Structural and behavioral determinants of digital payment platform adoption in a multi-currency rural economy: Evidence from Gutu District, Zimbabwe

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Abstract

This study investigates the determinants of digital payment platform adoption in rural economies, focusing on Gutu District in Masvingo Province, Zimbabwe, within the context of the country's evolving multi-currency monetary framework. In Zimbabwe, the coexistence of the United States dollar, South African Rand, Botswana pula and the domestically issued gold-backed Zimbabwean currency (ZiG), coupled with constrained circulation of ZiG cash, has elevated digital platforms as the principal medium for local-currency transactions. However, rural communities often face infrastructural and institutional barriers that limit their effective participation in these digital systems. Against this backdrop, the study examines how technological access, cognitive trust, social influence, socio-economic status, and monetary conditions jointly shape digital payment uptake. A quantitative cross-sectional design was employed. Primary data were collected from 221 rural households using interviewer-administered structured questionnaires. Structural Equation Modelling (SEM) was applied to evaluate both direct and mediated relationships among digital access, trust perceptions, social influence, poverty status, and adoption outcomes. The findings reveal that digital infrastructure access constitutes the most significant predictor of adoption, followed by cognitive trust and social influence. While poverty status exhibits a modest negative association with uptake, its influence diminishes where connectivity and system reliability

are strengthened. Importantly, the multi-currency environment emerges as a structural factor influencing adoption patterns: limited availability of ZiG cash increases reliance on digital platforms for local-currency transactions, yet infrastructural gaps and cost barriers restrict rural households from fully engaging in these systems. As a result, many transactions remain anchored in US dollar cash usage, reinforcing rural exclusion from segments of the formal digital economy. Adoption is positively associated with increased utilisation of mobile money services, digital banking, and routine electronic payments, contributing to expanded financial inclusion. However, broader wealth accumulation effects remain moderate. Overall, digital payment uptake in rural Zimbabwe reflects the interaction between technological readiness, trust formation, and monetary structure, rather than income levels alone. The study underscores the importance of strengthening rural connectivity, reducing transaction costs, enhancing interoperability, and aligning monetary policy implementation with rural digital capabilities to advance inclusive financial development.

Keywords: Digital payment platforms; financial inclusion; mobile money; multi-currency systems; rural technology adoption.

Introduction

Rural economies continue to trail urban areas in financial inclusion, even as digital payment platform technologies have expanded rapidly across the globe and fundamentally altered how individuals, households, and firms conduct transactions and engage with financial services (Mhlanga, 2025; Ngonyani, 2022). Digital payment platforms such as mobile money services and digital banking offerings now constitute core components of contemporary financial systems, offering speed, convenience, and enhanced security in transactions (Demirgüç-Kunt, Klapper, Singer & Ansar, 2022; World Bank, 2023). Despite these global advances, rural uptake in Zimbabwe remains comparatively limited, even as urban adoption accelerates. This divergence persists notwithstanding sustained regulatory efforts by the Reserve Bank of Zimbabwe (RBZ), particularly under the National Financial Inclusion Strategy II (RBZ, 2022, 2025). By 2024, approximately 45% of adults in Zimbabwe were formally banked, yet rural women, young people, and informal sector participants continued to experience disproportionate exclusion (RBZ, 2025). The widening contrast between urban progress and rural stagnation raises important questions regarding the structural and behavioural drivers underlying digital payment disparities and ongoing financial exclusion in rural communities (Mhlanga, 2025; Ngonyani, 2022).

Financial inclusion which is commonly understood as equitable access to affordable, suitable, and sustainable financial services is widely regarded as a foundational element of poverty reduction and inclusive economic development (Demirgüç-Kunt et al., 2022; Zins & Weill, 2016). Evidence from emerging economies suggests that expanded financial access can alleviate multiple dimensions of deprivation (Lee, Lou & Wang, 2023). Affordable and reliable financial services contribute to increased household savings, improved income smoothing, and asset accumulation, thereby strengthening the capacity of vulnerable households to transition out of poverty (Peng & Mao, 2023; Rubio & Leon, 2025). Across sub-Saharan Africa, the adoption of digital financial services has produced uneven outcomes. While mobile money platforms have broadened access to remittances, savings products, and short-term credit thereby enhancing resilience and welfare in many contexts (Dzogbenuku, Amoako, Kumi & Bonsu, 2022; Suri & Jack, 2016) their benefits have not been uniformly distributed. Kenya's M-Pesa experience illustrates the transformative potential of digital payments in lowering transaction costs and deepening rural financial access (Suri, Aker, Batista, Callen, Ghani, Jack & Sukhtankar, 2023; Suri & Jack, 2016), yet similar levels of impact have not consistently materialized across other African rural settings.

