The Influence of Financial Technology Experience on Digital Financial Inclusion: MVAS Perceived Usefulness as a Mediator among MFI Customers in Tanzania

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Abstract: Based in the fact that Digital Financial Inclusion is a key factor for promoting economic development and reducing poverty in a developing country like Tanzania, this study aimed at examining how the experience with Financial Technology (FinTech) influences digital financial inclusion among MFI customers in Tanzania, with the mediation role of the perceived usefulness of Mobile Value-Added Services (MVAS). Technology Acceptance Model (TAM) provided the lens through which the key issues under investigation could be examined. Data collection was conducted using a survey-based questionnaire involving a sample of 283 MFI customers found in two regions of Tanzania (Dar Es Salaam and Arusha). The Partial Least Squares Structural Equation Modelling (PLS-SEM) was then used for data analysis. Findings of the study show that the experience with FinTech positively and significantly influences the adoption and usage of digital financial inclusion among MFI customers. The results also show that perceived usefulness of MVAs mediates significantly the relationship between experience with FinTech and digital financial inclusion. Based on these findings, it is recommended that MFIs, Mobile Network Operators (MNOs) and regulatory authorities (e.g., BOT, TRCA and AFI) cooperate in educating the customers to get the necessary skills about digital financial transactions and to motivate them to use it regularly to gain experience. These stakeholders should also ensure positive experiences with MVAS as it mediates well the relationship between experience with FinTech and digital financial inclusion. The study contributes to the literature on digital financial inclusion and provides practical implications for policymakers and practitioners alike.

Keywords: Digital financial inclusion; experience; FinTech; MVAS; TAM; MFIs.

Introduction

Digital financial inclusion is crucial for ensuring that the world's financially marginalized and underserved individuals can conveniently access formal financial services through digital means at affordable costs and sustainably (Aziz & Naima, 2021; Kanungo & Gupta, 2021; Silva, 2015; Vyas & Jain, 2021). This advancement significantly contributes to economic growth, poverty reduction and income equality while maintaining financial stability (Aduda & Kalunda, 2012). Notably, during the COVID-19 pandemic, digital financial inclusion

proved indispensable as people turned to mobile phones and digital devices to access and utilize financial services while facing lockdowns (Benni, 2021; Dluhopolskyi et al, 2023). However, various factors such as personal financial situations, limited access to financial technology, risks associated with agents, unfamiliarity of digital financial services, potential technological risks and cultural and social norms continue to hinder the inclusion of marginalized population, despite the progress made in this field (Krishna, et al, 2022).

Digital financial inclusion relies on the presence of digital transaction platforms, agent networks and essential digital tools like mobile phones (Mhlanga, 2020). These digital transaction platforms serve as intermediaries, facilitating transactions between end-users, agent networks and service providers like Mobile Network Operators (MNOs), banks and microfinance institutions (MFIs) (Rea & Nelms, 2017; Arner et al, 2022). These platforms essentially connect various systems and transactions involved. Banks and MNOs actively promote digital financial inclusion as their customers frequently use mobile services to access financial services digitally (Anakpo et al, 2023). However, MFIs have lagged behind in adopting digital methods to offer financial services to their customers due to their limited technical, financial and managerial capacities (Rasheed, et al, 2019). MFIs provide financial services such as savings, credit, payments and micro-insurance to low-income individuals. Despite their significant growth in developing countries, MFIs struggle to reach and benefit poor households (Ashta et al., 2016). To improve digital financial inclusion for low-income individuals, MFIs must harness mobile Financial Technology (FinTech), especially Mobile Value-Added Services (MVAS) to enhance efficiency and expand their reach to new clients (Malakar, 2018). In the realm of MVAS, which encompasses various digital offerings beyond voice calls, such as mobile communication, entertainment, transactions and information services, customers of MFIs show a growing interest (Malakar, 2018).

These services are considered crucial for expanding financial services to underserved populations. Studies have shown that MVAS can enhance customers' intentions to use digital financial services, including mobile banking and e-transactions (Kathuria et al., 2019). However, despite the widespread availability of MVAS, some individuals remain hesitant to embrace digital financial services due to concerns about service quality, trust, transaction speed and ease of use (Islam, 2015). This issue is particularly pertinent in regions like Sub-Saharan Africa, where a significant portion of the adult population lacks access to formal financial services despite the prevalence of mobile financial services.

