Journal of Economics and Sustainable Development
ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online)
Vol.16, No.4, 2025

Post COVID-19 MSME Digital Payment Acceptability and Utilisation: Was the Pandemic a Forced Pilot?

John Musantu[1*]; Jessie Nkhowani[2]; Daphne Phiri[3]
[1,2,3]Department of Economics, School of Humanities and Social Sciences, University of Zambia, P.O. Box 32379, Great East Road, Lusaka, Zambia
*Email of corresponding author email address: musantu.john@gmail.com
ORCID: 0000-0002-2301-1904

Abstract
Despite the upward surge in access to mobile subscriptions, internet services and digital payment products and services on the market, a significant proportion of MSMEs were yet to adopt the use of digital payments systems pre COVID-19 pandemic. In this study, we argue that the pandemic experience shifted more consumers towards acceptability and utilisation of digital financial services. Our paper explores the factors that influence MSME acceptability of mobile money and mobile baking services post the pandemic. The study benefits from a sample of 368 MSMEs from Lusaka district of Zambia. Employing a probit model analysis, we establish that MSMEs are more acceptable of mobile money relative to mobile banking services. We further establish that MSME business owner attributes, business specific attributes and technological readiness is critical in digital payment acceptability and utilisation. From the findings, we offer recommendations for regulators and financial providers in improving service provision, product variety and achieving scale in digital payment adoption and utilisation.
Key words: *Digital payment acceptability, Post COVID-19, financial utilization, MSMEs, mobile banking, mobile money*
JEL Classification: *G2; G210*
DOI: 10.7176/JESD/16-4-06
Publication date: June 30th 2025

INTRODUCTION

The evolution in information and communication technology has led to vast opportunities in the financial payment system, marketing, and economic operations (Slozko & Pelo, 2015). The increased access and use of smartphones and internet services has led to the advent of digitization. Developing countries are the immediate beneficiaries as services that were previously inaccessible become widely accessible; of course, more work needs to be done to achieve universal access to these services across the globe. One area that has experienced significant improvements because of enhanced information and communication technology systems is trade and commerce.

Further, the way financial transactions are made has also drastically evolved, as they have become seamless and relatively faster because of the digitization process. With the ever-growing digital innovations and ICT, financial transactions have shifted from cash to digital payments, also referred to as e-payment systems (Muhamad, Haroon, & Najiran, 2009). Digital payment systems (DPSs) have disrupted paper currency, which has dominated financial transactions for a long time. Roy et al. (2014) defines digital payment as any platform used for making monetary transactions for various goods or services purchased over the Internet or mobile money platforms.

Financial technology, popularly known as FinTech, has facilitated the development of DPSs. FinTech refers to the automation of financial services through the integration of finance and technology. According to a FinTech landscape survey, FinTech refers to innovation in financial services (UNCDF, 2023). The use of Fintech has led to a reduction in transaction costs (Chen, 2016). In Zambia, Fintech services have changed the financial landscape by offering innovative financial solutions to individuals and businesses alike (UNCDF, 2023). The history of FinTech in Zambia is linked to the emergence of mobile money growth and an increased demand for online financial services (UNCDF, 2023). Online financial services include money transfers, loan payments, insurance services, and investments (Bharadwaj et al., 2019; Dhar & Stein 2017; Chen 2016).

The acceptability of DPSs is influenced by several factors, including regulatory factors, security issues, Internet access, technological knowledge, and user readiness (Nurqamarani et al., 2021). At the global level, the adoption of DPSs has transformed the conduct of financial transactions. In developed countries such as Germany and the United States, the adoption of DPSs was driven by technological infrastructure and high-income levels, which facilitated the development of DPSs (Kumar, 2024). The increased adoption of DPSs has also spread to

emerging economies, such as Brazil, India, and more recently, South Africa (ibid). The increase in adoption has been influenced mainly by the growth in the population of the middle class. The adoption of DPSs in developing countries is increasing steadily. Zambia is among the many countries in Africa that have experienced a steady rise in the adoption of DPSs. Adoption has been slowed by the many challenges faced by developing countries, such as limited internet services and security concerns (Çalli et al., 2019). While the adoption and utilization of DPSs is essential for all business firms, regardless of size, this study suggests that MSMEs could benefit greatly from this innovation.

Micro-small and medium enterprises (MSMEs) account for a large proportion of the global economy. The World Bank report for 2022 indicates that 90% of business activities are attributed to MSMEs (see table 1). MSMEs are increasingly adopting digital payment systems to achieve efficiency and minimize transaction costs. The extant literature shows that, ultimately, increased adoption of digital payment solutions by MSMEs can improve operational efficiency, customer convenience, financial inclusion, and economic resilience (Kanapathipilai et al., 2024). The MSME sector in Zambia accounts for 97 percent of business activity and contributes significantly to the gross domestic product (Ministry of Small & Meduim Enterprises Development, 2023). Despite their contributions, MSMEs face a number of constraints, such as limited access to finance, limited access to markets, lack of innovation, and poor uptake of technological solutions for business (MSME 2023). The MSME sector dates to the early 1980s, when the Government of the Republic of Zambia established the Small Industries Development Organization (SIDO) in 1981 to enhance its contribution to national development. Following the liberalization of the economy in 1992, Zambia saw transformation and growth in this sector (MSME 2023). Table 1 shows that there are approximately 1.5 million MSMEs, 98 percent of which are micro enterprises (BoZ, 2022).

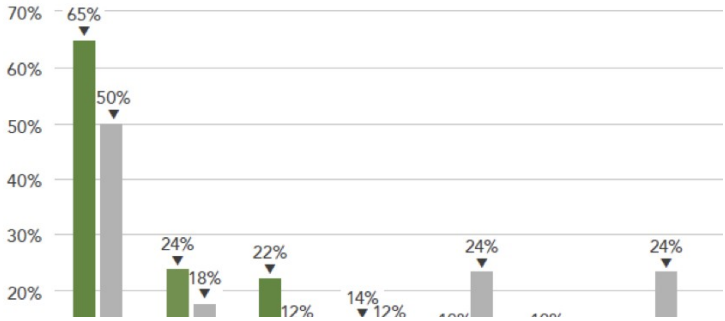
Table 1: Distribution of business in Zambia

Enterprise	Number	Percent
Micro	1,535,894	98.8
Small	16,180	1.0
Medium	1,818	0.2
Total	1,553,892	100.00

Source: Bank of Zambia, 2022

During and post the COVID-19 pandemic, statistics indicate an increase in the utilization of digital financial services worldwide during and after the globe. In the 2020 Global Findex Survey, data were collected from first-time digital payment users. Emerging markets and developing countries account for a significant proportion. The figure below highlights these numbers: (WB and Cambridge Centre for Alternative Finance, 2020). The respondents were also asked to receive

Figure 1: Percent of regulators who reported an increase in fintech usagae or offering in light of COVID-19 in emerging and advanced economies (N=97)

