## 論文の内容の要旨

農業・資源経済学 専攻

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論文題目 An Analysis of the Structure of Myanmar's Exports and Its Implications for Economic Development

(ミャンマーの輸出構造とその経済発展への含意に関する分析)

This research aims to analyze the role of agricultural exports in Myanmar assessing the trade performance for 45 years from 1962 to 2006 by using different methodologies such as descriptive analyses and various econometric models to analyze the data series of export, import and GDP. These data are obtained from several sources such as the United Nations commodity trade statistics, world development indicators, international financial statistics, etc.

The changes for improved outcomes in trade policy reforms in Myanmar are related to the domestic policies practiced by the government of Myanmar and international demand. The study examines selected trade policy issues in the country. The research strategy in each chapter has been conducted in order to understand the process of economic growth of the country within the solid theoretical framework. Looking insights gained from this study would be valuable guidance for the policy makers in identifying the issues that may apply in the reform process. Moreover, empirical analyses in this study are important in order to inform the policy debate in Myanmar.

Chapter 2 describes the performance of Myanmar economy in a descriptive way. Initially, this chapter highlights the importance of agriculture and aquaculture sectors contributed nearly 50 percent of GDP in 2004 using recent economic indicators. According to the chapter, economically active labor force of the country which is between 15.60 years is nearly 66 percent of the total population. Most of this active labor force is engaging in agriculture sector which is about 63 percent of total labor force. Country's government plus personnel consumption was increased overtime. It was about nearly Kyat 8 trillion in 2004.

Though the consumption was increased, trade dependence was declined on the other hand. Its value was 5.58 percent in total GDP in 1990. But in 2004, its value was only 0.31 percent of total GDP. Meanwhile, total value of trade was also increased. The main export commodity groups of the country are food and live animals, crude materials and mineral fuels. Among these groups, food and live animals group consists of agricultural and aquaculture commodities contributed 17.27 percent in 2005. Within the group, peas and beans and shrimps and prawns are main export items of the country. The export value of

these two commodities contributes about 50 percent of the total agricultural and aquaculture exports starting from 2000.

Chapter 3 analyzes the regional integration, bilateral trade flow and Myanmar. The purposes of this task are to examine whether ASEAN bloc, in which Myanmar is being a membership, has trade integration or not under the free trade agreement and how neighboring countries and domestic crisis affect on the economic growth of Myanmar. First it express about ASEAN and its free trade area. Then it explains the role of Myanmar in ASEAN and obligations that Myanmar has to perform as being a membership of the association.

This chapter divides into two studies. First, it analyzes the trade integration among ASEAN member plus China, India, Japan and Korea. These countries are chosen in this study as they are major trade partners of Myanmar since western countries embargo on Myanmar's products. The gravity model is used in this regional study. According to the results from random effects model, interesting result is trade integration between Japan and other countries and trade integration between Korea and other countries are more favorable in the short run.

In the case of Myanmar study, the same model is employed. In this analysis, three dummy variables are added. According to the results of neighbor dummy, the country's bilateral trade and economic growth is much influenced by its neighbors. Very interesting finding is the results of domestic crisis dummy. The results show Myanmar's economic growth could not be achieved without stability in political situation inside the country. In other words, even Myanmar is getting benefits from ASEAN free trade agreement; the country cannot exploit those benefits without addressing domestic political turmoil. Another dummy, regional financial crisis dummy shows no direct relationship between the crisis and the bilateral trade flow of the country since Myanmar is financially isolated since the country is not getting sufficient loan from international organizations.

Chapter 4 examines the export import structure between Myanmar and its major trading partners, and revealed comparative advantages of major commodities are calculated. It aims to explore the trade structure to know the specialization of production that is targeted for export. When a country specializes in the production of a few goods, it exports those goods that have comparative advantage. Consequently, it increases national income, which in turn raises the level of output and the growth rate of economy. Therefore, study on the structure of trade and comparative advantage of the commodities for a country is important.

Myanmar has limited affluent trading partners because of the sanction imposed by US and the western countries for its human rights conditions inside the country. It leads closer ties with its neighboring countries and other countries in the region in all sectors. The country especially has to depend on its emerging neighbors. RCA indexes indicated that Myanmar is still depending on its natural resources rather on the value added products which are the kinds of the vertical export diversification. To diversify the country's export vertically, Myanmar needs technical assistance from its neighboring and major trading

countries.

