Extended Abstract
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Paper/Poster Title	Savings for resilience: Investigating saving instruments in Mali

Abstract prepared for presentation at the 98th Annual Conference of The Agricultural Economics Society will be held at The University of Edinburgh, UK, 18th - 20th March 2024.

Abstract	200 words max

Despite worldwide initiatives to alleviate poverty, 35% of Sub-Saharan Africa's (SSA) population continues to live below the poverty line. In light of this, many regard the promotion of savings as a cost-efficient and low-risk tool for household resilience and pro-poor development. We assess whether different saving tools can promote the saving probability and the savings amount of 374 Malian farmers by employing a two-step selection model. In the first step, we assess determinants of whether or not a farmer saves by applying a probit model. In the second step, we estimate an Ordinary Least Squares (OLS) regression to investigate a farmer's savings amount depending on whether they save through mobile money (MM), via a bank account, or a secret place. We find considerable heterogeneity in saving determinants and identify a particularly strong role of supply-side factors such as transaction cost and infrastructure. Furthermore, the results suggest that saving with a secret place is persistently popular, indicating a potential to transfer savings to formal accounts for interest earnings. The findings have implications for improving financial practices and resilience among smallholder farmers in SSA, suggesting the transformative potential of secure and accessible saving mechanisms.

Keywords	Mali, Mobile Money, Household Saving, Microfinance, Resilience
JEL Code	D14, G51, I30, O55, Q14

Introduction	100 – 250 words

Despite global efforts to alleviate poverty, 35% of the SSA population still lives on less than $2.15 per day (Hasell, 2022). One avenue to tackle persistent poverty is microfinance, whereby marginalized households get the chance to invest, protect themselves against shocks, and smooth consumption through loans, insurance, or savings accounts. In recent years, saving and household financial resource management have been identified by researchers and policy decision-makers as promising instruments for pro-poor development (Banerjee & Duflo, 2011). In comparison to credit or insurance, for savings, funding requirements through external capital are negligible (Karlan et al., 2014) and there is no risk of over-indebtedness and being blacklisted. Until now, the question remains as to which factors influence (i) the decision to save and (ii) the amount saved. Thus, in this paper, we set out to investigate this issue and further disaggregate the saving instruments by analyzing the factors influencing the savings decision and amount concerning saving via (a) MM, (b) bank, or (c) a secret place. Understanding the determinants of farmers'

saving decisions when using various instruments is crucial to adequately advise MM providers and banks on ways in which to increase the attractiveness of formal and semi-formal accounts to farmers and policymakers.

Methodology	*100 – 250 words*

To answer our research questions, and contribute to the knowledge on savings determinants, we analyze a primary data set from Malian smallholder farmers. All participants of our study are clients of the Malian bank Banque Nationale de Développement Agricole (BNDA). The BNDA is a major commercial bank operating across all sectors in Mali and Western Africa. The data collection took place from December 2022 to February 2023. In November 2022, we conducted a one-week training session in Bamako, focusing on thoroughly preparing enumerators to minimize potential interviewer biases. All survey participants were interviewed face-to-face at their home by our enumerators.

To investigate the factors influencing Malian farmers' saving decisions and their amount of savings per instrument, we apply a two-part selection model. In particular, we employ a probit regression for the probability of observing a positive-versus-zero outcome. Conditional on a positive outcome, we apply an OLS regression. As a robustness check and to address potential endogeneity concerns, we follow Jack and Suri (2014) and apply the instrumental variable (IV) "distance to the next MM agent" to reduce endogeneity concerns and emphasize the robustness and internal validity of our two-staged approach.

Results	*100 – 250 words*

Our contribution to the body of evidence is threefold: First, we show initial insights into the heterogeneous effects of relevant determinants on farmers' savings decisions for different instruments. Second, we identify supply-side factors that drive saving success: Across the three instruments, and for total savings amount, we observe that better bank infrastructure (measured in walking distance to the next bank branch) seems to improve the likelihood of higher savings. Another factor is the cost (measured in transaction costs) and the monetary gains (indicated through interest earnings) associated with saving. Third, and in line with Aggarwal et al. (2023), we found that the secret place was still of relevance when making savings decisions. Despite the apparent ubiquity of MM, people nonetheless choose to keep a large portion of their savings at home, i.e. in a secret place. Here, we identify a considerable potential for formalizing these savings and allowing savers to boost their saving success through increased safety, commitment-increasing behavioral mechanisms, as well as through interest earnings. Particularly, we identify the self-reported distance to an MM agent as a suitable instrument for MM savings and thereby confirm observations from Suri and Jack (2016). The results of the IV indicate that the closer the respondent lives to the next MM agent, the higher their overall savings.

Discussion and Conclusion	*100 – 250 words*

Our study suggests that while the poor store money in a variety of ways, informal saving instruments still seem to be a popular option. On the one hand, for MM providers and banks, this provides an opportunity to pull these savings out of the hidden places and generate revenues. Savers, on the other hand, avoid the risk of theft and could start earning interest for their savings. However, up to now it seems that either, these formal instruments are not accessible to the poor or not attractive

enough. Hence, based on our findings, we suggest financial institutions to focus on the supply side e.g. by attracting savers through interest rates or advertising the improved security of saving formally to facilitate more savings among smallholder farmers. With our results, we address practitioners and policy decision-makers. We identify a positive effect of MM on savings accumulation and advise mobile network operators and banks to further strengthen their collaboration in the field of mobile solutions and to reach out to more marginalized areas.

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