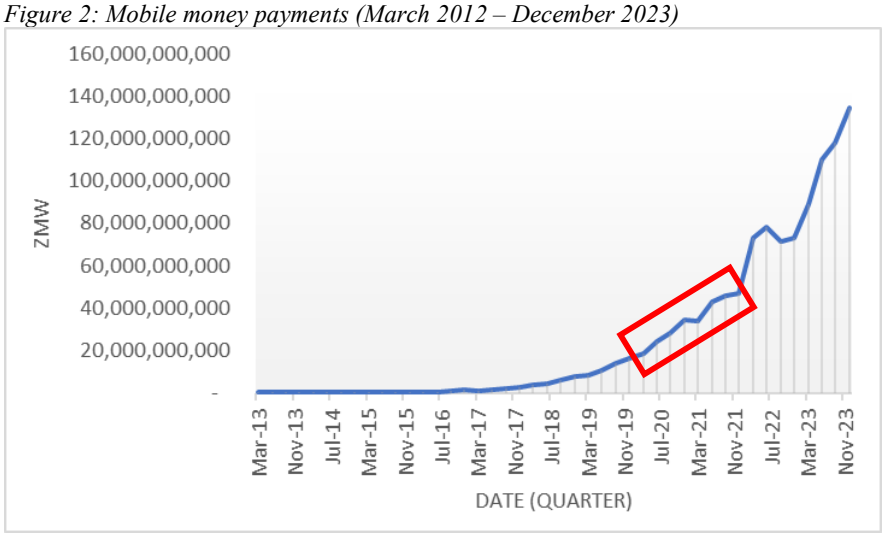


Source: World Bank and Cambridge Centre for Alternative Finance, 2020

Despite the upward trends in the number of mobile subscriptions and digital payment products and services in the market, a significant proportion of consumers and small businesses are yet to adopt digital payment systems (Baghla, 2018; Sanghita et. al. 2014; Sivathanu, 2019; Kanapathipillai el. at., 2024; WB and Cambridge Centre for Alternative Finance, 2020) 2019. In this study, we hypothesized that the COVID-19 pandemic experience may shift consumer toward acceptability and utilization of digital financial services. The pandemic has changed

the way most consumers perceive digital financial services, thereby increasing the adoption levels of digital payments. Figure 2 shows the sharp rise in mobile money use in Zambia during and after the pandemic.

Figure 2: Mobile money payments (March 2012 – December 2023)



Source: Authors using Bank of Zambia 2025 data

In our study, we argue that the COVID-19 pandemic acted as a "forced pilot," enabling the market to test digital financial services because they had no option in most cases but to make transactions digitally. At the descriptive level, there is a significant expansion in businesses' digital platform offerings and increased consumer reliance on mobile and online channels to conduct day-to-day activities. This hypothesis can be confirmed at a descriptive level by the increased utilization of digital payment services, as highlighted in figure 1 and 2. In the pandemic period and post, we observe increased volumes of digital payments, as highlighted above. If the observed changes become the "new normal," the pandemic may have reshaped and revolutionized the digital payments landscape in the longer term. However, the gains and changes highlighted above are not universal as some consumers have not shifted to digital payments. Some face financial, social, and technological barriers that may require legislation or industry changes. The 2022 national survey on access and usage found that the cost of gadgets (41.3 percent) and the cost of the Internet (25.2 percent) were the major barriers to access.

Study objectives

In this study, we explored the factors that influence the MSME acceptability of digital payment services post COVID-19. Given the experience of the pandemic, we seek to use it as a pilot for MSMEs; hence, we seek to explore the enablers and barriers to their acceptance as a means of financial transactions after the pandemic. Given the widely established literature on the impact of financial inclusion and digital financial services, ensuring that many economic agents join the digital space is worth the effort. Specifically, we consider the following objectives: i) to explore the role of MSME business owner attributes in digital payment acceptability; ii) to investigate the impact of technological readiness on MSME digital payment acceptability, to investigate whether there is a difference in acceptability between mobile money and mobile banking services; and iv) to explore the role of MSME business attributes in digital payment acceptability. This study employed a sample of 368 MSMEs from the Lusaka district of Zambia. We use mobile money and banking services. Employing a probit model analysis, we explore the factors that influence the acceptability and utilization of digital payment platforms.

Contribution to extant literature

To the best of our knowledge, no study has been conducted in Zambia that explores MSMEs digital payment acceptability and utilization after the COVID-19 pandemic. Therefore, this study contributes to academic research on this topic. Outside Zambia, there is a growing body of literature (Desmairega et al., 2023; Tanjung et al., 2023; Carletti et al., 2020; uyunchaliyeva et al., 2021; Lee et al., 2023; Ahmadian et al., 2025; Singhal et al., 2021; Bai et al., 2021) on the post pandemic digital payment adoption and utilisation. However, our study is unique in that most of the studies conducted have been descriptive by highlighting the levels of utilization pre- and post-pandemic, and the ones that have attempted an inferential analysis used a limited number of variables because of limited data. With the availability of data rich in scope, our study seeks to contribute to unpacking

this phenomenon by introducing new variables. Our study investigates the enablers and barriers to small business acceptability and utilization of digital payments using regressors, such as the age of the business owner, Female Owner; Trust in the financial sector, business registration status, small business opened during the pandemic, family business, and Technology Readiness.[1] These variables provide invaluable insights into the acceptance and utilization of small business digital payments after the COVID-19 pandemic. These variables are built on Kanapathipillai el. at. (2024), which explored the role of technological readiness in SME digital payment adoption. They established that technological readiness played a significant role in understanding the acceptability of digital payments following the pandemic. Our research builds on the investigation by Kanapathipillai et al. (2024) by incorporating additional key variables, as highlighted above.

Significance of the study

In Zambia, like in many other African countries, sustainable national growth is projected to emanate from the private sector. Most African countries are faced with a tight fiscal space due to high levels of unsustainable debt (domestic and external), high wage bills in state institutions, over-dependency on revenue from commodities, net importers, subdued economic growth that is disproportional to population growth, and the high cost of doing business. This places the private sector at the center of any meaningful sustainable growth on the continent. For Zambia, a vibrant SME sector is important in exchange market stabilization and the realization of a favorable balance of payment. To reduce the high demand for imports that destabilize the forex market, the SME sector needs to take up the production of some of the products that the country imports from the rest of the world (Mutambo et al., 2025). Therefore, ensuring a conducive business environment is of interest to the country. One of the key barriers that impedes small business growth is the cost of doing business because they do not have leverage of scale. The digitization process helps small businesses enhance their efficiency and reduce transaction costs. Hence, understanding small business acceptability and the utilization of digital services is important for building resilience. The findings from our study contribute towards enhancing drivers and barriers to digital financial service adoption and utilization among MSMEs. Our study offers insights for enhancing the scaling up of product offerings and utilization.

Definition of key terms

Digital Payments Platforms

Digital payment platforms facilitate digital transactions in a controlled environment (Kazan et al., 2014). A variety of digital payment instruments are used to transact, such as credit cards, debit cards, mobile money, online transactions, e-wallets, and ATMs (Maherali, 2017).

Debit/Credit Cards: Debit cards and credit cards require the user to have an active bank account. A debit card can only be used if it has sufficient funds, whereas a credit card requires repayment after using the funds. These payment tools are typically used for ATMs or point-of-sale (Singh and Rana, 2017).

UPI*:* A Unified Payment Interface is a system that enables multiple bank accounts to be added to a single UPI mobile application (Muthurasu & Suganthi, 2019). This app eliminates the need for users to have apps for each bank.

POS: A Point-of-sale machine is an electronic machine that records the time and place of the transaction. The machine may or may not be connected to a cash register and a receipt can be printed (Muthurasu & Suganthi, 2019).

Mobile banking: This is a service provided by all banks to allow their customers to remotely perform different types of financial transactions on a mobile device (Muthurasu & Suganthi, 2019).

Mobile money: Mobile money requires a user to subscribe to a particular mobile service provider to activate a Sim-card-based account. The mobile money account can then be credited with an e-float that can then be used to buy goods and services, transfer to other mobile money accounts, and withdraw cash through a mobile money agent in any location (Munyegera and Matsumoto, 2016).

[1] The above variable are dummies.

Online Banking: Online banking, sometimes referred to as Internet banking, is an Internet-based platform that allows customers to perform a range of financial transactions accessed from the website of a financial institution through the Internet. Online banking is part of e-banking and does not exist independently (Szopiński, 2016).

According to the Bank of Zambia (2017), there are 234,574 online banking users.

Automated Teller Machines
ATM is a self-service electronic device that enables users to access limited banking services. ATMs give customers access to services such as cash deposits, fund withdrawals, money transfers, bill payments, and e-wallets.