While there have been studies examining the impact of customers' perceptions of mobile phones on their adoption of digital financial services, few studies have explored how experience with financial technology influences digital financial inclusion in low-income societies found in developing countries like Tanzania. Most of the extant literature focuses on the broader context of computer and internet-based digital financial services (e.g., McKechnie et al. 2006; Sathiyavany and Shivany, 2018). Given this research gap, this study sought to contribute to the literature by investigating the influence of experience with financial technology on digital financial inclusion among MFI customers in Tanzania. Additionally, the study aimed to uncover the mediating role of the perceived usefulness of MVAS in the relationship between experience with FinTech and digital financial inclusion.

Theoretical Literature Review
This section describes the theoretical perspective of the study and discusses theories concerning the influence of mobile value-added services in digital financial inclusion.

Technology Acceptance Model (TAM)
The Technology Acceptance Model (TAM), developed by Davis in 1989, consists of six interconnected variables: perceived usefulness (PU), Perceived Ease of Use (PEOU), Attitudes, Behavioural Intention to Use (ITU) and Actual Usage (AU) of a system. Davis (1989) suggests that users' motivation to adopt a system is influenced by their attitudes toward technology, perceived usefulness (PU), the belief that a system enhances productivity, perceived ease of use and the belief that a system is user-friendly. TAM has been widely applied in various sectors and contexts, such as health, education and information and communication technology (ICT) (Kaba & Osei-Bryson, 2013). However, some researchers have reported a need to enhance the TAM model with additional variables to strengthen its explanatory power (Premkumar & Bhattacherjee, 2008).

Following these recommendations, several scholars have extended and modified the TAM model,

introducing supplementary variables. For instance, Njele and Phiri (2023) and Abdinoor and Mbamba (2017) adapted TAM to explore how perceived ease of use affects perceived usefulness in the context of mobile money services. Moslehpour et al. (2018) used a modified TAM model to establish the mediating role of perceived usefulness between consciousness and online purchase intention. Furthermore, some studies have retained the original TAM variables while introducing additional factors like perceived risk, perceived cost, perceived trust and social influence to establish mobile service usage. Building on this background, this study has extended the TAM model by incorporating experience with FinTech as an external variable (independent variable), while the mediator and the dependent variable were adopted from the TAM. The study examines the mediating effect of perceived usefulness on the relationship between experience with FinTech and digital financial inclusion.

Empirical Literature Review

The empirical literature review explains related studies on the relationship between mobile value-added services and digital financial inclusion. The literature has been collected from various scholars.

Experience with Financial Technology (FinTech)

Experience with financial technology is important to make users of digital financial transactions confident. Given the scarcity of financial resources, one should be sure of the success of the transaction; the experience is, therefore, crucial. McKechnie, et al. (2006) conducted research in the UK financial services sector and identified factors influencing internet adoption. The researchers discovered that consumers who owned computers and had previous experience with online non-financial service purchases were more inclined to believe that accessing financial services online was user-friendly. Sathiyavany and Shivany (2018) further reported that consumers' prior experiences with computer usage, technology and personal banking positively influenced attitudes and behaviours toward online banking. However, a study by Alsamydai et al. (2014) reported that personal knowledge had a less favourable impact on customers' adoption of mobile banking services. Corritore et al. (2003) suggested that some consumers may delay embracing mobile banking due to their limited understanding and familiarity with technology.

Additionally, Ishengoma (2011) found that illiterate users faced more challenges with technology usage compared to literate users in Tanzania. Furthermore, Gerrard et al. (2006) noted that customers with limited knowledge of mobile banking tended to continue using traditional banking services. These diverse findings emphasise the need for a comprehensive understanding of the complex factors influencing digital financial service adoption, incorporating technological proficiency, prior experiences, literacy levels and regional disparities. The hypotheses derived from these studies served as a basis for empirical testing, allowing for a deeper exploration of these complex dynamics in the evolving landscape of financial technology adoption:

H1:   Experience with financial technology has a positive influence on the perceived usefulness of MVAS

H2:   Experience with financial technology has a positive influence on digital financial inclusion

Perceived Usefulness of MVAS

Perceived usefulness is a critical concept in the realm of digital financial inclusion, capturing individuals' subjective assessment of how adopting digital financial services can enhance their financial activities and overall well-being. A study by Augsburg & Hedman (2014 found that value-added services positively impacted the adoption of mobile payments in Denmark through perceived usefulness. Another study by Batkovic and Batkovic (2015) further discovered that perceived usefulness positively influenced the intention to use mobile retail in Sweden. Hur et al. (2017) found that perceived usefulness played a significant role in consumer acceptance of mobile banking in Australia.

