The Impacts of Japanese MNCs and Foreign Direct Investment on Thailand Automotive Industry

Wilawan Phungtua
Faculty of Business Administration, Eastern Asia University

Abstract

Since the 1960's, Thailand's automotive industry has progressed from simple production of small components and parts manufacturing industry to a vibrant automotive assembling industry, and presently major as production and export hub of Japanese auto MNCs and regional R&D center for major automotive manufacturers. During the 1970's through 1990's, the sector has significantly contributed to the growth of Thailand's economy as the country shifted its economic base and labor force skills by evolving from labor-intensive agrarian economy to the early stage of technology-based manufacturing and export-led economy. This study discussed impacts and key contributing factors of Japanese auto MNCs, Thailand's industrial transformation process in parallel with robust foreign direct investment (FDI), Thai government's proactive industrial and trade policies, host-country comparative advantage in skilled workforces, automotive manufacturers' investment strategy to relocate their manufacturing bases, and technology transfer from automotive manufacturers which played major roles in describing factors and impacts of Japanese auto MNCs in development process of Thai automotive industry.

Keywords: Japanese MNCs, Foreign direct investment (FDI), Thai automotive industry

Introduction

Having been one of the most important industry sectors in modern Thailand economy, the automotive industry is highly dependent and related to other and many key industries. The automotive industry of Asian region gained significant attention from global investment for its increasing growing scales of regional growth and potential world's largest automobile market. Thai automotive industry, in particular, is geographically located in the center of ASEAN region where the presence of Japanese multinational corporations (MNCs) had major influences on automobile industry. All 90 percent of the automobiles were manufactured locally under strategic cooperation with Japanese manufacturers to enhance technology, production capabilities, and technology transfer. With the dramatic turn around after the Asia financial crisis, the rising manufacturing and technology capabilities of Thai automotive industry remarkably convinced Japanese automobile MNCs to enter Thailand with the important changing direction (Shimokawa, 2012). The Japanese MNCs altered its fundamental strategies from main local production, aiming for Thailand as global production base for global businesses and manufacturing expansion.

This paper aims to review the roles and impacts of contributing factors which derived from Japanese MNCs evolved and propelled in significance, inte-

gration and pathways with Thai automotive industry, including, industrial policy, and its impact on the automotive industry of Thailand.

Development of Japanese MNCs Auto Makers

According to Shimokawa (2012) the key differences of Japanese auto makers are identified in two different types of national and independent auto makers with no foreign investments such as the Toyota Group and Honda. A foreign affiliated group includes Nissan, Mazda, Mitsubishi, Fuji Heavy Industry, Suzuki and Isuzu. A unique example of more than 37.5 per cent foreign-affiliated companies, Nissan and Mazda, for instance, complied with major influences on important management issues and decision making of president title. Realization of the required changes from conventional business to align with new established business structures and global operations, the changing patterns of intense global competition encountered Japanese auto makers to restructure its roles and impacts of host country investment, entry of local market and new industry environment.

The manufacturing overseas were primarily setup to minimize impacts of trade conflicts, gaps and differences productions systems, level of technology capabilities, handling of labor practices, increase outsourcing of local parts, and creating supplier relationship network. Meanwhile the technical advanced process of product development was, at the beginning, only implemented from headquarters office in Japan. From that transition, not only the extension of technology and operational support, the setup of production outside Japan increased and derived profits. Under the establishment of independent development center, the enlarged scales and scopes of localization, thus, emphasized level of product design technology to further develop interiors, press parts and body design.

Localization made production expertise and technology capabilities possible to launch new models in timely response of local demand while expanding on global supply scale. Toyota, for example, developed IMV (Innovative Multipurpose Vehicle) focus on Thai and ASEAN markets through close operations and stages of technology learning and transfer between local production and headquarters. The pathway of global expansion, however, entailed immense challenges on matching compatibility of technology capabilities, materials and parts production, learning skills of technical employees and engineers, importantly, foresighted and consistent policy support of host country operations.