Technological readiness: In this study, technological readiness is characterized as the inclination of people to adopt and utilize new technologies to fulfill their objectives in both personal and professional settings. This idea, introduced by Parasuraman (2000), is evaluated through four essential constructs: Insecurity - The–the degree to which individuals experience doubt or uncertainty regarding technology. Discomfort: The sensation of unease or anxiety when engaging with technology. Optimism: The conviction that technology can improve life and yield positive results. Innovativeness: The eagerness to experiment with new technologies.

The rest of the paper is organized as follows. The next section reviews the literature by examining the theoretical underpinning and review of earlier studies related to our topic under consideration. In Section 3, we provide the methodology and data used in this study. We then detail and discuss the empirical results in Section 4. In Section 5, we present the conclusion and policy implications of our findings.

LITERATURE REVIEW

Theory of perceived risk

According to this theory, the perceived risk of using technology influences the decision to adopt it. According to the original theory developed by Kahneman and Tversky (1970), people perceive risks based on three factors: (1) the probability of an event occurring, (2) the consequences of the event, and (3) the likelihood of experiencing the consequences (Jacoby & Kaplan, 1972). Furthermore, individuals perceive risks based on their willingness to take risks. This theory is relevant to the current study because it helps explain why MSMEs may or may not adopt new technologies in the form of DPSs. The perceived risk and risk tolerance levels may influence the acceptance and utilization of DPSs.

Technology Acceptance Model

According to Davis (1989), the Technology Acceptance Model (TAM), offers a theoretical basis for understanding user acceptance and adoption of technology. The initial model suggests that three factors influence user acceptance of the technology: attitude towards the technology, perceived usefulness, and perceived ease of use. The revised model, which has five factors, has been useful for studying different types of technologies, including computers, the Internet, and mobile phones (Nurqamarani et al., 2021). The factors that influence adoption are explained as follows. (1) Perceived usefulness refers to the extent of consumer belief that the technology will be of help. Individuals and firms are more likely to adopt technology if there is evidence that it can boost business performance (Nurqamarani et al., 2021. (2) Perceived ease of use refers to the extent to which technology can be used with minimal or no effort. Individuals and businesses are more likely to adopt the technology if it is relatively easy to use(Liao et al., 2022). (3) Attitude towards using refers to a negative or positive feeling towards using a new technology. Individuals with a positive attitude are more likely to adopt technology (Cahyani et al., 2023). (4) External factors refer to factors outside the control of the individual or firm that may influence adoption. Users are more likely to adopt technology if external factors such as social factors positively influence them(Belamapa & Sugiarto, 2023). (5) Behavioral intention and actual usage refer to the seriousness of the user's intention to use and the repeated use of the technology over time (Cahyani et al., 2023). The TAM model has evolved over the years to TAM2 and UTAUT, the most recent of which was TAM3, developed by Vankatesh in 2012.

This study uses the original TAM model because it focuses on technology acceptance by MSMEs. This study believes that the model is sufficient to address the key factors related to user acceptance. This study focused on perceived usefulness, perceived ease of use, attitude, and social influence as external factors.

This model is relevant to the current study because it offers valuable insights into the factors that influence the MSMEs adoption of digital payment systems. This study examines the acceptance and utilization of digital payment systems by the Zambian MSME.

Perceived usefulness refers to the extent to which MSMEs believe that the current digital payment systems are useful to their businesses. Perceived ease of use refers to the extent to which MSMEs feel comfortable using DPSs. Behavioral intentions and actual usage refer to the seriousness of the intention to use DPSs, which may be measured by customer trust in a new technology. External factors also strongly influence adoption. In this study, the COVID-19 pandemic was considered to be a major factor influencing adoption.

Theory of Reasoned Action (TRA)
This theory states that the accomplishment of an activity depends on behavioral control and intention. This theory was first proposed by Fishbein and Ajzen, who identified four components: beliefs, attitudes, intentions, and subjective norms (Fishbein & Ajzen 1975). According to the authors, belief is the probability that a person thinks that an action will cause a certain outcome. Attitude refers to the disposition to respond favorably or unfavorably. Intention is the way one plans to behave based on one's beliefs and attitudes. Subjective norms are the sum of all important people in one's life and may influence their actions (Fishbein & Ajzen 1975).

The three theories adopted in this study are relevant because a person's attitude towards technology (TRA) influences the perceived usefulness and use of technology (TAM). Furthermore, perceived risk (TPR) can influence both attitude and perceived usefulness.

Empirical review
Desmairega et al. (2023) analyzed ATM/Debit Cards, Credit Cards, and E-Money transactions before and after COVID-19 in Indonesia. They establish that the above medium of transaction initially experienced a sharp decline during the start of the pandemic and, eventually, the transaction volumes increased as the economy utilized less cash during this period. Further, Tanjung et al. (2023) also established the results of increased consumer utilization of digital wallets during the pandemic periods, and they observed that consumers continued using the services as much in the post-pandemic era. This observation implies that consumers' experience with digital payments is satisfactory. This further confirms that perceived consumer usefulness and quality of services have a significant influence on the ongoing adoption of digital payment systems.

Frequency of cashless methods of payment
Evidence from the literature shows a shift from the use of physical cash payments towards a cashless mode of payment. A study conducted by Desmadirega and Hermana (2023) in Indonesia showed that there was a drastic change in the use of electronic/cashless systems such as ATM/Debit Cards, Credit Cards, and Electronic Money after the pandemic. This study explores the changes in payment methods, specifically focusing on the usage of Payment Cards (ATM/Debit Cards, Credit Cards) and Electronic Money (E-money), in Indonesia before and after the onset of the COVID-19 pandemic. The shift toward electronic payments due to changes in consumer behavior due to social distancing measures and other restrictions encouraged people to shop remotely using mobile devices and other digital platforms (Harshavarthini:2024). Desmadirega and Hermana's (2023) findings indicate that prior to the pandemic and at the onset of the disease, e-transactions were significantly low, but there was a surge as the disease burden progressed.

Furthermore, Tanjung et al. (2023) also established the results of increased consumer utilization of digital wallets during the pandemic period, and they observed that consumers continued using the services as much in the post-pandemic era. This observation implies that consumers' experience with digital payments is satisfactory. This further confirms that perceived consumer usefulness and quality of services have a significant influence on the ongoing adoption of digital payment systems.

Factors affecting usage of Fin-tech
During and after the pandemic, consumer behavior towards the use of e-transactions in many instances was attributed to internal and external factors. According to Lakhaiyar et al. (2022), the adoption of digital payment systems is influenced by several other factors, which can be grouped into four main categories: efficiency parameters, perceived utility, social influence, and facilitating conditions.

Technology availability plays a significant role in the adoption of e-payments. The perceived readiness of technologists by users in Saudi Arabia affected the use of fintech solutions during and after the pandemic (Temani and Seth 2024). In addition, the perceived safety and convenience that repayments bring into the fold

are also considered as explanation for the continue use of cybernated transactions in India (Temani and Seth 2024) They claimed that the use of e-platforms where not a new thing in India but the advent of the pandemic led to a push in the trend. The challenges posed by the pandemic have led to a shift from traditional methods to modern digital solutions for day-to-day transactions (De' et al., 2020; Stalmachova, 2022).

