



Mechanization Strategies and Appropriate Technologies on Small Farms in Mali: A Replication Study

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Abstract

This study examines the impact of mechanization strategies and appropriate technologies on small farms in Mali. A replication of an earlier study using a mixed-method approach including surveys and interviews. Mechanization increased yields by 10% (mean yield increase) compared to non-mechanized farms. Appropriate technologies significantly reduced labour intensity on small farms in Mali, leading to higher productivity. Farmers should be provided with targeted training and access to finance for implementing these technologies. Mali, Mechanization Strategies, Appropriate Technologies, Small Farms The empirical specification follows $Y = \beta_{0+\beta}^{-} p X + varepsilon$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: *African geography, Smallholder farming, Mechanization strategies, Appropriate technologies, Mixed-methods approach, Agricultural productivity, Community engagement*

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