Chapter 5 analyzes the factors contributing to the agricultural export performance. The challenging issue of Myanmar's agricultural export has been greater reliance on a smaller number of exportable commodities for foreign exchange earnings. Thus export dependency on traditional products of Myanmar can be reduced through diversification of export portfolio. In theory, export diversification can be attained by changing the shares of commodities in the existing export pattern or by including new commodities lines in the export portfolio. In this section I analyze the relative importance of international demand conditions on the one hand and diversification and competitiveness on the other hand to determine whether these factors played for export performance or not. If the results show that the international demand factor is exogenous, then the export success is mainly attributed by domestic policy orientation. This is done by using constant market share analysis based on three factors of diversification, competitiveness and market. It is an interesting research since agricultural export is considered one of the most promising means of increasing income and augmenting foreign exchange earnings especially for a less-developed country.

The estimated coefficients for world demand and diversification have the theoretically expected signs though the coefficients of the latter are not statistically significant. The coefficient of the world demand variable is statistically significant in both first and second period at 1 percent level. Coefficient for the competitiveness in the first period has negative sign but not statistically significant. But in the second period, coefficient for this factor is positive indicating that the improvement in agricultural export performance also comes from competitiveness of the country's products.

The results show external demand certainly plays an important role in the one hand, Myanmar can expand its exports under given world market conditions by improving upon its market share in its traditional exports and diversifying into new product lines providing it pursue appropriate domestic economic policies. The country needs flexible adjustments to changing world market conditions to be able to switch from one line of agricultural exports to another.

During the past few years, Myanmar has been diversifying its industry and agriculture. Through horizontal and vertical diversification, Myanmar is trying to build a diverse export base which includes a variety of products. However, without encouraging research and development, Myanmar cannot create a diverse production with different level of processing. To accomplish the goal of export diversification and to be competitive its products in the world market, the government should provide an environment conducive to attracting new investment into the country. In terms of horizontal diversification of agricultural production, land development strategies should be considered. Agricultural services and the provision of basic infrastructure should also be provided to achieve crop diversification in production. In terms of vertical diversification, agricultural and marketing research should be encouraged and supported.

In chapter 6, the research studies major markets for major commodities of Myanmar

to investigate the role of price in trade. This task is accomplished by using linear approximation almost ideal demand system. The price and expenditure elasticities of demand are estimated by utilizing export demand model for Myanmar and selected competing countries in a same market. The purpose of this study is to investigate price and expenditure elasticity empirically at HS 6 digit level of export flow for major commodities of Myanmar.

This chapter explores the major commodities and major markets of Myanmar. The most important agricultural export partner of Myanmar is India. India is a biggest buyer of Myanmar's peas and beans (SITC 0542) and wood (SITC 24231) through 2000 to 2006. Thailand and China import wood products (SITC 24231 and 24331) from Myanmar. Japan stand as an important export partner of Myanmar's shrimps and prawns (SITC 0313) throughout the study periods. Though the United States is buying shrimps and prawns from Myanmar, its value is lower than that of Japan. Singapore is also buying shrimps and prawns. But its import for that product is far lower than that of Japan. Bangladesh, EU, Taiwan and Vietnam are buying wood products from Myanmar. Among these products, I focus only on the export of peas and beans to India market and export of shrimps and prawns to Japan market since the export shares of these two commodities is nearly 50 percent of total agricultural exports. Thus, the study of these products would reflect the domestic economic policy on the farmers and fishermen who are producing those commodities.

All of the own price elasticities have expected signs. The magnitude of the own price elasticities varies for different suppliers in India market. It might be because consumers in India market consider products are different if the sources are different even though the products have a common commodity name. The own price elasticity for Myanmar is largest value of 1.6112 indicating that consumers prefer black gram importing from Myanmar. Two trade flows out of a total of 3 in India market and 2 out of a total of 5 trade flows in Japan market have own price elasticities valued greater than one in absolute values. Elasticity for other remaining trade flows are also greater than 0.5. These large own price elasticities are indicating that the exporter can increase not only the quantity of exports but also they can increase their export income by reducing the cost of production, marketing, and distribution. All import expenditure elasticities of two selected markets show greater than one or nearly one and positive signs in all cases. Expenditure elasticity of Thailand and Vietnam has highest value of 1.0062 and 1.0013 for shrimps and prawns commodity in Japanese market, respectively, and Thailand has highest value of expenditure elasticity for black gram in India market.