Furthermore, the COVID-19 pandemic has accelerated the global shift toward digitalization, highlighting the need for safe, secure, and hygienic processes (Purohit and Purohit, 2024). Çoşkun et al. (2022) postulated that trust, ease of use, and health effects positively influenced the adoption of online payment systems during COVID-19, whereas factors such as age and risk negatively affected the acceptability of e-payment systems in Turkey. Other barriers to adoption include perceived technological value, risk, usage, and image (Lakhaiyar 2022)

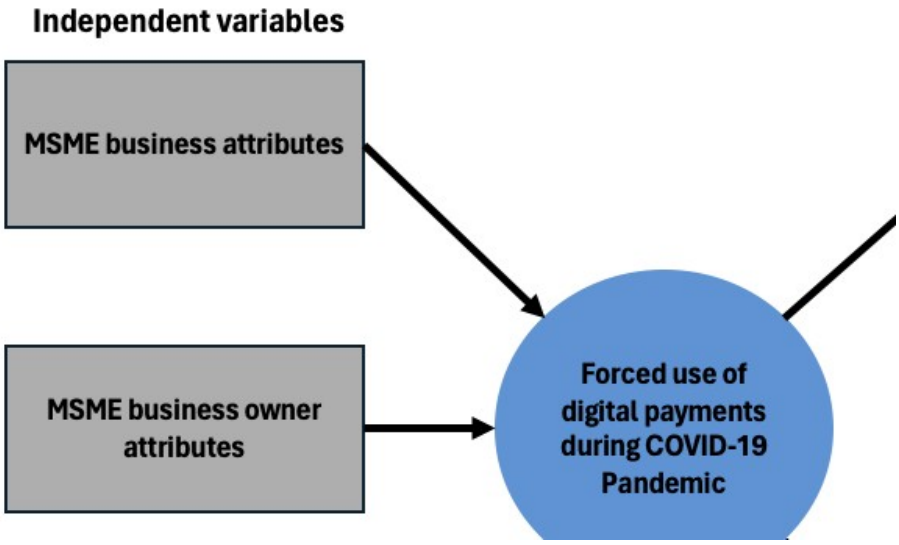
Evidence from Zambia shows that the pandemic accelerated the use of digital transactions. According to Kapako (2021), the Zambian industry has experienced a sharp increase in digital payments of 114% during the pandemic. Additionally, the Bank of Zambia realizes the benefits of digital financial services (DFS) to improve financial inclusion and has embarked on efforts to sensitize the public (go cashless campaign) to the transition to digital solutions. According to the BOZ in the National Payment System Vision and Strategy 2023 - 2027 (BOZ 2023), the financial sector saw an exponential growth in mobile payments, which grew by 819% in volume to 1,581 million in 2022 from 172 million in 2017.

Studies on technology acceptance and adoption in Zambia show that perceived usefulness and ease of use are factors that determine the acceptance and adoption of technology (Mvula M. K & Phiri J 2023). In addition, Sakala and Phiri (2019) add that banking institutions should consider working on the perceptions and attitudes of clients to increase the uptake of mobile banking.

Conceptual framework

In the conceptual framework, we highlighted the dependent and categorical independent variables considered in our study. Based on our hypothesis, we considered digital payment acceptability post COVID-19 as the dependent variable. Our conceptual framework is informed by the theories adopted in the theoretical framework. These three theories are relevant because a person's attitude towards technology (TRA) influences the perceived usefulness and use of technology (TAM). Furthermore, perceived risk (TPR) can influence both attitude and perceived usefulness. The independent variables falling into the following categories were considered: MSME business attributes, enabling environment, and MSME business owner attributes. This study argues that the pandemic acted like a forced pilot for a digital payment utilization experiment.

Figure 3: Conceptual framework



Source: Authors, 2025

METHODOLOGY AND DATA

Data source

This study benefits from a cross-sectional survey of 368 MSMEs from the Lusaka District of Zambia. Small businesses were selected from the retail, wholesale, food, and manufacturing sectors. This makes the data very rich as it covers key sectors within the Zambian economy. Furthermore, the survey has rich data on a wide range of topics, making it insightful.

Data were collected using a semi-structured questionnaire that was administered to the sampled MSMEs. The questionnaire contained a few open-ended questions that were mainly followed by closed questions for any additional information. The authors used this information to add context to the results. The analysis of these open-ended questions was mainly based on thematic analysis.

Model specification

Our empirical estimations used a probit model to understand the factors that influenced MSME digital payment acceptability after the COVID1-19 pandemic. In econometric analysis, when we aim to determine the probability that a unit with certain characteristics belongs or does not belong to the category of entities being studied, probit models are the best technique.

In our study, improved trust[1] in digital payments after the COVID-19 pandemic was the dependent variable. When an MSME is established to be in the state of 'improved trust in digital payment,' it takes 1 and 0 otherwise. If the status of an MSME's reported acceptability and reduced risk of digital payments depends on a latent variable y* determined by exogenous variables included in vector X′, we have

$$y_i^* = X_i'\beta + \mu_i \quad (1)$$

$$y_i^* = 1 \ \ s_i y_i' > 0; \ y^* = 0 \ \ s_i y_i^* \leq 0 \quad (2)$$

Subscript *i* represents the characteristics of individuals, vector β represents the parameters of the model, and μ is the normal distribution error term with mean 0 and variance 1. A critical threshold y_i is assumed, based on which, if y_i^*over y_i then the individual is financially included.

Where Z is the standard normal variable, Z ~ N (0,σ^2) and the cumulative normal distribution function is given by;

$$3P_i = P(y_i = 1|X') = P(y_i \leq y_I^*) = P(Z_i \leq \beta X_i') = F(\beta X_i') \quad (3)$$

$$F = \left(\frac{1}{\sqrt{\pi}}\right)\int_{-\infty}^{\beta X_i'} e^{\frac{z^2}{2}} dt \quad (4)$$

(Greene, 2012)

Functional model

Equations (5) and (6) highlight the functional and estimable forms of the probit model under consideration in our empirical analysis.

$$ImprovedTrustDigPayment_i = \alpha + \beta X_i + \varepsilon_i \quad (5)$$

Where:

$TrustDigPayment_{i_t}$: Denotes the improved trust in digital payments post COVID-19 variable

βX_i: The X_i indicates the explanatory variables in our estimation; ε_i is the error term; and α, and β are the model parameters.

[1] This was self-reported Improved trust in digital payments post COVID-19 by the MSMEs

Two dependent variables are observed, as discussed in the above generic bivariate model specification.

Variable Description

Dependent Variable

Reported Improved acceptability of digital payments: This study considered a dummy for business self-reported improved acceptability of digital payments after the COVID-19 pandemic. This dummy variable was generated as '1' for the respondents that said yes to perceived improved acceptability and '0' otherwise. This variable was used for mobile money and mobile banking services such as bank e-wallets.

Reported reduced risk associated digital payments: The other dependent variable that was considered for the dependent variable was the small business perceived reduced risk of digital payments after the COVID-19 pandemic. This dummy variable was generated as '1' for the respondents that said yes to reduced perceived risk of digital payment use and '0' otherwise.

Explanatory Variables

Note that most of the variables in this chapter were defined in the previous two chapters. table 2 provides a summary of these variables.

Independent variables

Table 2: Summary of Independent Variables

Factor or Variable	Variable/Proxy in Regression	Definition/Source/Notes
Youth MSME Owner	Dummy for youth	In this variable, we used the age variable to generate a dummy for MSME youth owners. The youth cut of point was 35 years old as per international standards
Education of MSME Owner	Primary education	Education variable was generated for three categories: primary, secondary and tertiary. The no education category was used as the base category
	Secondary education	
	Tertiary education	
Gender of MSME Owner	Female dummy	From the gender variable, the study generated a dummy for female MSME owners
Trust in the financial sector	- Has trust in formal financial sector - Has trust in semi-formal financial sector Has no trust (*base category*)	- Has trust in formal financial sector - Has trust in semi-formal financial sector Has no trust (*base category*)
Informal MSME	Dummy for not formally registered MSMEs	Registered (formal) vs Not registered (informal)
Financial size of the MSME business	Approximate financial size of the firm	Approximate financial size of the firm
Victim of financial scam	Experienced significant financial scam before while using digital payments	We generated a dummy for MSME businesses that have experienced a significant financial scam before while using digital payment systems
Manage my mobile money account	Manage my mobile money account	Dummy for MSME owners who manage their digital payment accounts
Number of employees	Number of employees	Continuous variable for number of employees under the firm
Business opened during COVID-19	Opened business during COVID-19	Dummy for business opened during the pandemic
Economic status of MSME Owner	Income levels	This variable was proxied by total monthly income of the business owner
	Owns the building they operate in	The MSME business owns the building in which they operate in

