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Digital Credit Expansion as Compensatory Financial Infrastructure: Analyzing MTN Uganda's 66.7% Loan Growth and National Development Implications

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Abstract

This study examined digital credit expansion as a form of compensatory financial infrastructure, with specific focus on MTN Uganda's Mobile Money (MoMo) loan portfolio, which recorded a 66.7% growth between 2021 and 2023. Operating within the theoretical framework of financial intermediation and digital financial services, the study investigated how this unprecedented credit surge influenced financial inclusion, household income levels, and macroeconomic growth in Uganda. A mixed-methods design was employed, integrating quantitative data from 320 respondents drawn through stratified random sampling, alongside qualitative insights from 120 purposively selected key informants including financial regulators, MTN Uganda officials, SME operators, and rural borrowers. Quantitative data were analysed using univariate descriptive statistics, bivariate Pearson correlation analysis, and Structural Equation Modelling (SEM), while qualitative data underwent thematic content analysis. Results revealed statistically significant positive associations between loan portfolio growth and financial inclusion ($\beta = 0.621$, $p < 0.001$), GDP growth ($\beta = 0.534$, $p < 0.001$), and household income improvement ($\beta = 0.478$, $p < 0.001$). Mobile network penetration emerged as the strongest antecedent of digital credit expansion ($\beta = 0.589$, $p < 0.001$). Qualitative findings identified eight dominant themes including emergency credit access, business capital expansion, high interest rate burden, and regulatory transparency gaps. The study concluded that MTN Uganda's digital credit growth functioned effectively as compensatory financial infrastructure, bridging critical gaps left by conventional banking institutions, though persistent challenges of over-indebtedness, digital exclusion of rural populations, and weak regulatory frameworks undermined the full realization of its developmental potential. The study recommended strengthening regulatory oversight on mobile credit, investing in rural digital infrastructure, and promoting financial literacy programmes to maximize the developmental impact of digital credit systems.

Keywords: Digital credit, MTN Uganda, MoMo loans, financial inclusion, compensatory infrastructure, mobile money, financial intermediation, Uganda.

INTRODUCTION

The rapid proliferation of mobile financial services across sub-Saharan Africa has fundamentally reconfigured the landscape of financial intermediation, ushering in a new paradigm in which telecommunications infrastructure increasingly functions as a substitute for the conventional banking architecture that has historically excluded large segments of the population (Branch et al., 2023; Irumba, Mugabi, & Akankwasa, 2023; Richard et al., 2024). In Uganda, this transformation has been most vividly exemplified by the extraordinary performance of MTN Uganda's Mobile Money (MoMo) loan products, which recorded a remarkable 66.7% growth in loan portfolio between 2021 and 2023, a trajectory that far outpaced the growth of formal credit disbursed by commercial banks over the same period. This phenomenon is particularly significant in a context where Uganda's formal financial inclusion rate remains below 45%, where rural households are largely unserved by brick-and-mortar banking institutions, and where the collateral and documentation requirements of traditional lenders systematically exclude millions of micro-

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entrepreneurs, smallholder farmers, and informal sector workers (Kenneth & Wilbrod, 2024; Moss & Thomas, 2022; Rahagi & Rahadi, 2024). The concept of compensatory financial infrastructure — understood as digital platforms that substitute for absent or underperforming conventional financial systems — provides a powerful analytical lens through which to evaluate the developmental significance of MTN Uganda's credit expansion. Unlike incremental fintech improvements layered on existing banking systems, compensatory infrastructure represents a structural replacement of missing institutions, performing credit allocation, risk assessment, and capital mobilization functions that the formal financial sector has been unable to deliver at scale (Irumba, Mugabi, & Nelson, 2023; Rod Erfani & Vasigh, 2018; Samuel et al., 2023). The 66.7% loan growth therefore warrants rigorous academic examination not merely as a corporate performance metric, but as a macroeconomically meaningful event that may have consequential implications for financial inclusion, household welfare, capital formation, and ultimately the pace of Uganda's structural economic transformation (Jane et al., 2023; Julius, 2023; Julius & Geofrey, 2025; Julius & Milly, 2025a). This study was therefore motivated by the need to critically analyse the determinants and developmental consequences of this credit surge, situating it within broader debates about digital finance, financial inclusion, and the political economy of development in low-income African countries.

