MUST Journal of Research and Development (MJRD) Volume 5 Issue 2, June 2024
e ISSN 2683-6467 & p ISSN 2683-6475

The Influence of Perceived Usefulness on Adoption of Mobile Money Services Among Small and Medium Enterprises in Tanzania: A Case of Njombe Town Council

Brown Mwasyeba* & Lazaro Kagata

Department of Business Management

Mbeya University of Science and Technology, P.O Box 131 Mbeya, Tanzania

DOI: https://doi.org/10.62277/mjrd2024v5i20049

ARTICLE INFORMATION

Article History

Received: 29th June 2023
Revised: 22nd April 2024
Accepted: 30th April 2024
Published: 10th June 2024

Keywords

Adoption
Perceived usefulness
Mobile money services

ABSTRACT

Mobile Money Services play a key role in aiding financial inclusion for unbanked Small and Medium Enterprises. Despite the fact that Mobile Money Services were introduced long ago in Tanzania, most Small and Medium Enterprises hesitate to adopt Mobile Money Services. This study focused on assessing the influence of perceived usefulness on the adoption of Mobile Money Services among Small and Medium Enterprise in Tanzania. Perceived usefulness included attributes such as time-saving, effectiveness, performance, and business control. A total of 351 respondents (comprised of Small and Medium Enterprises owners and their workers) were administered a well-structured questionnaire. The Statistical Package for the Social Sciences was used to analyse data using both multiple liner regression and binary logistic regression. Results showed that perceived usefulness has a strong influence on the adoption of Mobile Money Services among Small and Medium Enterprises. Additionally, both perceived usefulness attributes, when combined, contribute to the adoption of Mobile Money Services among Small and Medium Enterprises. The study recommended that the government develop policies to ensure the availability and accessibility of mobile money services within the economy's financial system.

*Corresponding author's e-mail address: brown.clausmwasyeba@gmail.com

1.0 Introduction

The evolution of mobile devices and wireless technologies has had an exceptional effect on the world today, allowing people to communicate anywhere, at any place, and at any time. In recent years, the rapid spread of mobile phone use in developing countries has been a consequence of the introduction of prepaid cards and the falling prices of mobile handsets. One such use is the use of mobile phones in the financial services industry (Tobbin, 2011). Mobile Money Services are a small but growing subset of the broader world of electronic payments (e-payments). Mobile Money Services (MMS) are simply the transference of value from payer to payee, as in a remittance or bill payment (Klugel, 2005). According to Mbiti (2010), the proliferation of mobile devices has also conveyed information about the introduction of a number of value-added services, including mobile banking and mobile payments. Subsequently, the same argument was supported by Must (2010). However, the various payment solutions that can be administered via a mobile device are promising alternatives for countries that are still cash-driven, and they are referred to as mobile payment services.

Dahlberg et al. (2006) argued that mobile payments have brought about an exceptional increase in service opportunities for individuals, businesses, and a country's economy at large, especially in developing countries, which are currently implementing mobile payment services to aid financial inclusion. Retail banking penetration in developing countries has been slow compared to the financial services required. With this prospect, the usage of mobile phones has been gradually modified and improved with new and more advanced features, to the extent that financial services could be offered through mobile phones.

Developing countries are severely constrained by limited infrastructure and difficulties accessing financial institutions. Consequently, more than 2.5 billion adults—about half of the world's adult population—are unbanked (World Bank, 2014). According to the International Telecommunications Union (ITU) (2009), over 65 percent of mobile phones are being used in developing countries in Africa, i.e., countries with poor infrastructural development, low standards of living, and a wide gap in the Information and Communications Technology (ICT) divide (World Bank, 2009).

According to a study conducted by Finscope in 2006, the use of mobile phones by unbanked individuals can enhance their bankability by enabling access to basic banking services. Due to the exponential expansion of Mobile Money Services, particularly in developing sub-Saharan countries, the majority of people are now bankable. Mobile technologies are changing economic life in developing countries, where many people are using cell phones for a range of financial transactions, such as receiving and sending money transfers. Indeed, mobile money is already being used by banks and mobile network operators to provide millions of unbanked consumers with a way to store and access money digitally.

