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**Timeline**

2021-2022

**Sample Size**

7 million individual and social media complaints records

**Research Implemented by IPA**

Yes

# Identifying Risk Factors Using Predictive Modeling for Digital Financial Services Fraud in Uganda

## Abstract

Third-party fraud poses a significant threat to the healthy expansion of digital financial services and the financial health of consumers. In Uganda, researchers are conducting data analysis using customer service data and social media to identify risk factors associated with fraud. Based on the results, the research team will design fraud prevention messages aimed at vulnerable populations.

## Policy Issue

The use of digital financial services (DFS) has increased throughout the developing world, as more consumers rely on these services to send and receive money, take out loans, and save. But third-party fraud—when an individual’s identity or personal details are used without their consent to open new accounts or take over existing accounts—can threaten the reach of digital financial services. The same survey found that consumers who cannot resolve complaints of fraud are more likely to stop or reduce usage of digital financial services compared to those who reported their complaint was resolved.<sup>[1]</sup>

Complaints and redress channels offer consumers the opportunity to alert financial service providers or regulators of fraud attempts and potentially mitigate their consequences. However, they can only be taken *after* the scam attempt and loss of funds. In Uganda, researchers are using complaint data to identify risk factors for digital financial services fraud

and potentially design effective interventions to prevent common fraud risks before they affect a large number of consumers.

## Context of the Evaluation

A recent survey conducted by Innovations for Poverty Action (IPA) found that in Uganda 47 percent of digital financial services users have experienced a fraud attempt via phone or SMS in recent months. More than 50 percent of the actors who committed fraud preyed on the trust in recognized private and public bodies to deceive consumers: 49 percent of fraudsters claimed they were the mobile network operator (MNOs) or financial service provider (FSP) and another 2 percent stated they were the country's regulator entity. Between March and September 2020, as many as 500,000 consumers fell victim to third party fraud in the country. Moreover, in Uganda, 33 percent of DFS users surveyed reported attempted phishing fraud in the past 6 months, and 31 percent having been charged extra fees by a mobile money agent.

The Uganda Communications Commission (UCC) partnered with IPA to develop effective solutions that both regulators and providers can implement to prevent digital financial fraud and reduce direct and indirect costs of fraud.

## Details of the Intervention

*Note: This study is not a randomized controlled trial.*

Researchers are conducting data analysis to identify risk factors associated with fraud in Uganda. Using a database of 7 million fraud reports collected through customer service or social media, the research team identifies patterns that could help predict the likelihood of fraud. The factors analyzed include age, gender, location, and time of the transaction.

Based on this analysis, the team will then develop fraud prevention messages aimed at at-risk populations. Possible types of fraud prevention materials may include radio scripts, interactive voice response systems, SMS, posters, and Whatsapp messages. The messages will be tested to identify the best approach to combat fraud. Researchers plan to partner with a mobile network operator to test these solutions with a subsection of consumers.

## Results and Policy Lessons

Research ongoing; results forthcoming.

## Sources

<sup>[1]</sup> Uganda Consumer Protection in Digital Finance Survey, March 2021  
<https://www.poverty-action.org/sites/default/files/Uganda-Consumer-Survey-Report.pdf>

March 01, 2022