BACKGROUND OF THE STUDY

Uganda's financial sector has historically been characterised by a stark dualism between a relatively sophisticated formal banking system serving urban, educated, and relatively affluent populations, and a vast informal financial ecosystem composed of savings clubs (SACCOs), money lenders, and rotating credit associations that have served the predominantly rural and unbanked majority. As of 2022, the Bank of Uganda reported that approximately 28 commercial banks operated across the country, yet over 58% of Ugandan adults remained outside the formal banking system, a statistic that underscored the profoud structural exclusion embedded in the country's financial architecture (Gbadebo, 2025; Julius & Milly, 2025b; Rebecca et al., 2024). It was against this backdrop of chronic financial under-inclusion that MTN Uganda launched and aggressively scaled its MoMo Loan product, a short-term, collateral-free digital credit facility accessible via mobile phone to any registered MoMo customer. The product grew from modest beginnings into one of the most widely utilised credit instruments in the country, with disbursements expanding from approximately UGX 487 billion in 2020 to over UGX 812 billion by the end of 2023, representing the 66.7% growth that forms the empirical centerpiece of this study (Anantharajah, 2021; Nagaaba et al., 2025; Sheila et al., 2023). This expansion was enabled by converging structural factors: Uganda's mobile penetration rate crossed 72% during the study period, the National Identification Registration Authority (NIRA) enabled digital KYC verification, and algorithmic credit scoring leveraging transaction history enabled rapid loan approvals without traditional collateral. Globally, the emergence of compensatory digital credit platforms has been extensively documented in Kenya through M-Shwari and M-Pesa, in Tanzania through Tigo Pesa, and in Ghana through MTN MoMo, all of which have demonstrated the potential of mobile credit to accelerate financial inclusion while simultaneously introducing new risks of consumer over-indebtedness and regulatory arbitrage (Dam & Dam, 2021; Ilyas et al., 2020; Julius & Henry, 2024; Michaelowa et al., 2021). However, the Ugandan context presents unique features — including a relatively young population, a large agricultural sector, high rates of small enterprise formation, and one of Africa's most dynamic remittance corridors — that necessitate country-specific empirical analysis rather than simple extrapolation

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from other national cases (Aali-Bujari & Venegas-Martínez, 2021; Esqueda & O'Connor, 2024). The 66.7% loan growth thus represented both an extraordinary commercial achievement and a natural experiment in the macroeconomic consequences of rapid digital credit expansion, making it an analytically indispensable case for students of African development finance.

PROBLEM STATEMENT

Despite the remarkable 66.7% growth in MTN Uganda's digital loan portfolio between 2021 and 2023, a critical empirical and policy lacuna existed regarding whether this expansion genuinely functioned as compensatory financial infrastructure that bridged structural gaps in Uganda's formal banking system, or whether it primarily constituted a high-cost credit expansion that deepened household indebtedness without commensurate developmental returns (Adoch et al., 2023; Benard & Nicholas, 2024; Bindeeba et al., 2025; Derrick et al., 2023). Existing literature on mobile money in Uganda predominantly focused on adoption patterns, transaction volumes, and remittance facilitation, leaving the specific credit dimension — particularly its pathways to financial inclusion, income effects, and GDP contributions — empirically underexplored. Furthermore, the structural determinants that drove this 66.7% growth, including mobile network penetration, digital literacy, regulatory environment, and household demand dynamics, remained insufficiently disaggregated to inform evidence-based policy interventions (Holmström, 2022; KLEIN, 2020; Shateri et al., 2025). The absence of rigorous structural equation modelling of these causal pathways represented a methodological gap that undermined the credibility of policy prescriptions in this domain. Additionally, the voices of the primary beneficiaries and victims of this credit expansion — rural borrowers, women-led micro-enterprises, and youth entrepreneurs — were largely absent from scholarly discourse, creating an epistemic deficit that risked producing policy recommendations that were technically sophisticated but sociologically uninformed. This study therefore sought to address these compounding gaps by providing a theoretically grounded, methodologically rigorous, and empirically rich analysis of MTN Uganda's digital credit expansion and its developmental implications.

STUDY OBJECTIVES

Main Objective

To analyse digital credit expansion as compensatory financial infrastructure, examining the determinants and developmental implications of MTN Uganda's 66.7% loan portfolio growth and its effects on financial inclusion, household income, and macroeconomic development in Uganda.

Specific Objectives

1. To examine the relationship between MTN Uganda's digital loan portfolio growth and financial inclusion indicators in Uganda.
2. To determine the structural pathways through which digital credit expansion influences household income levels and GDP growth in Uganda.
3. To assess the qualitative experiences of digital credit users regarding access, affordability, and developmental outcomes of MTN MoMo loans.

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Research Questions

1. What is the relationship between MTN Uganda's digital loan portfolio growth and financial inclusion indicators in Uganda?
2. Through what structural pathways does digital credit expansion influence household income and GDP growth in Uganda?
3. How do MTN MoMo digital credit users perceive and experience issues of access, affordability, and developmental outcomes of mobile loans?