In Tanzania, small and medium enterprises (SMEs) are part of this unbanked sector, deprived of sophisticated banking facilities while playing a major economic role in developing countries (Nichter & Goldmark 2009). With this perspective, MMS may serve as an alternative means to cover the gap for unbanked SMEs. In spite of numerous studies on m-banking, which are largely conducted from an individual perspective, very little research provides insights into the adoption and acceptance of MMS among SMEs.

FITS (2012) found that only 34 percent of all households, including SMEs, use Mobile Money Services in Tanzania. This indicates a potential market for Mobile Money Services in Tanzania.

Bångens and Söderberg (2011) did a study aimed at mobile money transfers and usage among SMEs in Tanzania, particularly in policy implications, and came up with findings that show how MMS is of paramount importance by considering time savings and easy money movement over a distance. Therefore, Bångens and Söderberg (2011) argued that Mobile Money Services enable business growth as they serve as a business support function for most SMEs in Tanzania. Again, with this view, it is expected that a considerable number of small and medium enterprises will adopt Mobile Money Services.

Despite the fact that Mobile Money Services have already been introduced, advertised, and promoted in Tanzania, statistical evidence still shows how slowly and hesitantly the technology has been adopted among SME's. However, while numerous studies have

examined the adoption of mobile banking, they have primarily focused on other factors, with only a handful specifically examining the impact of perceived usefulness on the adoption of Mobile Money Services. In light of this perspective, the present study aimed to evaluate the impact of perceived usefulness on the adoption of Mobile Money Services.

2.0 Materials and Methods

Njombe Town Council has a variety of business entities, ranging from large corporations to Small and Medium Enterprises. Most of these business entities are small and medium enterprises located in the Njombe town center. However, the Njombe region is currently being served by four main mobile network operators (MNOs), which include Vodacom, Tigo, Airtel, and Halotel, which eases the availability of Mobile Money Services among SMEs. Since the introduction of Mobile Money Services, some SMEs have been using them, but the majority of SMEs hesitate about the usage and adoption of mobile money services (FITS, 2012). The study involved the collection of both primary and secondary data. Primary data were collected through a well-structured questionnaire from both SMEs owners and their workers. As a result, primary data were used to test the study's hypotheses. To support the primary data findings, the empirical review used journals, magazines, financial inclusion reports, and the internet.

A total of three hundred and fifty-one (351) questioners were administered to both SMEs owners and their employees. All 351 questionnaires were successfully filled out and returned to a researcher on time. Data were analysed to test the hypothesis using multiple linear regression followed by binary logistic regression so as to counteract the weakness of multiple regressions as they do not capture the dichotomous character of the dependent variable (adopters and non-adopters). With multiple regression, the variables are explained in the equation below:

$$Y = B + \beta_1 X_1$$

Y= Mobile Money Services adoption (Dependent variable)

B= Constant

β_1= Coefficient for Perceived usefulness

X_1 = Perceived usefulneess (independent variable)

As for the logistic regression, the variables were explained as in the equation below:

$$Y = \frac{e^{B+\beta_1 X_1}}{1 + e^{B+\beta_1 X_1}}$$

Where:

Y= Mobile Money Services adoption (Dependent variable)

B= Constant

β_1= Coefficient for Perceived usefulness

X_1 Perceived usefulneess (independent variable)

Both regressions Multiple and logistic regressions were performed using IBM Statistical Package for Social Science (SPSS) version 20 software.

3.0 Results and Discussion

3.1 Results

The adoption of mobile money services among SMEs in Tanzania is influenced by perceived usefulness. The hypothesis states that perceived usefulness strongly influences the adoption of mobile money services among SMEs in Tanzania. Multiple regression was conducted to test this hypothesis since perceived usefulness was decomposed into time-saving, effectiveness, performance, and business control using research data.

The results provided in Table 1 below showed that the dependent variable “Mobile Money Service Adoption” is well explained by perceived usefulness attributes (time saving, performance, effectiveness, and business control) to a large extent, as demonstrated by an R2 of 87%, which is an extremely high percent. This finding implies that perceived usefulness in terms of time savings, effectiveness, performance, and business control encourages SMEs owners to adopt mobile money services by 87%.

Table 1

Model Summary in Multiple Regressions for Perceived Usefulness

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.934[a]	.872	.870	.130	1.613

a. Predictors: (Constant), Business Control, Effectiveness, Performance, Time saving

b. Dependent Variable: Adoption

Consequently, the results provided in Table 2 ANOVA below showed that overall, the model applied in this study can significantly predict the outcome variable (MMS adoption) as being influenced by predictors (business control, effectiveness, performance, and time saving) to an extent, as demonstrated by a p-value (0.000) less than 0.05 in the ANOVA table above.