Cullen and Kabanda (2018) found that demographics and motivational factors positively influenced various m-commerce activities through perceived usefulness in South Africa. Abdinoor and Mbamba (2017) also found that perceived usefulness positively influenced the adoption of mobile financial services in Tanzania. Mwiya et al. (2017) found that perceived usefulness, ease of use and trust positively correlated with the adoption of e-banking technology in Zambia. On the other hand, Rehman and Shaikh (2020) examined factors influencing behavioral intention to use mobile banking in Malaysia and found that perceived usefulness does not influence intention. De Luna et

al. (2019) also found an insignificant relationship between perceived usefulness and intention to use mobile banking in their study. Thakur et al. (2015) found that perceived ease of use influenced customers' adoption of Mobile Value-Added Services (MVAS). Lule et al. (2012) explored factors influencing the adoption of M-banking in Kenya and found no association between perceived usefulness and customers' attitudes toward m-banking. However, these studies varied in their regions and contexts, levels of technological advancement and utilization of mobile network operators' services, which may account for their divergent findings. Based on this background, the following hypothesis was developed to test its validity in the context of Tanzania:

H3: Perceived usefulness of MVAS has a positive influence on digital financial inclusion.

The concept of perceived usefulness has been widely employed as a mediator in linking external factors to individuals' intentions or actual usage of various systems (Davis, 1989). This mediating role of perceived usefulness has been utilized in various contexts, industries and countries to explain the intention to use or the actual usage of these systems (Chen & Aklikokou, 2020). Moslehpour et al. (2018) investigated how customers' personalities and perceptions of technology influenced their intention to make online purchases in Taiwan and found that perceived usefulness acted as a mediator in the relationship between consciousness and the intention to make online purchases.

Mutahar et al. (2018) explored the mediating role of perceived usefulness between self-efficacy and the intention to use banking services among 482 bank clients in Yemen. Mohammadi (2015) collected responses from 410 students in Iran through private emails, Facebook and LinkedIn to assess the usage of mobile banking and found that perceived usefulness mediated the connection between perceived ease of use and customers' attitudes towards using mobile banking services. Importantly, these studies focused on non-MFI customers who likely have a more extensive experience with technology and its impact on the actual usage of Mobile Value-Added Services (MVAS). Based on these studies, the following hypothesis was developed to test whether perceived usefulness of MVAS mediates the relationship between experience with FinTech and digital financial inclusion:

H4: Perceived usefulness of MVAS mediates the relationship between experience with FinTech and digital financial inclusion.

Conceptual Farmwork
The following diagram indicates the relationship between study variables i.e. experience with financial technology (independent variable), perceived usefulness of MVAS (mediator) and digital financial inclusion (dependent variable). Letter H explains the study hypotheses: H1-Experience with financial technology has a positive influence on the perceived usefulness of MVAS, H2-Experience with financial technology has a positive influence on digital financial inclusion and H3: Perceived usefulness of MVAS has a positive influence on digital financial inclusion.
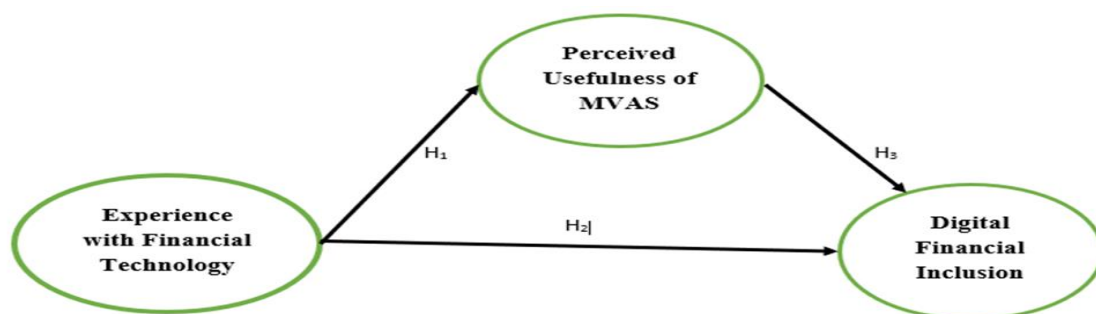

Figure 1: Conceptual Framework of the Study

Methodology
This section elaborates on the research philosophy, design, study population, area, sampling procedure, sample size and data collection procedures.

Independent variable, mediator and dependent variables used in this study are discussed to show the possible relationship of the constructs.

