The role of preferences and perceptions in shaping coffee farmers' risk behavior: evidence from Vietnam

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Abstract

This study examines the link between risk preferences and perceptions and management strategies across multiple dimensions (risk domains, likelihood of risk, perceived impacts and time reference). We use survey data from 802 coffee farmers in Vietnam's Central Highlands. Ordinary Least Squares and Multivariate Probit regression models are employed to analyze the relationship between risk perceptions and risk preferences, as well as the role of risk preferences and risk perceptions in farmers' risk decisions. The findings show that both past risk experiences and anticipated uncertainties are strongly associated with farmers' risk perceptions. While risk perceptions are associated with risk preferences, decision-making across all dimensions is predominantly driven by risk perceptions rather than risk preferences. Farmers with higher risk perceptions tend to adopt strategies that are likely to have short term benefits such as crop health management (i.e., pest and disease control, and quality of seedling management), market and financial mitigating measures while deprioritizing resource-intensive measures such grafting, renovation and water-saving management. Furthermore, the adoption of risk management strategies is highly correlated with past risk experience strongly and self-efficacy. These findings emphasize the importance of integrating risk perceptions and self-efficacy into agricultural policies and extension services to enhance farmers' resilience and adoption of risk management strategies. This study contributes to the development of comprehensive and more effective risk management strategies that address a wider range of uncertainties and improve the resilience and sustainability of coffee farmers.

Keywords: risk preferences, risk perceptions, risk behaviors, Robusta coffee, Vietnam
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Conflict of interest statement

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.