Factor or Variable	Variable/Proxy in Regression	Definition/Source/Notes
Family business [dummy]	Family business [dummy]	Dummy variable was generated for family owned MSME businesses
Technological readiness	Technological readiness	Technological readiness is characterized as the inclination of people to adopt and utilize new technologies to fulfil their objectives in both personal and professional settings (Parasuraman (2000).
Business prior experience in digital payment before pandemic	Business prior experience in digital payment before pandemic	This variable captures all the businesses that had experience using digital payments pre COVID-19

Sources: Author's own work, 2025

Test for Multicollinearity – VIF

In this section, we employ the VIF method to examine our model for multicollinearity among explanatory variables. Multicollinearity is a concern because it affects standard errors, which in turn influences the significance of our explanatory variables in the estimation. To investigate multicollinearity using the VIF, we followed a three-step process. First, we created correlation tables for all model variables to detect any signs of multicollinearity. Next, we performed a regression analysis of the explanatory variables, followed by the calculation of the variance inflation factor (VIF) and tolerance values. The VIF measures the increase in the variance of the estimated coefficients compared with a scenario in which there is no correlation among the model's explanatory variables. A common guideline suggests that a VIF score of five or more (or tolerance scores of five or less) indicates potential multicollinearity issues among the explanatory variables (Allison, 2012; Menard, 2002; Menard, 2010). In our model estimation, we establish VIF values below 4; hence, the model can be considered acceptable (we are confident that our results are not inefficient because of collinearity).

Summary Statistics

Table 3: Summary statistics

Explanatory Variable	Mean	Standard Deviation	Explanatory Variable	Mean	Standard Deviation
Trust in financial institution (base=no trust)			**MSME Industry**		
Trust formal financial institution	0.397	0.489	Retail/wholesale	0.489	0.473
Trust semi-formal financial institution	0.339	0.473	Food beverages	0.456	0.336
			Manufacturing	0.051	0.021
Reported improved acceptability of digital payments	0.683	0.393	MSME business opened during pandemic	0.151	0.377
Reported reduced risk in use of digital payments	0.689	0.473			
Educational status (base=no education)			Informal MSME	0.283	0.493
Primary education	0.397	0.471	Female MSME Owner	0.578	0.494
Secondary education	0.333	0.489	Digital payment opened during pandemic	0.105	0.012
Tertiary education	0.108	0.406	Priori experience using digital payments before COVID-19	0.583	0.393
Economic status			Number of employees	4.973	2.322
Monthly income of MSME Owner	8,000.6	701.7	Victim of financial scam	0.498	0.500
MSME owns business building	0.262	0.481			
Family business	0.062	0.481			
Youth MSME Owner	0.358	0.480			
Technological readiness	0.488	0.473			
Number of observations	**368**				

Source: Authors own work, 2025

In table two above, we present the summary statistics for the variables employed in the estimation.

RESULTS AND DISCUSSION

Table 4: Probit Regression Estimations (Marginal Effects) – Mobile Money and Mobile Banking

Probit estimation - Mobile Money			Probit estimation - Mobile Money		
Explanatory variable	**Marginal effect**	**Robust std. error**	**Explanatory variable**	**Marginal Effect**	**Robust std. error**
Youth MSME Owner	0.067***	0.013	Youth MSME Owner	0.056**	0.014
Education of MSME Owner	0.045	0.014	Education of MSME Owner	0.232	0.006
Trust semi-formal financial institution	0.068***	0.014	Trust semi-formal financial institution	-0.005***	0.008
Trust formal financial institution	0.036***	0.016	Trust formal financial institution	0.066***	0.008
Female MSME Owner	-0.024**	0.026	Female MSME Owner	-0.039***	0.009
Informal MSME	0.038**	0.016	Informal MSME	-0.011**	0.012
Financial size of the MSME business	0.014**	0.017	Financial size of the MSME business	0.017**	0.006
Victim of financial scam	0.016**	0.004	Victim of financial scam	0.009***	0.007
Manage my mobile money account	0.036	0.004	Manage my mobile money account	0.057	0.006
Number of employees	-0.121	0.011	Number of employees	-0.001	0.006
Business opened during COVID-19	0.063	0.010	Business opened during COVID-19	0.036	0.007
MSME business owns the land	0.013	0.010	MSME business owns the land	0.001	0.006
Family business [dummy]	0.035	0.009	Family business [dummy]	0.012	0.007
Family business [dummy]	-0.035***	0.014	Family business [dummy]	0.025***	0.008
Technological readiness	0.041***	0.013	Technological readiness	0.052***	0.002
Business prior experience in digital payment before pandemic	0.014	0.014	Business prior experience in digital payment before pandemic	-0.004	0.007
Number of observations	368		**Number of observations.**	368	
Pseudo R-square	0.522		**Pseudo R-square**		
Prob> chi-square	0.000		**Prob> chi-square**	0.000	
Wald chi-square (28)	4121.52		**Wald chi-square (24)**	3983	

***Significance to 1%; **Significance to 5%; *Significance to 10%

Source: Authors own work, 2025

Table 5: Summary of significant variables

Variable	Estimation 1 -Mobile money	Estimation 2 -Mobile banking
Youth business owner	+	+
Female MSME Owner	-	-
Trust in Formal	+	+
Trust semi-formal	+	-
Informal MSME business	+	-
Victim of financial scam	+	+
Family business	-	+
Technological Readiness	+	+
Economic status of MSME Owner	+	+
MSME business owns the land	N/A	+

Source: authors work from the probit results, 2025

DISCUSSION OF FINDINGS

In this study, we explore the impact of the COVID-19 pandemic on digital payment acceptability and utilization among MSMEs in Lusaka Province of Zambia. This study employs a probit model and a case study of 368 MSMEs to explore this phenomenon. Digital payment services were split into mobile money and banking services[1]. We seek to understand the profile of small business owners who were likely to accept digital payments after the pandemic. Furthermore, we wanted to assess whether the acceptability by small business owners varies across mobile money and mobile bank services.

The study establishes that the pandemic significantly improved the rate of digital payment acceptability and utilization among the sampled MSMEs in the country. This is consistent with the general trend of digital uptake during the post-pandemic era across different sectors. The pandemic acted as a forced pilot for consumers in the market, leading to improved product experience, enhanced knowledge of use, and ultimately increased acceptability and perceived reduced risk in digital payment services by MSMEs. This result demonstrates the importance of the customer product experience (trial/pilot) in adoption. At the height of the pandemic, consumers had no choice but to use online shopping and delivery services, which required them to use digital payment services for the most part. This has led to a forced use and gain in customer experience, which, as per our study findings, has led to a positive disruption in the payment system.

Comparing the two, mobile money and mobile banking services, we observe that mobile money was relatively more accepted and utilised post COVID-19 relative to mobile banking services, as per the descriptive statistics. This can be explained by the scale of use of these two types of financial products. Given the nature of small businesses and the spread of mobile money, they are more likely to have widely utilized mobile money relative to mobile banking services. This result supports the role of customer experience in product acceptability and utilization in the market. Furthermore, our study establishes that there is variation in the factors that influence the acceptability and use of mobile money and banking services by MSMEs. Additionally, variable interaction also influences the effect of some significant variables on the dependent variable. In the detailed sections below, we highlight some of the scenarios.

The study results highlight the importance of product testing [piloting], frequency of use, and overall customer experience in product adoption and utilization. The COVID-19 pandemic acted like a pilot (forced one) but in a special way, as almost everyone was forced to use digital services. The global economy saw an increase in the uptake of digital financial services. In this study, we observe that the use of digital payments was sustained after the pandemic. Therefore, our study explored the likelihood of adoption of digital payment services after the pandemic.

