



Mechanization and Appropriate Technologies within Small Farm Systems in Mali: A Theoretical Framework

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Abstract

Mechanization and appropriate technologies play a crucial role in enhancing productivity and sustainability for small farm systems in Mali's agricultural sector. This study employs a mixed-methods approach, integrating qualitative interviews with quantitative analysis to explore the challenges and opportunities associated with adopting new technologies in small-scale farming. The theoretical framework presented here provides a solid foundation for understanding the barriers and facilitators to adopting mechanization and appropriate technologies within small farm systems in Mali. Policy makers should prioritise education programmes that emphasise the benefits of mechanization and appropriate technology adoption, alongside providing financial incentives to facilitate its uptake by farmers. The empirical specification follows $Y = \beta_{0+\beta}^{-1} p X + \text{varepsilon}$, and inference is reported with uncertainty-aware statistical criteria.

Keywords: *Sub-Saharan, Agricultural, Sustainability, Mesoanalysis, Holistic, Systems, Contextual*

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