

## Understanding Digital Tool Adoption Among Mobile Money Agents in Ghana

### EXECUTIVE SUMMARY

Mobile money agents are central to Ghana's digital finance ecosystem, yet many continue to rely on feature phones and manual record-keeping. This limits efficiency, service diversification, and integration into the formal financial system. Given their role as the primary interface between digital finance and end users -- particularly low-income and underbanked populations -- their adoption of digital tools is critical for deepening financial inclusion.

To assess whether digitalisation could improve agent performance, a randomised controlled pilot was implemented in Koforidua and surrounding communities in Ghana's Eastern Region. The intervention combined Point-of-Sale (POS) devices, onboarding into Ecobank's agent banking system, training, and working capital support. The aim was to test whether digital tools and liquidity support could

expand service offerings, improve operational efficiency, and strengthen links between informal agents and formal banking systems.

The evidence shows that while digital tools offer clear potential benefits, adoption is constrained by formalisation requirements, technical unreliability, weak interoperability with existing mobile money systems, and limited post-onboarding support. Agents recognised potential efficiency gains but often opted out because digitalisation imposed additional costs, risks, and administrative burdens on already low-margin businesses.

Overall, the pilot demonstrates that digitalisation can support financial inclusion only when embedded within an enabling ecosystem—characterised by simplified compliance processes, reliable infrastructure, interoperable systems, and sustained hands-on support.



Source: gettyimages

## BACKGROUND

Mobile money is a key entry point into formal and semi-formal financial services in Ghana, with agents playing a pivotal role in service delivery. Despite this, most agents do not use digital tools to improve record-keeping, efficiency, or service expansion, even as cash-based commissions face increasing pressure from competition and digital payment growth.

This study addresses a gap in the literature and policy debate: while digital tools are often promoted as drivers of efficiency and inclusion, there is limited causal evidence on what determines adoption among mobile money agents. Existing research highlights that agent performance is shaped not only by technology access but also by liquidity constraints, infrastructure reliability, insecurity, and compliance costs.

The project therefore examined whether combining digital tools with liquidity support could enable agents to evolve into broader retail financial service providers, including banking agents. It also assessed whether supply-side interventions can better integrate informal financial actors into formal systems without undermining business viability.

### Research Objectives

- Examine how digital tools influence business opportunities for mobile money agents.
- Assess whether working capital improves service diversification.
- Evaluate whether digital tools improve operational efficiency and data use.
- Generate evidence on scalability within Ghana’s retail finance ecosystem.

## METHODOLOGY

The study was implemented as a randomised controlled trial in Koforidua and surrounding communities in Ghana’s Eastern Region. A census identified 184 eligible non-banking mobile money agents operating from fixed business locations, from which 150 were randomly selected. A baseline survey covered 111 agents.

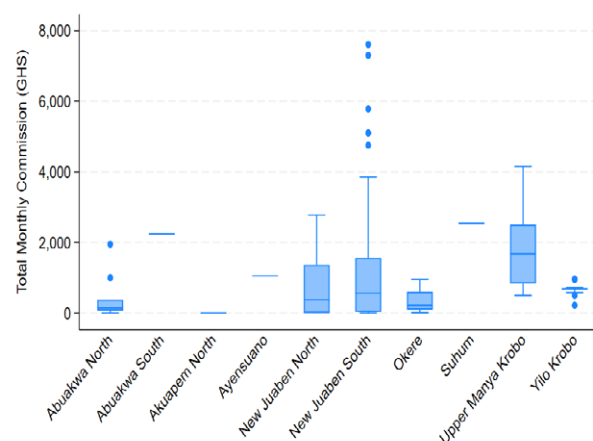
The original design included three arms: a control group, a POS grant group, and a loan-financed adoption group (implemented through Oze). Treatment agents were to receive POS devices,

Ecobank Xpress Point onboarding, training, and working capital support. However, high attrition and onboarding challenges—particularly in the loan group—necessitated collapsing the design into a simplified treatment-versus-control comparison.

The study generated causal evidence on adoption, utilisation, revenue diversification, operational efficiency, and formalisation outcomes. It also provided implementation insights into how compliance systems, infrastructure constraints, and platform design shape real-world uptake.

## FINDINGS

**1. Agents operated in highly competitive markets with narrow service portfolios and strong dependence on cash-out commissions.** The average monthly commission was GHS 1,054.30, while the mean cost-to-commission ratio (for complete expenditure data) was 2.67, indicating significant financial pressure and limited business sustainability for many operators.



*Distribution of total monthly commission by districts*

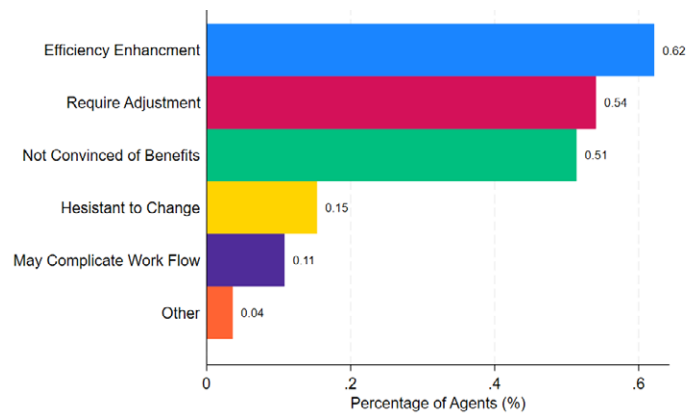
Variable	Obs	Mean	Std. Dev.
Total commission	111	1054.30	1484.77
Cash-out	111	695.78	992.48
Cash-in	111	282.72	515.644
Bundle	80	105.16	179.87

