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TNC Involvement In the Thai Auto Industry*

Mingsarn Santikarn Kaosa-ard**

Thailand's per capita Gross Domestic Product (GDP) more than tripled from 1970 to 1980, and almost tripled again by 1990. From 1988 to 1990, the economy registered three consecutive years of double digit growth. Thailand has emerged as another Asian success story. Unlike the majority of its predecessors, however, the country has achieved high growth with relatively little government involvement. Among the ASEAN economies, Thailand's is the most inclined toward laissez-faire.

Thailand's economic success, despite the May 1992 Tragedy, has reinforced the country's reputation as a profitable base for investment. Until the early 1980s, foreign investment in Thailand was relatively low, the second lowest in ASEAN. After the international currency realignment in 1985, Japan and the other newly-industrialized economies (NIEs) chose Thailand as an export base. In 1987, Japanese investment exceeded the country's cumulative investments over the previous two decades.

Thailand thus offers an interesting case study of the interplay between transnational corporations (TNCs), the state and local enterprises.

The automobile industry is one of the few Thai industries that has specific sectoral goals and policies. In its initial stages in the early 1960s, the industry was protected through import substitution. Subsequent trade deficits in this sector led to the establishment of the Automobile Development Committee (ADC) in 1969 to provide guidelines and to monitor the local content program. Today the automobile industry is dominated by Japanese assemblers, supplied by strings of joint ventures and local supplies. The purpose of this study is to review TNC involvement in this industry. It explores the evolution of the host country's policies, designed to extract benefits especially in technology transfer from TNC investments. The Thai automotive policy is reputed to be the most successful of the ASEAN Four, which includes Malaysia, Indonesia, and the Philippines (Doner 1991). In particular, this study aims to answer the question: Do TNCs help or hinder the achievement of national goals for industrial development?

PROFILE OF THE AUTO INDUSTRY[1]

The Thai auto industry was one of the first industries to receive investment incentives. In 1961, the country produced a mere 525 vehicles. By 1970, the number had soared to 10,667. Although the economic downturn of 1985 depressed production, the industry regained momentum in 1988. Production doubled between 1988 and 1990. Commercial vehicles accounted for about three quarters of local production. Interestingly, Thailand is one of the world's largest markets for commercial cars, second only to the United States (Board of Investment 1991).

By international standards, the size of the Thai auto industry is negligible. Thai production capacity was only 0.3 percent of world capacity in 1988 and domestic production was mainly for local consumption. Thailand has 12 auto assemblers and their capacities are shown in Table 1. The auto industry's contribution (Thailand Standard Industrial Classification 38431-32-39) to manufacturing value added was 6.14 percent in 1989. The industry experienced rapid real growth of over 10 percent between 1970 and 1980.

The balance of auto trade has always been negative and its deficit continues to grow rapidly (Table 2). In 1987, this sector's trade deficit was 1.8 billion baht in 1970. By 1985, it had jumped to 13 billion baht, and stood at 47 billion baht by 1989 (Board of Investment 1991). The auto trade deficit has been a major cause

of concern to the Thai government and has been a decisive factor underlying various policy changes. Apart from the trade deficit, the industry has been by far the largest remitter of royalties and technical assistance fees, accounting for 16.9 percent of total remittances in 1989. In 1982 the amount paid to foreign technology owners, or mother companies, totalled 165,477,526 baht. By 1989 the amount had increased to 903,818,520 baht.

TNCS IN THE THAI AUTO INDUSTRY

The first transnational corporation to produce in Thailand was a British-based American TNC. Since then, the Thai auto industry has been increasingly dominated by Japanese TNCs. Today, of the country's 12 assemblers, eight are Japanese joint ventures, three are European affiliates (Table 3) and one is a fully locally-owned firm, but with less than 2 percent of total production capacity. The TNCs with the largest capacities include Toyota Motors (Thailand), Isuzu Motors and MMC Sittipol (Mitsubishi). In 1991, Japanese automobile TNCs controlled about 95 percent of the market share, monopolizing the production of one-ton pick-up trucks and with 83 percent of the market share for passenger cars (Kato 1992). To understand Japanese TNCs operational strategies in Thailand, it is helpful to follow the evolution of their development in Japan itself.