Research Design

he study adopted a positivist research philosophy to investigate the impact of FinTech experience on digital financial inclusion, with perceived usefulness of Mobile Value Added Services (MVAS) as a mediating factor. Drawing on deductive reasoning and empirical observation through the senses of microfinance institution clients, the study developed hypotheses based on the literature review (Creswell & Creswell, 2017). Utilizing statistical tools for data analysis and hypothesis testing (Field, 2018), the study employed an explanatory quantitative research design, specifically a cross-sectional approach, to examine how FinTech experience influences digital financial inclusion through the perceived usefulness of MVAS. This method aligns with the recommendation of Gomber et al. (2018) to use appropriate measurements in quantitative evaluations for advancing knowledge in the studied field (Apuke, 2017).

Population and Sampling

The study took place between December 2021 and January 2022 in two regions in Tanzania: Dar Es Salaam and Arusha. These regions were chosen because the headquarters of selected MFIs are found there and the data were collected at the headquarter branches (Kichawele, 2020). The study population was 1,200 MFI customers while the full-scale data collection involved a sample of 300 MFI customers who were selected through convenient sampling. However, after conducting a data cleaning process, the usable questionnaires were reduced to 283 (valid sample size).

Instruments

This study used a close-ended questionnaire to collect data. Questionnaire is a set of written questions that are filled out by or for a respondent to express his/her view (Einola & Alvesson, 2021). The questionnaire was used because its structured format ensures consistency in data collection, enhancing the reliability and validity of research findings, while also allowing for the quantification and statistical analysis of responses (Aithal & Aithal, 2020).

Validity and Reliability

The researchers consulted experts and also conducted pilot study to ensure validity and reliability of the initial questionnaire, from which valuable suggestions were obtained. Subsequently, the researchers, incorporated those improvements before deploying the final questionnaire in the field. The pilot study involving 50 MFI customers demonstrated the Cronbach's Alpha exceeding 0.7, confirming the questionnaire's reliability for effective data collection, as indicated in Table 1.

Table 1: Reliability Test Result

Variables	Cronbach's Alpha	Comment
Digital financial inclusion	0.783	Reliable
Experience with financial technology	0.775	Reliable
Perceived usefulness of MVAS	0.794	Reliable

Statistical Treatment of Data

Data analysis consisted of two types of statistics: descriptive and inferential. Descriptive statistics described the profile of respondents and their views on the study variables, such as their experience with FinTech, their perceived usefulness of MVAS and their level of digital financial inclusion. Inferential statistics examined the hypothesized relationships among these variables using partial least squares structural equation modelling (PLS-SEM) in the Smart–PLS 3 (2015) software. PLS-SEM is a suitable method for this study because it can handle complex models with latent variables, it does not require strict assumptions about data distribution, and it focuses on prediction rather than explanation (Hair et al., 2017; Henseler et al., 2016). A two-stage approach was followed to test the measurement and structural model, as suggested by Anderson and Gerbing (1988). The measurement model was evaluated for its validity and reliability by examining the factor loadings, Average Variance Extracted (AVE), Cronbach's alpha, reliability coefficient (Rho_a), discriminant validity and composite reliability of each construct (Hair et al., 2017; Latif et al., 2020). The structural model was assessed for its explanatory power and it predictive relevance by estimating the path coefficients, coefficient of determination (R-squared), effect size (f-squared), predictive relevance (Q-squared), predictive accuracy (q-squared) and significance levels using the bootstrapping technique with 5,000 samples (Hair et al., 2017; Latif et al., 2020). The results of the study are presented and interpreted in the next section.

Descriptive statistics for the study key variables reflects the respondents' views on their experiences with FinTech. Measures such as means and standard deviations were used as presented in different tables. Table 3, for example, shows the varying perceptions among respondents regarding their experience with FinTech. Notably, most respondents agreed that they have adequate experience of using mobile money applications in facilitating financial transactions, such as withdrawing money (mean=3.68) and checking balances (mean=3.64) in their accounts. However, low scores are associated with experience in training others and applying for credit, each having a mean score of 3.35. This was followed by the use of mobile money applications to deposit money (mean=3.50). These findings indicate a range of attitudes and usage patterns related to FinTech among the respondents. The respondents were required to indicate their agreement or disagreement by ticking one of the following options on how experience with financial technology influence DFI for each item in the questionnaire: 1=strongly disagree, 2=disagree, 3= neutral, 4=agree and 5=strongly agree. The interpretation of the obtained mean score was as follows: 1.00-1.49 = strongly disagree (very low), 1.50-2.49 = disagree (low), 2.50-3.49 = undecided (moderate), 3.50-4.49 = agree (high) and 4.50-5.00= strongly agree (very high).