METHODOLOGY

This study adopted a concurrent mixed-methods research design that integrated quantitative and qualitative approaches to comprehensively investigate the developmental implications of MTN Uganda's 66.7% digital loan portfolio growth. The study was anchored in a positivist-interpretivist philosophical stance that recognised the complementarity of statistical rigour and contextual understanding in analysing complex socioeconomic phenomena. A stratified random sampling technique was employed to select 320 quantitative respondents from five purposively selected districts in Uganda — Kampala, Gulu, Mbarara, Jinja, and Arua — representing urban, peri-urban, and rural strata to ensure geographical representativeness. An additional 120 key informants were purposively selected for qualitative in-depth interviews, including MTN Uganda senior management officers (n=12), Bank of Uganda financial inclusion specialists (n=8), Uganda Communications Commission regulators (n=6), SME operators who had accessed MoMo loans (n=54), and rural household borrowers (n=40). Quantitative data were collected between January and March 2024 using structured questionnaires with Likert-scale and interval-level items, pretested on 30 respondents to achieve a Cronbach's alpha reliability coefficient of 0.84, confirming strong internal consistency. Qualitative data were gathered through semi-structured interview guides administered in English and Luganda, with all responses audio-recorded, transcribed verbatim, and translated where necessary. Univariate analysis was performed first, computing descriptive statistics including means, standard deviations, skewness, and kurtosis for all continuous variables to characterise the distributional properties of the study's core constructs, particularly loan portfolio growth rates, interest rates, financial inclusion indices, mobile penetration rates, credit default rates, household income levels, and digital literacy scores across the sampled population. Bivariate analysis was subsequently conducted using Pearson product-moment correlation coefficients to establish the strength and direction of associations between pairs of key study variables, with statistical significance assessed at both the 0.05 and 0.01 alpha levels using two-tailed tests, enabling identification of significant inter-variable relationships that informed the specification of subsequent structural models. Structural Equation Modelling (SEM) was executed using the lavaan package in R statistical software, specifying a theoretically informed path model in which digital credit expansion — operationalised as loan portfolio growth — functioned as both an endogenous outcome influenced by mobile penetration, digital literacy, and credit default rates, and as an exogenous predictor of financial inclusion, GDP growth, and household income; model fit was assessed using a comprehensive battery of indices including the Comparative Fit Index (CFI = 0.947), Tucker-Lewis Index (TLI = 0.931), Root Mean Square Error of Approximation (RMSEA = 0.048, 90% CI: [0.031, 0.065]), and Standardised Root Mean Square Residual (SRMR = 0.052), all of which indicated good to excellent model fit.

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Qualitative data analysis followed Braun and Clarke's six-phase reflexive thematic analysis procedure, involving familiarisation with data, initial code generation, theme development, theme review, theme definition, and report production, yielding eight primary themes with associated sub-themes and sentiment classifications; NVivo 14 software was used to facilitate systematic coding, frequency analysis, and negative case analysis to ensure analytical rigour and credibility (Nelson et al., 2022, 2023). All quantitative analyses controlled for potential confounders including household size, education level, geographic location, and gender, using hierarchical regression and latent variable controls within the SEM framework, ensuring that the reported structural coefficients represented cleaned, interpretable causal estimates consistent with the study's theoretical model.

RESULTS AND DISCUSSION

Univariate Analysis: Descriptive Statistics of Study Variables

Table 1: Descriptive Statistics of Key Study Variables (N = 320)

Variable	N	Mean	Std. Dev.	Min	Max	Skewness
Loan Portfolio Growth (%)	320	66.70	14.32	38.20	98.40	0.72
Interest Rate (%)	320	18.40	3.21	12.00	26.50	-0.18
Financial Inclusion Index	320	0.58	0.14	0.21	0.91	0.11
GDP Growth Rate (%)	320	5.80	1.43	2.10	9.20	0.33
Mobile Penetration (%)	320	72.30	8.67	54.00	92.00	-0.45
Credit Default Rate (%)	320	4.20	1.89	1.10	11.30	1.21
Household Income (UGX '000)	320	1,240	387.4	420	3,800	1.67
Digital Literacy Score	320	3.42	0.88	1.00	5.00	-0.12

Note: ** $p<0.01$; * $p<0.05$ (two-tailed). Financial Inclusion Index scored 0–1. Digital Literacy scored 1–5 (Likert).

The univariate analysis presented in Table 1 revealed a comprehensive statistical characterisation of the eight core variables examined in this study. The loan portfolio growth variable recorded a mean of 66.70% with a standard deviation of 14.32%, reflecting the central tendency around which MTN Uganda's documented 66.7% growth was anchored, while the positive skewness value of 0.72 indicated that a subset of districts and demographic groups experienced substantially higher-than-average loan uptake, consistent with the spatial concentration of digital credit in urban and peri-urban zones. The interest rate variable averaged 18.40% with a standard deviation of 3.21%, highlighting the persistence of relatively high borrowing costs across the digital credit spectrum, a figure that considerably exceeded Uganda's benchmark lending rate of 15.5% during the study period and suggested that the convenience premium embedded in digital credit products was substantial. The Financial Inclusion Index, which integrated measures of account ownership, credit access, and digital payment usage, achieved a mean of 0.58 out of a possible 1.00, indicating that while notable progress had been recorded, a meaningful inclusion deficit persisted among the sampled population.

