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## 主 論 文 の 要 旨

論文題目

An Industrial Policy under East Asian Economic Integration:  
Policy Implications for Myanmar

(東アジア経済統合下の産業政策： ミャンマーへの政策含意)

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## 論 文 内 容 の 要 旨

This Ph.D. dissertation aimed to inquire into an industrial policy for Myanmar under the framework of East Asian economic integration. Since Myanmar's exports mainly consist of natural resources, the pace of other industrial development has lagged behind compared to countries in the Association of Southeast Asian Nations (ASEAN) region. Exports have been primarily from resource-based industries such as mining, energy, forestry, and agriculture. Therefore, the study set out to formulate a potential industrial policy for Myanmar under regional trade agreement schemes.

The primary objectives of the study are:

1. To identify the evolution/changes in export competitiveness and comparative advantage for Myanmar
2. To identify policy initiatives to promote Myanmar's industries and to enable it to catch up with the ASEAN members in regional economic integration by drawing on experiences from selected ASEAN members
3. To provide policy recommendations to design relevant systems and institutions in order to attract FDIs into Myanmar
4. To analyze the relative effectiveness of trade and FDI policies and to seek an optimal mix in promoting Myanmar's industrial development, and
5. To study the impact of various trade integration schemes on the economy, including the narrower AFTA and the wider East Asian economic integration frameworks, and to assess the role of FDIs and technology transfer in conjunction with the aforementioned trade liberalization.

Based on each research objective, the study first reviewed the nature and export patterns of Myanmar. Second, the study examined the comparative advantage and competitiveness of Myanmar's exports before and after joining the ASEAN. Third, the study conducted a comparative study of selected ASEAN members and suggested an industrial policy for Myanmar using the Global Trade Analysis Project (GTAP) model. The study examined the impact on Myanmar's economy of joining the process of East Asian economic integration and analyzed various trade agreements in which Myanmar participates. Then, the study scrutinized the industrial promotion policy for Myanmar by observing the role of foreign trade, FDIs, and technology transfers into the country. Finally, the study reviewed the reform process and economic cooperation of Myanmar in East Asia under the Thein Sein regime from 2011 to 2014.

The dissertation attempted to answer each question chapter by chapter and found the significant findings and policy suggestions for Myanmar as follows.

Chapter 2 was the historical background of Myanmar in ASEAN and its industrialization process. The finding was, in the 1990s, two main reasons and events happened in Myanmar's trade and industrial development. First, although the export of Myanmar garments to international market was growing, it ended in 2002 due to the trade embargo by US and the Western sanctions. Second was the opening of the new natural gas field in 2003. As a result, the main export patterns of Myanmar have still been relying on the resource-based industries (mining, forestry, energy, and agricultural products) with limited markets.

Chapter 3 used the Revealed Comparative Advantage (RCA) index developed by Balassa (1965) to investigate the structure of Myanmar exports, its comparative advantage, and competitiveness to ASEAN and the global market along Cambodia, Laos, and Vietnam. Myanmar has developed labor-intensive industries like garment exports to the US and EU markets from the 1990s and created the top export earnings until 2002. However, this export ended by the US's trade embargo. In 2003, Myanmar concentrated on the exploration of natural gas, and this sector became the main source of Myanmar's GDP. The study found that mining, especially natural gas export, remained the key export of Myanmar for a long time. This kind of industrial structure would remain in the long run unless the government implements a proactive industrial policy for manufacturing industries. The finding from this chapter was export diversification has been very low in Cambodia, Laos, and Myanmar. These findings would suggest that participation in AFTA has not brought the benefits of competitiveness to the CLM yet. Therefore, this chapter concluded that despite the garment export of Myanmar had shown progress during the 1990s to the early

2000s, there was devastated around 2002 by the trade embargo of the Western countries. The opportunity of Myanmar garments exports to the US and EU markets was lost, when Cambodia extended its market extensively with the favor of MFA offered by the western countries and to their markets. Finally, Cambodia moved ahead of its textile markets in the US and EU markets while Myanmar lagged behind Cambodia and Vietnam at that time. After that event, Myanmar concentrated on the primary resource-based exports such as agriculture, forestry, fishery, and mining.