Table 3: Descriptive Statistics for Experiences with FinTech

S/N	Response on how experience with financial technology influence digital financial inclusion	Mean	Std dev	Interpretation
1	I have long experience using mobile phone money applications to make online payments.	3.32	1.37	Neutral
2	I have long experience using mobile phone money applications to apply for credit.	3.35	1.21	Neutral
3	I have long experience using mobile phone money applications to deposit money into my account	3.50	1.20	Agree
4	I have long experience using mobile phone money applications to perform insurance services	3.12	1.34	Neutral
5	I have long experience using mobile phone money applications to check the balance in my account	3.64	1.16	Agree
6	I use my long experience with mobile phone money applications to train others on the relevance of mobile money services	3.35	1.25	Neutral
7	I have long experience using mobile phone money applications to withdraw money from my account	3.68	1.18	Agree

Table 4: Descriptive Statistics for Perceived Usefulness of MVAs

S/N	Response on how perceived usefulness of MVAS influence digital financial inclusion	Mean	Std dev	Interpretation
1	It saves time to use mobile phone money applications for savings	3.66	1.19	Agree
2	I find mobile phone money applications useful for savings	3.51	1.18	Agree
3	Using mobile phone money applications to deposit money in my account saves time	3.76	1.14	Agree
4	It is cheap to use mobile phone money applications for savings into my account	3.61	1.15	Agree
5	The use of mobile phone money applications enables me to get a wide range of information in my account	3.72	1.17	Agree
6	It saves time to use mobile phone money applications to apply for loans	3.71	1.11	Agree
7	I find mobile phone money applications useful to borrow money	3.62	1.20	Agree
8	Using mobile phone money applications enables me to accomplish loan requests and receive more quickly	3.71	1.18	Agree
9	I find mobile phone money applications useful to request and receive loans without physically visiting a microfinance institution	3.46	1.24	Neutral
10	Using mobile phone money applications to apply for loan increase my chances of achieving other daily activities.	3.66	1.10	Agree
11	It is cheap to use mobile phone money applications to apply for and receive loan	3.57	1.26	Agree
12	The use of mobile phone money applications saves time in repaying loan	3.79	1.14	Agree
13	The use of mobile phone money applications saves costs on repaying loan	3.57	1.16	Agree
14	Using mobile phone money applications helps to remind when the loan repayment date is due	3.80	1.12	Agree
15	The use of mobile phone money applications alerts me when I settle a loan	3.61	1.16	Agree
16	I access loan balances by using mobile phone money applications	3.67	1.22	Agree

Table 5: Descriptive Statistics for Digital Financial Inclusion

S/N	How digital financial inclusion is useful	Mean	Std dev	Interpretation
1	The use of mobile phone money applications helped me to deposit money into my account	3.79	1.10	Agree
2	The use of mobile phone money applications helped me to borrow money	3.72	1.16	Agree
3	The use of mobile phone money applications to facilitate loan repayments	3.69	1.12	Agree
4	The use of mobile phone money applications helps me to check the balance in my account	3.79	1.09	Agree
5	The use of mobile phone money applications helps me access insurance services	3.50	1.26	Agree
6	The use of mobile phone money applications helps me to make various online payment	3.78	1.15	Agree
7	The use of mobile phone money applications helps me to track my loan repayment record	3.63	1.21	Agree
8	The use of mobile phone money applications helps me to access statement of my account	3.84	1.23	Agree

Table 4 provides an overview of perceived usefulness of Mobile Value-Added Services (MVAS) – the additional services offered by mobile phone operators besides normal calls (e.g., SMS and mobile money applications). The highest scored items were related to the time and money savings that MVAS provide when repaying or applying for loans, with mean scores of 3.79 and 3.71, respectively. The lowest scored item was related to the convenience of requesting and receiving loans without visiting an MFI physically, with a mean score of 3.46. The other items, related to the usefulness of MVAS for savings and reminders, had mean scores of 3.51 and 3.54, respectively.

Table 5 provides summary on the levels of digital financial inclusion (the dependent variable of the study). Note that, digital financial inclusion refers to the extent to which individuals and businesses have access to and use a range of quality and affordable digital financial services that meet their needs (World Bank Group, 2016; CGAP, 2015). The highest scored items were related to the convenience and efficiency of mobile phone money applications in accessing account statements (mean=3.84), making deposits (mean=3.79), and making online payments (mean=3.78). The lowest scored items were related to the impact of mobile phone money applications on accessing insurance services (mean=3.50), tracking loan repayment records (mean=3.63), and increasing borrowing capacity (mean=3.72). These results suggest that the respondents have different experiences and opinions on how digital financial inclusion affects their financial well-being and opportunities.

