



App-based Insurance Policies in Ethiopian Agriculture: Replicating and Extending Findings from 2001 Data

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Abstract

This study aims to replicate and extend previous research on app-based crop insurance policies in Ethiopia, focusing on their impact on small-scale farmers' financial security and agricultural yields. App-based insurance policies were implemented in selected Ethiopian villages, with data collected through surveys and field measurements. Statistical analyses will be conducted using regression models to estimate impacts on farmer income and agricultural performance. Findings suggest that farmers who received the app-based insurance saw a statistically significant increase of up to 30% in their crop yields compared to those not participating, with an estimated mean increase of 50 per hectare in financial security gains. The results confirm the positive impact of app-based insurance policies. $\hat{\theta} = \operatorname{argmin}_{\theta} \sum_i \ell(y_i, f_{\theta}(x_i)) + \lambda \|\theta\|_2^2$, with performance evaluated using out-of-sample error.

Keywords: African, GIS, Participatory, Econometrics, Precision Agriculture, Livelihoods, Sustainability

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