobile phones connected to their network, which creates a strong and stable relationship with their customers. Due to the quality of services and products offered by telecommunication companies, there is already a certain level of trust and loyalty on the part of customers, which is reinforced by the large network coverage that allows customers to access services even in remote areas.

The merging of financial and telecommunication services has greatly changed the financial services and telecommunication industries. Mobile money services have become a powerful platform to introduce unbanked consumers to formal financial services (Scharwatt, Katakam, Frydrych, Murphy, & Naghavi, 2014; Pal & Herath, 2020; Metlo, Hussain, Saqib, Phulpoto, & Abro, 2021). As many people in the world do not have access to formal financial services, mobile phones are increasingly becoming one of the best channels to improve access to low-cost financial services such as savings, insurance, payments, loans and remittances (Scharwatt, Katakam, Frydrych, Murphy, & Naghavi, 2014). Mobile money is emerging as a core product offered by many mobile network operators (MNOs) with unique technology to provide financial services with a scalable and sustainable approach. A trusted MNO with a widespread network (coverage) and secure access to channels has emerged as a key factor in customers' decision to use their services (Scharwatt, Katakam, Frydrych, Murphy, & Naghavi, 2014).

Mobile financial services (MFS) are the use of mobile phones to access financial services and conduct financial transactions that offer both transactional and non-transactional benefits, such as viewing tax information on the user's mobile phone. With the proliferation of MFS, customers have another strong and preferred channel through which they can engage with host banks, conduct transactions and access financial services. The availability of MFS has transformed the banking experience and the way consumers interact with their banks.

Financial services offered by MNOs and delivered through mobile phones allow customers to conduct a range of financial transactions without having to visit a bank's premises. After analysing the significant exponential use of MFS in Bangladesh, it is concluded that MFS contribute to banks' profits and customers are satisfied when they receive money through MFS, but there may also be uncertainties due to network problems, telecommunication services and agent ignorance (Dona, Mouri, Hasan, & Abedin, 2014). MFS have a positive social and economic impact on a large number of people in emerging economies worldwide. Mobile money is an important tool for financial inclusion. Not only have the services and geographical areas served by MFS improved, but also the variety of alternative products available to consumers who previously did not have access to such services. It is expected that the



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introduction of these new technologies as alternative channels in the MFS sector will improve efficiency and promote growth.

## 1.1 Statement of the problem and objective of the study

The merging of financial services and telecommunication services has created a new platform that has contributed to several innovations in the telecommunication and financial industries. This has transformed the old way of working of financial institutions into a modern and sophisticated form. MFS are also considered as a network infrastructure for storing and transferring money, which facilitates the exchange of cash and electronic value between different actors such as customers, businesses, government agencies and financial service providers (Kendall, Machoka, Veniard, & Maurer, 2011).

Key players in financial services include banks and MFSs that integrate banking systems. Branches and physical distribution have been a critical success factor for most banks, but the emergence of MFS in the financial services industry has forced banks to change their entire management approach. MFS serve not only the non-bankers and non-bankers but also the users of banking services. Banking services have been extended to be integrated with MFS, which means that bank customers also use MFS. This has also narrowed the gap between people who were previously unbanked and they now realise the benefits of using banking services because of the mobility and easy accessibility of their money. Bank customers also use MFS because banking systems work closely with MFS offered by MNO, including mobile banking. Bank customers' decision to use MFS is motivated by convenience, efficiency and reliability in payments, transfers and cash access.

In Tanzania, there is a gap in access to and use of financial services between urban and rural residents, but even those who have good access to financial services do not use MFS as expected. Several financial sector reforms have been undertaken to improve the availability of financial services to people (Ndulu, 2012). The FSDT (2017) shows that between 2013 and 2017, the actual number of adults using financial services increased by 15%, while those using banking services and MFS increased by 37% and 38% respectively. The report also shows that only 16.7% of respondents who use banking services also use MFS, with Dar es Salaam City leading with 40% of banking service customers (FSDT, 2017).