The following sections offer a detailed discussion of the different independent variables and the observed results under mobile money and mobile banking services. The results are based on the probit model analysis and are highlighted in tables 4 and 5.

Age of business owner [dummy for youth]: In this study, we generated a dummy variable for youth MSME business owners to explore the impact of age on digital payment acceptability after the COVID-19 pandemic. We find a positive and statistically significant result for both mobile money and mobile bank services. This

[1] As defined in key definition section

entails that 'youth business owners' are more likely to accept usage of digital payments relative to their counterparts, the older business owners. In this study, we establish that youth business owners are more likely to accept digital payments relative to their older counterparts outside youth age. These results are consistent with extant literature (Banerjee et al., 2023; Berguiga et al., 2025; Shafeer, et al., 2019; Ljumović et al., 2021) on digital financial services adoption by the youth relative to their older counterparts. Extant literature has established that youth are more likely to be acceptable for the change and system disruption that comes with digitization. In our study, we see that this phenomenon extends to business owners. Even when interacted with business owner who has experienced financial scam involving a significant amount, they dummy for 'youth' remained positive and significant in both digital service type.

Female MSME Owner: This variable sought to explore the impact of gender on small business owners. We generate a dummy variable for female business owners. We observe a negative and statistically significant result for both mobile money and mobile banking acceptance. This means that female small business owners are less likely to be acceptable for mobile payments post COVID-19 relative to their male counterparts. This is in line with the extant literature (Arora et al., 2020; Chamboko et al., 2022; Sekantsi et al., 2019; Ngware et al., 2024) on trust in financial services and the adoption of general financial services, where females have been established to be less likely to trust financial services and adopt new financial products because of the market barriers they face in the use of appropriate financial products relative to their male counterparts.

When this variable interacts with the education variable [business owner has education], we observe that the results are still statistically significant in both mobile money and mobile banking, but the sign changes to positive in mobile banking but remains negative in mobile money.

When interacted with education and no education variables, surprising the result remained negative and significant for the 'no education' interaction, but the education interaction turned positive. This interesting outcome can be explained for by the fact that the 'not educated female business owners' are more likely to be 'hands-on,' involved in the daily operations of the business relative to their educated counterparts, hence, they are likely to be more acceptable of cash which can be received in their presence. On the other hand, the educated business owner is likely to have a full-time job; hence, transactions via digital payment will be more acceptable to them than cash because they are likely not to be fully involved in the operations of the business. They are likely to use digital payments that they can monitor as a means of monitoring the business agent and the employed (s).

Trust in the financial sector: We explored the impact of trust in the financial sector. The study generated a dummy for all respondents who indicated trust in the financial sector and financial services in the market. We established a positive and statistically significant result for this variable. The results are very intuitive and within the current body of financial inclusion literature (Pashkov et al., 2020; Jhonson et al., 2023; Sekantsi et al., 2019; Pazarbasioglu et al., 2020; Musantu, 2020, 2021) which indicates that consumers who trust the financial sector and its services are more likely to adopt and widely use financial products in the market. The trust in our study establishes that these results in the extant literature also extend to MSME's acceptability and utilization of digital payments in the market. When interacting with the other regressors, this variable remained consistent, positive, and statistically significant.

Business registration status [dummy for unregistered]: In this variable, the study explored the role of registration status on the small business acceptability of digital payments. We establish that small businesses that were not formerly registered were less likely to accept mobile banking services than their formally registered small business owners. These were despite the use of these services during the pandemic. On the other hand, these businesses were established to be more likely to accept the use of mobile money post-pandemic. These results demonstrate the impact of informality on the perception and use of formal services. Instead, they are more likely to accept and use semi-formal digital services for mobile money.

Victim of financial scam: People who had experienced a significant financial scam while using digital payments were found to be more likely to adopt the use of both mobile money and mobile banking services after the COVID-19 pandemic. This is an interesting result, which could be explained by the fact that these small business owners are likely to have been making judgements of digital financial services based on their limited experience before the COVID-19 pandemic; hence, when they were forced to use digital financial services, they gained experience (knowledge on utilization) that led to their significant change in perception. This result demonstrates the power of financial product piloting and customer service experience in terms of product adoption.

Small business opened during COVID-19 pandemic: In this variable, we generated a dummy variable for small businesses that were opened during the pandemic. Our hypothesis was that they are more likely to be acceptable for digital payments because they were born during the pandemic and registered their companies with the pandemic landscape in mind. Further, some of these were likely opening up to exploit the pandemic opportunities, such as offering delivery services. In our estimation, we observe that firms that opened during COVID-19 were more likely to be acceptable for digital payment services (both mobile money and mobile banking) relative to their counterparts who had opened before COVID-19. Most business initiatives that opened during COVID-19 attempted to exploit the situation leveraged on existing platforms.

Technology Readiness: The study controlled for technology readiness, a concept that is defined in chapter one under the definition of key terms sections. This variable has been widely established to influence the adoption of new products centered on digitization across different sectors. In our study, we controlled for this variable and established it to be statistically significant with a positive influence, as in the extant literature (Thomas et al., 2016; Tennakoon et al., 2024; Musyaffi et al., 2021; Omar et al., 2023). The above results are consistent for both mobile money and mobile banking services.

Family business [dummy]: The dummy for a family business variable aimed at exploring whether businesses owned by a family are more likely to adopt digital payments because of internal trust. The results were statistically significant but opposite to the study's expectation of mobile money. Thus, family businesses are less likely to accept mobile money. On the other hand, they were more likely to accept the use of mobile banking services post COVID-19.

Income of MSME business owner: This variable was used to assess the impact of the business owner's economic status on the acceptability and utilization of financial services post-pandemic. Our study establishes that economic status, proxied through income levels, has a significant and positive impact on MSME owner digital payment acceptability in the market. This result applies to both mobile money and mobile banking, which show a relatively stronger impact, as reflected in a relatively larger marginal effect. This result is consistent with the extant literature (Sharma et al., 2016; Ghosh et al., 2021; Nandru et al., 2020; Serrao et al., 2021) on the role of income in financial inclusion and product utilization.

Insignificant independent variables: Some variables hypothesized in our study to have a potential impact on the acceptability and utilization of digital payments were established to be statistically insignificant. The following were the insignificant variables and their coefficient signs: Education (+); 'Manage my mobile money account (+); 'Number of employees' (-); 'Prior experience in digital payment before COVID' (+); 'Financial size of the business' (+); Financial product opened during COVID-19 (-).

CONCLUSIONS, RECOMMENDATIONS AND POLICY IMPLICATIONS

Despite the upward surge in access to mobile subscriptions, Internet services, and digital payment products and services in the market, a significant proportion of MSMEs were yet to adopt the use of digital payment systems before the COVID-19 pandemic.

In this study, we explored the factors that influence the MSME acceptability of digital payment services post COVID-19. Given the experience of the pandemic, we seek to use it as a pilot for MSMEs; hence, we seek to explore the enablers and barriers to their acceptance as a means of financial transactions after the pandemic. Given the widely established literature on the impact of financial inclusion and digital financial services, ensuring that many economic agents join the digital space is worth the effort. Specifically, we consider the following objectives: i) to explore the role of MSME business owner attributes in digital payment acceptability; ii) investigate the impact of technological readiness on MSME digital payment acceptability;)iiTo investigate whether there is a difference in acceptability between mobile money and mobile banking services; and iv) explore the role of MSME business attributes in digital payment acceptability. This study employed a sample of 368 MSMEs from the Lusaka district of Zambia. We use mobile money and banking services. Employing a probit model analysis, we explore the factors that influence the acceptability and utilization of digital payment platforms.