A growing body of scholarship documents persistent rural–urban gaps in digital payment adoption. Rural communities frequently confront structural impediments, including weak telecommunications infrastructure, limited digital literacy, relatively high transaction fees, and low confidence in formal financial institutions (Ong, Yusri & Ibrahim, 2023; Siagian, Tarigan, Basana & Basuki, 2022; Wu & Peng, 2024). International development organizations emphasize that narrowing this divide is essential for building inclusive digital economies and achieving sustainable development objectives (GSMA, 2024; World Bank, 2023). In Zimbabwe, these challenges are compounded by distinctive monetary and institutional arrangements. The diffusion of digital payments in Zimbabwe has largely been shaped by regulatory interventions rather than purely market-driven forces. The country operates within a multi-currency framework in which the United States dollar, the South African Rand and Botswana Pula circulates alongside the domestically issued gold-backed Zimbabwean currency (ZiG). While US dollars remain relatively accessible through banking channels and diaspora remittances, the physical availability of ZiG notes and coins has been intentionally constrained through policy measures limiting cash circulation. Consequently, digital platforms have become the primary medium for ZiG-

denominated transactions. This shift has unfolded unevenly. Urban populations have adapted more readily to digital ZiG payments, whereas rural communities often struggle to meet the technological, infrastructural, and institutional prerequisites for sustained digital usage. As a result, many rural transactions, which are dominantly under the informal sector, continue to rely on physical cash and, in some cases, barter arrangements, with the US dollar functioning as the dominant transactional currency (Sibanda, Kuzakwacho, Moyo & Nhliziyo, 2025; Mutale, 2024).

Such structural conditions restrict rural participation in local currency digital transactions and limit households' ability to exploit potential cost efficiencies within a multi-currency environment. Limited access to US dollar cash in rural areas also increases the cost of acquiring appropriate denominations, thereby intensifying financial vulnerability. Several explanations have been advanced to account for this pattern of rural digital exclusion. Cultural inclinations toward physical money, driven by a desire for tangible security and oversight, continue to impede the transition to a cashless ecosystem (Nyika, 2024). Persistent infrastructural deficits particularly unstable mobile network coverage and unreliable electricity supply has been found to further constrain continuous engagement with digital platforms (Simatele & Maciko, 2022). Additional barriers include relatively high transaction costs, weakened consumer trust, and gaps in digital ecosystem development (Barugahara, 2021; Chikweche, Chaora & Cross, 2023). These obstacles persist despite the existence of domestic payment infrastructure, including Zimswitch's ZIPIT system, multiple mobile money providers (EcoCash, Telecash, Omari, Innbucks and OneMoney), and money transfer agencies that facilitate linkages between banked and unbanked users (Mutale, 2024; Ntini, Ndlovu, Shava, Charumbira & Sibanda, 2022; Svotwa, Makanyeza & Wealth, 2023).

Departing from prior research, this study explicitly incorporates the structural implications of Zimbabwe's multi-currency regime and monetary policy environment into the analysis of rural digital payment adoption. It argues that limited rural participation in formal financial systems cannot be explained solely by income constraints or individual preference. Rather, adoption patterns are embedded within a monetary structure that privileges US dollar cash transactions while simultaneously promoting ZiG-based digital payments. Building on earlier frameworks (Mhlanga, 2025), the study integrates digital access, cognitive trust, social influence, and socio-economic conditions into a unified analytical model tailored to rural Zimbabwe. Consistent with

findings by Chamboko (2024) and Kaiser and Barstow (2022), infrastructural inadequacies and elevated operating costs are identified as fundamental constraints that restrict engagement with savings mechanisms, credit facilities, and efficient payment systems.

By isolating the behavioural implications of a dual-currency system, the study advances understanding of how macro-monetary arrangements shape digital payment adoption in rural contexts. This perspective clarifies why Zimbabwe's rural economy remains predominantly US dollar cash-based, why ZiG-denominated digital transactions are limited, and why overall rural digital uptake remains subdued (Siagian et al., 2022; Wu & Peng, 2024). Incorporating these institutional complexities enhances the policy relevance of the findings, particularly for strategies aimed at financial inclusion, poverty reduction, and rural economic transformation within evolving monetary environments (Subramaniam & Masron, 2025; Svotwa et al., 2023).

Ultimately, the research contributes to ongoing efforts to expand access to secure, affordable, and user-oriented digital financial services in underserved rural regions (Simatele & Mbedzi, 2021; Svotwa et al., 2023). It aligns with broader international policy agendas advocating the strategic use of financial technologies to address poverty and social marginalization (Ouechtati, 2020; World Bank, 2021) and supports progress toward the United Nations Sustainable Development Goals, particularly those related to poverty reduction and inequality (United Nations General Assembly, 2015). In doing so, the study deepens insight into the interconnections between digital technology adoption, financial inclusion, and rural development across sub-Saharan Africa (Subramaniam & Masron, 2025).

Review of Literature

Theoretical Framework

The expansion of digital payment platforms is commonly interpreted through established technology adoption frameworks, particularly the Technology Acceptance Model (TAM) (Davis, 1989) and the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh, Morris, Davis & Davis, 2003). These models emphasize cognitive determinants such as perceived usefulness, ease of use, and social influence as central predictors of technology uptake. Empirical

research on digital financial services consistently finds that individuals are more willing to engage with digital payment systems when they view them as beneficial, uncomplicated to operate, and socially endorsed within their reference groups.

