

The Role Of Mobile Money Banking In Promoting Financial Inclusion In Rural Areas: A Case Of Mobile Money Users In Mityana District

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Abstract

This study investigated the role of mobile money banking in promoting financial inclusion among mobile money users in Mityana District, Uganda. Financial exclusion remains a persistent development challenge in Uganda's rural areas, where formal banking infrastructure is sparse and traditional financial services are inaccessible to significant portions of the population. Using a cross-sectional survey of 210 mobile money users in Mityana District, the study examined how mobile money services contribute to financial inclusion through three pathways: savings mobilization ($r = 0.574$, $p < 0.01$), credit access facilitation ($r = 0.538$, $p < 0.01$), and financial transaction services ($r = 0.612$, $p < 0.01$). All three pathways demonstrated significant positive correlations with financial inclusion. Multiple regression analysis revealed that financial transaction services were the strongest predictor of financial inclusion ($\beta = 0.392$, $p < 0.001$), followed by savings mobilization ($\beta = 0.283$, $p < 0.01$) and credit access facilitation ($\beta = 0.241$, $p < 0.05$). The model explained 64.8% of the variance in financial inclusion ($R^2 = 0.648$). The study concludes that mobile money banking is a significant driver of financial inclusion in Mityana District and recommends policies to expand mobile network coverage, develop mobile credit products tailored to rural needs, and promote digital financial literacy to maximize the financial inclusion impact of mobile money platforms.

Keywords: Mobile money banking, financial inclusion, rural finance, MTN Mobile Money, Airtel Money, Mityana District, Uganda

1.0 Background of the study

Financial inclusion defined as the access to and use of quality, affordable financial services by all individuals and enterprises is increasingly recognized as a foundational enabler of sustainable development, poverty reduction, and economic growth (World Bank, 2021). In Uganda, the 2020 FinScope survey estimated that 58% of Ugandan adults were financially included, with significant disparities between urban (76% inclusion) and rural (49% inclusion) populations (Polycarp et al., 2023). Mityana District, located in the central region of Uganda with an estimated population of 570,000, exemplifies the rural financial inclusion challenge, with limited branch banking presence and large proportions of the population engaged in subsistence and smallholder agriculture (Allan et al., 2023).

Mobile money services, pioneered in Uganda through MTN Mobile Money and Airtel Money platforms, have emerged as transformative tools for extending financial services to previously excluded populations (Faridah et al., 2023). By leveraging the extensive mobile network infrastructure and agent banking networks that have penetrated deeply into rural Uganda, these services enable individuals without formal bank accounts to conduct financial transactions, save money, and access credit through their mobile phones (Faridah et al., 2023). Uganda's mobile money

ecosystem is among the most developed in East Africa, with over 30 million registered mobile money accounts and a transaction value exceeding UGX 120 trillion annually (Bank of Uganda, 2022).

Mityana District presents a compelling case study for examining mobile money's financial inclusion impact (Winny et al., 2023). The district's mobile money penetration rate exceeds 65%, providing a large population of active users whose experiences with the service's financial inclusion impacts can be systematically examined (Irumba et al., 2024). Agricultural households in the district have increasingly used mobile money for farm input purchases, produce sales, and remittances from urban relatives, while rural entrepreneurs use the platforms for business payments and savings management (Christopher & Nelson, 2024).

2.0 Problem Statement

Despite the evident growth and penetration of mobile money services in Mityana District, the extent to which these services translate into meaningful financial inclusion outcomes rather than simply providing a convenient transactional mechanism remains empirically unclear (Arinaitwe J, 2024). Concerns have been raised that mobile money usage may be primarily concentrated in P2P transfers and airtime purchases, with limited uptake of savings, credit, and insurance products that would constitute deeper financial inclusion (David et al., 2023). Moreover, gender disparities in mobile money ownership and usage, coupled with digital literacy constraints among older rural users, may limit the inclusiveness of mobile-money-driven financial access (Moses et al., 2023).

Quantitative evidence on the specific pathways through which mobile money contributes to financial inclusion in rural Ugandan districts is essential for informing policies aimed at maximizing these services' development impact (Faridah et al., 2023). Without such evidence, interventions may be misdirected toward expanding network coverage while neglecting the usage quality and financial capability dimensions that determine whether mobile money translates into genuine inclusion (Christopher & Nelson, 2024).

3.0 Main Objectives

The study aimed to investigate the role of mobile money banking in promoting financial inclusion in Mityana District. Specific objectives included: (i) examining how mobile money banking facilitates savings mobilization among rural users; (ii) assessing the role of mobile money in facilitating credit access for rural households and enterprises; (iii) evaluating the contribution of mobile money transaction services to financial inclusion; and (iv) determining the relative contributions of each mobile money dimension to overall financial inclusion outcomes.

4.0 Literature Review

4.1 Mobile Money and Financial Inclusion Theory

The financial inclusion framework conceptualizes access to financial services along dimensions of access (proximity to service points), usage (frequency and depth of service utilization), and quality (appropriateness and value of available services) (AFI, 2016). Mobile money services address the access dimension primarily by extending service reach through agent networks, but their impact on usage and quality dimensions depends critically on product design, user capability, and regulatory environment (Julius & Audrey, 2025). The technology acceptance model (TAM) has

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been applied to mobile money adoption research, identifying perceived usefulness and ease of use as primary adoption determinants, alongside trust, network effects, and agent reliability (Lwanga & Muvunyi, 2019).