Chapter 4 was one of the core analytical chapters and it produced main findings for policy implementations in this dissertation. The primarily objective of this chapter was to draw the essential strategies that can lead a rapid industrialization (regional FDI and technology transfers) and support Myanmar's economic development in the future. This chapter applied the GTAP model developed by Hertel for policy simulations in order to draw industrial policy implications for Myanmar. In scenarios for policy simulations, there were two sets of strategies for Myanmar to conduct, regional trade agreements and attraction of the FDI from Japan, China, Korea, and Thailand. These FDI flows into Myanmar and the transfer of technology into the strategic industries were based on the National Comprehensive Development Plan (2011-2031). Policy implications for Myanmar were successfully drawn by using the GTAP model under the framework of regional trade agreements, movement in foreign capitals, and technology transfers into Myanmar's industries. This study provided practical policy implications, as follows. First, if Myanmar wishes to re-start its path to industrialization and economic development, it needed to use the frame of regional trade agreements like East Asia Free Trade Area (EAFTA) and ASEAN plus Japan, Korea, and China rather than the ASEAN Free Trade Area (AFTA). The EAFTA gave Myanmar better welfare gains than the AFTA. Second, given the role of capital stock (FDI) and technology transfers, improving technology in production process created more welfare gain for Myanmar. A proactive industrial promotion policy was essential for Myanmar to achieve its industrialization. Myanmar's welfare gain was better in the EAFTA than the AFTA. Welfare gain was also high for all East Asian members under the wider and more comprehensive regional arrangements.

Chapter 5 was the analytical section for Myanmar's attempting in its development strategies and visions under the civilian government started in 2011. This chapter investigated the economic strategies of Myanmar under the Thein Sein regime. Main findings and policy implications for Myanmar were as follows. First, as Myanmar has been engaged its reform

process under the political, social, and economic agendas, a good governance with a better institution and a sound macroeconomic policy are necessary at the moment. To achieve economic development, economic policies of Myanmar should be formulated clearly, not just a document or draft on the paper. The plans and strategies should be implemented only after a careful formulation of draft plans and supporting visions. Afterward, the targeted sectors and industries should be given priority for achieving its industrialization visions. Second, as Myanmar is rich in natural resource endowments, particularly in agricultural land, marines, mining, and forestry, it should promote these industries to be more sophisticated as an agro-based industry. Myanmar should upgrade its industrial structures from raw material-oriented exports to semi-finished goods and finished goods-oriented in the future. Upgrading from the processing of agriculture, foods, and beverages into the manufacturing of agricultural commodities, foods, and beverages will create more benefit for local people, and the local economy will become less dependent on the imported goods. Third, heavy dependence on extraction industries (natural gas and oil) and power generation can lead to the effect of Dutch Disease and environmental degradations. Therefore, Myanmar needs to transform its economic structure from overly natural resource dependent to a more diversified one. It is also essential for Myanmar to build a more diversified export structure in order to effectively compete and survive in the global market. Lastly, as Myanmar is currently designing/negotiating SEZs to promote its manufacturing industries, it should look into the experiences of the more advanced members to absorb merits and avoid risks in order to gear its industrialization process in the globalized and regionalized world.

This dissertation concluded that a proactive industrial promotion policy was essential for Myanmar to achieve its industrialization. Industrial promotion policies in a comparatively advantaged sector (such as agriculture) should be promoted by more capital-intensive industry. Food and beverage also need to be upgraded, as Myanmar is rich in these resources. Textiles (garments) are in the most favorable condition to be upgraded, not only for building competitiveness but also for job opportunities in the take-off period. Special Economic Zones and Export Processing Zones can be the primary strategy for Myanmar to attract FDIs, to absorb better production/management technology, and to gain market access. Lastly, a protection policy did not work under regional trade agreements, as it created resource misallocation from the advantaged industries to the disadvantaged industries. For the macroeconomic stability, a stable monetary policy and sound fiscal policy should be placed high in the reform agenda.

For successful industrial policy/promotion through trade and investment integration, it is imperative for Myanmar to establish and preserve sound macroeconomic management, including proper exchange rate management.