Our study establishes that the COVID-19 pandemic was a positive shock to digital payment acceptability and utilization in the country. As evidenced by the study results, the pandemic has led to a digital payment forced pilot for consumers, giving them product experience and awareness, thereby potentially leading to enhanced trust in digital payment services. Further, employing a probit model analysis, we establish that MSMEs are more

acceptable for mobile money than for mobile banking services. Additionally, we establish that MSME business owner attributes, business-specific attributes, and technological readiness are critical in digital payment acceptability and utilization. This study highlighted the specific attributes that were established as significant in influencing digital payment acceptability and utilization after the pandemic.

This study contributes to the academic research on the phenomenon of MSME adoption of digital financial services, specifically, digital payment services post the COVID-19 pandemic. Outside Zambia, there is a growing body of literature (Desmairega et al., 2023; Tanjung et al., 2023; Carletti et al., 2020; uyunchaliyeva et al., 2021; Lee et al., 2023; Ahmadian et al., 2025; Singhal et al., 2021; Bai et al., 2021) on the post post pandemic digital payment adoption and utilisation. However, our study is unique in that most of the studies conducted have been descriptive by highlighting the levels of utilization pre- and post-pandemic, and the ones that have attempted an inferential analysis used a limited number of variables because of limited data. With the availability of data rich in scope, our study contributes to unpacking this phenomenon by introducing new variables.

In Zambia, like in many other African countries, sustainable national growth is projected to emanate from the private sector. Most African countries are faced with a tight fiscal space due to high levels of unsustainable debt (domestic and external), high wage bills in governments, over-dependency on revenue from commodities, net importers, subdued economic growth that is disproportional to the growth of the population, and high cost of doing business. This places the private sector at the center of any meaningful sustainable growth on the continent.

Based on the findings, we recommend the following interventions and policy considerations to further boost the adoption and utilization of digital financial services, especially for business:

Product innovation: We observe that financial institutions have vast potential to continue innovating and designing MSME customer-centric digital payment solutions that are user-friendly. Innovation and expansion of other mobile-based services, such as savings, credit, and insurance offerings, will be useful for MSMEs in their capital acquisition, building resilience, and overall financial management. Currently, mobile money service providers play a facilitative role in the provision of mobile-based loans, as the actual facility is issued by a third-party provider. Given the capacity and experience that mobile money providers have acquired in the market, regulators should consider allowing them to operate as loan providers. This will help reduce the middleman cost (markup MNOs get), thereby reducing the current of these micro loans issued via the mobile money platform.

Consumer awareness and product experience: The significant increase in the digital payment adoption post the pandemic, demonstrates the importance of customer product awareness and experience in product adoption and utilisation. Therefore, the financial sector and regulators should continue with sensitization campaigns (market interaction) and offer free (pilot) customer tests of financial digital services to enhance consumer confidence, demonstrate product relevance, and build trust. Customer financial service product testing is key to demonstrating to the customer the value of the product in the effective management of their finances. We recommend that financial institutions consider offering new products on a waiver basis to allow customers to experience the product before they can fully sign up. We see this with many media products such as pay channels and platforms. This business strategy could be extended to financial sector offerings.

Enabling environment for improved technological readiness: Enhancing technological readiness and consumer protection by regulators is key to scaling up adoption. The growth of digital payments and finance is intricately linked to infrastructure components, such as reliable electricity, extensive mobile phone usage, and Internet connectivity. While these infrastructure challenges are beyond the direct influence of the financial sector, they can impede the success of digital payment systems, requiring careful consideration by both the government and private organizations when implementing solutions. Customized approaches may be necessary for rural and remote regions to address the shortcomings of the infrastructure. This includes developing products that work with basic mobile phones, and creating an ecosystem that addresses connectivity issues. In the medium-to long-term, the ability to conduct financial, commercial, and governmental transactions remotely, enabled by digital finance, underscores the importance of investing in infrastructure.

Encourage responsible finance by building financial capability and enforcing financial consumer protection: Boosting financial literacy and capability can lead to greater adoption and use of digital financial services, particularly among underserved groups, such as women. Utilizing digital platforms to deliver information and training, along with applying behavioural economics strategies, such as nudges, reminders, or

entertainment, can amplify the effectiveness of these efforts. Regulations aimed at consumer protection can also foster trust and prevent harmful practices such as the aggressive promotion of expensive credit products. For instance, governments might mandate that providers clearly communicate the costs, fees, and expectations related to digital wages. Research conducted in controlled settings has demonstrated that simplified presentations of essential information can positively influence financial behaviour.

Conflicts of Interest
The authors declare no conflicts of interest.

Data Availability Statement
The dataset that supports the findings of this study is available upon request from the corresponding authors.

REFERENCES

Ahmadian, M. (2025). E-payments in the post-COVID-19: Navigating uncertainty and forecasting trends. Journal of Economic Studies.

Arora, R. U. (2020). Digital financial services to women: Access and constraints. In Gender Bias and Digital Financial Services in South Asia: Obstacles and Opportunities on the Road to Equal Access (pp. 51-72). Emerald Publishing Limited.

Baghla, A. (2018). A study on the future of digital payments in India. International Journal of Research and Analytical Reviews (IJRAR), 5(4), Oct–Dec 2018.

Bai, C., Quayson, M., & Sarkis, J. (2021). COVID-19 pandemic digitization lessons for sustainable development of micro-and small-enterprises. Sustainable Production and Consumption, 27, 1989-2001.

Banerjee, S. (2023). Adoption of digital finance among youth: A study. The Business & Management Review, 14(2), 36-41.

Bank of Zambia. (2022). 2022 Micro, Small and Medium Enterprise Finance Survey Report. Government Gazette.

Bank of Zambia. (2023). National Payment System Vision and Strategy 2023-2027. Lusaka: Bank of Zambia. Government Gazette.

Belamapa, R. B., & Sugiarto, C. (2023). Technology acceptance model analysis of MSME attitudes and intentions to use digital technology. Journal of Information Systems Engineering and Business Intelligence, 5(1), 60–63.

Berguiga, I., & Adair, P. (2025). Determinants of youth financial inclusion in MENA countries: Account holding versus the use of digital services. Journal of Financial Reporting and Accounting, 23(2), 550-574.

Bharadwaj, P., Jack, W., & Suri, T. (2019). Fintech and household resilience to shocks: Evidence from digital loans in Kenya (No. w25604). National Bureau of Economic Research.

Cahyani, A., Yeskainayah, A., Hamdah, L., & Suryaatmaja, K. (2023). The use of Technology Acceptance Model to evaluate MSME perspectives on e-payment system. Interdisciplinary Social Studies, 2(8), 2194-2203.

Çallı, B. A., Coşkun, E., & Özşahin, M. (2019). ICT adoption in SMEs: Determinants, levels, and influence on organizational innovativeness. Proceedings of the 12th IADIS International Conference Information Systems 2019, 285–289. https://doi.org/10.33965/is2019_201905c011

Carletti, E., Claessens, S., Fatás, A., & Vives, X. (2020). Post-Covid-19 World. Centre for Economic Policy Research.

Chamboko, R. (2022). On the role of gender and age in the use of digital financial services in Zimbabwe. International Journal of Financial Studies, 10(3), 82.

Coskun, M., Ebru, S., & Mehmet, O. K. (2022). Exploring online payment system adoption factors in the age of COVID-19—Evidence from the Turkish banking industry. International Journal of Financial Studies, 10(2), 39. https://doi.org/10.3390/ijfs10020039

De', R., Pandey, N., & Pal, A. (2020). Impact of digital surge during COVID-19 pandemic: A viewpoint on research and practice. International Journal of Information Management, 55, 102171. https://doi.org/10.1016/j.ijinfomgt.2020.102171

Desmadirega, L. A., & Hermana, B. (2023). The comparison of ATM/Debit Card, Credit Card, and E-Money transactions in Indonesia before and after the COVID-19 pandemic period January 2018 - August 2023. Journal of Economics, Finance and Management Studies. https://doi.org/10.47191/jefms/v6-i12-10

FAO. (2021). Digital finance and inclusion in the time of COVID-19. https://doi.org/10.4060/cb2109en

Ghosh, S., & Sahu, T. N. (2021). Financial inclusion and economic status of the states of India: An empirical evidence. Economic Notes, 50(2), e12182.