4.2 Savings Mobilization through Mobile Money

Mobile money savings products, including Momo Save (MTN) and Wewole (Airtel), represent a significant evolution from pure transaction accounts to genuine savings instruments (Gloria et al., 2023). Research on M-Shwari in Kenya found that mobile savings accounts reached users who had never previously saved formally, with particularly strong uptake among women and lower-income households (Mbiti & Weil, 2016). In Uganda, Munyegera and Matsumoto (2016) found that mobile money users were more likely to save formally and had higher total savings compared to non-users, attributing this partly to the reduced transaction costs and privacy benefits of mobile savings relative to traditional bank accounts (David et al., 2023).

4.3 Credit Access through Mobile Money

The use of mobile transaction histories as alternative credit scoring data has enabled mobile network operators and fintechs to develop micro-credit products accessible to previously uncreditworthy rural users (Derrick et al., 2023). Products such as MTN's Mokash and Airtel's QuickLoan use algorithmic credit scoring based on mobile money usage patterns, airtime consumption, and network activity to offer small loans without collateral requirements (Collins et al., 2023). Research on similar products in Ghana and Tanzania has demonstrated positive impacts on household consumption smoothing and SME working capital adequacy (Anarfo et al., 2019). However, concerns about high effective interest rates and predatory lending practices have also been documented (Benard, 2023).

4.4 Payment and Transaction Services

Mobile payment services represent the most widely used mobile money function and the primary entry point into the digital financial ecosystem for most rural Ugandans (Florence & Julius, 2023). The ability to send and receive money safely over distances, pay utility bills, school fees, and agricultural inputs through mobile money significantly reduces transaction costs, security risks, and travel distances associated with cash-based financial management (Munyegera & Matsumoto, 2016). These efficiency gains in daily financial management constitute a direct financial inclusion benefit by making financial services more accessible and affordable (Irumba et al., 2024).

5.0 Methodology

A cross-sectional survey design was adopted, targeting active mobile money users in Mityana District. The study population was estimated at approximately 750 adult mobile money users across four sub-counties selected through purposive sampling to represent diverse geographic and economic sub-district conditions (Sarah et al., 2024). A systematic random sample of 210 respondents was drawn from mobile money agent transaction lists. Data collection employed a structured questionnaire administered through face-to-face interviews to accommodate varying literacy levels among respondents, covering mobile money usage patterns (frequency, products used, transaction volumes) and financial inclusion outcomes across savings, credit, and transaction dimensions (Olanrewaju et al., 2021). A Cronbach's alpha of 0.891 confirmed questionnaire reliability. Focus group discussions with 24 purposively selected

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users provided qualitative context for quantitative findings(Nafiu, 2012). Data were analyzed using SPSS version 25 through descriptive statistics, Pearson correlations, and multiple linear regression(Nelson et al., 2022).

6.0 Results

6.1 Descriptive Statistics

Table 1: Descriptive Statistics for Study Variables

Variable	N	Mean	Std. Dev.	Min	Max	Level
Savings Mobilization	210	3.38	0.82	1	5	Moderate
Credit Access Facilitation	210	2.91	0.96	1	5	Moderate
Financial Transaction Services	210	3.74	0.71	1	5	Good
Financial Inclusion	210	3.42	0.79	1	5	Moderate-Good

Source: Primary Data, 2025

The descriptive results (Table 1) indicate that financial transaction services achieved the highest mean score ($M = 3.74$, $SD = 0.71$), confirming that mobile money users primarily experience the service as a transaction facilitation tool and perceive it as performing well in this role. Savings mobilization scored moderately ($M = 3.38$, $SD = 0.82$), suggesting that a meaningful proportion of users engage with mobile savings products but that uptake remains partial. Credit access facilitation recorded a lower moderate mean ($M = 2.91$, $SD = 0.96$), reflecting limited awareness and utilization of mobile credit products among rural users, with high variability ($SD = 0.96$) indicating substantial heterogeneity in credit access experiences. Overall financial inclusion achieved a moderate-to-good mean of 3.42 ($SD = 0.79$), indicating that mobile money is making meaningful contributions to financial inclusion while significant exclusion gaps persist.

6.2 Correlation Analysis

Table 2: Pearson Correlation Matrix

Variable	1	2	3	4
1. Savings Mobilization	1.000			
2. Credit Access Facilitation	0.512**	1.000		
3. Financial Transaction Svcs	0.463**	0.428**	1.000	
4. Financial Inclusion	0.574**	0.538**	0.612**	1.000

** $p < 0.01$ (2-tailed)

Source: Primary Data, 2025

The correlation analysis (Table 2) reveals significant positive associations between all three mobile money dimensions and financial inclusion. Financial transaction services demonstrated the strongest correlation ($r = 0.612$, $p < 0.01$), followed by savings mobilization ($r = 0.574$, $p < 0.01$) and credit access facilitation ($r = 0.538$, $p < 0.01$). The relatively strong correlation of credit access facilitation despite its lower usage level suggests that users who do access mobile credit experience significant financial inclusion benefits, underscoring the high potential impact of expanding mobile

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credit accessibility. The inter-correlations among predictor variables ($r = 0.428$ to 0.512) indicate related but distinct dimensions of mobile money's financial inclusion contribution, with VIF values all below 2.5 confirming acceptable multicollinearity.