Japanese TNCs

The Japanese auto industry was initially fostered in 1936 by government procurement of military trucks from a cartel comprising Toyota, Nissan and Jidosha Kogyo, or Isuzu (Adachi and Siriboon 1982). The passenger car market was, however, left intact to avoid competition with Ford and General Motors (GM). These two firms had to struggle to fulfill production quotas and local content requirement. At the same time, they were also facing increased import prices and yen devaluation. By the time the two closed their plants in 1939, a large number of Japanese producers of parts and components had been established.

After the Second World War, the Japanese government revived the auto industry by giving it a wide range of support, including protective tariffs, import quotas, restriction on foreign capital participation, loans and bounties, accelerated depreciation and special import arrangements for machinery and technology. By 1980, Japanese TNCs had become major exporters in the world auto market. Japan came second only to the USA in the number of vehicles produced.[2]

The Japanese auto industry now boasts 10 producers. Toyota and Nissan are the top two, followed by three medium-sized manufacturers (Mazda, Honda and Mitsubishi). The remaining companies are smaller. These are Suzuki, Subaru, Hino, Daihatsu and Isuzu (Doner 1991). Some of the smaller manufacturers, such as Hino, Isuzu and Nissan Diesel, specialize in trucks, while Suzuki and Daihatsu concentrate on light cars. Medium-sized producers have defied the Ministry of Trade and Industry's attempt to transform the Japanese auto industry into a few producers with links with U.S. producers, for example, Mitsubishi with Chrysler, Isuzu and Suzuki with GM, and Mazda with Ford. Cartelization between Toyota, Hino and Daihatsu, for example, has resulted in fierce group competition in the form of product differentiation and export competition. Mitsubishi is particularly anxious to improve its present fifth place position in the national market. Its export policies are aggressive. These policies are also reflected in its joint venture here in Thailand.

In sharp contrast to the U.S. big three, which produce 35 percent of their vehicles overseas, Toyota and Nissan together produce one percent of their total production off-shore. Nissan, which characteristically has relied less on the Sogo Shosha, or trading companies, initially avoided off-shore investment, especially in the less developed countries (LDCs). This partially explains Nissan's initial involvement in Thailand on a purely contractual and non-equity basis.

The spread of the Japanese auto industry into Southeast Asia was a defensive strategy driven by host country policies and inter-group rivalry. At the time, though, Japanese TNCs had less reason than U.S. or European car makers to expand production in low-wage countries. First, Japanese auto makers were relatively capital intensive. During the 1980s, they required only 65 percent of the labor used in the U.S. and

used 30 percent fewer hours than their West German counterparts. Although Japanese TNCs could exploit their older plants in the LDCs, cheap labor was not a major attraction (Doner 1991). Second, the Japanese TNCs operated in close production links with their parts and component suppliers. The introduction of just-in-time inventory systems further increased their dependence on reliable suppliers. Third, the subcontracting system whereby Japanese auto manufacturers procure parts and components from outside firms has lessened the pressure from assemblers' labor unions and allowed them to minimize the number of plant workers (Smitka 1992).

When Thailand initiated its local auto industry, the Japanese TNCs found it necessary to defend their market. Initial investments were small and the Japanese TNCs attempted to fragment the Thai market by offering varied models and series and thus raising entry barriers. As the local market grew and the Thai government insisted on localization of parts and components, the Japanese TNCs overcame these disadvantages by bringing their parts suppliers to Thailand.

Technology Transfers

A rough measure of the benefits of technology transfers in the auto industry is the number of local suppliers and the growing sophistication of the parts and components produced locally. Over the past three decades, the number of local firms supplying parts and components to Japanese TNCs has grown relatively slowly. During the 1960s, local firms supplied tyres, batteries and leaf springs. Tyre producers were all foreign affiliates or joint ventures. One battery firm acquired a technical assistance contract from a Japanese manufacture. One leaf spring producer is a Japanese-controlled joint-venture of a Japanese supplier.

The 1970s saw more local suppliers. It was estimated that in 1977 Thailand had some 180 local suppliers (Doner 1991). The parts and components produced included starters, alternators, filters, exhaust pipes, radiators and safety glass, or mostly peripheral equipment (Board of Investment 1991). A number of modern metal working plants were, however, established during this period. Production of pressed small body parts and rubber parts also increased. During the first half of the 1980s, when the industry was under the "progressive localization scheme," it became necessary for TNCs to invite their more sophisticated suppliers to invest in Thailand. At the same time, native suppliers, such as Siam Nawaloha, Siam Machinery and Equipment, and CM Industries found it necessary to upgrade their casting and machining processes (Board of Investment 1991). Suppliers of non-metal parts also proliferated. Locally-supplied parts included exhaust brake fuel suspension, lighting systems, and pressed parts.

