

Enhancing Sustainable Timber Production in Vietnam: Smallholder Tree Growers' Preferences for Contract Farming

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Abstract

Long-term tree contract farming (CF) across South-East Asia has emerged as a central mechanism for sustainable timber production, yet many ex-ante contract designs fail by overlooking smallholder grower preferences. This study investigates preferences for tree CF using a discrete choice experiment (DCE) among 406 smallholders across five provinces in Central Vietnam. Random Parameter Logit (RPL) models show that timber price premiums and subsidized loans significantly increase CF uptake, while longer contracts deter it, establishing a vital role of front-loaded credit support. Interaction models reveal grower preference heterogeneity in contract trade-offs with wealthier households, cooperative members, and already certified growers in favor longer contract durations but responding less to financial incentives. Experiences with localized climate shocks create distinct choice behaviors in that smallholders exposed to storm damage demand shorter contractual commitments and remain unresponsive to price incentives, whereas those facing climate-induced tree diseases actively accept longer contracts as mechanisms for silvicultural risk mitigation. This study contributes novel evidence to the tree CF literature and particularly for Vietnam by demonstrating that grower preferences and climate vulnerabilities are not uniform. Consequently, to achieve Vietnam's ambitious sustainable forestry targets by 2030, outgrower schemes must adopt flexible, climate-sensitive, and regionally differentiated contract designs.

Keywords: Vietnam, Tree plantations, Contracts, Outgrower, DCE, Smallholders