

Locus of Control and Technology Adoption in Africa: Evidence from Ethiopia

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Abstract

We investigate the implication of farmers' locus of control on their technology adoption decisions. Our empirical analysis is based on two longitudinal surveys and hypothetical choice exercises conducted on Ethiopian farmers. We find that locus of control significantly predicts farmers' technology adoption decisions, including use of chemical fertilizers, improved seeds, and irrigation. We show that individuals with an internal locus of control have higher propensity of adopting agricultural technologies, while those with an external locus of control seem less likely to adopt one or more of these agricultural technologies. We observe these empirical regularities in both datasets, and for both revealed measures of farmers' technology adoption decisions as well as farmers' hypothetical demand for agricultural technology. The results hold even in a more conservative fixed effects estimation approach, assuming locus of control as time-variant and dynamic behavioral trait. These findings provide psychological (behavioral) explanations for the low rates of adoption of profitable agricultural technologies in Sub-Saharan Africa. Our results highlight that improving farmers' psychological capital and non-cognitive skills may facilitate agricultural transformation. More generally, the results suggest that anti-poverty policies that only focus on relaxing short-term external constraints, including physical access to markets and technologies, may not sufficiently alleviate agricultural underinvestment.

Keywords: Locus of control, internal constraints, behavioral biases, technology adoption, agricultural investment, chemical fertilizers.

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