The objective of this study was to investigate the factors influencing the adoption of MFS by banking customers in Dar es Salaam, Tanzania. It had the following specific objectives:

- i. to determine the role of perceived usefulness in the adoption of MFS by bank customers;



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- ii. to determine the role of perceived ease of use in the adoption of MFS by bank customers;
- iii. to determine the role of perceived coverage with distributed network services in bank customers' adoption of MFS;
- iv. to determine the role of perceived risk in bank customers' adoption of MFS; and v. determine the role of perceived cost in bank customers' adoption of MFS.

The findings shed light on customers' perceptions and attitudes towards MFS and create a platform for the respective players to continuously improve their products or services and restructure their strategies to attract bank customers and maximise the use of MFS. The study also provides information for governments and regulators to assess and implement strategies that effectively use MFS to support the country's vision of moving away from a bankless economy by 2025. This study informs all stakeholders in the banking and telecommunications sectors about the business opportunities that could be exploited through the use of MFS in Tanzania. Researchers and related industries can use the findings by analysing consumer behaviour and resistance to drive MFS innovations.

## 2. Literature Review

### 2.1 Theoretical Literature Review

The acceptance of new technologies has attracted much attention in the literature. Over the past decade, significant progress has been made in demonstrating and predicting user acceptance of information technologies. In addition, the Technology Acceptance Model (TAM) (Davis, Bagozzi, & Warshaw, 1989) has received strong theoretical and empirical support. TAM illustrates the acceptance and adoption of innovations and has been applied in several studies worldwide. Numerous empirical studies have shown that it can explain a high degree of variation in usage intentions and behaviour (Venkatesh & Davis, 2000). This model has also been used in different contexts, especially in the recognition and adoption of new technologies, regardless of the environment from which the individual participants come and in different cultural and economic contexts

Understanding individuals' acceptance or rejection of new information technologies has always been one of the most important research topics in the study of new technologies. Among the various considerations for understanding the acceptance of information systems, TAM is one of the most frequently cited models. TAM anticipates the relative factors in the diffusion of technological systems and illustrates the factors of user acceptance (Davis, Bagozzi, & Warshaw, 1989). As Davis et al. (1989) stated, this model attempts to "derive the determinants



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of overall technology acceptance by showing the individual character of a wide range of users of technologies".

According to TAM, technology acceptance is determined by perceived ease of use and perceived usefulness. Perceived ease of use is the extent to which a person trusts that using a particular system will be effortless, and perceived usefulness is the extent to which a person trusts that their performance will be improved by using a particular system (Davis, Bagozzi, & Warshaw, 1989). Perceived ease of use and perceived usefulness are stimulated by external factors that vary according to context. Commonly used variables are information richness, task/design characteristics, experience, political influences, organisational structure and computer self-efficacy, computer anxiety (Ajzen & Fishbein, 1980). According to TAM, the use of information systems is the result of behavioural intentions that are constantly dictated by individual attitudes towards the use of the system and perceived benefits (Davis, Bagozzi, & Warshaw, 1989).

The TAM has become an accepted and used model that can be modified or extended by other theories (Venkatesh & Davis, 2000). Porter and Donthu (2006) found that TAM explained more variance in clients' attitudes towards adoption and comparable variance in usage compared to other models, and that its constructs were easier to operationalise and empirically test than Rogers' (1995) ideas. Several studies that have used TAM to examine MFS adoption. These studies used the original TAM variables and other variables such as trust, perceived risk and perceived cost of MFS.

## 2.2 Empirical Review and Research Variables

*Behavioural intention to adopt/accept MFS:* Behavioural intention to adopt MFS measures the strength of the user's behavioural intention (Ajzen & Fishbein, 1980). TAM postulates that user behaviour can only be determined by measuring behavioural intention and should be predictable, while all other factors that influence user behaviour can only do so indirectly (Davis, Bagozzi, & Warshaw, 1989). This was measured by the extent to which they are able to recommend other clients to use the services and how satisfied they are with the MFS, as well as whether they are willing to use the MFS when they need financial access.