Jacoby, J., & Kaplan, L. B. (1972). The components of perceived risk. Sv, January, 382–393.

Jhonson, D., Smith, J., & Shehzadi, T. (2023). Digital trust and financial transactions: Building confidence in internet banking systems.

Kanapathipillai, K., Ling, T. G. S., Loong, L. M., Rabong, B. A., & Subindin, I. B. (2024). Navigating the digital payment landscape in Malaysian SMEs: Post-COVID-19 challenges and key drivers of adoption. European Journal of Social Sciences Studies, 10(3).

Kapako, N. (2021). COVID-19 and its impact on the Zambian economy. ZAMBANKER, Bank of Zambia.

Kumar, R. (2024). A study of digital payment system in G20 countries. Journal of Internet Banking and Commerce, 29(2), 1-10.

Lakhaiyar, S., & Mani, M. (2022). Factors influencing the adoption of digital payment systems during COVID-19. International Journal of Biotechnology and Knowledge Development, 14(1), 1–21. https://doi.org/10.4018/ijskd.315292

Lee, C. T., & Pan, L. Y. (2023). Smile to pay: Predicting continuous usage intention toward contactless payment services in the post-COVID-19 era. International Journal of Bank Marketing, 41(2), 312-332.

Liao, Y. K., Wu, W. Y., Le, T. Q., & Phung, T. T. T. (2022). The integration of the Technology Acceptance Model and Value-Based Adoption Model to study the adoption of e-learning: The moderating role of e-WOM. Sustainability, 14(2). https://doi.org/10.3390/su14020815

Ljumović, I., & Pavlović, D. (2021). Expanding financial inclusion for youth: Does digitalization matter?

Ministry of Small & Medium Enterprises Development. (2023). National Micro Small and Medium Enterprise Development Policy 1 Republic of Zambia Revised. www.msme.gov.zm

Miranda, T., Femiawan, A., & Onggo, G. (2023). Unleashing digital wallet expansion in the post-pandemic: A study using Technology Continuance Theory. International Conference on Informatics, Multimedia, Cyber and Information Systems, 222-227.

Musyaffi, A. M., Mulyani, S., Suraida, I., & Sukmadilaga, C. (2021). Lack of readiness of digital banking channel acceptance: Study on TAM 3 and technology readiness. Academy of Strategic Management Journal, 20, 1-18.

Mutambo, B., & Musantu, J. (2025). A quantitative analysis of the balance of payment performance using an alternative evaluation approach: A case of Zambia (1980–2020). American Journal of Economics, 9(1), 17-48.

Muthurasu, D. C., & Suganthi, D. M. (2019). An overview on digital library. Global Journal for Research Analysis, October, 1–2. https://doi.org/10.36106/gjra/8906567

Mvula, M. K., & Phiri, J. (2023). Assessing the major factors that affect the adoption of Information and Communications Technology on court service delivery in Zambia. Open Journal of Business and Management, 11, 1304-1323.

Nandru, P., & Rentala, S. (2020). Demand-side analysis of measuring financial inclusion: Impact on socio-economic status of primitive tribal groups (PTGs) in India. International Journal of Development Issues, 19(1), 1-24.

Nurqamarani, A. S., Sogiarto, E., & Nurlaeli, N. (2021). Technology adoption in small-medium enterprises based on Technology Acceptance Model: A critical review. Journal of Information Systems Engineering and Business Intelligence, 7(2), 162–172.

Omar, Q., Yap, C. S., Ho, P. L., & Keling, W. (2023). Can technology readiness predict farmers' adoption intention of the e-AgriFinance app? Journal of Agribusiness in Developing and Emerging Economies, 13(1), 156-172.

Panetta, I. C., & Leo, S. (2022). Why are m-payment platforms so attractive? M-payment as the entry level to the digital financial era. In Social and Economic Studies within the Framework of Emerging Global Developments, Vol. 1 (pp. 43–58). Peter Lang GmbH.

Pashkov, P., & Pelykh, V. (2020). Digital transformation of financial services on the basis of trust. Economic and Social Development: Book of Proceedings, 375–383.

Pazarbasioglu, C., Mora, A. G., Uttamchandani, M., Natarajan, H., Feyen, E., & Saal, M. (2020). Digital financial services. World Bank, 54(1).

Premchand, A., & Choudhry, A. (2015). Future of payments – ePayments. International Journal of Emerging Technology and Advanced Engineering, 5, 110-115.

Purohit, S., & Purohit, M. (2024). From cash to code: Digital payment adoption and its ripple effects on economic landscape in Indian petro-retail. In Contemporary Research in Business, Management and Economics Vol. 2. BP International.

Puschmann, T. (2017). Fintech. Business & Information Systems Engineering, 59, 69-76.

Rahardja, U., Hapsari, I. D., Putra, P. H., & Hidayanto, A. N. (2023). Technological readiness and its impact on mobile payment usage: A case study of Go-Pay. Cogent Engineering, 10(1), 2171566.

Sakala, L., & Phiri, J. (2019). Factors affecting adoption and use of mobile banking services in Zambia based on TAM model. Open Journal of Business and Management, 7, 1380-1394. https://doi.org/10.4236/ojbm.2019

Sekantsi, L. P. (2019). Digital financial services uptake in Africa and its role in financial inclusion of women. Journal of Digital Banking, 4(2), 161-174.

Serrao, M., Sequeira, A., & Varambally, K. V. M. (2021). Impact of financial inclusion on the socio-economic status of rural and urban households of vulnerable sections in Karnataka. arXiv preprint arXiv:2105.11716.

Shafeer, P. S. (2019). Usage of digital financial services among youth from college campuses in Kerala. IJRAR, 6(2).

Sharma, M. K. (2016). Financial inclusion: A prelude to economic status of vulnerable group. International Journal of Research-Granthaalayah, 4(12), 147-154.

Singhal, R., & Gupta, A. (2021). Impact of COVID-19 on digital payment services at towns and villages. International Journal of Creative Research Thoughts (IJCRT).

Sivathanu, B. (2019). Adoption of digital payment systems in the era of demonetization in India: An empirical study. Journal of Science and Technology Policy Management, 10(1), 143-171.

Slozko, O., & Pelo, A. (2015). Problems and risks of digital technologies introduction into e-payments. Transformations in Business and Economics, 14(1), 42-59.

Stalmachova, K., Chinoracky, R., & Strenitzerova, M. (2022). Changes in business models caused by digital transformation and the COVID-19 pandemic and possibilities of their measurement—Case study. Sustainability, 14(1), 127. https://doi.org/10.3390/su14010127

Temani, V. P., & Seth, S. (2023). Emerging trends of cybernated transactions in India: An outlook amidst COVID-19 pandemic. Indian Journal of Public Administration.

Tennakoon, I. (2024). Impact of technology readiness in digital banking adoption and role of mediating effect of behavioral intention: A study of commercial banking customers of Sri Lanka. Journal of Business and Technology, 8(2).

Thomas, L. D., Vernet, A., & Gann, D. M. (2016). Adoption readiness in service innovation: The case of digital money. Industry and Innovation, 23(4), 353-371.

UNCDF. (2023). The fintech landscape in Zambia.

Uyunchaliyeva, M. M., Nautiyal, R., Shaikh, A. A., & Sharma, R. (2021). The use of mobile payment systems in post-COVID-19 economic recovery: Primary research on an emerging market for experience goods. Sustainability, 13(24), 13511.