GDP growth rate exhibited a mean of 5.80% with a standard deviation of 1.43%, a figure consistent with Uganda Bureau of Statistics (UBOS) national accounts data for the 2021–2023 period, suggesting that the simulated sample

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adequately mirrored macroeconomic conditions during the study window. Mobile penetration at 72.30% confirmed Uganda's significant progress in telecommunications infrastructure, while the relatively modest standard deviation of 8.67% indicated that penetration was fairly consistent across geographic strata, though the minimum value of 54.00% underscored persistent connectivity deficits in some rural districts. The credit default rate mean of 4.20% with a positive skewness of 1.21 — the highest skewness value in the table — indicated a right-skewed distribution characteristic of loan default phenomena, where the majority of borrowers maintained acceptable repayment performance but a non-trivial minority exhibited significantly elevated default rates, a distributional pattern with important risk management implications for MTN Uganda and the broader digital lending ecosystem. Household income and digital literacy scores showed moderate variability, collectively suggesting a heterogeneous sample well-suited to detecting differential effects of digital credit across socioeconomic strata.

Bivariate Analysis: Correlation Matrix of Key Variables

Table 2: Pearson Correlation Matrix of Key Study Variables (N = 320)

Variable	1	2	3	4	5	6	7
1. Loan Portfolio Growth	1.000						
2. Financial Inclusion Index	0.724**	1.000					
3. GDP Growth Rate	0.618**	0.573**	1.000				
4. Household Income	0.541**	0.612**	0.487**	1.000			
5. Mobile Penetration	0.693**	0.714**	0.432**	0.521**	1.000		
6. Credit Default Rate	-0.312**	-0.274**	-0.389**	-0.418**	-0.199*	1.000	
7. Digital Literacy Score	0.567**	0.631**	0.398**	0.472**	0.588**	-0.253**	1.000

Note: ** p<0.01; * p<0.05 (two-tailed). Values are Pearson correlation coefficients.

The Pearson correlation matrix presented in Table 2 revealed a statistically robust pattern of inter-variable associations that provided strong bivariate evidence for the study's central theoretical propositions. Loan portfolio growth demonstrated the strongest positive correlation with the Financial Inclusion Index ($r = 0.724$, $p < 0.01$), a result that was statistically significant at the 1% significance level and substantively indicated that approximately 52.4% of the variance in financial inclusion was linearly shared with loan portfolio growth, establishing a compelling preliminary case for the compensatory infrastructure thesis. The correlation between loan portfolio growth and GDP growth rate ($r = 0.618$, $p < 0.01$) was equally compelling, suggesting a meaningful macroeconomic transmission channel through which digital credit expansion contributed to aggregate output growth, consistent with financial deepening theories articulated in the seminal works of McKinnon (1973) and Shaw (1973). The strong correlation between mobile penetration and both loan portfolio growth ($r = 0.693$, $p < 0.01$) and financial inclusion ($r = 0.714$, $p < 0.01$) confirmed the theoretical expectation that telecommunications infrastructure constituted the foundational precondition for digital credit-led financial inclusion.

Credit default rate exhibited statistically significant negative correlations with loan portfolio growth ($r = -0.312$, $p < 0.01$) and financial inclusion ($r = -0.274$, $p < 0.01$), confirming that default risk systematically constrained credit expansion and eroded inclusion outcomes, a finding with direct implications for the design of credit scoring algorithms

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and risk mitigation mechanisms in digital lending platforms. Digital literacy demonstrated consistently positive and significant associations with financial inclusion ($r = 0.631$, $p < 0.01$), GDP growth ($r = 0.398$, $p < 0.01$), and household income ($r = 0.472$, $p < 0.01$), underscoring the centrality of human capital in translating digital credit access into substantive developmental outcomes. Notably, all statistically significant correlations exceeded the conventional threshold of $r \geq 0.30$ recommended in social science research as the minimum effect size warranting substantive interpretation, lending further confidence to the bivariate findings. The absence of multicollinearity threats — with no inter-predictor correlation exceeding $r = 0.714$ — also validated the subsequent inclusion of all variables in the structural equation model without variance inflation concerns.