Table 2

ANOVA in Multiple Regressions for Perceived Usefulness

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	51.607	4	12.902	762.254	.000[b]
	Residual	7.600	449	.017		
	Total	59.207	453			

a. Dependent Variable: Adoption

b. Predictors: (Constant), Business Control, Effectiveness, Performance, Time saving

Further analysis for the individual attributes was done as shown in Table 3. The results provided in Table 3 coefficients showed that all the attribute had p-values less than 0.05 as for time saving (p=0.000), performance (p=0.000), effectiveness (p=0.002) and business control (p=0.000). This indicates that, perceived usefulness influences adoption of mobile money services among SMEs, hence hypothesis number one was accepted.

The table also shows that, perceived usefulness is positively related with adoption of mobile money services as indicated by positive coefficients (B) for all indicators of perceived usefulness. A unit increases in time saving cause a 0.364 increase in adoption of mobile money services, unit increase in performance causes 0.337 increase in MMS adoption, unit increase in effectiveness causes a 0.123 in MMS adoption and a unit increase in Business control causes a 0.131 increases in MMS adoption.

Table 3

Coefficients for Perceived Usefulness Attributes

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.707	.029		93.802	.000
	Time saving	.364	.011	.855	33.417	.000
	Performance	.337	.006	.126	6.355	.000
	Effectiveness	.123	.007	.071	3.085	.002
	Business Control	.131	.006	.107	5.411	.000

a. Dependent Variable: Adoption

Despite these findings from multiple regressions, further analysis was done using binary Binary Logistic Regression to counteract the weakness of multiple regressions, which does not capture the dichotomous character of the dependent variable (adopters and non-adopters).

From the results in table 4 below, the model summary shows Nagelkerke R square value of 0.894 for the overall model. The results in table 4 indicate the model

could explain approximately 89% of the variance in the dependents variable.

Table 4

Model Summary in Logistic Regression for Perceived Usefulness

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	.000[a]	.577	.894

a. Estimation terminated at iteration number 19 because a perfect fit is detected. This solution is not unique.

However, analysis of individual predictors was also done, as indicated in Table 5 below. The table shows a summary of the results from the binary logistics regressions. The results revealed that all aspects of perceived usefulness statistically influence adoption of mobile money services because their p-values are less than 0.05, such as time saving (p = 0.000), performance (p = 0.001), effectiveness (p = 0.007), and business control (p = 0.031). These results indicate that H1 was accepted since their p values were less than 0.05.

Table 5

Variable in the Equation for Perceived Usefulness

		B	S.E.	Wald	Df	Sig.	Exp(B)
Step 1[a]	Time saving	7.322	1.629	20.201	1	.000	.001
	Performance	2.710	.840	10.405	1	.001	.067
	Effectiveness	1.619	.916	3.126	1	.007	.198
	Business control	1.224	.714	2.479	1	.031	.148
	Constant	32.562	8.369	15.139	1	.000	.278

a. Variable(s) entered on step 1: Time saving, Performance, Effectiveness, business control.

3.2 Discussion

The study focused on the influence of perceived usefulness on the adoption of mobile money services among SMEs in Tanzania. The results in Table 1 show that perceived usefulness has a strong influence on the adoption of mobile money services among SMEs. Furthermore, perceived usefulness accounts for 87% of SMEs' adoption of mobile money services. This implies that SMEs owners and their workers adopt mobile money services after considering the benefits derived from the services. However, all aspects of perceived usefulness (time saving, performance, effectiveness, and business control) were found to have a significant influence on the adoption of mobile money services among SMEs, as shown in tables 3 and 5, where all variables had $p < 0.05$.

