



Land tenure and farm management efficiency: The case of smallholder rubber production in customary land areas of Sumatra

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Received 21 September 1999; accepted in revised form 14 November 2000

Key words: land tenure institutions, profitability, smallholder rubber production, tree planting

Abstract

This study assesses the impact of land tenure institutions on the efficiency of farm management based on a case study of rubber production in customary land areas of Sumatra, Indonesia. Using the modes of land acquisition as measures of land tenure institutions, we estimated tree planting, revenue, income, and short-run profit functions, and internal rates of return to tree planting on smallholder rubber fields. We find generally insignificant differences in the incidence of tree planting and management efficiency (defined as residual profits) of rubber production between newly emerging private ownership and customary ownership. This is consistent with our hypothesis that tree planting confers stronger individual rights, if land rights are initially weak (as in the case of family land under customary land tenure systems). On the other hand, short-term profits are higher on land that is rented through share tenancy. This result indicates that rubber trees are over-exploited under renting arrangements due partly to the short-run nature of the land tenancy contracts and partly to the difficulty landowners face in supervising tapping activities of tenants in spatially dispersed rubber fields.

Introduction

While individual usufruct rights usually are well established under customary land tenure systems, including community, lineage, and extended family ownership, the rights to transfer and inheritance are often limited (Bassett, 1993; Sheppard, 1991). Such customary land tenure institutions have evolved towards individualized tenure, in which individual community members have clearer ownership rights, in response to population pressure and agricultural commercialization in many parts of Asia and Africa (e.g., Bruce and Migot-Adholla, 1993; Otsuka et al., 2000; Place and Otsuka, 2000a, b). It is not clear, however,

whether and to what extent individualized tenure institutions are still governed by customary land tenure rules.

If individual land ownership rights are not secure under emerging individualized tenure, those who undertake long-term investments may not be able to reap the future benefits due to an inability to bequeath the property to desired heirs or to sell the land freely if the need arises. In this way, efficient farm management may be hampered by tenure insecurity (Besley, 1995). On the other hand, the spontaneous process of institutional choice may lead to the establishment of secure individual land tenure institutions in customary land areas, as envisaged by the evolutionary view