Japanese MNCs and FDI on Thai Automotive Industry

Contributions of MNCs through foreign direct investment (FDI) activities have long been crucial to the industrial development process. In fact, developing countries considered MNCs investment roadmaps as the engine for economic development under private sector-led growth. Thai government outpaced and acquired investment from Japanese MNCs as the most facilitating host economy within ASEAN. Contributions of technology advancement, production and manufacturing know-how significantly increased capacity process and introduced structural changes to make manufacturing more efficient over decades. Decision to invest by Japanese MNCs was based on the strategy to improve production efficiency, higher productivity, and enhancement of global competitiveness in respective priority.

The major entrance of Japanese MNCs to developing countries started after the conclusion of the Plaza Accord in 1985. The main objective of the Accord was to re-align the foreign exchange rates among the major industrial countries, made the relative exchange rates closer to equilibrium. Industrialized

countries and especially Japan was the only key industrial country in Asia at the time when Korea industrialization process was still at the infant stage in the mid-1980s. As a result, the re-alignment of its currency rendered rising appreciation of the Japanese yen against the U.S. dollar to the point where manufacturing cost increased, wages continued to rise, and eventually Japan's export competitiveness declined (Wiboonchutikula, Phuchanroen & Pruektanakul, 2016).

This phenomenon also adversely affected the newly-industrialized countries (NICs) such as Thailand, the major trade partner of Japan, where the country recently embarked on industrial development and was in the process of shifting its economy-base from agriculture to manufacturing. In the mid-1980's, Thailand was internationally known as the components and parts manufacturers for major manufacturing industries including automotive, electrical, appliances, machine and equipment and computer. The Thai Baht was primarily pegged to the value of U.S. dollar and Japanese yen, the two major trade partners, and as a result of appreciating currency, the export competitiveness of Thailand also became disadvantages.

To withstand the eroding manufacturing export competitiveness, the industrial countries, in the late 1980's, adopted a production cost reduction strategy and to seek benefit from the favorable exchange rates in the host countries, began to relocate manufacturing facilities to Southeast Asia, and to Thailand in particular, where low-wage skilled labor was abundant. This shift of industrial strategy resulted to dramatic increase of MNCs entered and invested in Asia, and Thailand was a major benefactor. The net inflow of FDI increased from the average of $287 million per year in the first half of 1980's to the average of $744 million per year in the last half of 1980's (Wiboonchutikula, Phuchanroen & Pruektanakul, 2016).

