Mobile Tools in Rural Senegal: A Methodological Framework for Agricultural Information Dissemination

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Abstract

Mobile technology has become increasingly prevalent in rural areas of developing countries, offering opportunities for enhancing agricultural productivity through information dissemination. A mixed-method approach combining qualitative interviews with quantitative surveys will be employed. The survey will use a randomized controlled trial design, incorporating a control group and two intervention groups receiving different types of mobile messaging interventions. The initial phase of the study revealed that 60% of farmers preferred mobile messages over traditional broadcast methods for accessing timely agricultural information. The methodological framework demonstrates potential for improving communication channels between extension services and rural farmers in Senegal. Further research should focus on evaluating the long-term impact and sustainability of these interventions, particularly in diverse farming contexts. Mobile Technology, Agricultural Information Dissemination, Mixed-Methods Approach, Randomized Controlled Trial Model estimation used $\hat{\{}\theta\}=argmin\{\theta\}sumiell(yi,f\theta(\xi))+\lambda lVert\theta rVert2^{2}$, with performance evaluated using out-of-sample error.

Keywords: *Sub-Saharan, Participatory Action Research, Mobile Apps, GIS, Data Collection, Spatial Analysis, Community Mapping*

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