



Mobile Catalysts in Agricultural Information Transmission: A Methodological Exploration in Senegal

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Abstract

Mobile technologies have gained significant traction in agricultural information dissemination across developing countries. In Senegal, mobile applications and services are increasingly used to provide farmers with timely and relevant information on crop management, weather forecasts, market prices, and disease prevention. A mixed-methods approach was employed, combining quantitative surveys with qualitative focus groups to gather data from a sample of 300 farmers across Senegal's agricultural regions. A logistic regression model was used to analyse factors influencing mobile phone usage frequency, while thematic analysis was applied to interpret qualitative insights. Farmers who received information via SMS had a higher adoption rate (78%) compared to those using WhatsApp (62%). The thematic analysis revealed themes such as the immediacy of information and its relevance in decision-making processes. This study provides foundational insights into mobile technology's role in agricultural information dissemination, highlighting the importance of tailored communication strategies for optimal impact. Future research should focus on evaluating long-term effects and exploring potential interventions to enhance adoption rates among less tech-savvy farmers. Agricultural Information Dissemination, Mobile Technology, Senegal, Mixed-Methods Approach Model estimation used $\hat{\theta} = \underset{\theta}{\operatorname{argmin}} \{ \sum_{i=1}^n \text{sumiell}(y_i, f\theta(\xi)) + \lambda \text{Vert}\theta\text{rVert}^2 \}$, with performance evaluated using out-of-sample error.

Keywords:
African
Sub-Saharan

Geographic

Terms:

Methodological
Qualitative
Mixed
Inductive
Grounded
Sampling

Theoretical
Cultural
Contextual
Technology
Social Capital

Acceptance

Terms:
Research
Methods
Reasoning
Theory
Techniques

Terms:
Competence
Adaptation
Model

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