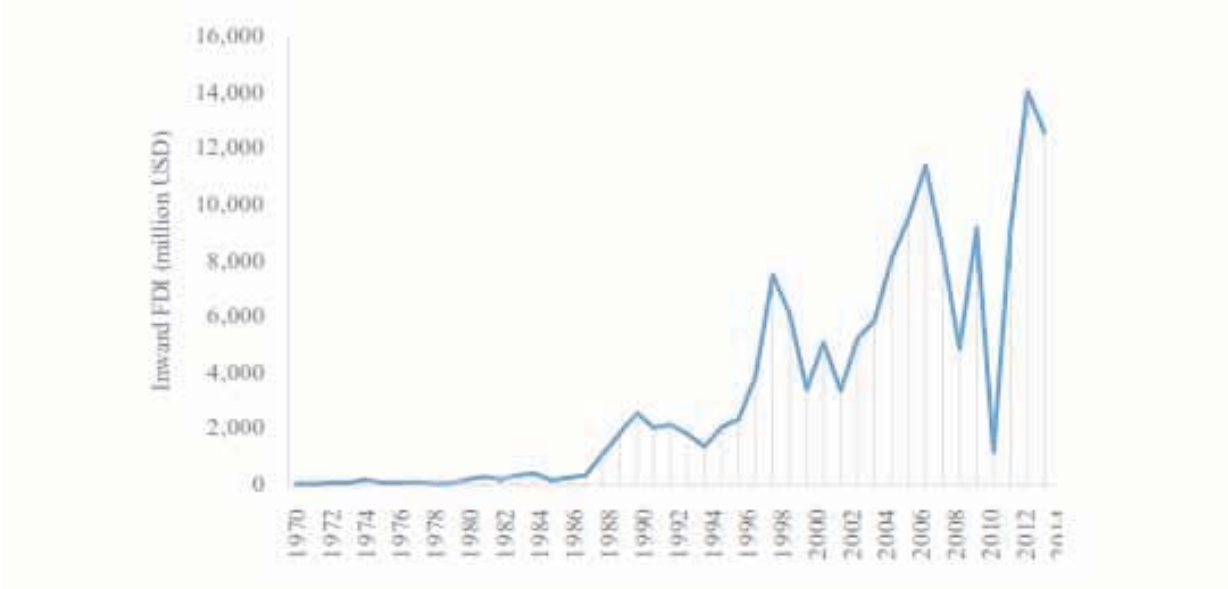

Figure 1: Net FDI Inflows into Thailand

Note: From (2016). *Spillover effects of foreign direct investment on domestic manufacturing firms in Thailand.* by Wiboonchutikula, P., Phucharoen, C. & Pruektanakul, N., Retrieved from http://www.worldscientific.com/doi/abs/10.1142/S0217590816400282?journalCode=ser

Thailand prior to the 1980's, FDI in the manufacturing sector was largely in the joint ventures with local businesses to assemble parts and accessories of the finished goods for the domestic market. From 1986 onward, FDI has played a significant role in Thailand's industrialization process, where more and more FDI went into the manufacturing of value-added final goods and export industries. Between 1970's – 1990's, cumulatively over US$50 billion FDI entered Thailand (Technkanont and Terdudomtham, 2004).

In the 1990's, structural changes also occurred in the export manufacturing sector, the proportion of resource-based and labor-intensive exports declined dramatically, while the science and technology-based and whole-product exports grew rapidly. Export of industrial and tech-based products, notably, automobile and consumer electronics expanded significantly (Techakanont and Terdudomtham, 2004). FDI trends accumulated from 2000 to 2014 with approximately over $15 billion net.

	Amount per Year (million USD)		Share (%)	
Sector	2000–2007	2008–2014	2000–2007	2008–2014
Agriculture, forestry and fishing	5.79	5.07	0.11	0.05
Mining and quarrying	318.38	156.34	3.95	3.63
Manufacturing	3,245.85	3,375.05	54.73	53.47
Construction	12.69	−22.29	0.31	−0.26
Wholesale and retail trade; repair of motor vehicles and motorcycles	457.86	481.82	9.12	5.54
Accommodation and food service activities	284.01	24.65	7.04	0.57
Financial and insurance activities	816.86	1,617.74	8.24	13.03
Real estate activities	323.19	1,150.33	3.37	16.69
Other services	814.36	2,501.13	13.14	7.27
Total	6,278.97	9,289.84	100.00	100.00

Figure 2: Net FDI inflows to Thailand by major sector

Note: From (2016). *Spillover effects of foreign direct investment on domestic manufacturing firms in Thailand.* by Wiboonchutikula, P., Phucharoen, C. & Pruektanakul, N., Retrieved from http://www.worldscientific.com/doi/abs/10.1142/S0217590816400282?journalCode=ser

FDI was the primary driver of Thai automotive industry for more than 50 years. Over 30 percent out of total 50 percent FDI inflows to Thailand was concentrated in the manufacturing. MNCs invested in automotive industry with the highest values were from home country of Japan (Wiboonchutikula et al, 2016). Most major MNCs auto makers and local Thai automotive industry evolved from being parts and accessories producers to automobiles assembly for domestic market, and stepped up as regional manufacturing hub for global exports of vehicles and auto parts.

Thai government and Industry Policies

Historically in the 1970s, Thailand's industrial development policy focused predominantly on the automotive industry to pioneer country economic development. The relationships with Japanese businesses were that of vibrant partnerships and mutually beneficial. Under import substitution policy, Thai automotive industry provided support for local companies to produce labor-intensive components and parts for Japanese automakers. Thailand, in addition, as home country investment markedly improved and expanded its domestic automotive market.

