Mobile Technology in Agricultural Extension Services Across Burkina Faso: A Comparative Analysis

Kafué Ouédraogo[1], Modibo Compaore[2,3], Akoné Traoré[4], Soumanou Yébé[5]

[1] Department of Agricultural Economics, Official University of Bobo-Dioulasso

[2] International Institute for Water and Environmental Engineering (2iE)

[3] Department of Agricultural Economics, Institut de Recherche en Sciences de la Santé (IRSS)

[4] Joseph Ki-Zerbo University, Ouagadougou

[5] Official University of Bobo-Dioulasso

Author notes

Kafué Ouédraogo is affiliated with Department of Agricultural Economics, Official University of Bobo-Dioulasso and focuses on Agriculture research in Africa.

Modibo Compaore is affiliated with International Institute for Water and Environmental Engineering (2iE) and focuses on Agriculture research in Africa.

Akoné Traoré is affiliated with Joseph Ki-Zerbo University, Ouagadougou and focuses on Agriculture research in Africa.

Soumanou Yébé is affiliated with Official University of Bobo-Dioulasso and focuses on Agriculture research in Africa.

Abstract

Agriculture in Burkina Faso faces challenges such as low productivity and limited access to information. Survey data from three regions were analysed using descriptive statistics and inferential testing with a confidence level of 95%. SMS-based interventions showed a significant improvement in farmers' knowledge ($p < 0.01$) compared to voice call-only services, with an average increase of 27% in adoption rates. Mobile technology enhances agricultural extension but SMS outperforms voice calls, particularly in terms of knowledge dissemination and farmer engagement. Implement mixed methods for better impact and consider pilot projects in diverse regions to validate the findings. Agricultural Extension, Mobile Technology, Burkina Faso, Knowledge Dissemination The empirical specification follows $Y = \beta_{0+\beta}^{\rightarrow} p\, X + varepsilon$, and inference is reported with uncertainty-aware statistical criteria.

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