*Perceived usefulness:* As can be read at TAM, usefulness influences behavioural intentions. Davis et al (1989) describe perceived usefulness as the extent to which a person expects the use of technology to contribute to improved performance. Several studies have found that usefulness is the most important predictor of technology adaptability in the context of MFS (Davis, Bagozzi, & Warshaw, 1989; Wilson & Mbamba, 2017).

*Perceived ease of use:* Perceived ease of use is the extent to which a person believes that using MFS is effortless (Davis, Bagozzi, & Warshaw, 1989). Perceived ease of use influences a



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person's attitude towards using a technology, and several researchers have recommended ease of use as one of the most important features of e-business applications. Users are always interested in how much effort is required to use the technology and how unpredictable the process is. In this study, the idea that learning how to use MFS is easy for consumers, the idea that interacting with the MFS system does not require a lot of mental effort, was taken up. Previous research on this concept has found that perceived ease of use has an impact on usage, whether directly or implicitly through its influence on perceived usefulness (Davis, Bagozzi, & Warshaw, 1989; Venkatesh & Morris, 2000). A technology that is easier to use has a high usage rate, reflecting a high level of consumer/user acceptance (Venkatesh & Morris, 2000). Consumers may perceive MFS as a nuisance if the systems are not easy to understand and use. Moreover, perceived ease of use builds trust among users as it shows that providers put their customers' interests first (Wang, Wang, Lin, & Tang, 2003; Abdinoor & Mbamba, 2017).

*The role of network coverage in MFS adoption:* Geographic coverage is defined as the percentage of the area where the service is available and this is reflected in the accessibility of network services. Network coverage is an added advantage for service accessibility in terms of mobile network coverage, MFS agents and integration of many services related to payments/money transfers. Telecommunication companies have a strong base and broad network coverage, which is also supported by consumers' mobile devices, so that consumers can easily access all services associated with their network at any time and in any location with network coverage. In other countries, national roaming services have been introduced where customers of one mobile operator can use the network of another mobile operator and access their own network within the country's borders (roaming).

*The role of risk in the adoption of MFS:* It is believed that the adoption of MFS raises concerns about financial losses, password security, network outages, hacking and loss of personal data. Chitungo and Munongo (2013) explored customers' security and privacy concerns by asking to what extent they consider online transactions to be secure, to what extent they have confidence in the bank's ability to protect their privacy, and how they feel about sending sensitive information through the mobile financial systems. Risk is uncertainty about the outcomes of using an advance/innovation (Chitungo & Munongo, 2013). Perceived risk is the potential loss caused by fraud or a hacker attack on the security of a mobile transaction (Lee, 2009). Lee (2009) identifies 5 components of perceived risk, namely: performance risk, time risk, privacy and security risk, financial risk and social risk. A number of studies have examined the role of perceived risk and acceptance. For example, Xie, Ye, Huang and Ye (2021) found that perceived value mediates the influence of perceived risk on adoption, while Milly, Xun, Meena and Cobbinah (2021) observed that perceived risk has a negative influence on the actual use of mobile banking, with the intention to use it negatively mediating the relationship. Financial risk is a financial loss caused by failed transactions or account misuse that can instil