Although TAM and UTAUT have been widely applied and empirically supported across various contexts, their explanatory strength weakens in rural financial environments. In such settings, decisions to adopt digital platforms are shaped not only by individual perceptions but also by broader structural conditions. Poverty levels, limited infrastructure, fragile institutional frameworks, and entrenched socio-cultural practices exert substantial influence over adoption behaviour (Nyathi & Mutale, 2025; Mutale, 2024). These realities constrain the predictive adequacy of perception-centered models and suggest the need for a more context-sensitive analytical approach.

Rural environments present structural and social complexities that conventional adoption theories do not fully capture. Weak telecommunications networks, unreliable electricity supply, limited digital capabilities, and collective decision-making norms often diminish the predictive precision of TAM and UTAUT in such contexts (Chamboko, 2024; Nyathi & Mutale, 2025). Consequently, digital payment adoption in rural areas reflects the interaction between individual attitudes and enabling or constraining economic and institutional conditions, rather than perceptions alone. To address these limitations, scholars increasingly advocate integrating traditional adoption frameworks with perspectives drawn from market failure theory, financial innovation literature, and development economics. Such theoretical synthesis offers a more robust lens for understanding the structural and behavioural drivers of digital financial inclusion in rural economies.

Empirical Literature Review

Cognitive considerations play a central role in shaping digital payment adoption. Within established technology acceptance frameworks such as TAM and UTAUT, perceived usefulness and perceived ease of use are regarded as foundational determinants of behavioural intention (Davis, 1989; Venkatesh et al., 2003). Recent empirical studies continue to validate the relevance of these constructs in payment adoption contexts, demonstrating that perceived usefulness and ease

of use remain significant predictors of digital payment adoption across developing economies (Addae, Ahmed, Ofori, Abubakari & Sharma, 2025; Narang, Jain, & Sarma, 2025). More recent evidence further confirms that these cognitive factors influence users' attitudes and behavioural intentions toward fintech services, reinforcing their continued applicability in contemporary digital payment ecosystems (de Andrade, 2025; Muromba, Keeni & Fuyuki, 2025).

In rural Zimbabwe, uptake tends to increase when users experience tangible benefits, including reduced travel time, lower transaction expenses, and fewer bureaucratic procedures (Ntini et al., 2022). Furthermore, Trust closely intertwined with perceptions of usefulness is of paramount importance in rural contexts, where skepticism toward formal financial institutions may persist. Confidence in system reliability, transaction security, and the integrity of service providers significantly shapes willingness to engage with digital payment platforms (Simatele, 2024). Conversely, apprehensions related to fraud, technical malfunction, or financial loss have been shown to dampen adoption intentions (Ngonyani, 2022; Nyarugwe, Maibvisira & Mudzurandende, 2012).

Adoption behaviour is further conditioned by individual socio-economic attributes. Educational attainment and digital literacy influence users' competence in navigating digital interfaces, underscoring the need for targeted training and capacity-building initiatives in rural communities (Ngware, 2024). Income levels also affect perceptions of affordability; transaction fees and service charges can discourage frequent use among low-income households, even where access is technically available (Ozili, 2024). Demographic factors introduce additional variation. Younger individuals often display greater receptiveness to digital innovations, whereas women may encounter structural and cultural barriers that limit both access to platforms and sustained engagement (Ngware, 2024; Zeka & Alhassan, 2024).

A substantial body of research links financial inclusion to improved welfare outcomes, poverty reduction, and broader economic participation. Studies by Nnoje, Doris, and Ogochukwu (2024) and Ofoeda et al. (2024) demonstrate that expanded access to financial services strengthens household resilience and enhances economic integration. Digital financial systems can promote inclusivity by lowering transaction costs and mitigating geographic isolation (Osabutey & Jackson, 2024; Sadok, 2021). Social dynamics also shape adoption patterns. Peer influence, endorsements

from community leaders, and familial networks frequently act as catalysts for digital financial engagement in rural areas (Ong et al., 2023). Such patterns reflect collectivist norms prevalent in many sub-Saharan African societies, where financial decisions are often embedded within social relationships rather than made in isolation.

Institutional and systemic conditions further affect adoption outcomes. Service reliability, system quality, and responsive customer support contribute positively to user satisfaction and continued platform usage (Simatele & Mbedzi, 2021). Interoperability is particularly critical in environments characterized by multiple service providers. In Zimbabwe, initiatives such as the Zimswitch network have facilitated cross-platform transactions and expanded financial connectivity (Mutambisi & Chavunduka, 2023). Nonetheless, fragmented service provision, inconsistent standards, and limited integration across platforms continue to impede seamless user experiences (Putrevu & Mertzanis, 2024).

Public policy and regulatory frameworks also play a decisive role in shaping digital adoption trajectories. Measures that enhance transparency, protect consumers, and regulate pricing structures tend to strengthen public confidence and encourage sustained usage (Ofoeda et al., 2024). Experiences from India's Digital India initiative illustrate how coordinated investments in infrastructure development and digital literacy can significantly expand rural financial access (Parvin & Panakaje, 2022). In low-literacy settings, incentive-driven awareness campaigns have proven effective in encouraging initial experimentation with digital tools (Swaminathan et al., 2019). However, scholars caution against equating rising digital transaction volumes with meaningful economic empowerment. Evidence suggests that in many rural contexts, digital financial activity primarily supports short-term consumption smoothing and remittance transfers rather than long-term asset accumulation (Li et al., 2022; Liu et al., 2024). More substantial poverty reduction effects appear to be associated with access to digital credit and investment products, rather than payment services alone (Peng & Mao, 2023).

