

Econometric Studies on the Contribution of Rice Specialized Companies to the Agricultural Households Economy in Myanmar

ナン, キン スー トウィン

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Name : NAN KHINE SU THWIN

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Thesis Summary

Myanmar is an agricultural country. Although rice plays a major role in Myanmar, rice production still faces the problems of lower yield and low income level of rice farmers. Utilization of poor quality seeds, inappropriate market assessment, un-standardized agricultural inputs, lack of high agricultural technologies and underdeveloped infrastructures are the main factors for lower yield and income. For overcoming these problems, the government of Myanmar established a policy of granting export licenses to Rice Specialized Companies (RSCs) that had contract farming records in 2008 with the objective of developing the activities along the supply chain especially in upgrading farmers' income and increasing productivity. Therefore, RSCs have been involved in Myanmar rice supply chain by participating in rice production, processing and marketing since 2008.

In 2011–2012, the policy of preferential access to export licenses for RSCs was eliminated; from that point, any rice trader could obtain an export license, regardless of whether he or she had a contract farming record. RSCs also faced the problem of a poor repayment rate among contract farmers due to adverse weather effect and so on. For the above reasons, some RSCs have been transformed into normal traders; only a few RSCs are still involved in contract farming in Myanmar. It is said that the decrease in numbers of RSCs and their activities give negative effect on supply chain activities of rice in Myanmar. The government of Myanmar still hopes to continue the participation of RSCs in the rice industry. No comprehensive analysis of the contribution of RSCs has been conducted. It is essential to consider whether RSCs activities can give positive effect or not.

The participation of RSCs on the rice farmers' income and productivity are especially focused in this research. Because, increasing income and productivity is the fundamental goal for agricultural households. In this view, the main objective of this study is to investigate the impact of RSCs activities on the agricultural households economy in Myanmar.

We utilize the data that obtained by interviewing with 70 contract farmers, 70 non-contract farmers, 13 remaining RSCs, 20 old RSCs, some millers, Myanmar Rice Federation and Myanmar Rice Traders Association from a survey conducted between September 3, 2014 and October 28, 2014 in Ayeyarwaddy, Yangon and Bago regions of Myanmar.

For fulfilling the main goal of this study, the generalized contribution of RSCs on the supply chain activities of rice is mentioned in chapter 2. In this chapter, the comparison between traditional supply chain and RSCs supply chain in production site, processing site and marketing site is done by using descriptive analysis. The results of this chapter can be pointed RSCs supply chain is superior to traditional supply chain

in each site. In the production site, contract farmers can obtain better quality production inputs and lesser risk for credit than non-contract farmers. It can be reduced yield gap and increased farmers' income. In the processing site, higher productivity and lower losses modern rice mills can be produced quality rice in RSCs supply chain than traditional supply chain. In the marketing site, it is higher possibilities to sell higher quality rice in RSCs supply chain than traditional supply chain. As a result of it, it may also have a high potential for getting market share of Myanmar rice in the international markets. Moreover, RSCs supply chain is shorter than traditional supply chain. It can also reduce the marketing margin. Therefore, RSCs supply chain can give smaller marketing margin and larger price level in all marketing stages as a result of shorter chain.

In chapter 3, the impact of rice contract farming system on the income of rural farmers in Myanmar is investigated. We use the Propensity Score Matching (PSM) methodology, which can solve the problem of selection bias. The problem of selection bias is occurred in this case; because the participation in contract farming is nonexperimental and is not assigned randomly. The findings of this study indicate that the contract farming system implemented by RSCs can increase rice farmers' gross income per acre by 37.78%. In addition, this effect on income, estimated via the PSM method, is 0.68 percentage points lower than the effect estimated from a simple descriptive analysis. This chapter determines that the RSCs activities, via contract farming, benefit rural rice farmers' income in Myanmar.

To proof how RSCs contribute for upgrading the economy of agricultural households, the impact of contract farming by RSCs on the productivity of rice farmers is investigated in chapter 4. In this chapter, the productivity of contract farmers and non-contract farmers are mentioned as the Technical Efficiency (TE). The TE of both farmers are calculated by using the Data Envelopment Analysis (DEA) method. And then, the TE of contract farmers and non-contract farmers are compared by using PSM method to eliminate the selection bias. The findings of this study indicate that the contract farming system implemented by RSCs can increase rice farmers' productivity by 6.93%. In addition, this effect on productivity, estimated via the PSM method, is 4.28% points smaller than the effect estimated from a simple descriptive analysis. Moreover, according to the results of the DEA method, 20.00% of contract farmers are operating efficiently. On the other hand, only 10.00% of non-contract farmers are running in efficient level of production. According to the results, we can conclude that contract farmers operate more efficiently in rice production than do non-contract farmers.

The overall conclusions of this research determine that RSCs participation can give positive effects to the supply chain activities especially on the economy of agricultural households. Therefore, contract farming via RSCs should be continued for improving agricultural households economy in Myanmar.