

**Researchers**

Abu S. Shonchoy  
Florida International University

Emma Riley  
University of Washington

Robert Osei  
Institute of Statistical, Social and Economic Research (ISSER), University of Ghana

**Timeline**

2021

**Sample Size**

400 Microfinance Consumers

**Research Implemented by IPA**

Yes

# The Impact of Fraud Training on the Take-up of Mobile Banking Services

## Abstract

Fraud in mobile banking can be difficult to detect, and consumers often do not know they were targeted until after the transaction occurred. This can lead to consumer distrust of mobile banking services, particularly for consumers who have a higher chance of experiencing fraud, like women. In Ghana, researchers are measuring the impact of fraud recognition and avoidance training on encouraging female microfinance consumers to take up mobile banking services.

## Policy Issue

By 2026, the mobile banking industry's market value is expected to reach US \$1.82 billion.<sup>[1]</sup> The share of mobile banking in low-and-middle-income countries' (LMICs) Gross Domestic Product (GDP) has also increased by two percent in 2020.<sup>[2]</sup> These facts reflect the growing importance of mobile banking, but as the sector grows, the risk of fraud has also increased. Fraud can have severe negative consequences for consumers who fall victim to it, including loss of money, insecure and at-risk accounts, and more interactions with parties attempting to defraud them. Female consumers are more likely to be fraud targets due to the perception that they have lower financial literacy and understanding of how to use mobile money services.<sup>[3]</sup> Incidentally, the existence of fraud in mobile banking transactions has the potential to make consumers anticipate that they will experience fraud. This in turn can generate hesitation towards using mobile banking services.<sup>[4]</sup>

There is growing research on consumer protection in mobile banking for female consumers, particularly in how they are affected by fraud and how to build trust in mobile services.<sup>[5]</sup>

However, the research on fraud as a primary barrier to mobile banking is not present. This project adds to the literature by targeting and overcoming fraud specifically to incite mobile banking adoption amongst female consumers.

## Context of the Evaluation

Ghana has become one of the fastest growing mobile banking markets in Africa. As of 2021, almost 39 percent of consumers aged 15 and older had a mobile money account.<sup>[6]</sup> However, the quick rise in the adoption of mobile banking services has been accompanied by a subsequent rise in fraud activity by providers and individuals claiming to be associated with providers. Female mobile banking consumers are often victims of fraud, as a 2020 audit study found that female consumers are 89 percent more likely than men to experience fraud.<sup>[7]</sup> Although Ghana's financial institutions have instituted policies to protect consumers against fraud, such as requiring IDs for consumers before making withdrawals,<sup>[8]</sup> these measures have not been enough. For example, many poor consumers who live in isolated villages tend to not have formal IDs, and IDs can be easily faked.<sup>[9]</sup> This can limit the effectiveness of the ID policy on reducing fraud.

## Details of the Intervention

In Ghana, researchers partnered with Opportunity International Savings & Loans (OISL) to measure the impact of fraud recognition and avoidance training on female microfinance consumers' take up of mobile banking services.

The participants of this study include 400 female microfinance clients in 115 microfinance groups from rural areas of central Ghana who have a bank account. To determine whether encouragement of mobile banking services incurs adoption, the researchers randomly assigned the participants into the following groups:

- **Individual monetary reward:** 100 clients (29 microfinance groups) received information on the benefits of mobile banking services and received a monetary reward if they completed a mobile banking transaction within a one-month period.
- **Individual monetary reward + peer-led training and monetary reward:** 100 clients (29 microfinance groups) received the same monetary reward as the first group. A group leader was also trained to use mobile banking services and informed about their benefits, was instructed to train the rest of the participants on how to use mobile banking services, and received a monetary reward for each member of her group who completed a mobile banking transaction.
- **Individual monetary reward + peer-led training and monetary reward + fraud training:** 100 clients (29 microfinance groups) received the same intervention as the first two groups and received additional training on how to identify, avoid, and manage fraud threats when conducting transactions.
- **No intervention:** 100 clients (29 microfinance groups) received no encouragement to use mobile banking services but were free to use them.

Participants were then surveyed after the intervention to evaluate the effectiveness of the fraud training program on female consumers' perceptions of fraud and mobile banking services.

## Results and Policy Lessons

Research ongoing; results forthcoming.

## Sources

<sup>[1]</sup> Allied Analytics, "Mobile Banking Market Size to Reach \$1.82 Billion by 2026 | Top Player Positioning & Industry Dynamics," EIN News, September 2, 2021  
[https://www.einnews.com/pr\\_news/550355396/mobile-banking-market-size-to-reach-1-82-billion-by-2026-top-player-positioning-industry-dynamics](https://www.einnews.com/pr_news/550355396/mobile-banking-market-size-to-reach-1-82-billion-by-2026-top-player-positioning-industry-dynamics)

<sup>[2]</sup> International Monetary Fund, "Press Release No. 21/315: IMF Releases the 2021 Financial Access Survey Results," International Monetary Fund, November 1, 2021

<https://www.imf.org/en/News/Articles/2021/10/28/pr21315-imf-releases-the-2021-financial-access-survey-results>

<sup>[3]</sup> Chalwe-Mulenga, Majorie, Eric Duflos, and Gerhard Coetzee. 2022. "The Evolution of the Nature and Scale of DFS Consumer Risks: A Review of Evidence." Slide Deck. Washington, D.C.: CGAP

<sup>[4]</sup> Weschler, Michael, Samikshya Siwakoti. 2020. "Gender, Cybersecurity, and Fraud in DFS" Columbia University  
[https://dfsobservatory.com/sites/default/files/papers/Cybersecurity\\_Gender\\_Fraud\\_DFS\\_210214.pdf](https://dfsobservatory.com/sites/default/files/papers/Cybersecurity_Gender_Fraud_DFS_210214.pdf)

<sup>[5]</sup> "Breza, Emily; Kanz, Martin; Klapper, Leora. 2020. Learning to Navigate a New Financial Technology : Evidence from Payroll Accounts. Policy Research Working Paper;No.. 9495. World Bank, Washington, DC.

<sup>[6]</sup> Statista, "Share of population with a mobile money account in Ghana from 2018 to 2021," Statista, accessed January 31, 2022

<https://www.statista.com/statistics/1175988/mobile-money-accounts-ghana/>

<sup>[7]</sup> Annan, Francis, Gender and Financial Misconduct: A Field Experiment on Mobile Money (2019). Available at SSRN: <https://ssrn.com/abstract=3534762>

<sup>[8,9]</sup> PK Senyo, “Ghana’s new mobile money rule could derail financial inclusion. But there are answers,” The Conversation, April 18, 2021

<https://theconversation.com/ghanas-new-mobile-money-rule-could-derail-financial-inclusion-but-there-are-answers-158770>

March 07, 2022