The key roles of the Board of Investment (BOI) was prominently established during 1960's to provide fiscal and tax incentives to foreign businesses planning to locate their manufacturing facilities in Thailand. Industrial estates zones were included with advanced infrastructures and transport routes inciting efficiency and cost effectiveness for businesses. Following these policy measures, major automotive manufacturers, led by Japan and U.S. increased their investments in automotive parts production to facilitate more advanced level of technology transfer enabling production capabilities. During 1996, Ford also was one of the early automaker to respond to the Thai government's requests for automobile manufacturers to invest and assisting Thailand to develop a globally competitive automobile industry. Ford invested US$500 million – nearly five times the largest investment in the automobile industry at that time set up a joint venture manufacturing and export facilities – Auto Alliance Thailand Co., Ltd. with Mazda, a company partly owned by Ford. The two automakers bring different sets of expertise to Auto Alliance. Ford is strong in international marketing and finance, while Mazda has the comparative advantage in manufacturing and product development (Techakanont and Terdudomtham, 2004).

After the 1997-1998 Asia financial crisis, the Thai government further removed foreign ownership restrictions by allowing foreign companies to hold majority equity in a company. This further attracted FDI from the major automotive manufacturers into R&D and production for exports. Additional policies and measures aimed to strategically attract FDI and advance industrialization were put in place, for instance, the national reviews and structures of country's competitiveness was materialized and promoted. The ensuing result was the development of industry clusters for the automotive industry. As the industrial development progressed from basic production to more complex value-added production process, systemic quad or business clusters underpin the major progress (Rasiah, 2007). Basic and advanced infrastructures, production technological capacities, related service-industry linkages, workers' skills and experiences, as well as government institutional supports were the main factors for cluster development.

The official integration of ASEAN Economic Community (AEC) since 2015, regional and bi-lateral free trade agreements further liberalized and fostered the growth of industrial sectors regionally and globally. To meet the challenges of AEC integration, the Thai government accommodated clear policies, with flexible strategies such as offering low corporate tax of 20 percent, investing in strategic infrastructure development of Eastern Seaboard, including more than 16 major infrastructure projects for sea ports, highway roads, railways, energy planning, water resources management, and internet fiber optic infrastructure to support production and manufacturing investment of MNCs.

To offer and attract MNCs in the mid-1980's, Thai automotive industry, led by the government, the Federation of Thai Industries (FTI) and the Thai Automotive Institute (TAI) implemented plans to integrate automotive production network and industrial clusters to connect varying complex requirements of auto productions. The Japanese's concept of Just-In-Time (JIT) was adopted to design and develop industry clusters of parts, accessories and inventory. The government through the Board of Investment (BOI) incentivized local suppliers, businesses and MNCs subsidiaries to be located in network and facility zoning areas close to the manufacturing sites, mostly in industrial estates. The multinational auto manufacturing companies including Toyota, Honda, Ford, Nissan Mitsubishi, Mazda founded its long-established production in Thailand to acquire advantages of proximity and less travel time to benefit transportation and logistics planning. More

importantly, cost–competitive transports of inputs, materials, parts and components scheduling to the final assembly process serving fast changes of production models for domestic and export demand.

Technology Transfer and the Spillover Effects

Thailand has adopted the science and technology-based manufacturing strategy and export-oriented growth strategy. Over decades, the automotive industry led the manufactuing sectors in outputs and provision of domestic market demand with high success of becoming the automobile production base for exports.

Figure 3: ASEAN automobile production by country

Note. From *ASEAN automotive outlook*, by Titikorn, L., 2016, Retrieved from www.lmc-auto.com

Thailand as the leading automobile producer in ASEAN, produced 1.89 million vehicles of 3.8 million vehicles in ASEAN in 2015 (50%), and increasing to 1.95 million vehicles of 3.82 in ASEAN in 2016 (over 50%).

Ideally, the spillover effects would be the natural channel for technology, knowledge and skills transfer to the local economy. It can be described or achieved in two forms– horizontal and vertical FDI. Horizontal or intra-industry FDI generates investment in the same industry, while vertical FDI creates linkages between the local firms and upstream and downstream foreign manufacturers (Wiboonchutikula et al, 2016). Recent empirical studies have shown that while the amount of net inflows of FDI into Thailand's manufacturing sector and more specifically the automotive industry has increased significantly, the benefits of technology transfer and industry innovation are yet to be realized (Intarakumnerd & Techakanont 2016; Nawan & Inttarakumnerd 2013).