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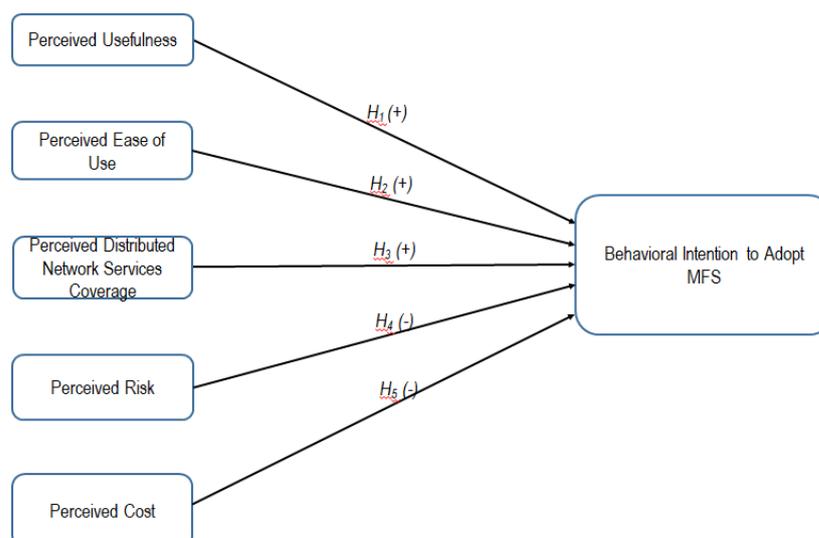
fear in users. Security risk is a potential loss caused by fraud or a hacker attack on the online account. Social risk is the possibility that use of the MFS system will cause social discontent among friends, colleagues or others. Time risk can refer to missed opportunities resulting from delays in receiving payments due to system problems. It is argued that risk has a negative impact on MFS adoption because it raises fears of financial loss, password security, network outages, hacking and loss of personal data.

*The role of cost in MFS adoption:* if costs are high, they can discourage people from adopting MFS, but if they are affordable, they can be a motivation for faster adoption (Tobbin & Kuwornu, 2011). Cost is defined as the extent to which a person believes there is a financial cost associated with using MFS (Luarn & Lin, 2005). Costs include financial transaction expenses such as bank fees and mobile transfer fees, unstructured supplementary service data (USSD) access fees, internet and mobile device costs. In addition, high costs may discourage people from using MFS. However, if they are affordable, they can be a motivation for faster use (Tobbin & Kuwornu, 2011). Research shows that cost has a negative impact on usage (Abdinoor & Mbamba, 2017; Wilson & Mbamba, 2017).

## 2.3 Research Gap and Conceptual Framework

Figure 1 is a framework that summarises the theories, empirical framework and objectives that guide this research. Five hypotheses were developed in the study.

Figure 1 Conceptual framework



Source: Literature Review



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## 2.4 Study Hypothesis

H<sub>1</sub>: Perceived usefulness has a positive influence on consumer adoption of MFS.

H<sub>2</sub>: Perceived ease of use has a positive influence on consumer adoption of MFS.

H<sub>3</sub>: Perceived coverage with distributed network services has a positive influence on consumer adoption to MFS.

H<sub>4</sub>: Perceived risk has a negative influence on consumer adoption of MFS.

H<sub>5</sub>: Perceived cost has a negative influence on consumer adoption of MFS.

## 3. Research Methodology

### 3.1 Research Design

For this study, the positivist paradigm methodology was used for data collection and analysis because of the availability of well-developed information systems implementation theories. An industry was deliberately selected for the study and respondents were selected systematically. The study targeted a sample size of 133 respondents who are customers of banking services in Dar es Salaam region and have access to a mobile phone. The study used the questionnaire method to collect data. Before the actual data collection, a pilot study was conducted to test the instrument. Questionnaires are the most commonly used data collection methods, which are also relatively cheap and economical. For this reason, the questionnaire was also used in this study.

The sampling frame for the study first consisted of purposively selecting Dar es Salaam city from several cities and towns in Tanzania. Then, some branches were purposively selected where the authors believed there were more users of mobile financial services. Then 10 out of 15 branches were systematically selected. Seventeen questionnaires were unusable.

The questionnaire consisted of three parts. The first part collected demographic data, the second part dealt with the level of use by respondents and the third part focused on six variables identified in the conceptual framework. A five-point Likert scale was used to determine the response options. This scale has been used in previous research on TAM.

### 3.2 Validity and Reliability of Measures

Reliability includes the ability of the instrument to process the reliable effect a second time under similar conditions. Reliability was measured with the Cronbach's coefficient alpha with an acceptable range of 0.7 and above



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Validity includes the ability of the items of the instrument to represent what is being described and the measurement should reflect reality. Data validity, by definition, is the extent to which the research study measures what is expected. If the results of the study do not correctly measure what should be measured, they are said to be invalid. To ensure the validity of the data, the questionnaire was pre-tested to check the comprehensibility of the questions asked in the questionnaire and to correct a number of misconceptions. Respondents were invited to express their opinions and further modify the questionnaire before it was returned to the sample respondents for data collection.