The examined literature indicates that the adoption of digital payments in rural areas is influenced by a complex interaction of cognitive, individual, environmental, organizational, and regulatory factors. Although perceived utility, trust, affordability, and social influence are primary motivators, structural facilitators such as infrastructure availability, interoperability, and

governmental backing are also essential. The evidence indicates that adoption alone does not inherently lead to poverty alleviation unless accompanied by supportive financial services and conducive institutional frameworks. Comprehensively addressing these interconnected characteristics is critical for enhancing digital payment uptake and attaining significant financial inclusion in rural sub-Saharan Africa.

Research Methodology

This study adopts a quantitative research design grounded in a survey approach to examine the determinants of digital payment platform adoption and their implications for financial inclusion in rural Zimbabwe. The methodology outlines the procedures followed in the development of the research instrument, sampling strategy, data collection, and analytical techniques. A structured questionnaire was designed based on established constructs from technology adoption and financial inclusion literature, ensuring content validity and alignment with the study objectives. The instrument was pre-tested to enhance clarity, reliability, and contextual relevance before full-scale data collection.

The study was conducted in Masvingo Province, Zimbabwe, over the period 2023–2024. Gutu Rural District was purposively selected as the focal area because it reflects many of the structural characteristics common to rural Zimbabwe. The district is characterized by relatively high poverty incidence, limited proximity to formal financial institutions, reliance on subsistence farming, and substantial engagement in informal economic activity (Zimbabwe National Statistics Agency [ZIMSTAT], 2022). Research by Ncube (2024) pointed out that although mobile phone ownership has increased steadily, persistent infrastructural and network connectivity challenges in rural Zimbabwe remain. These contextual features make Gutu District an appropriate setting for examining the determinants of digital payment platform uptake and assessing their implications for inclusive rural development.

The study was anchored in a post-positivist paradigm and adopted a quantitative research strategy to explore relationships between observable indicators and underlying latent constructs. A survey design was implemented, enabling empirical testing of hypothesized associations at a single point in time. This design was suitable for examining adoption drivers and behavioural outcomes using structured and measurable variables.

The sample size for this study was determined using the Slovin (1960) formula, which provides a simplified approach for estimating sample size in studies involving large populations where limited prior information on population behaviour is available. The formula is expressed as:

$$n = \frac{N}{1 + N(e)^2}$$

where *n* represents the required sample size, *N* denotes the total population size, and *e* is the margin of error. For this study, population figures were obtained from the Zimbabwe National Statistics Agency (ZIMSTAT, 2022), which reports a total population of 208,160 in Gutu District, of which 71,465 individuals fall within the economically active age group (20–60 years). This economically active population was considered the appropriate sampling frame, thus $N = 71{,}465$. Assuming a margin of error of 7% ($e = 0.07$), the calculated sample size was:

$$n = \frac{71{,}465}{1 + 71{,}465(0.07)^2} \approx 204$$

To account for potential non-response, incomplete questionnaires, and other field-related contingencies, the sample size was adjusted upward to 221 respondents. This adjustment enhances representativeness and reduces the risk of sampling error while remaining feasible within the logistical constraints of rural fieldwork. Furthermore, the final sample size falls within the acceptable range for multivariate statistical analysis, as recommended in methodological literature, where sample sizes between 200 and 500 are considered adequate for reliable estimation in regression-based and structural models (Meyer, 2018; Noordzij et al., 2010).

The questionnaire captured demographic characteristics, income sources, patterns of payment usage, perceptions of digital platforms, and factors associated with adoption decisions. Prior to full-scale data collection, a pilot study was conducted in a ward outside the sampled clusters to assess instrument clarity and consistency. Feedback from the pilot phase informed refinements to question wording, sequencing, and overall structure, thereby strengthening validity and reliability. Data collection took place over a four-month period within the 2023–2024 timeframe, with trained

enumerators administering questionnaires in households, marketplaces, and community meeting points. Secondary sources including financial inclusion reports, policy publications, and relevant scholarly literature were utilised to provide contextual background and support interpretation of empirical results.