*Summary Statistics of Monthly Agent Commissions by Service Category (GHS)*

**2. Limited digital readiness, but broader behavioural barriers.** About 66.67% of sampled agents had never used a smartphone or POS device, indicating low digital readiness. However, even

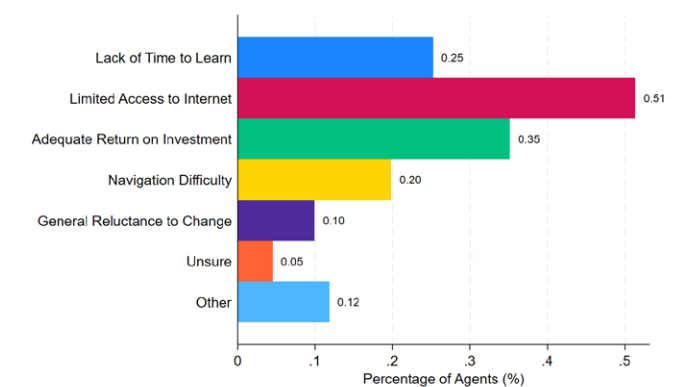
agents with some smartphone familiarity often preferred paper-based systems due to simplicity, reliability, and integration with existing workflows.

This suggests that adoption barriers extend beyond digital literacy to include trust, perceived usefulness, and operational convenience.



*Reported Initial Impression about Digital Transition*

**3. Formalisation requirements reduced uptake.** Onboarding into Ecobank’s agent banking system required documentation such as police reports and business registration certificates. These requirements created substantial barriers to participation and contributed to attrition, particularly in the loan group. Fear of indebtedness further reduced uptake among agents offered credit-based support.



*Perceived Challenges to Digital Integration*

**4. Technical and ecosystem failures undermined post-adoption satisfaction.** Agents who received POS devices reported multiple operation challenges, including battery failures, small-screen usability issues, dormant accounts, login failures, and slow support response times. Critically, the system was poorly integrated with mobile money wallets, creating liquidity management difficulties and reducing the practical usefulness of the intervention.

**5. Working capital alone was insufficient.** Although most agents used the GHS 1,000 working capital injection responsibly, satisfaction remained low.

This was largely due to structural constraints -- interoperability gaps, system unreliability, and weak support – remained unresolved. The findings show that standalone inputs (capital or hardware) are insufficient without broader system integration.

**Key operation insight: “Rational informality”**

A central finding is the concept of “rational informality,” where agents deliberately avoided formalisation not due to resistance to innovation, but because compliance costs and risks threatened already fragile businesses. The study also shows trust in digital systems was highly sensitive to reliability; repeated system failures and slow support quickly eroded confidence and led to abandonment.

**CONCLUSION AND RECOMMENDATIONS**

The pilot shows that digital tools and working capital can enhance the role of mobile money agents in Ghana’s retail financial ecosystem, but only when embedded within a supportive institutional and technological environment. In its current form, the formal banking integration model faced significant constraints related to compliance burden, technical reliability, interoperability, and ecosystem readiness.

**Recommendations**

**1. Simplify regulatory and compliance pathways**

- The Bank of Ghana should adopt a proportionate, risk-based framework for agent digitalisation, including streamlined onboarding, risk-based compliance requirements, and stronger support for interoperable payment systems.
- Streamline onboarding and reduce unnecessary documentation requirements.
- Introduce subsidised or simplified formalisation pathways for low-margin agents.

**2. Reduce onboarding barriers**

- Banks should simplify documentation processes and provide hands-on institutional support during agent registration and verification.
- Simplify onboarding processes and improve usability of digital registration systems.

**3. Strengthen technology design and support**

- Banks and service providers should address device-level challenges such as battery performance, interface usability, and system reliability.

- Ensure rapid, field-level technical support to prevent early abandonment and trust erosion.

#### 4. Improve interoperability and liquidity management

- Banks and mobile money operators should strengthen integration between mobile money wallets and banking platforms.
- Develop liquidity support tools such as float financing and real-time settlement systems.

#### 5. Enhance training and sustainability support

- Shift from one-off training to continuous, practical, hands-on support.
- Incorporate business management and workflow adaptation into agent training programmes.

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### Researchers:

Ahiabenu, Kwami — Department of Tech Innovations, Knowledge Innovations

(Corresponding Author: [kahiabenu@knowledgeinnovations.com](mailto:kahiabenu@knowledgeinnovations.com))

Fertig, Alexander — Economics & Public Policy, University of Michigan

Frimpong, Prince Boakye — Department of Economics, KNUST

Riley, Emma — Department of Economics, University of Michigan

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#### ReFinD Research Initiative

 ISSER, University of Ghana

 [refind.issuer@ug.edu.gh](mailto:refind.issuer@ug.edu.gh)

 [www.refind-issuer.ug.edu.gh](http://www.refind-issuer.ug.edu.gh)

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ReFinD is a sub-grants-awarding research initiative that aims to support interventions that will effectively expand the reach and efficiency of agent network operations through public policy and commercial solutions that can plausibly be scaled. It is implemented by the Institute of Statistical, Social and Economic Research (ISSER), University of Ghana, with funding from the Bill & Melinda Gates Foundation, with focus on research based in LMICs in Sub-Saharan Africa, South Asia, and Southeast Asia.