Validity indicates the extent to which the estimation results meet expectations, while reliability indicates the extent to which the measurements are free from random error and therefore provide consistent data. It tells us whether the survey generally measures what it is supposed to measure.

### 3.3 Data Analysis Techniques

Statistical and inferential analyses such as descriptive statistics,  $r^2$ , analysis of variance (ANOVA) and regression analysis were performed. Multiple regression analysis was applied to determine the relationship between a criterion and the predictors. The regression equation was later constructed based on the model and the estimated parameter values. The model was then tested for its ability to predict the values of the criterion variables for the values of the predictor variables. The  $r^2$  (coefficient of determination) is the measure of the goodness of fit of the multiple regression equation (Saunders, Lewis, & Thornhil, 2009). ANOVA was used to determine whether competing models were better than the model developed.

## 4. Research Findings and Discussion

### 4.1 Characteristics of Responses and Uses of MFS

For this study, data was collected from various respondents from Dar es Salaam city. About 150 questionnaires were distributed to respondents but 133 were returned, representing 88.67% of the total questionnaires distributed.

The demographic characteristics of the respondents included gender, age group, education level, average monthly income, occupation and number of bank accounts. Table 1 summarises the data on the characteristics of the sample. As shown in Table 1, general description of the profile of the respondents, the majority of the respondents were male. Furthermore, the results show that the majority of the respondents are middle-aged, followed by young people. The majority of respondents have a Bachelor's degree, more than half of all respondents, followed by those with a Master's degree. Respondents have a middle income, followed by a high



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income. More than half of the respondents have more than one bank account, which means that the selected sample represents the actual customers of banking services who are active consumers.

*Table 1 Respondents Demographics*

Age	Frequency	Percent	Average Monthly income (Tsh)	Frequency	Percent
30 and below	48	36.1	Below 1,000,000	22	16.5
31 – 40	74	74.0	1m to 4m	78	58.6
41 and above	11	8.3	Above 4m	33	24.8
<b>Total</b>	<b>133</b>	<b>100</b>	<b>Total</b>	<b>133</b>	<b>100</b>

Gender	Frequency	Percent	No of Bank Accounts	Frequency	Percent
Male	87	65.4	One	29	21.8
Female	46	34.6	Two	62	46.6
<b>Total</b>	<b>133</b>	<b>100</b>	More than Two	42	31.6
			<b>Total</b>	<b>133</b>	<b>100</b>

Occupation	Frequency	Percent	Education level	Frequency	Percent
Student	9	6.8	Secondary education	2	1.5
Working	123	92.5	Certificate	1	0.8
Not working	1	0.8	Diploma	3	2.3
<b>Total</b>	<b>133</b>	<b>100</b>	Bachelor Degree	82	61.7
			Master Degree	38	31.1
			Above Master's Degree	1	0.8
			<b>Total</b>	<b>133</b>	<b>100</b>

*Source: Data analysis, 2021*

## 4.2 Data Quality

Table 2 shows the reliability of the data. All values are greater than 0.7, so that the data achieve an acceptable level of reliability.

*Table 2 Reliability*

	Alpha	Cronbach alpha based on standardized items	Number of items
Perceived usefulness	0.887	0.888	5
Perceived ease of use	0.933	0.933	5



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<b>Perceived Distributed network services coverage</b>	0.949	0.949	5
<b>Perceived risk</b>	0.871	0.872	5
<b>Perceived cost</b>	0.879	0.879	5
<b>Behavioral Intention to adopt</b>	0.923	0.924	5

Source: Data Analysis

### 4.3 Hypothesis Testing

Table 3 shows the model performance results and their significance. R stands for the multiple correlation coefficients with a range between -1 and +1. The r value is 0.747,  $r^2$  is 0.573 and the adjusted  $r^2$  is 0.556, which means that the model explains almost five-ninths of the variations (goodness of fit of the regression model). The result shows that the Durbin-Watson value is acceptable (expected value is 2.00 +/- 0.25). The results of ANOVA are presented in Table 4 and show that the model is better than competing models ( $F=34.055$ ,  $p < 0.05$ ).