Results of PLS-SEM Analysis and their Interpretation

This part provides in detail the results of partial least square structural equation modelling analysis and their interpretation. Specifically, it provides results about the measurement model, structural model results and mediation analysis.

Measurement Model

The assessment of the research model both convergent and discriminant validity was conducted to gauge the extent to which the measurement items accurately captured specific construct-related variances. Convergent validity was established by evaluating measurement item reliability by factor loadings, Cronbach Alpha, internal consistency and Average Variance Extracted (AVE). These assisted in exploratory testing of the phenomena, which is valuable for validating variables that may not be fully understood. The research model was reflectively measured based on criteria outlined by Hair et al. (2021), item reliability; assessing the proportion of variance in the construct captured by measurement items, as indicated by factor loadings. Conventionally, this is supposed to exceed the 0.7 score. However, in social business and social sciences, loadings above 0.4 score can be retained in the measurement model as long as their corresponding AVE and CR meet the specified thresholds (Hair et al., 2021 & Hair et al., 2017). In line with this approach, three items (E1, E4 and E6) were eliminated from the experience with FinTech measures while from digital financial inclusion measures, two items (D1 & D6). On the other hand, eleven items (U1, U2, U6, U7, U9, U10, U11, U13, U14, U15 & U16) were eliminated from the perceived usefulness of MVAS due to their notably low outer loadings (below 0.4). Figure 2 provides final results depicting the measurement model results for factor loadings.

Generally, measurement assessment model by considering factor loadings and other validity and reliability results (e.g., Cronbach alpha, Rho_a, composite reliability and AVE) are presented using Table 6 that follows.
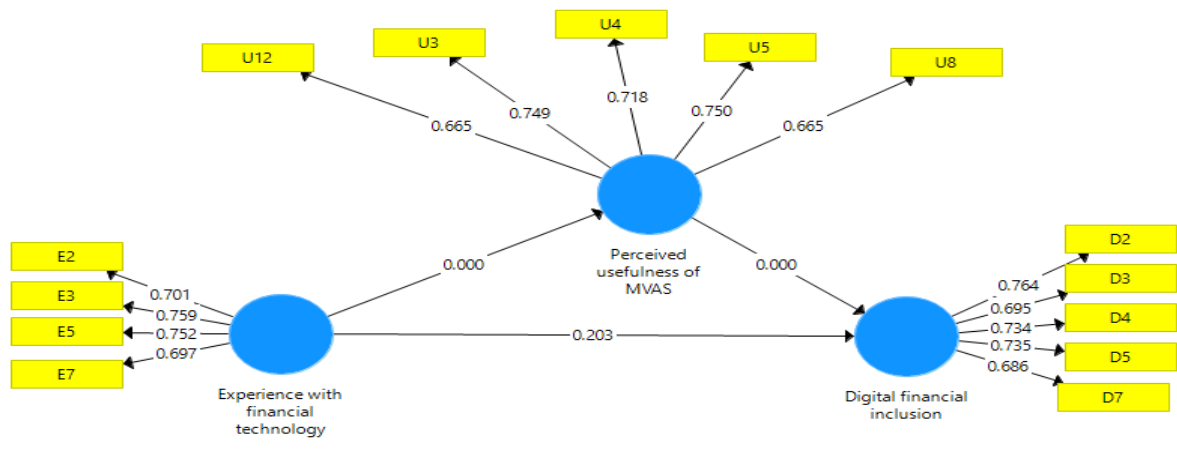
Figure 2: Measurement Model – Factor Loading

Table 6: Measurement Model Assessment

Construct	Indicator Items	Factor Loading	Cronbach's Alpha	Rho_a	Composite Reliability	AVE
Digital financial inclusion	D2	0.764	0.773	0.777	0.846	0.524
	D3	0.695				
	D4	0.734				
	D5	0.735				
	D7	0.686				
Experience with financial technology	E2	0.701	0.705	0.706	0.818	0.530
	E3	0.759				
	E5	0.752				
	E7	0.697				
Perceived usefulness of MVAS	U3	0.749	0.754	0.756	0.836	0.505
	U4	0.718				
	U5	0.750				
	U8	0.665				
	U12	0.665				

For internal consistency, consideration is given to Cronbach's alpha and composite reliability (CR) of the model constructs. The Cronbach's alpha values for all the study constructs were above 0.7 as a minimum requirement. Results also indicated that the CR for all constructs met the minimum requirement of 0.7 i.e., values for all the constructs ranged between 0.818 and 0.846, which indicated high reliability. To complement item reliability, AVE for each construct was assessed to ascertain the amount of variance each construct explained in contrast with the measurement error. According to Hair et al., (2017); AVE is required to be greater than 0.5, which would signify that the construct is explaining more than half of the variations in its indicators. Results show that the AVE values were; the digital financial inclusion (AVE = 0.524), the

experience with FinTech (AVE = 0.530) and the perceived usefulness of MVAS (AVE = 0.505) – meaning that convergent validity for model constructs was ensured.

