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## The Changing Role of Agriculture in Rural Villages of an Emerging Market Economy: The Case of Thailand

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### Abstract

This paper analyses the long-term changes in the livelihoods and the role of agriculture in rural households in Thailand, based on a panel dataset collected in 2009 and 2018 from a census of a village in Phetchaboon province, Thailand. Results are shown by a descriptive analysis of the panel data and a Positive Mathematical Programming (PMP) model. The descriptive analysis shows that per capita household income has increased by 8.5% on average per year while income inequality increased, with the Gini coefficient rising from 0.47 to 0.59. Nevertheless, poverty decreased from 54.3% to 28.9% head count ratio. The share of agriculture in household income decreased from almost 60% to just over 40% within the ten-year period. Wage employment instead of own agriculture has become the main occupation due to largely temporary migration. Pronounced inequality in land holding did holding not change much and was already high in 2009 with a Gini coefficient of 0.65. In the analysis, we split households into two groups, namely those where agriculture exceeds 50% of household income and those below. Clearly, we see that the farmer have declined. The demographic structure of the village shows an ageing population with strong implications for the organisation of agriculture. The PMP village model helps to explore future village development trends, in particular the development of agriculture. Key variables are the price of the maize, as the main crop, and the costs of labour. Results show that even high price incentives would not bring more labour back into agriculture. Higher wages will shift more labour out of agriculture but there is no effect on the distribution of land holding. Villagers hold on to their farm and engage in part-time farming as a safety measure. To a considerable extent, this impedes structural change in agriculture. However, as shown by the recent Corona crisis, it is perhaps a good livelihood strategy of rural households in emerging market economies like Thailand.

**Keywords:** Panel data, positive mathematical programming, role of agriculture, rural livelihood, Thailand