Data analysis was performed using Partial Least Squares Structural Equation Modelling (PLS-SEM). This technique was selected due to its suitability for exploratory and predictive modelling, its capacity to estimate complex relationships involving multiple latent variables, and its robustness in situations where multivariate normality assumptions may not be fully satisfied (Hair & Alamer, 2022). The analytical framework consisted of five latent constructs, defined as follows:

$$\text{DigitalAccess} = \beta_1 \text{PhoneAccess} + \beta_2 \text{Network} + \beta_3 \text{MobileDeviceOwnership} \quad (1)$$

$$\text{PovertyStatus} = \alpha_1 \text{Education} + \alpha_2 \text{Income} + \alpha_3 \text{AssetScore} + \alpha_4 \text{IncomeSource} \quad (2)$$

$$\text{CognitiveTrust} = \omega_1 \text{EaseOfUse} + \omega_2 \text{Accessibility} + \omega_3 \text{Security} \quad (3)$$

$$\text{SocialInfluence} = \delta_1 \text{Convenience} + \delta_2 \text{Recommendation} + \delta_3 \text{MerchantAcceptance} \quad (4)$$

$$\text{AdoptionOutcome} = \theta_1 \text{MobileMoneyUse} + \theta_2 \text{MobileBankingUse} + \theta_3 \text{EasierSavings} \quad (5)$$

Partial Least Squares estimations were performed for the five latent variables. The Energy Test of Multivariate Normality indicated multivariate normality was not upheld ($E = 2.5098$, $p < 0.001$), leading to the rejection of the null hypothesis of normality. This outcome further validated the application of PLS-SEM, owing to its resilience against non-normal data distributions.

Measurement Model Assessment

The measuring model was assessed for reliability, convergent validity, and discriminant validity. Table 1 indicates that composite reliability (CR) values exceeded the required level of 0.70, while average variance extracted (AVE) values topped 0.50 for all constructs, with the exception of WealthStatus. This verifies adequate reliability and convergent validity for DigitalAccess, CognitiveTrust, SocialInfluence, InitialAdoption, and ContinuousUse. Discriminant validity was confirmed by the Fornell–Larcker criterion and Heterotrait–Monotrait (HTMT) ratios, whereas variance inflation factor (VIF) values under 3 suggested an absence of multicollinearity issues. The subpar performance of income-based metrics illustrates the multifaceted and non-monetary

aspects of poverty in rural Zimbabwe, where asset ownership and livelihood security can provide a more accurate representation of economic position than reported income.

Table 1. Reliability and Convergent Validity

Construct	CR	AVE	Interpretation
DigitalAccess	0.893	0.735	Reliable, convergent validity established
CognitiveTrust	0.893	0.735	Reliable, convergent validity established
SocialInfluence	0.827	0.617	Reliable, convergent validity established
InitialAdoption	0.756	0.611	Reliable, convergent validity established
ContinuousUse	0.795	0.660	Reliable, convergent validity established
WealthStatus	0.224	0.266	Reliability and validity concerns

Structural Model and Mediation Analysis

The structural model results (Table 2) demonstrate that DigitalAccess ($\beta = 0.528$), CognitiveTrust ($\beta = 0.256$), and SocialInfluence ($\beta = 0.238$) are significant predictors of InitialAdoption. Initial Adoption significantly influences Continuous Use ($\beta = 0.489$), hence affirming its mediation function. Mediation study indicates that InitialAdoption is the principal conduit through which access, trust, and social influence lead to prolonged platform utilization.

Nonetheless, ContinuousUse does not serve as a significant predictor of WealthStatus ($\beta = 0.155$), indicating that although digital payment adoption behaviors are adequately elucidated ($R^2 = 0.55$ for InitialAdoption and $R^2 = 0.45$ for ContinuousUse), their direct impact on socio-economic advancement is constrained ($R^2 = 0.15$ for WealthStatus).

Table 2. Direct and Indirect Effects

Pathway	Effect	Interpretation
DigitalAccess → InitialAdoption	0.528	Strong, significant
CognitiveTrust → InitialAdoption	0.256	Moderate, significant
SocialInfluence → InitialAdoption	0.238	Moderate, significant
InitialAdoption → ContinuousUse	0.489	Strong mediator
ContinuousUse → WealthStatus	0.155	Weak, not significant
DigitalAccess → ContinuousUse (indirect)	0.258	Strong mediation
DigitalAccess → WealthStatus (indirect)	0.040	Very weak mediation
CognitiveTrust → ContinuousUse (indirect)	0.125	Weak mediation
SocialInfluence → ContinuousUse (indirect)	0.116	Weak mediation

Results Presentation and Discussion

Descriptive Statistics

Descriptive statistics were employed to characterize respondents and outline the socio-economic and digital background of the sample. Table 1 indicates that the sample consisted of 56.6% male and 43.4% female participants. The age distribution was quite equitable, with the highest percentages in the 18–24 years (22.6%) and 45–54 years (22.2%) groups. The educational attainment in the rural context was notably high, with over 83% of respondents possessing at least secondary education, indicating a foundational capability for digital participation.

Table 1. Demographic details of sampled rural dwellers (n = 221)

		Frequency	Percent
Age	18-24	50	22.6
	25-34	33	14.9
	35-44	47	21.3
	45-54	49	22.2
	55 and above	42	19.0
Gender	Male	125	56.6
	Female	96	43.4
Educational background	No formal Education	14	6.3
	Primary Education	22	10.0
	Secondary Education	96	43.4
	Tertiary Education	89	40.3
Digital payment usage for a month recall	Only Cash, no digital payment	24	10.9
	Only digital, no cash payment	19	8.6
	More digital, less cash payments	94	42.5
	More cash, less digital payments	84	38.0

Payment usage patterns suggest a shifting rural economy. While 42.5% of respondents indicated a greater reliance on digital payments compared to cash, a significant portion (38.0%) stuck in using cash more frequently, and 10.9% depended only on cash. The coexistence of digital and cash transactions highlights partial acceptance instead of complete digital replacement.