The spillover effects from horizontal intra-industry FDI were few in cases and inconclusive. Very limited evidences were found in the foreign output shares in intra-industry, suggesting FDI and technology were adequately introduced or transferred to local manufacturing. In fact, machinery and equipment remain largely imported, while technological innovation continued to show little improvement, resulting in import-dependent on technology (Wiboonchutikula et al, 2016). Skill training for automotive industry also limited by MNCs due to language and cost issues. Recently, the Thailand Automotive Institute was requested and ready to provide technical training for industry workforce.

The spillover effects of vertical upstream-

downstream FDI were more significant. Automotive manufacturers cooperate with suppliers in related industries to take part in competition, achieve efficiency, ensure product quality and reliability, and generate high productivity in supplying the manufacturing process. The vertical industries workforces also received more training to increase output productivity (Wiboonchutikula et al, 2016). Efforts were underway by partnering with foreign MNCs, mainly the Japanese auto manufacturers Honda and Nissan to establish R&D centers to cover engineering design, calibration and testing facilities. The government also provided additional incentives to attract FDI for R&D activities to enhance technological competitiveness for Thai-owned suppliers of component parts, and also technical trainings of auto industry skilled-workers have been initiated by Thailand Automotive Institute (TAI).

Concluding discussion

Initially, automotive manufacturers' strategic decision to expand investment and production facilities in the South East Asia, and more directly in Thailand, was largely based on the Plaza Accord's realignment of domestic currencies among the industrial countries. The intent was to manage production cost, compete in the global market, and to increase efficiency and productivity. The auto MNCs aimed and derived at their decision by considering what the manufacturers perceived as comparative advantages of the host country - namely domestic demand, level of development, skilled workers, and the conditions of supply chain of related and supporting industries (Techakanont and Terdudomtham, 2004).

Through foreign direct investment, it is perceived easier to acquire technological capability and high-skilled workforces through technology transfer as compared to developing own innovation. Thailand has been advocating investment promotion and policies to obtain investment capital and technology from MNCs with the objectives that FDI would contribute to the domestic development by technology transfer to local firms. From the studies and empirical evidences, the Thai government and automotive industry learned that technology spillovers remain limited. Knowledge and technology from MNCs could be more transferred to local companies if the local companies more invest and experience in R&D activities with the MNCs.

The continuing impacts and success also implied that the roles and circumstances of Thailand's auto industry as prominent host country investment continued to be highly challenging, especially with the integration of ASEAN Economic Community, rising capacity of Indonesia and Malaysia auto industry, and the upcoming competition of China and India competing in global automotive landscapes. To maintain positive impacts and competitive factors for Japanese auto MNCs to invest, Thailand needs to continue and upgrade the automotive industry on workforce skills, minimizing gap of R&D facilities and expertise, importantly to increase technological capability of local suppliers and related industries relationship network as key unique industry characters.

References

Intarakumnerd, P., & Techakanont, K. (2016). Intra-industry trade, product fragmentation and technological capability development in Thai automotive industry. *Asia Pacific Business Review, 22*(1), 65-85.

Nawan, A., & Intarakumnerd, P. (2013). Interaction between host countries' innovation systems and investment strategies of transnational corporations: A case study of a U.S.-based conglomerate. I*nstitutions and Economics, 5*(2), 131-154.

Rasiah, R. (2007). The systemic quad: Technological capabilities of computer and component firms in Penang and Johor, Malaysia. *International Journal of Technological Learning, Innovation and Development 1*(2), 179-203.

Shimokawa, K. (2010). *Japan and the global automotive Industry.* Cambridge: Cambridge University.

Techakanont, K., & Terdudomtham, T. (2004). Evolution of inter-firm technology transfer and technological capability formation of local parts firms in the Thai automotive industry. *Asian Journal of Technology Innovation 12*(2), 151-183.

Titikorn, L. (2016). *ASEAN automotive outlook*. Retrieved from www.lmc-auto.com.

Wiboonchutikula, P., Phucharoen, C., & Pruektanakul, N. (2016). S*pillover effects of foreign direct investment on domestic manufacturing firms in Thailand*. Retrieved from http://www.worldscientific.com/doi/abs/10.1142/S0217590816400282?journalCode=ser