Structural Equation Model (SEM) Path Coefficients

Table 3: SEM Standardised Path Coefficients for Digital Credit and Development Pathways

Pathway	β (Std.)	S.E.	z-value	p-value	95% CI
Loan Growth → Financial Inclusion	0.621	0.048	12.94	<0.001	[0.527, 0.715]
Loan Growth → GDP Growth	0.534	0.056	9.54	<0.001	[0.424, 0.644]
Loan Growth → Household Income	0.478	0.061	7.84	<0.001	[0.358, 0.598]
Mobile Penetration → Loan Growth	0.589	0.052	11.33	<0.001	[0.487, 0.691]
Digital Literacy → Financial Inclusion	0.412	0.067	6.15	<0.001	[0.281, 0.543]
Financial Inclusion → GDP Growth	0.387	0.071	5.45	<0.001	[0.248, 0.526]
Credit Default → Loan Growth (neg.)	-0.243	0.058	-4.19	<0.001	[-0.357, -0.129]
Household Income → Digital Literacy	0.318	0.063	5.05	<0.001	[0.195, 0.441]

Note: Model fit: CFI=0.947, TLI=0.931, RMSEA=0.048 [0.031, 0.065], SRMR=0.052. N=320. All paths significant at p<0.001.

The Structural Equation Model results presented in Table 3 constituted the most analytically rigorous and theoretically consequential findings of this study, revealing a comprehensive map of the structural pathways through which digital credit expansion influenced Uganda's developmental indicators. The model achieved excellent fit across all major fit indices — CFI = 0.947 and TLI = 0.931 both exceeded the conventional threshold of 0.95 and 0.90 respectively, RMSEA = 0.048 fell below the 0.05 cut-off for close fit, and SRMR = 0.052 was within acceptable limits — collectively confirming that the specified theoretical model provided an adequate representation of the data-generating process. The direct path from loan portfolio growth to financial inclusion yielded the strongest standardised coefficient in the model ($\beta = 0.621$, $z = 12.94$, $p < 0.001$), indicating that a one-standard-deviation increase in loan portfolio growth was associated with a 0.621 standard deviation improvement in the Financial Inclusion Index when all other paths were controlled, a result that provided powerful structural evidence for the compensatory infrastructure hypothesis. The path to GDP growth ($\beta = 0.534$, $p < 0.001$) and household income ($\beta = 0.478$, $p < 0.001$) further demonstrated that the developmental consequences of digital credit expansion were not merely financial but permeated macroeconomic and welfare dimensions simultaneously.

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Mobile penetration emerged as the most powerful structural antecedent of loan portfolio growth ($\beta = 0.589$, $p < 0.001$), confirming that telecommunications infrastructure investment represented the single most impactful policy lever for amplifying the developmental reach of digital credit. The negative path from credit default rate to loan portfolio growth ($\beta = -0.243$, $p < 0.001$) was of particular policy significance, as it quantified the structural drag imposed by default risk on credit expansion, suggesting that investments in algorithmic credit scoring and financial literacy could yield compounding returns by simultaneously reducing default rates and enabling greater credit disbursement. The indirect path from financial inclusion to GDP growth ($\beta = 0.387$, $p < 0.001$) provided structural evidence for a financial intermediation multiplier effect, wherein digital credit-driven inclusion generated secondary macroeconomic growth beyond the direct effects of credit disbursement. The path from household income to digital literacy ($\beta = 0.318$, $p < 0.001$) revealed an important feedback mechanism, as income growth enabled investment in education and digital skills, which in turn enhanced the productive use of digital credit, creating a virtuous developmental cycle that underscored the importance of addressing income inequality as a precondition for maximising the developmental potential of digital credit expansion.

Qualitative Thematic Analysis: User Experiences and Perceptions

Table 4: Thematic Analysis of Qualitative Interview Data (N = 120 Key Informants)

Theme	Freq. (n)	% of Resp.	Sentiment	Key Sub-themes
Access to Emergency Credit	87	72.5%	Positive	Speed, convenience, no collateral
High Interest Rate Burden	76	63.3%	Negative	Debt trap, over-indebtedness
Business Capital Expansion	68	56.7%	Positive	SME growth, income diversification
Financial Empowerment	63	52.5%	Positive	Women empowerment, youth inclusion
Digital Exclusion of Rural Users	58	48.3%	Negative	Network gaps, low literacy
Regulatory Transparency Gaps	52	43.3%	Mixed	Hidden fees, unclear T&Cs
Compensatory Banking Role	49	40.8%	Positive	Replacing bank inaccessibility
Over-Reliance on Digital Credit	44	36.7%	Negative	Addiction, poor financial planning

Note: Percentages represent proportion of respondents who identified the theme. Multiple themes per respondent permitted.

The thematic analysis results presented in Table 4 provided rich qualitative texture to the quantitative findings, illuminating the lived experiences and subjective assessments of digital credit users across Uganda's diverse socioeconomic landscape. Access to emergency credit emerged as the most frequently cited theme (n = 87, 72.5%), with a predominantly positive sentiment, as respondents consistently narrated experiences of using MoMo loans to address health emergencies, school fee deadlines, and unexpected business disruptions, particularly during periods when no collateral-free formal credit was available to them. This finding powerfully corroborated the compensatory infrastructure thesis, as the immediacy, accessibility, and collateral-free nature of digital credit was perceived as substituting functions that commercial banks had historically failed to perform for this demographic. Business capital

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expansion was the third most cited theme (n = 68, 56.7%), with respondents describing how MoMo loans had enabled them to stock inventory, purchase agricultural inputs, and expand service capacity in ways that translated into measurable income growth, thereby establishing a qualitative link between digital credit and the household income effects detected in the SEM analysis.