The Fornell-Larcker criterion for determining the discriminant validity was employed to determine the theoretical and conceptual uniqueness of the model constructs (Fornell & Larcker, 1981; Hair et al., 2021). Under this procedure, discriminant validity is determined by comparing the square root of the AVE of each construct with the inter-correlations' values of constructs (Hair et al., 2021). The requirement is that the square roots of the AVE values should be higher than the correlation with other constructs (Fornell & Larcker, 1981); and that the square root values of the AVE are high

compared with the corresponding correlations among constructs. Table 7 provides obtained results indicating that indeed the model discriminant validity was ensured.

Structural Model Results

Through the structural model it was possible to examine multicollinearity issue via the Variance Inflation Factor (VIF). Obtained results where all VIF were below the maximum acceptable level of 5 indicate that there was no multicollinearity problem (Hair et al., 2021). The goodness of the model was also tested using the coefficient of determination (R^2) useful for ascertaining the changes in the endogenous variable (digital financial inclusion) as explained by the exogenous variables. Study results indicated $R^2 = 0.355$, signifying that the model described up to 35.5 per cent of the variations in the exogeneous variables in enhancing digital financial inclusion. According to some studies, R^2 values of 0.75, 0.50, or 0.25 for endogenous latent variables can described as substantial, moderate or weak, respectively (Hair et al., 2011; Hair et al., 2013). Hair et al., (2021) emphasized that R^2 values should better be interpreted according to context. Therefore, an R^2 of 0.355 can be considered moderate in this study.

Table 7: Discriminant Validity

	Digital financial inclusion	Experience with FinTech	MVAS Usefulness
Digital financial inclusion	0.724		
Experience with financial technology	0.434	0.728	
Perceived usefulness of MVAS	0.559	0.445	0.711

Table 8. Structural model Results f² and Q²

Variables	f² (f square)	Q²
Experience with financial technology ->Digital financial inclusion	0.067	
Experience with financial technology -> Perceived usefulness of MVAS	0.161	
Perceived usefulness of MVAS -> Digital financial inclusion	0.258	0.180

Table 9: Structural Model Results - Direct Effect

	Path Coeff (β)	T- values	P - Values
Experience with Fintech -> Digital financial inclusion	0.232	3.539	0.000
Experience with FinTech -> Perceived usefulness of MVAS	0.445	9.137	0.000
Perceived usefulness of MVAS -> Digital financial inclusion	0.456	6.344	0.000

From table 8, the quality of the predictive model was further examined using f-square (f^2), which indicates the relative importance each construct carries in relation to predicting the outcome variable (Kock (2014). Study results revealed the following: the experience with FinTech ($f^2 = 0.067$) and the perceived usefulness of MVAS ($f^2= 0.258$). These results show that perceived usefulness carried a more meaningful effect and experience with Fintech carried the least relevance in the model. Moreover, the overall predictive relevance of the model ($Q^2 = 0.180$) indicates that the model was relevant in explaining the influences of explanatory variables in the study.

In further assessment of the goodness of fit, study hypotheses were tested to ascertain the significance of the relationships among the study variables. This was achieved by examining the path coefficients and path significance based on the established criteria i.e., p-values < 0.5, and t-values > 1.96 (Hari et al., 2021). As presented in Table 9, generated results indicate a positive and significant relationship between experience with FinTech and digital financial inclusion (β= 0.232, t= 3.539, p < 0.01), and experience with Fintech and perceived usefulness of MVAS (β=0.445, t= 9.137, p < 0.01), respectively. As for the relationship between perceived usefulness of MVAS and digital financial inclusion (β= 0.456, t= 6.344, p > 0.01), there was a significant positive relationship as well.

Based on the foregoing discussion and the structural model results as presented in Table 8, the study has established that the exogeneous variables have a substantial positive and significant effect on the

digital financial inclusion. Therefore, confirming the study hypotheses which were stated as follows:

> H1: Experience with financial technology has a positive influence on the perceived usefulness of MVAS, is supported

> H2: Experience with financial technology has a positive influence on digital financial inclusion, is supported

> H3: Perceived usefulness of MVAS has a positive influence on digital financial inclusion, is supported.