Table 3 Regression Model Summary

R	R Square	Adjusted Square	R	Std. An error of the Estimate	Durbin-Watson
<b>0.757</b>	0.573	0.556		34.055	2.203

Source: field data

Table 4 ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
<b>Regression</b>	51.111	5	10.222	34.054	0.000
<b>Residual</b>	38.122	127	0.300		
<b>Total</b>	89.233	132			

Source: field data

The table of model coefficients (Table 5) contains the coefficients for perceived ease of use, perceived usefulness, perceived risk, perceived cost and perceived coverage with distributed network services together with their significance values. The values of the model coefficients are used in the regression equation. A small significance value below 0.05 for all predictor variables indicates that there is a strong relationship between the criterion and the predictor variables.



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Table 5 Coefficients in Regression Analysis

	B	std error	standardized beta	T	sig.	
Constant	4.226	0.048		88.946	0.000	Positively influence
Perceived usefulness (b1)	0.252	0.048	0.306	5.278	0.000	Positively influence
Perceived ease of use (b2)	0.226	0.048	0.279	4.807	0.000	Positively influence
Perceived Distributed network services coverage (b3)	0.321	0.048	0.039	6.737	0.000	Positively influence
Perceived risk (b4)	-0.311	0.048	-0.379	-6.528	0.000	Negatively influence
Perceived cost (b5)	-0.267	0.048	-0.324	-5.594	0.000	Negatively influence

Source: Data Analysis

Hence, the regression equation is as in equation 1.

$$y = 4.226 + 0.252x_1 + 0.229x_2 + 0.321x_3 - 0.311x_4 - 0.267x_5 \quad (1)$$

## 4.4 Discussion of Results

Based on the results of this study, MFS adoption can be modelled with the variables of perceived usefulness and perceived ease of use as described at TAM, as well as three new variables, namely perceived risk, perceived cost and perceived coverage by distributed network services. A regression analysis was conducted to determine how the adoption of MFS is influenced by various factors. Intention to adopt MFS is the dependent variable, while several independent variables were tested to see if they were related to the dependent variables. The regression analysis revealed that all predictor variables influence the adoption of MFS. In general, all criterion factors are good predictors of the outcome factor.

The results show that the five identified predictor variables from the literature review: perceived usefulness, perceived ease of use, perceived coverage by distributed network services, perceived risk and perceived cost can predict the intention to adopt banking services. All variables appear to be important for adoption. The results suggest that companies should make efforts to ensure that their services are perceived as useful and user-friendly, that



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coverage through distributed network services is improved, and that perceived risk and cost are reduced. These results are consistent with the hypotheses made at the outset.

This is consistent with a number of previous studies (Davis, Bagozzi, & Warshaw, 1989; Wilson & Mbamba, 2017, Luarn & Lin, 2005; Tobbin & Kuwornu, 2011).

## **5. Conclusions and Recommendations**

### **5.1 Conclusion about the Research Problem**

The main objective was to determine the factors influencing the adoption of MFS by bank clients in Tanzania. This study provides a useful picture of the factors that influence bank customers' decision to adopt MFS in Tanzania. The results of this study show that MFS adoption is influenced by perceived usefulness, perceived ease of use, perceived coverage by distributed network services, perceived risk and perceived cost. The results show that perceived usefulness, perceived ease of use and coverage by distributed network services have a positive influence on the acceptance of MFS, while perceived cost and perceived risk have a negative influence on the acceptance of MFS. This means that customers accept MFS that are useful, do not require much effort and can be accessed anytime and anywhere. The negative results also show that high cost and high risk can be a barrier to MFS adoption and that reducing cost and risk will promote MFS adoption. MFS providers need to address the issue of risk in order to gain the trust of customers and thus increase MFS adoption. The study also recommends that MFS service providers rethink their service pricing models and reduce/eliminate additional fees for MFS transactions to promote MFS adoption, as customers conduct MFS transactions more frequently than traditional banking services and end up paying more fees for services/transactions than for traditional banking services when service fees are high.