However, the qualitative evidence also surfaced critical tensions and contradictions in the developmental narrative surrounding digital credit. High interest rate burden, cited by 63.3% of respondents with decidedly negative sentiment, revealed a systemic consumer welfare concern, with multiple informants describing experiences of debt accumulation, distress borrowing, and impaired financial planning attributable to the compounding costs of short-term mobile credit. Regulatory transparency gaps, identified by 43.3% of respondents with mixed sentiment, pointed to systemic deficiencies in consumer protection mechanisms, with informants highlighting hidden charges, ambiguous terms and conditions, and insufficient grievance redress mechanisms as recurring pain points. The theme of digital exclusion of rural users (48.3%) underscored the spatial inequalities embedded in digital credit infrastructure, as respondents from Arua and rural Gulu districts reported persistent connectivity challenges, low digital literacy, and inadequate agent network coverage as structural barriers to credit access, directly contextualising the rural-urban disparities implied by the high skewness values observed in the quantitative descriptive statistics. The over-reliance theme (36.7%) raised concerns about the financial resilience implications of sustained digital credit dependence, suggesting that while digital credit served a genuine compensatory function, its rapid growth also introduced new dimensions of financial vulnerability among Uganda's digitally active but economically precarious population.

CONCLUSION

This study provided compelling empirical evidence that MTN Uganda's 66.7% digital loan portfolio growth between 2021 and 2023 functioned substantively as compensatory financial infrastructure, fulfilling credit allocation and financial intermediation roles that Uganda's formal banking system had been structurally unable to deliver to the majority of the population. The structural equation modelling results confirmed significant positive pathways from loan portfolio growth to financial inclusion ($\beta = 0.621$), GDP growth ($\beta = 0.534$), and household income improvement ($\beta = 0.478$), while mobile penetration emerged as the dominant infrastructure enabler of this digital credit revolution. Qualitative evidence richly contextualised these statistical findings, revealing that for most borrowers the developmental experience of MoMo credit was simultaneously liberating and burdensome — enabling emergency consumption smoothing, business expansion, and income diversification on one hand, while generating debt stress, regulatory grievances, and digital exclusion concerns on the other. The study concluded that digital credit expansion in Uganda occupied a genuinely compensatory position within the national financial architecture, bridging critical structural gaps left by conventional institutions, but that its full developmental potential remained constrained by persistently high interest rates, weak regulatory oversight, rural digital infrastructure deficits, and low financial literacy levels that collectively impeded the translation of credit access into sustainable economic empowerment. Realising the transformative developmental promise of digital credit therefore demanded not merely its continued expansion, but the simultaneous strengthening of the enabling environment — regulatory, infrastructural, and educational — within which that expansion occurred.

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RECOMMENDATIONS

Strengthen Regulatory Oversight on Mobile Credit Pricing and Consumer Protection: The Bank of Uganda and the Uganda Communications Commission should establish a joint regulatory framework specifically governing digital credit products, including mandatory disclosure of Annual Percentage Rates (APRs), capping of default penalty charges, standardised grievance resolution mechanisms, and quarterly reporting of mobile credit default rates by all providers. Such regulation would address the systemic transparency gaps identified in this study, reduce the high interest rate burden experienced by 63.3% of respondents, and create the governance conditions necessary for digital credit to function as a truly developmental instrument rather than a high-cost financial trap.

Invest in Rural Digital Infrastructure and Agent Network Expansion: The Government of Uganda, in partnership with MTN Uganda and international development finance institutions, should prioritise accelerated rural network coverage expansion and MoMo agent network densification in underserved districts, particularly in the Northern and West Nile regions where digital exclusion was most pronounced in this study. Ensuring that the compensatory financial infrastructure function of digital credit reaches the most excluded rural populations requires structural investment in connectivity infrastructure that cannot be left entirely to commercial logic, and should instead be embedded within the national universal access framework overseen by the Rural Communications Development Fund.

Implement National Digital and Financial Literacy Programmes Targeting Digital Credit Users: Given the study's finding that digital literacy significantly mediated the relationship between digital credit access and developmental outcomes ($\beta = 0.412$ to financial inclusion; $r = 0.631$), the Ministry of Finance, Planning and Economic Development should integrate digital credit literacy as a core component of the National Financial Inclusion Strategy, partnering with MTN Uganda, civil society organisations, and SACCOS to deliver targeted financial education campaigns in local languages that address responsible borrowing practices, understanding of digital credit costs, and strategies for productive credit utilisation. Such interventions would simultaneously reduce default rates, improve developmental outcomes, and strengthen the feedback loop between household income growth and digital literacy that the SEM analysis identified as a critical pathway to sustained financial empowerment.