Digital Payment Platform Usage

Table 2 presents the distribution of usage across different digital payment platforms. Mobile money services dominate the rural digital landscape, with more than three-quarters of respondents reporting active use. Mobile banking follows at 59.7%, indicating moderate engagement relative to mobile money. In contrast, the uptake of point-of-sale (POS) payments, e-commerce transactions, and cryptocurrency remains comparatively low.

These patterns suggest that mobile-based solutions, particularly those aligned with routine, day-to-day transactions constitute the core of rural digital finance. More advanced or infrastructure-intensive platforms, however, have yet to gain meaningful traction within the rural context.

Table 2. Platform usage

		Number of respondents	**Percent**
Digital payment usage for a month recall	Only Cash, no digital payment	24	10.9
	Only digital, no cash payment	19	8.6
	More digital, less cash payments	94	42.5
	More cash, less digital payments	84	38.0

Digital payment platform by type.

	Yes	No
Do you use Mobile Money	74.70	25.30
Do you use Mobile Banking?	59.70	40.30
Do you use eCommerce	18.60	81.40
Do you use POS machine payments	21.70	78.30
Do you use Cryptocurrencies(e.g.,Bitcoin)	10.90	89.10

Sources of Income

Table 3 illustrates the diversification of rural livelihoods. Salaried employment (59.7%) and agricultural operations (36.2%) constituted the principal income sources, augmented by informal channels including remittances from relatives and friends, casual labor, and donor assistance. This income framework illustrates both formal and informal financial streams, highlighting the importance of adaptable, cost-effective digital payment solutions that can accommodate irregular and minor transactions.

Table 3. Sources of income

	Yes	No
I get income from farming activities	36.20	63.80
I get income from salaried work	59.70	40.30
I get income from relatives and friends	18.10	81.90
I get income from donor funding	4.10	95.90
I get income from piece jobs	17.20	82.80

Perceived Importance of Adoption Attributes

The perspectives of respondents regarding issues affecting digital payment utilization are illustrated in Table 4. Dependable internet connectivity, low transaction costs, device affordability, and system usability were assessed as highly significant. While security concerns were somewhat less prioritized than other traits, they remained significant, suggesting that trust-related issues continue to be relevant. These data indicate that adoption decisions are mostly influenced by affordability, infrastructural reliability, and user-friendliness, rather than technological innovation.

Table 4. Rating of factor importance in usage

	Most Important	Very Important	Important	Somewhat Important	Least Important
Reliable and stable internet connectivity	30.80	25.80	22.20	10.40	10.90
Easy to use and intuitive user interfaces	22.70	30.50	24.10	13.60	9.10
Availability of local support and assistance for digital platform usage	26.70	24.90	27.10	11.80	9.50

Low cost or no transaction fees	28.50	25.80	22.60	13.10	10.00
Trustworthy and secure digital payment systems	29.40	21.70	17.60	19.90	11.30
Accessible and affordable mobile devices	27.10	25.30	25.30	11.80	10.40
Incentives or rewards for using digital payment platforms	29.40	23.50	25.80	8.60	12.70
Integration with local businesses and service providers	28.50	28.10	20.80	12.20	10.40

Measurement Model Assessment

Prior to estimating the structural relationships, the measurement model was assessed to establish reliability and validity. As reported in Table 5, the constructs representing Digital Access, Cognitive Trust, Social Influence, and Adoption Outcomes demonstrated strong factor loadings on their respective latent variables, supporting satisfactory indicator reliability. Digital Access was effectively captured through measures of smartphone ownership, network reliability, and device availability. Similarly, Cognitive Trust was adequately represented by perceptions of ease of use, accessibility, and system security.

In contrast, the Poverty Status construct exhibited weaker measurement performance. Asset ownership emerged as the most stable and informative indicator, while income-based measures contributed less consistently to the construct. This outcome reflects the complex and context-specific nature of poverty in rural settings. Despite these measurement limitations, the construct was retained in the model to account for structural economic constraints that may influence adoption behaviour.

Table 5. Measurement model results

Construct	Indicator	Loading (β)	p-value
Digital Access	Smartphone Access	0.75	< .001
	Reliable Network	0.80	< .001
	Mobile Device Ownership	0.80	< .001
Poverty Status	Education	0.23	< .05
	Income	-0.10	<.970
	Asset Score	-0.80	< .001
	Income Source	-0.20	<.054
Cognitive Trust	Ease of Use	0.84	< .001
	Accessibility	0.74	< .001
	Security	0.71	< .001
Social Influence	Convenience	0.63	< .001
	Recommendation	0.78	< .001
	Merchant Acceptance	0.56	< .05
Adoption Outcomes	Mobile Money Use	0.82	< .001
	Mobile Banking Use	0.79	< .001
	Payment Usage	0.76	< .001
	Easier Savings	0.81	< .001

Note. All loadings >0.60 indicate strong reliability, except for Poverty Status indicators which showed weaker performance, particularly Income and Income Source (non-significant).

