Do International Food-Safety Standards Marginalize Poor Farmers? Evidence from Kenyan Family Green Bean Farms

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Food-safety scandals and ensuing consumer concerns over food contamination by microorganisms and pesticides have led European governments to enact stringent food-safety regulations. Fresh-produce retailers in the European Union (EU), especially supermarkets, have responded by developing their own protocols and passing them upstream to developing-country exporters. In order to keep their share of the EU supermarket trade, major developing-country exporters are imposing very strict pesticide-use and handling requirements while demanding that suppliers establish traceability systems and sanitary standards. To enforce compliance with these international food-safety standards (IFSS), exporters are closely monitoring their suppliers under contracts.

What impact do these demanding standards and intensified oversight have on developing- country smallholders who often have poor access to capital? For contracted farmers, meeting IFSS is a prerequisite for staying in business. Yet meeting IFSS implies incurring higher variable costs (e.g., switch to new safer but more costly pesticides), investing in costly medium- and long-term assets such as a grading shed, hessian cooler, pesticide disposal pit, and pesticide store, and keeping technical records of pesticide use and application. The high capital needs of making these adjustments have led to growing concern that IFSS will exclude smallholder farmers from the lucrative fresh export business. Despite these concerns, there are as yet no studies that empirically investigate whether access to export contracts is biased against smallholder farmers in developing countries. In particular, what factors affect a farmer's ability to obtain a contract with an exporter firm and what factors apart from access to a contract determine the degree to which farmers will comply with IFSS?

This study uses quantitative data collected from 180 Kenyan green bean growers during 2003–04 and stratified by access to production contracts with exporters. Two econometric models are estimated to address the research questions. First, survey probit regression is used to estimate the probability that a Kenyan green bean farmer obtains a production contract with an exporting firm, as determined by physical, human, and social capital endowments. Second, survey Poisson regression is used to estimate the degree of IFSS compliance as a function of physical, social, and human capital endowments.

Results show that endowments with physical capital (i.e., land and physical assets besides land), human capital (experience in growing green beans), and social capital (membership in farmers' group) as well as access to institutional assets (namely, public extension) affect both the probability of contract participation and the intensity of IFSS compliance. However, whereas prior pest-management knowledge affects contract participation, there is no evidence that it influences the degree of IFSS compliance.

The study concludes that wealth (i.e., physical, human, and social capital endowments) affects both the probability of contract participation and intensity of IFSS compliance. Although this finding suggests that poor developing-country farmers face disadvantages, related evidence shows that smallholder farmers who form marketing associations can obtain export contracts, comply with IFSS, and gain access to United Kingdom supermarkets.

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