Mediation Analysis

In order to test the mediation effect of perceived usefulness of MVAS on the relationship between experience with Fintech and digital financial inclusion, the study used the product coefficients approach in the bootstrapping technique (Preacher & Hayes, 2008). As indicated in table 10, perceived usefulness partially mediated (both direct and indirect effects were significant) and the relationship between experience with Fintech and digital financial inclusion is significant (t-value = 4.797 and P-value < 0.01). This therefore, establishes the relevance of the earlier predicted mediation role of the perceived usefulness of MVAs, as captured in the following hypothesis:

H4: Perceived usefulness of MVAS mediates the relationship between experience with financial technology and digital financial inclusion, is supported.

Table 10:   Indirect Results

	t-value	P - value
Experience with FinTech -> Perceived usefulness of MVAS -> Digital financial inclusion	4.797	0.000

Discussion of the Study Findings

In this study, the influence of experience with Financial Technology (Fintech) on digital financial inclusion was examined through two hypotheses (H1 and H2): experience with Fintech has a positive influence on the perceived usefulness of Mobile Value-Added Services (MVAS) (H1), and that experience with Fintech positively influences digital financial inclusion (H2). The results supported these hypotheses, revealing that experience with Fintech significantly and positively affected digital financial inclusion. Importantly, this positive influence was evident both in cases where experience with Fintech operated independently and when perceived usefulness of MVAS was considered as an intermediary variable. It is noteworthy that experience with Fintech encompasses various components, such as usage frequency, range of services, duration of use, technology literacy, problem-solving abilities, innovation adoption, learning from mistakes and interactions with support services (McKechnie et al., 2006); which collectively contribute to customers' awareness, belief and ability to access digital financial services (Karjuoto et al., 2002).

Furthermore, study findings underscore the significance of adequate experiences with Fintech,

reliable internet connectivity and access to devices like laptops, mobile phones or tablets in enabling customers to engage in digital financial transactions without the need for physical visits to Microfinance Institutions (MFIs). The advent of digitalization has not only transformed traditional banking but also has a considerable impact on customer satisfaction and convenience, leading to a substantial growth in the Tanzanian banking industry. As customers become more adept with digital Fintech, they can perform various transactions seamlessly, such as checking account information and purchasing products, anytime and anywhere (Haralayya, 2021). Prior experience with digital financial transactions and mobile technology positively influences consumers' attitudes and behaviors towards online banking enhancing their confidence in using such services (Gerrard et al., 2006; Thakur et al., 2015). In contrast, it is important to acknowledge that some studies have reported non-positive effects of personal knowledge on the use of mobile banking services (Alsamydai et al., 2014). However, this contradiction can be attributed to individuals' initial reluctance to engage with digital financial services due to concerns about potential risks, such as financial losses. Nevertheless, as technology continues to advance and digital financial services become more prevalent, individuals have

opportunities to acquire experience, either through peer learning or situational necessity, ultimately fostering greater comfort and proficiency in digital Fintech (Ishengoma, 2011).

Furthermore, the influence of the perceived usefulness of MVAS on digital financial inclusion (H3) in which it was hypothesized that the perceived usefulness of MVAS has a positive impact on digital financial inclusion, have been confirmed. The robust conducted analysis produced results that clearly supported this hypothesis ($p < 0.01$). Results have shown how the perceived cost of MVAS affected customers' engagement in various online financial transactions, ranging from online payments to applying for credit, depositing money, purchasing insurance services, checking account balances, training others in online transactions and withdrawing funds from accounts. This study's conclusions align well and echo the views offered by Technology Acceptance Model (TAM) as proposed by Davis (1989), which assert that perceived usefulness as a key determinant of technology adoption.

Conclusions and implications

This study concludes that positive experience with FinTech enhances the perceived usefulness of Mobile Value-Added Services (MVAS), hence driving digital financial inclusion among MFI customers. This implies the need of tailoring financial technology solutions to customers' technological backgrounds by both practitioners and policymakers. The mediation effect of perceived usefulness of MVAS on the relationship between experience with FinTech and digital financial inclusion among MFI customers in Tanzania is important to be maintained. This implies MFI customers are more comfortable with a financial system which is effective. Further more it is recommended that MFIs, Mobile Network Operators (MNOs) and regulatory authorities (e.g., BOT, TRCA and AFI) cooperate in educating the customers to get the necessary skills about digital financial transactions and to motivate them to use it regularly to gain experience. These stakeholders should also ensure positive experiences with MVAS as it mediates well the relationship between experience with FinTech and digital financial inclusion

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