Structural Model Results

Table 6 reports the structural model estimates. The results show that Digital Access constitutes the most influential predictor of platform uptake, with Cognitive Trust and Social Influence also exerting meaningful positive effects. In contrast, Poverty Status displays a small and statistically

non-significant negative association with adoption, suggesting that infrastructural readiness and trust-enhancing factors outweigh income considerations in shaping participation decisions.

Furthermore, platform adoption exhibits a significant positive relationship with all examined usage outcomes, including mobile money usage, engagement with mobile banking services, transaction frequency, and savings-oriented activities. These findings indicate that adoption operates as a central conduit through which access conditions and trust perceptions translate into sustained interaction with digital financial services.

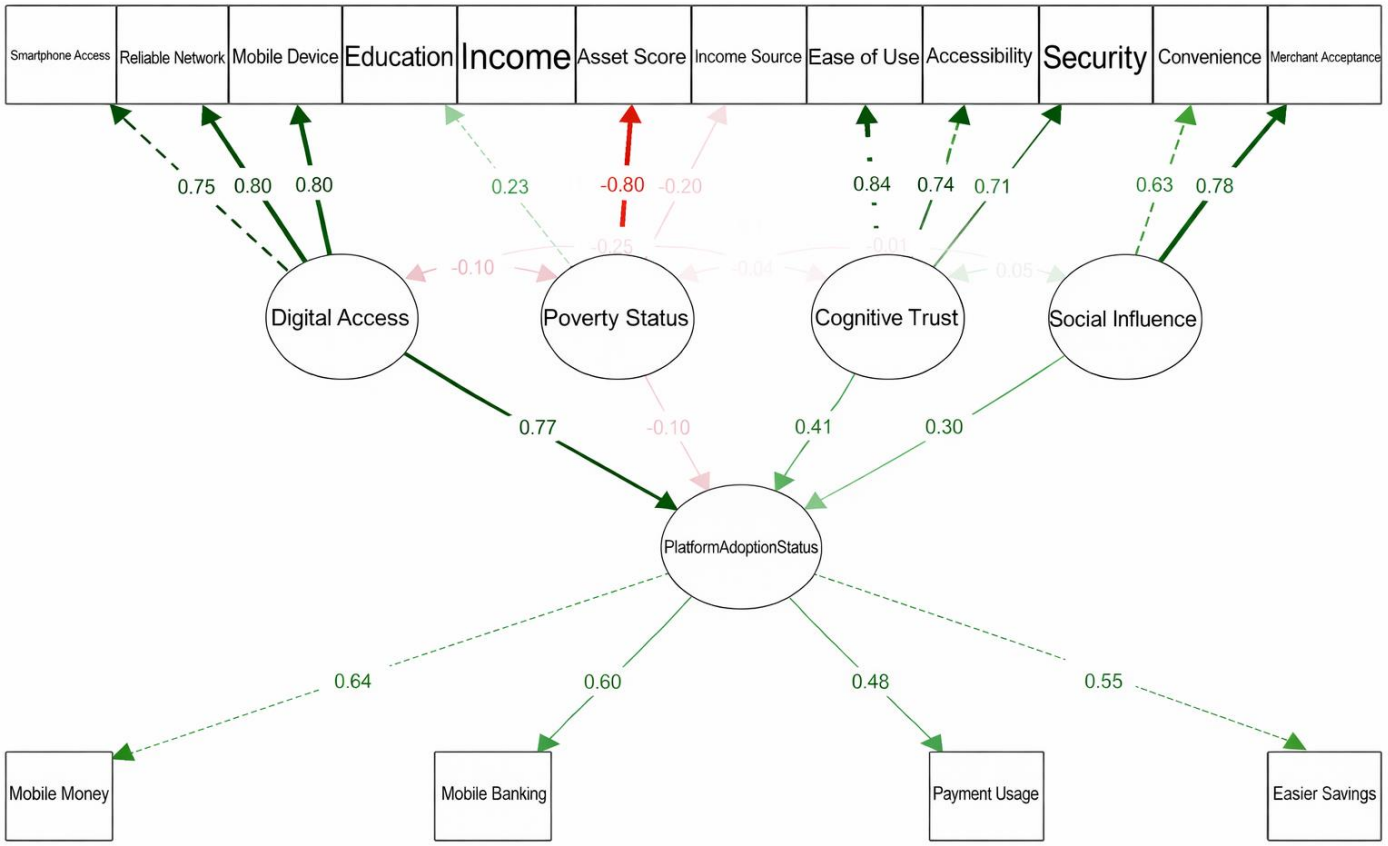
Table 6. Structural equation model results

Path	Standardized Coefficient (β)	p-value	Significance
Digital Access → Platform Adoption	0.77	< 0.001	***
Cognitive Trust → Platform Adoption	0.41	0.012	**
Social Influence → Platform Adoption	0.30	0.027	**
Poverty Status → Platform Adoption	-0.10	0.186	n.s.
Platform Adoption → Mobile Money Use	0.64	< 0.001	***
Platform Adoption → Mobile Banking	0.60	< 0.001	***
Platform Adoption → Payment Usage	0.48	0.004	**
Platform Adoption → Easier Savings	0.55	< 0.001	***

Note. ***p < 0.001; **p < 0.05; n.s. = not significant. Fit indices: $\chi^2/df < 3.0$; CFI = 0.95; TLI = 0.93; RMSEA = 0.048; SRMR = 0.042.

