



Digital Agricultural Insurance Adoption and Farmer Resilience in Southern Ethiopian Highlands: A Quantitative Analysis

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Abstract

Digital agricultural insurance has become an integral part of risk management strategies for smallholder farmers in Ethiopia's Southern Highlands. The region faces significant climate-related challenges, necessitating innovative solutions to enhance resilience. The study employed a mixed-methods approach combining quantitative survey data with qualitative interviews, collected from a representative sample of 300 farmers across four districts. Data analysis utilised regression models to assess relationships between insurance adoption and resilience indicators. Digital agricultural insurance has been adopted by over 45% of the surveyed farmers, significantly bolstering their ability to cope with income fluctuations due to weather-related shocks. The proportion of insured farmers who reported higher levels of adaptive behaviors increased from 20% to 38% post-adoption. The findings suggest that digital agricultural insurance can be an effective tool for enhancing farmer resilience in the face of climate-induced risks, but further research is needed to understand long-term impacts and potential barriers to adoption. Policy makers should consider subsidizing or mandating digital agricultural insurance as a means to improve rural livelihoods. Additionally, there is a need for continuous engagement with farmers to ensure widespread acceptance and use of these services. Digital Agriculture Insurance, Farmer Resilience, Climate Risk Management, Southern Ethiopian Highlands

Keywords: *Ethiopia, Highlands, Smallholder, Quantitative, Insurance, Resilience, Innovation*

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