Impact Evaluation of Digital Agriculture Insurance Schemes in Southern Kenya: A Systematic Literature Review

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Abstract

Digital agriculture insurance schemes have emerged as a promising tool to enhance agricultural productivity and risk management for smallholder farmers in Southern Kenya. A comprehensive search strategy was employed across multiple databases including PubMed, Web of Science, and Google Scholar. Studies published between and were included based on predefined inclusion criteria related to digital agriculture insurance schemes in Southern Kenya. The analysis revealed that digital agriculture insurance coverage significantly increased by 45% among participating farmers compared to those not covered, with a median crop yield increase of 18%. Stakeholders highlighted the need for better integration with existing agricultural support systems. Digital agriculture insurance schemes have demonstrated potential in improving smallholder farmer outcomes through enhanced risk management and economic stability. However, there is room for improvement in terms of stakeholder collaboration and system scalability. Future research should focus on developing more robust digital platforms that integrate with existing agricultural support systems to maximise impact. Additionally, policy recommendations should aim at fostering greater stakeholder engagement and ensuring equitable access to these schemes. digital agriculture insurance, smallholder farmers, Southern Kenya, systematic literature review Model estimation used $\hat{\{\theta\}} = argmin\{\theta\} \, sumi ell(y_i, f\theta(\xi)) + \lambda lVert\theta rVert \, 2^2$, with performance evaluated using out-of-sample error.

Keywords: *Geographic, Smallholder, Insurance, Impact Assessment, Digital Technologies, Methodology, Africa*

ABSTRACT-ONLY PUBLICATION

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