Model evaluation metrics demonstrate adequate explanatory capability and overall model suitability. Figure 1 illustrates the validated structural linkages, emphasizing the relative strength of routes across categories and affirming the relevance of Digital Access and Adoption inside the model.

Figure 1. Structural Equation Model of Digital Payment Platform Adoption



Summary of Findings and Implications

The findings of this study provide important insights into the dynamics of digital financial inclusion in rural contexts. Contrary to dominant expectations in the literature, the results reveal that while digital payment adoption is positively influenced by factors such as digital access, cognitive trust, and social influence, its relationship with poverty outcomes is more complex. In particular, the negative association observed between digital payment usage intensity and household income suggests that increased usage may reflect economic necessity rather than improved welfare. Thus, these finding challenges conventional assumptions that digital financial inclusion directly translates into poverty reduction. Instead, it supports the argument that digital platforms in rural settings are often utilised as coping mechanisms for managing financial constraints, including receiving remittances and facilitating low-value transactions.

The results demonstrate that uptake of digital payment platforms in rural Zimbabwe is driven primarily by access to reliable infrastructure and the presence of cognitive trust, with social influence acting as an additional reinforcing factor. Although poverty constrains participation to some extent, its effect is comparatively weaker than broader systemic and institutional determinants. Following adoption, users show increased engagement with digital financial services, particularly in relation to routine transactions and savings-oriented practices.

These outcomes underscore the necessity of integrated policy approaches that simultaneously strengthen rural infrastructure, cultivate user trust, and reduce transaction-related costs. Without addressing these foundational conditions, digital payment systems risk remaining underutilized, even in contexts where mobile phone penetration is relatively high.

From a practical and policy standpoint, the results demonstrated that expanding access to digital payment platforms alone is insufficient to achieve meaningful poverty reduction. Policymakers should complement digital financial initiatives with targeted interventions aimed at enhancing income-generating capacity, financial literacy, and digital skills among rural populations. For financial service providers, the findings point to the importance of designing inclusive products that go beyond facilitating transactions to supporting savings, investment, and productive economic activities. In multi-currency environments such as Zimbabwe, ensuring affordability, interoperability, and trust in digital platforms remains critical for deepening financial inclusion.From a theoretical perspective, this study contributes to the digital financial inclusion literature by integrating behavioural and structural determinants within a unified empirical framework. By incorporating variables such as cognitive trust, social influence, and socio-economic capability, the study extends traditional technology adoption models and demonstrates their applicability within rural, resource-constrained environments. Importantly, the findings highlight the limitations of relying solely on adoption metrics as indicators of financial inclusion success, suggesting the need for models that distinguish between transactional usage and transformative economic impact.

This study is subject to several limitations that provide avenues for future research. First, the use of cross-sectional data limits the ability to capture dynamic changes in digital payment adoption and its long-term effects on poverty outcomes. Future studies could employ longitudinal data to

examine causal relationships over time. Second, while this study focuses on rural Zimbabwe, comparative studies across different regions or countries would provide deeper insights into contextual variations in digital financial inclusion. Third, future research could explore additional dimensions such as financial literacy, institutional trust, and behavioural biases to further enrich the understanding of digital adoption patterns. Finally, qualitative approaches may complement quantitative findings by providing deeper insights into user experiences and motivations.

Conclusion

This study examined the determinants of digital payment platform uptake in rural Zimbabwe, drawing on survey evidence from Gutu District. The findings reveal that digital access constitutes the most influential driver of adoption, highlighting the importance of mobile phone ownership, reliable network coverage, and supportive technological infrastructure. Cognitive trust shaped by perceptions of ease of use, accessibility, and system security emerges as a significant predictor of behavioural intention. In addition, social influence, manifested through peer recommendations and merchant acceptance, reinforces adoption decisions within rural communities. Although poverty status exhibits a modest negative association with uptake, the relatively small magnitude of this effect suggests that improvements in infrastructure and trust-building mechanisms can partially offset income-related constraints.

Results from the structural model further indicate that adoption of digital payment platforms is associated with increased use of mobile money services, digital banking, routine electronic transactions, and savings-oriented practices. These patterns suggest that digital platforms function not merely as transactional instruments but as gateways to broader financial participation. While direct effects on wealth accumulation appear limited in the short term, the observed behavioural shifts point to gradual strengthening of transactional capacity and incremental progress toward financial inclusion in rural settings.Overall, the evidence underscores that digital payment adoption in rural economies is shaped by an interplay of technological readiness, institutional conditions, and social dynamics rather than by income levels alone. Advancing inclusive rural digital finance therefore requires integrated interventions that expand infrastructure, reduce transaction costs, strengthen consumer confidence, and enhance digital literacy. By situating adoption within the structural realities of rural livelihoods, this study offers empirically grounded insights to inform

policy formulation and practical strategies aimed at developing inclusive digital financial ecosystems in emerging economies.

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