### **5.2 Research Objectives Conclusion**

The objective of this study was to investigate the factors influencing the adoption of MFS by bank customers in Tanzania. The analysis conducted showed that the factors listed have a positive influence on adoption.

In conclusion, this study has succeeded in achieving all the research objectives with the model used being found to be significant. The adoption of MFS in Tanzania is influenced by perceived usefulness, perceived ease of use, perceived coverage by distributed network services, perceived risk and perceived cost.



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## 5.3 Implication to Literature Review

The acceptability of MFS and the acceptability of people in Tanzania may differ from those in other countries. Therefore, this study contributes to a better understanding of the causes/determinants of acceptance and continued use of MFS in Tanzania compared to other countries by users and potential users. The literature review revealed that the models of TAM have been extensively used to explain the intention to accept and use a particular technology. This was confirmed by the fact that the two constructs of the TAM model, perceived ease of use and perceived usefulness, were used in the analysis and were found to be good predictors of the dependent variable.

If costs are high, they may discourage people from adopting MFS, but if they are affordable, they may be a motivation for faster adoption. The costs associated with payments have a direct impact on consumer uptake and use of services, especially if the full costs are passed on to consumers.

## 5.4 Implication to Policy Makers and Stakeholders

The results of the study provide banks and MFS providers with insights into how their financial services are perceived and what areas they should focus on when it comes to improving and expanding services. MFS providers should also invest in technology and infrastructure to ensure that risks and security-related issues are reduced. Perceived cost has a negative significant impact on MFS adoption, implying that increasing the cost of access to MFS will reduce the rate and speed of adoption. The study also suggests that commercial banks will continue to use MFS for transactions as more people have access to mobile phones and consumer demand for fast access to financial services increases. In addition, the convergence between MNOs and banks has revolutionised banking, and with the greater network coverage available to MNOs, MFS are closer to customers. The study also recommends that MFS reverse transactions in real time to reduce the risk of customers getting their money back too late if transactions between the payment systems involved fail.

## 5.5 Study Limitations

The results of this study have achieved their objectives. However, there are some limitations that need to be considered and that affect the results of this study. These limitations are explained below:



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First, for this study we mainly interviewed people who are likely to know about mobile services and banking. This was also helped by the fact that users who do not use MFS were reluctant to complete the questionnaires. The samples of respondents could be biased in favour of experienced users of mobile and banking services, so the opinions of those who do not use financial services may not have been effectively captured in this study.

Secondly, the small sample size has a major impact on the observed result and the conclusions drawn in this study. It is quite possible that a larger sample under the same conditions would lead to different observations and conclusions. However, this depends on whether the sample is representative or not.

## 5.6 Areas for Further Research

As for the limitations of the research, they pave the way for further studies in this area. Future studies should be conducted in rural areas to collect data from people living in these areas, many of whom have very low incomes and no clear understanding of MFS. Further studies could also be conducted to effectively assess demographic characteristics and their impact on MFS use. Knowing the demographic characteristics of users and non-users of MFS could prove very beneficial to financial institutions as demographic data can be used to identify target segments for their potential users.

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## References

- Abdinoor, A., & Mbamba, U. O. (2017). Factors influencing consumers' adoption of mobile financial services in Tanzania. *Cogent Business & Management*, 4(1), 1392273.
- Ajzen, I., & Fishbein, M. (1980). *Understanding Attitudes and Predicting Social behavior*. Englewood Cliffs, NJ: Prentice-Hall.
- Chitungo, S. K., & Munongo, S. (2013). Extending the Technology Acceptance Model to Mobile Banking Adoption in Rural Zimbabwe. *Journal of Business Administration and Education*, 3(1), 51-79.
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management science*, 35(8), 982-1003.



