

C07 – Determinants of land use change and impact on household welfare among smallholder farmers

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Project Summary

During the first phase of the project, extensive field work was conducted and data were collected from 701 farm households. Seven research papers are being developed. These papers cover the following aspects:

- Determinants and impacts of land market transactions (Krishna et al., 2014)
- Patterns of smallholder oil palm expansion and micro-level drivers (Euler et al., 2015)
- Yield gaps in smallholder oil palm cultivation and existing production constraints
- Livelihood impacts of land-use changes in terms of household consumption
- Impact heterogeneity between adopters and non-adopters of oil palm
- Village-level factors that influence land-use changes over time (in cooperation with C08; Gatto et al., 2015a)
- Impacts of the oil palm contracts on village welfare (in cooperation with C08; Gatto et al., 2015b)

The basics: economics of land use systems

- Rubber remains the major land-use type among smallholders in Jambi, while oil palm is gradually gaining in importance.
- There are significant differences in terms of factor use: oil palm is more capital-intensive with relatively low labour requirements, rubber is much more labour-intensive, and the labour is required continuously over the entire year.
- To ensure continued supply of labour, rubber farmers get into sharecropping arrangements, which is likely to reduce efficiency and profit.
- Rising labour costs increase the attractiveness of oil palm.
- Differences in factor endowments and institutional factors may lead to heterogeneous livelihood impacts of land-use changes among rural households.

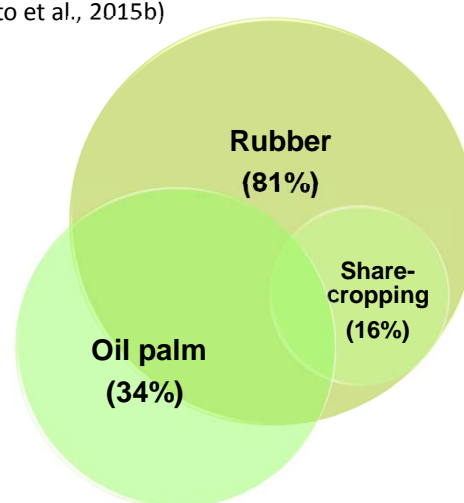
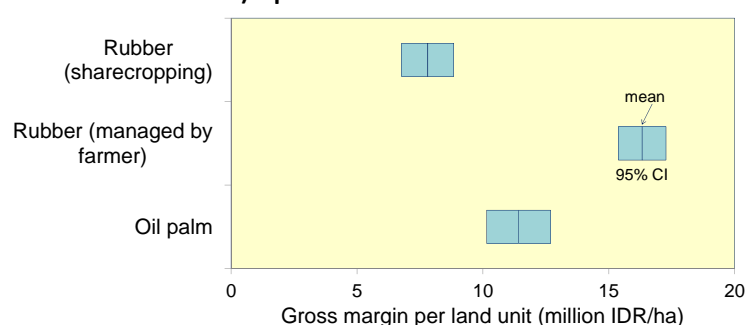


Fig. 1: Adoption of plantation crops by sample farmers (n = 701). 21% of sample farmers cultivates both oil palm and rubber. Contractual labour arrangements exist only for rubber.

Fig. 2: Gross margin from productive plantations

a) per land unit



b) per labour unit



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