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## Farm Size and Productivity: Empirical Evidence from Rural Vietnam

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### Abstract

The inverse relationship between farm size and productivity is a major hypothesis of agricultural development which is particularly relevant for the land reform debates in developing countries. In the course of Vietnam’s economic reforms, agricultural production has attained high growth rates. However, land market is still in its infancy and the allocation of agricultural land to the most productive farms does not take place to the necessary extent. The land-man ratio is a constraint for the development of efficient farm sizes. In this paper, we submit an empirical test for the inverse relationship between farm size and land productivity in three provinces in Vietnam. Additionally, we investigate to what extent farm size affects labour productivity in agriculture.

The study hypothesises that as farm size increases land productivity decreases but labour productivity increases. This hypothesis is tested by using data on some 2200 rural households in three provinces of Vietnam, namely Ha Tinh, Thua Thien Hue, and Dak Lak in 2008 collected under the DFG project “Impact of Shocks in the Vulnerability to Poverty: Consequences for Development of Emerging Southeast Asian Economies”. There are two models used in this analysis: a fixed-effects model with village dummies and a random effects model.

Results confirm the negative relationship between land productivity and farm size. This finding still holds when village-related factors such as soil quality, irrigation facilities, and prices are ruled out in the fixed-effects model. Another finding is the existence of decreasing returns to scale. This fact is explained by the low level of mechanisation in agricultural production in these provinces. Moreover, the study finds an inefficient allocation of land, labour and other inputs which is ascribed to the abundance of family labour in small farms and the imperfections of the land, labour, and credit markets. Higher crop yields of small farms are merely obtained by means of using production inputs excessively. Finally, the results show that larger landholdings increase labour productivity. The outcomes of the study call for further reforms in land market and the provision of more off-farm labour opportunities to facilitate the development of larger farms.

**Keywords:** Farm size, labour productivity, land market, land productivity, land reform, returns to scale, Vietnam