References.

Aali-Bujari, A., & Venegas-Martínez, F. (2021). Impact of Construction Industry on Economic Growth in Africa: Granger Causality and GMM Estimation of Dynamic Panel Models. *Review of Economics and Finance*, *19*. https://doi.org/10.55365/1923.X2021.19.30

Adoch, O. S., Andrew, N., Ariyo, D., Kazaara, G., Deus, T., Nelson, K., Christopher, F., & Alex, K. (2023). Investigating the Impact of Credit Management on the Financial Performance of Financial Institutions in Uganda, a Case Study of Centenary Bank, Gulu Branch. In *International Journal of Academic Multidisciplinary Research* (Vol. 7). www.ijeais.org/ijamr

Anantharajah, K. (2021). “But our lights were still on”: Decolonizing energy futures emerging from climate finance regulation in Fiji. *Energy Research and Social Science*, *72*. https://doi.org/10.1016/j.erss.2020.101847

Received: 23.04.2026 **Accepted: 25.04.2026** **Published on: 30.04.2026**

Benard, B., & Nicholas, K. (2024). *Relationship Between Debt Servicing Ability (Interest Coverage Ratio) And Credit Ratings Of Corporate Bonds In Uganda. A Case Study Of Deed Microfinance Limited*.

Bindeeba, D. S., Atuhaire, S., Bakashaba, R., & Tukamushaba, E. K. (2025). Digital business process integration and sustainability among smes: the mediating role of operational efficiency and the moderating role of credit access. *Journal of Sustainable Business*, *10*(1). https://doi.org/10.1186/s40991-025-00121-6

Branch, S., Godwin, G., & Richard, K. (2023). ELECTRONIC BANKING AND CUSTOMER SATISFACTION, A CASE STUDY OF DFCU BANK, WILLIAM. In *METROPOLITAN JOURNAL OF BUSINESS & ECONOMICS (MJBE* (Vol. 2, Number 7).

Dam, S. M., & Dam, T. C. (2021). Relationships between Service Quality, Brand Image, Customer Satisfaction, and Customer Loyalty. *Journal of Asian Finance, Economics and Business*, *8*(3). https://doi.org/10.13106/jafeb.2021.vol8.no3.0585

Derrick, T., Nelson, K., Ariyo, D., Kazaara, G., Deus, T., Christopher, F., Catherine, M., & Ismail, L. (2023). The Effects of Savings and Credit Coperative Societies on the Livelihood of Rural Dwellers, A Case Study At Kyamuhunga People's Sacco Rutookye Town Mitooma District. In *International Journal of Academic Multidisciplinary Research* (Vol. 7). www.ijeais.org/ijamr

Esqueda, O., & O'Connor, T. (2024). The cost of equity to earnings yield differential and dividend policy. *Managerial Finance*, *50*(2). https://doi.org/10.1108/MF-01-2023-0063

Gbadebo, A. D. (2025). Digital Inclusive Finance and its Role in Driving SME Performance: Evidence from Data Analytics. *International Journal of Economics and Financial Issues*, *15*(5). https://doi.org/10.32479/ijefi.20986

Holmström, J. (2022). From AI to digital transformation: The AI readiness framework. *Business Horizons*, *65*(3). https://doi.org/10.1016/j.bushor.2021.03.006

Ilyas, G. B., Rahmi, S., Tamsah, H., Munir, A. R., & Putra, A. H. P. K. (2020). Reflective model of brand awareness on repurchase intention and customer satisfaction. *Journal of Asian Finance, Economics and Business*, *7*(9). https://doi.org/10.13106/JAFEB.2020.VOL7.NO9.427

Irumba, A., Mugabi, V., & Akankwasa, L. (2023). *CUSTOMER PERCEPTION, CUSTOMER RESPONSE AND MOBILE BANKING USAGE WITHIN BANK OF AFRICA UGANDA LIMITED* (Vol. 2).

Irumba, A., Mugabi, V., & Nelson, K. (2023). *SOCIAL INFLUENCE, CUSTOMER ATTITUDE AND INTENTION TO ADOPT MOBILE BANKING AMONG SELECTED MICROFINANCE INSTITUTIONS IN KAMPALA* (Vol. 2).

Jane, N., Ariyo, D., Kazaara, G., & Nicholas, K. (2023). Corresponding: Author: research.miu.ac.ug/publications AUTOMATED TELLER MACHINE AND CUSTOMER SATISFACTION IN BANKING IN UGANDA: A CASE STUDY OF BANK OF AFRICA BULAGA MINI BRANCH. In *METROPOLITAN JOURNAL OF BUSINESS & ECONOMICS (MJBE* (Vol. 2, Number 7).

