

学位論文要旨 Dissertation Abstract

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Economic Analyses on Trade, Price volatility, Production, and
Consumption for Agricultural Products

学位論文題目 :
Title of Dissertation

(農産物の貿易、価格ボラティリティー、生産、消費に
関する経済学的研究)

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Dissertation Abstract

This study aims to provide an in-depth understanding of economics of trade, price volatility, livestock production, and consumption which are very important to enhance our understanding of the increasing economic growth. Specifically, the study is composed of eight essays; providing for four areas: free trade area, agricultural price volatility, broiler production, and agricultural consumption.

The first essay studies the impact economic of Free Trade Agreement (FTA) in ASEAN on multilateral trade development of Thailand and the Philippines. This experiment used a simulation analysis based on a GTAP/CGE model. The results from simulation in the different implications, confirm that the AFTA-CEPT would affect Thailand and the Philippines because full reciprocity would impact negatively on the Thailand and the Philippines's FTA, both in term of GDP, trade balance and allocative efficiently effect. These results indicate that Thailand obtains the greater benefit with the larger coverage membership. The potential gain for the Philippines remains unclear.

The second essay addresses the Trans-Pacific Strategic Economic Partnership (TPP) agreement. The results show that real GDP of the TPP economies will be boosted by less than one percent in eight of the eleven participating countries, Japan, Canada, Vietnam, New Zealand, Malaysia, Australia, and Singapore. The biggest welfare gains occur in USA, Japan, Australia, Canada, and New Zealand.

The third essay examines possible impacts on trade liberalization of TPP free trade area when Japan Korea and China join TPP agreement. The results show that expansion member countries among TPP countries with three countries would benefit from the FTA among member countries which gain much more from real GDP and welfare than the TPP agreement. This result suggests that the TPP would have negative effects for all non-members.

The fourth essay studies the agricultural price volatility in USA market. This experiment measures the volatility of agricultural commodity prices and crude oil using the GARCH approach. It concludes that strong GARCH effects were apparent for agricultural market. Interestingly, the correlations between soybean and crude oil present low values during the 2007-2013 time period.

The fifth essay outlines the contract broiler system of production cycle, and finance. The results show that broiler production for contract farming in Chiang Mai province was profitable venture in rural area of Thailand but some farmers complained about long waits until the delivery of the next cycle of chicks have started. Although the fixed costs of contract farmers (i.e. housing and equipment) were 51.98 percent of total costs of production which were borrowed on 5-10 years term in loans. This suggests that lower fixed costs may tend to hold down poultry costs, prices and favor industry expansion for contract farming.

The sixth essay details translog stochastic frontier model in which the effects of technical inefficiency are defined by the Battese and Coelli model. The results show that feed, bird stocks, operating costs, and other costs were important factors to broiler output in the Chiang Mai Province. It also shows that the socio-economic situation of farmers appears to have effect technical efficiency at the farm level. The results suggest that there is opportunity to improve broiler production in the region by adopting appropriate management practices.

The seventh essay studies technical efficiency of poultry farms by using the DEA approach and the variation in the technical inefficiency is explained using characteristic of farmers' variables. The mostly ranging of technical efficiency among the farmers shows that 46.15 percent of farmers have a technical efficiency ranging between 0.60 and 0.69. However, 1.92 percent of farmers were found to have the technical inefficiency below 0.50 efficiency score. It means that the amount of input used by farmers were lower than what would be needed to maintained the same output level. The results suggest that, there is opportunity to improve broiler production in the region by adopting appropriate management practices.

Lastly, eighth essay exams the mango for Japanese consumer including local brands (Miyazaki, and Okinawa prefecture) and import brands. The choice experiment method with conditional logit model was employed. The results show that Japanese consumer preferred local brand from Miyazaki prefecture and were they willing to pay about JYP 844 much higher than other brands at 400 g.