

ABSTRACT

Abstract of thesis submitted to the Graduate School of Maejo University in partial fulfillment of the requirements for the degree of Master of Science in Agricultural Economics

**FACTORS AFFECTING GROSS DOMESTIC PRODUCT
OF THAI AGRICULTURAL SECTOR**

By

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The objectives of this research were to investigate factors affecting gross domestic product of agricultural sector in Thailand and to study factor efficiency and returns to scale of agricultural production in Thailand. This research employed three production functional forms, i.e. linear, Double-log and Semi-log production function, using time series data during the period of 1976 to 1993.

The results indicated that the Double-log production function model was the best for the data analysis. The inputs which could significantly at the level of confidence 95 percent explain the changes in gross domestic product of agriculture were agricultural land holding, pesticides and capital stock employed in the agricultural sector.

The results of the production efficiency analysis and returns to scale of production showed that the factors used most efficiently were agricultural land holding, i.e. 1 percent increase in agricultural land holding increased 1.4204 percent of the value of gross domestic product of agriculture, followed by capital stock of agricultural sector, i.e. 1 percent increase in capital stock of agricultural sector increased 0.5542 percent of the value of gross domestic product of agriculture. Pesticide was used with lowest efficiency, i.e. 1 percent

increase in the amount of pesticide used increased 0.1110 percent of the value of gross domestic product of agriculture. The production of agricultural sector in Thailand showed increasing returns to scale. This indicated that the factors were not efficiently utilized; an increase in all factors at the same ratio would increase agricultural product at a higher level than the increase in the factors.

The results of the study imply that the government should provide more knowledge and training to farmers in proper use of pesticides, encourage the use of capital stock in agricultural sector, and improve efficiency of land use, because of all inputs were influence increase product of thai agricultural sector.

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