Effects of Contract Farming on Productivity and Income of Farmers in Production of Tea in Phu Tho Province, Vietnam

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A thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy in Management

Newcastle Business School
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February 2019
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I, Dr Janet Dzator, attest that Higher Degree by Research candidate Anh Tru Nguyen made a significant and original contribution to the joint publications included as part of this thesis.

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I, Dr Andrew Nadolny, attest that Higher Degree by Research candidate Anh Tru Nguyen made a significant and original contribution to the joint publications included as part of this thesis.

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<td>ATT</td>
<td>Average Treatment Effects on the Treated</td>
</tr>
<tr>
<td>EUR</td>
<td>European Euro</td>
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<tr>
<td>FAO</td>
<td>Food and Agriculture Organization of the United Nations</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>HA</td>
<td>Hectare</td>
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<tr>
<td>KG</td>
<td>Kilogram</td>
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<tr>
<td>KM</td>
<td>Kernel Matching</td>
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<tr>
<td>MARD</td>
<td>Ministry of Agriculture and Rural Development, Vietnam</td>
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<tr>
<td>NNM</td>
<td>Nearest-neighbour Matching</td>
</tr>
<tr>
<td>NPK</td>
<td>Nitrogen (N) Phosphorus (P) Potassium (K) (Mixed Fertiliser)</td>
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<tr>
<td>NTPHEPR</td>
<td>National Target Program on Hunger Eradication and Poverty Reduction</td>
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<tr>
<td>OLS</td>
<td>Ordinary Least Square</td>
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<tr>
<td>PSM</td>
<td>Propensity Score Matching</td>
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<td>SFM</td>
<td>Stochastic Frontier Model</td>
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<td>TE</td>
<td>Technical Efficiency</td>
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<tr>
<td>VAR</td>
<td>Vector Autoregressive</td>
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<tr>
<td>VBCSD</td>
<td>Vietnam Business Council for Sustainable Development</td>
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<tr>
<td>VND</td>
<td>Vietnam Dong</td>
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<tr>
<td>UNCTAD</td>
<td>United Nations Conference on Trade and Development</td>
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<td>US$</td>
<td>United States Dollar</td>
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Abstract

The research investigates the impacts of contract farming on tea productivity, income and poverty of farmers in Phu Tho province, Vietnam. Moreover, this study examines the causal relationship between economic growth, tea exports and poverty in Vietnam. In Vietnam, there is only a limited number of research studies on contract farming of tea production. The findings in the limited literature about the effects of contract farming on crop productivity and farmers’ welfare are not only inconclusive but the studies were based on cross-sectional data, which only measure association and not causality.

The paucity of specific knowledge on the impacts of contract farming on Vietnamese tea farmers especially in rural areas like Phu Tho province motivates the current study. Consequently, this study made three empirical contributions to the extant literature.

First, this study employs both cross-sectional and time series data to quantitatively explain the relationship between businesses and farmers in contract farming of tea production in Phu Tho province and in Vietnam. The study found that contracted farmers had superior technical efficiency that is statistically significant compare to non-contracted farmers in Phu Tho province. This finding confirms the positive effect of contracting on technical efficiency, which dominate the extant literature unlike in Ngoc et al. (2014) who found that there were no significant difference in technical efficiency between contracted and non-contracted farmers in Phu Tho province. Second, the current research is unique and different from existing studies because it explores mechanisms of the influence of contract farming on crop productivity and income of farmers in Phu Tho province by using the propensity score matching. Ngoc et al. (2014) only employed the stochastic frontier production function
to estimate technical efficiency of tea production and Oanh et al. (2016) estimated only the revenue and cost of tea farmers in Phu Tho province. The third investigation used time series data and confirmed the importance of tea production to economic growth and poverty reduction in Vietnam. The time-series analysis using data over the last four decades (1977–2016) was the first of its kind in Vietnam to the knowledge of the author. The limited existing studies only assess contract farming of tea production at the provincial level (Saigenji and Zeller, 2009; Ngoc et al., 2014; and Oanh et al., 2016).

Along with macro policies recommended to the government and Phu Tho province, the research also addresses recommendations to firms and tea farmers in Phu Tho province to facilitate the achievement of contract farming and reduce poverty. First, specification of the relationship in the contract. Second, construction of the contents of the contract through discussions between enterprises and tea growers. Third, signing the contract through intermediate organisations such as farmer associations and cooperatives. Fourth, specification of the consistency of the contents of a contract with the conditions and nature of the contracting parties. Fifth, adoption of a tea farming information system. Lastly, specification of communities and tea farmers that are consistent with contract farming of tea production.