

Adoption and Diffusion of Mobile Money-Enabled Crop Insurance

An Action Research Framework for Cotton Farmers in Mali's Sikasso Region

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ABSTRACT

Cotton farmers in Mali face significant climate-related production risks, yet uptake of formal insurance remains low. Mobile money platforms present a novel channel for delivering and managing micro-insurance products, but the socio-technical processes for their effective adoption and diffusion within farming communities are poorly understood. This action research study aimed to collaboratively design, implement, and evaluate a contextualised framework for enhancing the adoption and diffusion of a mobile money-enabled crop insurance scheme among smallholder cotton farmers. Employing a cyclical action research approach in the Sikasso Region, the study involved four iterative phases of planning, acting, observing, and reflecting with key stakeholders, including 120 farmer co-researchers, insurance providers, and mobile network operators. Data were collected through focus group discussions, participatory workshops, and structured field diaries. The co-designed intervention, which integrated insurance premium payments with input credit via mobile money, led to a reported increase in willingness to enrol. A key theme was the critical importance of trusted local farmer cooperatives as diffusion agents, with their involvement correlating with higher perceived legitimacy of the scheme. The study concludes that technology-driven insurance models require embedded social intermediation to achieve meaningful diffusion. The action research framework proved effective in adapting a financial product to local socio-economic realities and communication networks. Policymakers and insurers should mandate the inclusion of farmer representative bodies in product design. Future schemes should allocate resources for continuous community feedback loops and leverage existing cooperative structures for last-mile education and enrolment. action research, mobile money, agricultural insurance, technology adoption, Mali, smallholder farmers This paper provides a novel, empirically-grounded framework for orchestrating the diffusion of digital financial services in rural African communities, demonstrating how iterative co-design with end-users can mitigate adoption barriers.

Keywords: *Mobile money, micro-insurance, agricultural innovation diffusion, Sahel, participatory action research, cotton farming, Mali*

Article Highlights

- Integrating premium payments with input credit via mobile money increased willingness to enrol.
- Farmer cooperatives emerged as critical diffusion agents for legitimacy and trust.
- The cyclical action research approach effectively adapted the product to local realities.
- Continuous community feedback loops are essential for sustainable adoption.

Policy Imperative

Mandate the inclusion of farmer representative bodies in the design of technology-enabled financial products.

This framework demonstrates how iterative co-design can mitigate adoption barriers for digital services.

ABSTRACT-ONLY PUBLICATION

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