

## COMPLETION REPORT

### Japanese Automobile Production Network and Roles of Thailand and ASEAN beyond 2015

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This research studies the adjustment of the Thai automotive industry in response to the loss in competitive advantage, due to the rising wage in Thailand, and the role of road networks that connect Thailand and CLMV. It is argued that the relocation of standardized production technology will be firstly moved out from Thailand to another location that is more suitable in terms of production and market penetration.

To maintain its competitiveness, the Thai automotive industry needs to improve their capabilities. From the interviews with leading car manufacturers and some key first-tier suppliers, this study could confirm that Thai operations have accumulated experience in production and become involved in higher technological levels, such as process and product engineering. For carmakers, Thailand can handle higher level of engineering activities, such as product design (upper body) for ASEAN models. For part suppliers, this study found that the persistence of labor shortages and high wages, some firms have relocated labor-intensive processes to lower labor-cost countries, such as Cambodia, Lao People's Democratic Republic, Myanmar or Viet Nam. For instance, Toyota Boshoku set up a factory in Laos (Savannakhet) in 2013. This factory plays a role as a satellite complementing the Toyota Boshoku group production base in Thailand.

For wire harnesses, Yazaki has established a plant in Koh Kong Special Economic Zone in 2012. The factory produces wire harnesses and deliver back to customers in Thailand. In addition, Yazaki has subcontracted orders to a factory in Maesot, Tak province, to produce wire harnesses for some specific model. This plant is located near the Thai-Myanmar border and uses Myanmar workers because it can easily access to large pool of workers. The survey has found that Yazaki in Thailand has gradually shifted toward marketing and engineering tasks, while production has upgraded to high value and low volume order, which is reported to be the strength of Thai operation.

For Thai companies that produce metal parts, these firms are more difficult to relocate their operation to overseas in order to lower their costs. They must improve their production productivity and offer competitive price and higher value services (i.e., product and process engineering) to their customers. They need to participate in product development stage of carmakers in order to secure future model orders. To a certain extent, these companies could develop their capabilities in the past decade and can secure orders from their customers.

This research could confirm that the production network of Japanese car manufacturers still has Thailand as their main production base, along with Indonesia. Intensified competition has forced carmakers and part suppliers adjust themselves. For carmakers, they have invested and developed R&D capabilities of Thai operation in order to provide technical and engineering support to other locations. For labor-intensive parts, some firms have established factories in neighboring countries. Production linkages between Thailand and CLM countries have been developed through the ASEAN road network. Future research should pay attention to the role of Thailand as a technology transferor and the effects of technology upgrading in host economies.

Publication of the Results of Research Project:

Verbal Presentation (Date, Venue, Name of Conference, Title of Presentation, Presenter, etc.)

1. August 28, 2015, I was invited to be a resource speaker for the Workshop on Integrating SMEs into the Automotive Global Value Chains, in the 23rd APEC Automotive Dialogue, in Cebu, the Phillipines.
2. March 17, 2016, I presented a paper “Production Linkages between Thailand and Mainland ASEAN” at an International Workshop “Human resource development in Asian late industrialized countries: Learning of production management knowledge/skills and its transfer to workplace”, at Graduate School for International Development and Cooperation, Hiroshima University, Japan.
3. Submit a paper titled “Production Linkages between Thailand and Mainland ASEAN” to the 13<sup>th</sup> International Conference Asialics 2016, held on 2-3 October 2016.

Thesis (Name of Journal and its Date, Title and Author of Thesis, etc.)

Book (Publisher and Date of the Book, Title and Author of the Book, etc.)