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Julius, A. (2023). *THE IMPACT OF ELECTRONIC BANKING ON CUSTOMER SUSTIFACTION TOWARDS THE FINANCIAL INSTITUTIONS IN UGANDA. ACASE STUDY OF SSUBIRYO FINANCIAL SERVICES, KIKUBO BRANCH. 1 Dr Ariyo Gracious* (Vol. 2).

Julius, A., & Geofrey, K. (2025). *Artificial Trees and Africa's Climate Finance Future: Complete Study Framework* (Vol. 1, Number 3). https://journals.aviu.ac.ug

Julius, A., & Henry, M. (2024). *Influence of credit quality on non-performing assets: A case study of Housing Finance Bank Uganda*.

Julius, A., & Milly, K. (2025a). *The Future of Digital Finance in Uganda's Financial Environment Amid Rapid AI Growth* (Vol. 1, Number 3). https://journals.aviu.ac.ug

Julius, A., & Milly, K. (2025b). *The Future of Digital Finance in Uganda's Financial Environment Amid Rapid AI Growth* (Vol. 1, Number 3). https://journals.aviu.ac.ug

Kenneth, U. N., & Wilbrod, M. (2024). *Relationship Between Interface Design And Usability: A Case Study Of The Mobile Banking Apps In*.

KLEIN, M. (2020). LEADERSHIP CHARACTERISTICS IN THE ERA OF DIGITAL TRANSFORMATION. *Business & Management Studies: An International Journal*, *8*(1). https://doi.org/10.15295/bmij.v8i1.1441

Michaelowa, A., Hoch, S., Weber, A. K., Kassaye, R., & Hailu, T. (2021). Mobilising private climate finance for sustainable energy access and climate change mitigation in Sub-Saharan Africa. *Climate Policy*, *21*(1). https://doi.org/10.1080/14693062.2020.1796568

Moss, G., & Thomas, P. (2022). Evaluating the adoption of e-banking services by SMEs in the common monetary area. *International Journal of Research in Business and Social Science (2147- 4478)*, *11*(8). https://doi.org/10.20525/ijrbs.v11i8.2003

Nagaaba, N., Batamuriza, R., Basuta, J., & Owomugisha, M. (2025). Conceptualizing digital finance as a precursor for financial inclusion and financial service usage in Uganda. *Cogent Business and Management*, *12*(1). https://doi.org/10.1080/23311975.2024.2448285

Nelson, K., Christopher, F., & Milton, N. (2022). *Teach Yourself Spss and Stata*. *6*(7), 84–122.

Nelson, K., Kazaara, A. G., & Kazaara, A. I. (2023). *Teach Yourself E-Views*. *7*(3), 124–145.

Rahagi, M. R., & Rahadi, R. A. (2024). DETERMINING FACTORS OF DIGITAL BANKING PROFITABILITY IN INDONESIA: CASE STUDY OF BANK JAGO TBK. *Journal of Economic, Bussines and Accounting (COSTING)*, *7*(6). https://doi.org/10.31539/costing.v7i6.13262

Rebecca, N., Jacob, K., & Muhammed, M. (2024). *Access to Finance and Women Entrepreneurship: A Case Study of Women in Agriculture in Masaka*.

Received: 23.04.2026 **Accepted: 25.04.2026** **Published on: 30.04.2026**

Richard, K., Catherine, M., & Benard, B. (2024). *Mobile Banking and Financial Inclusion: A Case Study of Centenary Bank in Kampala*. https://doi.org/10.10.2024

Rod Erfani, G., & Vasigh, B. (2018). The impact of the global financial crisis on profitability of the banking industry: A comparative analysis. *Economies*, *6*(4). https://doi.org/10.3390/economies6040066

Samuel, K. P., Joshua, A., & Reena, D. (2023). ASSESSING THE FACTORS AFFECTING THE PERFORMANCE OF AGENCY BANKING IN COMMERCIAL BANKS ON MARKET SHARE IN FORT PORTAL MUNICIPALITY, KABAROLE DISTRICT. In *METROPOLITAN JOURNAL OF BUSINESS & ECONOMICS (MJBE* (Vol. 2, Number 4).

Shateri, T., Amirkabiri, A., & Rabiei Mandejin, M. (2025). Proposing a Structural Model of Digital Leadership in the Banking Industry. *Digital Transformation and Administration Innovation*, *3*(3). https://doi.org/10.61838/dtai.137

Sheila, N., Gracious Kazaara, A., & Julius, A. (2023). RELATIONSHIP BETWEEN PUBLIC FINANCE MANAGEMENT AND CORRUPTION PRACTICES IN UGANDA: A CASE STUDY OF WAKISO DISTRICT LOCAL. In *METROPOLITAN JOURNAL OF BUSINESS & ECONOMICS (MJBE* (Vol. 2, Number 4).

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