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- Dona, P. D., Mouri, S. I., Hasan, & Abedin, Z. (2014). Significance of Exponential uses of Mobile Financial Services (MFS) in Bangladesh. *Global Journal of Management and Business Research*, 14(4).
- FSDT. (2017). *Finscope 2017*. FSDT.
- Kendall, J., Machoka, P., Veniard, C., & Maurer, B. (2011). An Emerging Platform: From Money Transfer System to Mobile Money Ecosystem. *SSRN Electronic Journal*.
- Lee, M. (2009). Factors influencing the adoption of internet banking: An integration of TAM and TPB with perceived risk and perceived benefit. *Electronic Commerce Research and Applications*, 8(3), 130-141.
- Luarn, P., & Lin, H.-H. (2005). Toward an Understanding of the Behavioral Intention to Use Mobile Banking. *Computers in Human Behavior*, 21(6), 873-891. doi:<http://dx.doi.org/10.1016/j.chb.2004.03.003>
- Metlo, M. Y., Hussain, N., Saqib, G., Phulpoto, K., & Abro, S. (2021). Impact of Mobile Banking on Customers' satisfaction. *International Journal of Management*, 12(1), 1263-1271.
- Milly, N., Xun, S., Meena, M. E., & Cobbinah, B. B. (2021). Measuring Mobile Banking Adoption in Uganda Using the Technology Acceptance Model (TAM2) and Perceived Risk. *Open Journal of Business and Management*, 9(1), 397.
- Ndulu, B. (2012). Financial Innovations And Financial Inclusion. *The Sixteenth Conference of Financial Institutions* (pp. 1-4). Arusha: Bank of Tanzania.
- Pal, A., & Herath, T. (2020). The role of mobile payment technology in sustainable and human-centric development: evidence from the post-demonetization period in India. *Information Systems Frontiers*, 1-25.
- Porter, C. E., & Donthu, N. (2006). Using the technology acceptance model to explain how attitudes determine Internet usage: The role of perceived access barriers and demographics. *Journal of business research*, 59(9), 999-1007.
- Rogers, E. M. (1995). *Diffusion of Innovations* (4 ed.). New York: THE FREE PRESS Division of Simon & Schuster Inc.
- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students* (5 ed.). Harlow, Essex, England: Pearson Education Limited.
- Scharwatt, C., Katakam, A., Frydrych, J., Murphy, A., & Naghavi, N. (2014). *Mobile Financial services for Unbanked*. GSMA-Mobile Money for Unbanked(MMU). Retrieved from



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[https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2015/03/SOTIR\\_2014.pdf](https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2015/03/SOTIR_2014.pdf)

- Tobbin, P., & Kuwornu, J. K. (2011). Adoption of Mobile Money Transfer Technology: Structural Equation Modeling Approach. *European Journal of Business and Management*, 7, 59-78.
- Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management science*, 46(2), 186-204.
- Venkatesh, V., & Morris, M. G. (2000). Why Don't Men Ever Stop to Ask for Directions? Gender, Social Influence and Their Role in Technology Acceptance and Usage Behavior. *MIS Quarterly*, 24(1), 115-139. doi:<http://dx.doi.org/10.2307/3250981>
- Wang, Y.-S., Wang, Y.-M., Lin, H.-H., & Tang, T.-I. (2003). Determinants of User Acceptance of Internet Banking: An Empirical Study. *International Journal of Service Industry Management*, 14(5), 501-519. doi:<http://dx.doi.org/10.1108/09564230310500192>
- Wilson, V., & Mbamba, U. O. (2017). Acceptance of Mobile Phone Payments Systems in Tanzania: Technology Acceptance Model Approach. *Business Management Review*, 20(2), 15-25.
- Xie, J., Ye, L., Huang, W., & Ye, M. (2021). Understanding FinTech Platform Adoption: Impacts of Perceived Value and Perceived Risk. *Journal of Theoretical and Applied Electronic Commerce Research*, 15(5), 1893-1911.