African Peace and Conflict Studies (Broader - Interdisciplinary)

Mobile Technologies in Agricultural Information Dissemination in Senegal: A Review

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Abstract

Mobile technologies have become increasingly prevalent in agricultural information dissemination globally, yet their impact on smallholder farmers in Senegal remains understudied. A comprehensive search strategy was employed, including electronic databases (PubMed, Web of Science), grey literature sources, and expert consultations. Studies published between and were included based on predefined inclusion criteria. Mobile technology has shown significant potential in enhancing agricultural productivity, with a notable proportion of farmers reporting increased crop yields by up to 40% after adopting mobile-based information services. The review highlights the promising role of mobile technologies in bridging the information gap for smallholder farmers in Senegal. However, challenges such as low internet penetration and digital literacy remain significant barriers. Investment should be prioritised in improving infrastructure to enhance mobile connectivity, while training programmes for farmers are essential to maximise benefits from mobile-based agricultural information services. 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, Mobile Apps, Participatory Approach, Information Systems, Wireless Networks, Geographic Information Systems, Case Study*

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