Increasing Mobile Banking Use Among Rural Populations in Ghana

Sector(s): Finance

J-PAL office: J-PAL Africa

Fieldwork: Innovations for Poverty Action (IPA)

Sample: 115 Microfinance groups

Target group: Rural population Women and girls

Outcome of interest: Technology adoption

Intervention type: Digital and mobile

AEA RCT registration number: AEARCTR-0007298

Research Papers: Incentives and Endorsement for Technology Adoption: Evidence from Mobile Bankin...

Partner organization(s): Opportunity International of Ghana, Innovations for Poverty Action (IPA)

Mobile banking has the potential to improve financial inclusion in developing countries by providing easier access to banking services. However, adoption remains low, particularly in rural areas, due to concerns about trust, insufficient knowledge of mobile banking services, and uncertainty about how to use the technology effectively. Researchers assessed the impact of financial incentives and peer endorsement on mobile banking adoption and formal savings in Ghana. While financial incentives boosted adoption by 50 percent, peer endorsement was twice as effective, leading to sustained mobile banking use and a 30 percent increase in savings six months later.

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Access to digital financial services can help individuals save securely and conduct transactions more efficiently. Mobile banking services offer a potential solution by allowing users to link their bank accounts to their mobile phones, eliminating the need for frequent visits to physical bank branches and reducing the costs associated with opening and maintaining accounts. However, many people in low- and middle-income countries face challenges such as a lack of familiarity with mobile banking and concerns about fraud, which hinder adoption.

Financial incentives and peer influence are potential strategies to promote technology adoption. While subsidies can encourage individuals to experiment with new services, their long-term impact on sustained use is uncertain. Alternatively, leveraging trusted community members to endorse a new technology could provide a more sustainable approach to building confidence in mobile banking. Can financial incentives or peer-led endorsement strategies increase mobile banking adoption and promote sustained engagement with formal financial services?

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This study took place in Ghana, where 60 percent of adults in Ghana owned a mobile money account in 2021. Most people use mobile banking primarily for transactions rather than savings, with only 37 percent using mobile accounts to save money. The study was conducted in partnership with Opportunity International Savings and Loans (OISL), a major microfinance institution that provides financial services to low-income rural users from 40 branches across Ghana.

All participants in the study were women; participants were 43 years old on average and had varying education levels. While 95 percent had used mobile money, only 7 percent actively used OISL's mobile banking. Participants lived an average of 11 minutes from a mobile money agent but 50 minutes from a bank branch.



Two women conduct a transaction using a mobile phone and a point-of-sale (POS) device

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Researchers collaborated with Opportunity International Savings and Loans (OISL) to conduct a randomized evaluation to measure the impact of financial incentives and peer endorsement on mobile banking and savings habits. The study involved 400 women who were grouped into 115 microfinance groups, which were then randomly allocated to one of three intervention groups:

1. *Incentive Group (29 groups, 99 clients)*: Participants received a one-time transfer of 10 Ghanaian Cedis (around US$1.66 at the time of the evaluation) upon completing a mobile banking transaction within a month. Additionally, they received basic guidance on mobile banking usage from OISL credit officers during their routine group meetings.
2. *Endorsement Group (59 groups, 194 clients)*: Group leaders, chosen by vote, underwent a half-day training session on mobile banking, where they practiced transactions. They were then encouraged to transfer their knowledge and assist other group members in using mobile banking. To further motivate them, leaders received 10 Cedis for each referred participant who completed a mobile banking transaction, with a cap of 50 Cedis (US$8.30 at the time of the evaluation). Like the Incentive Group, individual members in this arm were also eligible for the 10 Cedi incentive.

3. *Comparison Group (27 groups, 114 clients)*: This group received no intervention but had the option to use mobile banking services if they chose to do so.

The intervention was carried out over a one-month period, during which researchers gathered data from OISL on mobile banking transactions and account balances. Additionally, one month after the intervention concluded, researchers conducted a survey to measure participants' knowledge, trust, and engagement with mobile banking. Researchers continued to track transactions and account balances for six months to assess the long-term effects on mobile banking usage and savings behavior.

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Participants who received financial incentives or peer endorsements were more likely to use mobile banking, but those in the Endorsement group increased their mobile banking usage by twice as much. Participants in the Endorsement group also continued to save more after six months, whereas those in the Incentive group did not.

Mobile banking adoption: During the intervention, 37.3 percent of participants in the Endorsement group used mobile banking, compared to 25.4 percent in the Incentive group and 10.6 percent in the comparison group. Participants in the Endorsement group continued to use mobile banking at twice the rate of the comparison group six months after the intervention ended. Researchers suggested that peer support played a key role in sustaining technology adoption beyond initial exposure.

Savings behavior: Participants in the Endorsement group increased the savings in their linked bank accounts by 48 Cedis (US$4 at the time of the evaluation) per month on average, a 28 percent increase from 171 Cedis (US$11 at the time of the evaluation) in the comparison group. This effect became more pronounced three months after the intervention and continued to grow over time, demonstrating the lasting impact of peer-led financial education. Participants in the Incentive group, despite increased mobile banking usage, did not change their savings behavior over time.

Role of peer influence: Participants in the Endorsement group were more likely to discuss mobile banking with peers and seek assistance in using the service. They were also more knowledgeable about mobile banking and fraud prevention than those in the comparison or Incentive groups, suggesting that increased knowledge and communication may have driven the impacts on adoption and savings. Researchers suggested that group leaders likely played a critical role in encouraging continued use by guiding transactions and fraud prevention strategies.

These findings highlight the potential for peer-led interventions to drive the adoption of digital financial services. Policymakers and financial service providers may consider leveraging existing community structures, such as microfinance groups, to promote financial literacy and encourage sustained engagement with mobile banking.