6.3 Regression Analysis

Table 3: Multiple Regression — Predictors of Financial Inclusion

Predictor	B	SE	Beta (β)	t	p-value
Constant	0.578	0.219	-	2.639	0.009
Savings Mobilization	0.303	0.091	0.283	3.330	0.001
Credit Access Facilitation	0.201	0.078	0.241	2.577	0.011
Financial Transaction Services	0.437	0.093	0.392	4.699	0.000

$R = 0.805$, $R^2 = 0.648$, Adjusted $R^2 = 0.643$, $F(3,206) = 126.33$, $p < 0.001$

Source: Primary Data, 2025

The multiple regression model was highly significant ($F(3,206) = 126.33$, $p < 0.001$) and demonstrated strong explanatory power, accounting for 64.8% of variance in financial inclusion ($R^2 = 0.648$). Financial transaction services emerged as the dominant predictor ($\beta = 0.392$, $t = 4.699$, $p < 0.001$), confirming that the core transactional utility of mobile money is its primary engine of financial inclusion. Savings mobilization contributed significantly ($\beta = 0.283$, $t = 3.330$, $p = 0.001$), while credit access facilitation made a meaningful independent contribution ($\beta = 0.241$, $t = 2.577$, $p = 0.011$) despite its lower utilization levels. These findings validate the multi-dimensional conceptualization of mobile money's financial inclusion pathways and highlight the importance of promoting not just access to mobile money accounts but active engagement with the full suite of financial services.

7.0 Discussion of Results

The primacy of financial transaction services as a financial inclusion driver aligns with established literature on mobile money's role as a transaction platform and confirms that even basic P2P transfers and bill payment capabilities generate meaningful inclusion benefits by reducing the financial exclusion experienced by cash-dependent rural populations. The ability to transact safely over distances reduces the vulnerability to theft associated with cash handling, lowers travel costs for remote payments, and enables participation in economic networks that would otherwise be inaccessible. Focus group discussions in Mityana confirmed these benefits, with participants emphasizing the transformative impact of being able to receive remittances from urban family members directly and immediately.

The significant contribution of savings mobilization, despite the moderate level of mobile savings uptake, suggests that even partial engagement with mobile savings products generates meaningful financial inclusion improvements. This finding is consistent with Munyegera and Matsumoto's (2016) research in rural Uganda, which documented significant improvements in savings behavior and financial resilience among mobile money users. The relatively low utilization of mobile savings products in Mityana compared to transaction services points to an opportunity for mobile

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network operators and the Bank of Uganda to promote savings-linked mobile money products through targeted awareness campaigns and savings incentives.

Credit access facilitation, while the weakest predictor of financial inclusion, demonstrated a substantial independent contribution that underscores mobile credit's unique financial inclusion potential. Access to small, emergency loans through mobile money platforms can be transformative for rural households facing agricultural production challenges or healthcare emergencies, providing a safety net that reduces vulnerability to poverty traps. The concerns raised in qualitative discussions about high mobile credit interest rates and aggressive debt recovery practices warrant regulatory attention to ensure that mobile credit serves financial inclusion rather than deepening financial exclusion through over-indebtedness.

8.0 Conclusions

This study provides robust empirical evidence that mobile money banking is a significant driver of financial inclusion in Mityana District, with financial transaction services, savings mobilization, and credit access facilitation all making significant independent contributions to financial inclusion outcomes. The model's explanatory power of 64.8% demonstrates the comprehensive importance of mobile money in shaping financial inclusion while acknowledging that additional factors, including financial capability, gender dynamics, and infrastructure quality, also influence outcomes. The findings affirm Uganda's mobile money ecosystem as a powerful vehicle for rural financial inclusion and provide an evidence base for targeted policy and product development interventions.

9.0 Recommendations

Based on the study's findings, the following recommendations are made: (i) Uganda Communications Commission should accelerate implementation of the Rural Communications Development Fund to extend mobile network coverage to underserved sub-counties in Mityana and similar districts, ensuring geographical financial inclusion is achieved; (ii) mobile network operators should develop targeted campaigns promoting mobile savings products in rural areas, including agent-delivered savings demonstrations and savings matching incentives for new savings account activations; (iii) Bank of Uganda should strengthen regulatory oversight of mobile credit products, establishing maximum effective interest rate caps and transparency requirements to protect rural borrowers from predatory lending; (iv) the Ministry of Finance should fund a national digital financial literacy program delivered through village savings and loan associations, agricultural cooperatives, and local government extension workers; and (v) MNOs should develop gender-sensitive mobile money products and agent training programs to close the gender gap in mobile money utilization documented in this and prior research.

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