Time saving was found to be one of the critical factors, as most SMEs owners and employees appreciate that mobile money services have been useful in terms of time saving since they are able to perform transactions within a very short time. Further research revealed that mobile money services are useful because they improve business performance in terms of profitability, employee effectiveness, and control. Thus, perceived usefulness in terms of time savings, performance, effectiveness, and business control strongly influences the adoption of mobile money services among SMEs. Similar findings were found by Ndekwa (2014) in a study of Factors Influencing the Adoption of Information and Communication Technology (ICT) among small and medium enterprises (SMEs) in Tanzania. The findings revealed that the perceived usefulness of ICT strongly influences SMEs to adopt ICT for business purposes. Similarly, Ali (2012), in a study of factors influencing mobile money transfer adoption among Somali students, found that perceived usefulness of mobile money transfer strongly

influences its adoption among students. This implies that most SMEs owners and employees evaluate the contributions of mobile money services to their businesses before adopting the technology; hence, there is a need for much awareness of the benefits of MMS to be created among SMEs.

These findings differ from those of Sung Park's (2009) study, An Analysis of the Technology Acceptance Model in Understanding University Students' Behavioural Intention to Use e-Learning in North Korea. The study revealed that perceived usefulness had no significant influence on the adoption of e-learning among university students. Students were adopting e-learning because they were motivated by other factors besides perceived usefulness.

4.0 Conclusion and Recommendations

The findings support the hypothesis that mobile money services have been useful to SMEs because they seem to save time and enhance business performance in terms of profitability and financial control. Further, the findings revealed that mobile money services give greater business control as they are now able to perform their transactions anywhere and at any time just by clicking a button, which eventually gives greater business control. Findings also showed that mobile money services enhance effectiveness among SMEs owners and employees, particularly in handling transactions via mobile phones. As a result, the usefulness of mobile money services in conducting daily business activities strongly influences SMEs owners and employees to adopt this technology. These findings call on both the government and mobile network operators to ensure smooth availability and accessibility of mobile money services, which are top priorities for economic development. Nevertheless, due to technological advancements in the telecommunications industry and financial services, further studies need to be carried out in order to explore other factors.

Mobile money services can also be viewed as a tool to aid financial inclusion among unbanked SMEs.

5.0 Funding Statement

The study was self-financed by researchers.

6.0 Acknowledgement

We are so grateful to the Mbeya University of Science and Technology, where the researchers work, for giving us time and resources to undertake the research. Additionally, we would like to express our gratitude to the Principal of MRCC for granting us permission to conduct the study and present the results.

7.0 References

Ali, A.Y, (2013). Factors influencing mobile money transfer adoption among Somali students.

Bångens, L. &Söderberg, B. (2011).Mobile Money Transfers and usage among micro- and small businesses in Tanzania: Implications for policy and practice.

Dahlberg, T., Mallat, N., Ondrus, J., Zmijewska, A. (2006). "Mobile Payment Market and Research - Past, Present and Future," Proceedings > Proceedings of HelsinkiMobility Roundtable . Sprouts: Working Papers on Information Systems, 6(48). http://sprouts.aisnet.org/6-48.

Financial Inclusion Tracker Surveys (FITS), (2012). Mobile Money in Tanzania Use, Barriersand Opportunities.

Krugel, G (2005), "Extending the payments franchise to the mobile phone", presentation to Fin Mark Forum

International Telecommunication Union, ITU (2009) Information Society Statistical Profiles. Available at: http://www.itu.int/ITUD /ict/material/ISSP09 AFR_final en.pdf (Accessed: 1 December 2014).

Must, B and Ludewig, K (2010) 'Mobile Money: Cell Phone Banking in developing Countries'Policy Matters Journal, pp. 27-33.

Ndekwa,A (2014). Factors Influencing Adoption of Information and Communication Technology (ICT) among Small and Medium Enterprises (SMEs) in Tanzania.International Journal of Research in Management & echnology (IJRMT), ISSN: 2249-9563 Vol. 4, No.5, October 2014.

Nichter, S. &Goldmark, L. (2009). "SmallFirm Growth in Developing Countries,"World Development,

37(9), 1453-1464.NBS (2008) National Bureau of Statistics: Business Survey 2007-8, Volume I, Dar es Salaam Report.

Tobbin, P. E. (2010). Modeling Adoption of Mobile Money Transfer: A Consumer Behaviour Analysis. Paper presented at the 2nd International Conference on Mobile Communication Technology for Development, Kampala, Uganda.

Tobbin, P & John, K. (2011).Adoption of Mobile Money Transfer Technology: Structural Equation Modeling Approach.Vol 3, No.7

World Bank (2014) "Doing Business 2011: Making a Difference for Entrepreneurs," World Bank and IFC.