The latter half of the 1980s saw substantial growth in the Thai automobile industry. The first batch of Thai-assembled vehicles was exported to Canada by MMC Sittipol in 1988. Japanese joint-ventures, after long delays and negotiations, decided to produce engines locally. During this high growth period, however, there were few new suppliers.

> *One reason for this was reportedly that Japanese firms, which dominated the auto-assembly industry, tended to produce high value-added parts and components internally or within their closely affiliated groups of companies. Outside vendors had little chance of penetrating the doubly-protected domestic market... (Board of Investment 1991, p. 56).*

To understand this statement, one must understand the historical links between Japanese auto assemblers and parts and components suppliers. After the Second World War, the auto industry in Japan abandoned in-house production of parts and components and began to procure parts and components from outside firms. This was to take advantage of the excess capabilities of machining industries (Smitka 1992). This practice reduced both trade union pressure on the auto industry and, at the same time, lowered production costs, as the machining industries paid lower wages. The subcontracting system thus became a main feature of the Japanese automobile industry.

Japanese auto assemblers in Thailand generally have 40 to 50 suppliers. Typically, Japanese TNCs have three classes of suppliers-affiliates, close associates and general vendors (TDRI 1991). Affiliates are those suppliers with whom auto makers have made joint investments. Close associates are regular subcontractors. General vendors are local suppliers who do not fall into these two categories. Japanese TNCs first deal with

local firms as vendors. If they determine that the local firm has adequate technical capacity and is reasonably reliable, they will promote them to subcontractors. The proportion of subcontractors to vendors varies from firm to firm. Subcontractors are provided with design specifications and limited technical assistance. Contrary to general impressions, TNCs do not train local firms from scratch. If substantial technical assistance is required, a separate contract for technology transfer may be secured. One Thai supplier revealed in an interview that Japanese TNCs require compensation for the same level of technology provided free by a European firm.

The general assessment of the status of technology transfer in the auto industry is that while the quantitative aspect of development, measured by the number of local firms, has been respectable, qualitative growth is much less impressive. According to interviews, of the technology needed in auto production—design, production engineering, including plant layout, quality and inventory control, and post-assembly technologies, such as spare parts management and after sales services—only the last technologies have been mastered by the Thai assembly industry. The transfer of production engineering technology has been moderately successful. As for design technology, a key component of the automobile industry, the Thai industry has not been given the opportunity to absorb the technology. Thai technicians are as yet unable to design major parts and components, let alone a complete vehicle. Local joint ventures and locally-owned assemblers rely on foreign partners' specifications. A recent survey reported that Japanese auto manufacturers procure about 70 percent of their parts from their subsidiaries (Kato 1992).

The exception is one local assembler who initiated limited designs of selected body parts for the assembly of a van. As the van became commercially popular, the Japanese supplier informed the local assembler that the production of major parts for this particular model would be terminated and that the next model would be assembled by its own subsidiary.

In an evaluation of the Thai auto industry's success, based on the percentage of local content, Thailand's record compares favorably with its ASEAN counterparts (Doner 1991). Since the mid 1980s, for example, the Thai industry achieved 45 to 54 percent local content, while Malaysian input into the Proten Saga was only 36 to 40 percent. In Doner's study, local subcontractors in Thailand were found to be relatively numerous. They also posses higher technical capacity than their ASEAN counterparts. In October, 1992, when a TDRI survey was conducted, the local content of locally-assembled one-ton pick-up trucks reached almost 80 percent. Most of the parts and components produced locally are, however, subsidiary parts. The local industry has not been able to produce major parts, such as those for power transmission.

Other criteria for industrial progress include the reduction of the ratio of local cost to deletion allowance from around 2.7 in the early 1980s to around 1.5 to 1.7 in the early 1990s. The ex-factory cost of a Thai automobile is about 15 percent higher than the same model in Japan.

While a static and snapshot evaluation places Thailand's success above other ASEAN countries, the future of the Thai auto industry does not seem promising. First, the lack of designing ability greatly limits the opportunity to strengthen technology and to adapt existing models or technology to fit new markets. Second, the industry is almost completely controlled by Japanese TNCs. Whether Thailand will become an exporter of automobiles or auto parts will be decided in Tokyo rather than in Bangkok.

THE STATE'S ROLE

The benefits to host countries of establishing local auto industries include foreign exchange savings, labor absorption, extensive inter-industry linkages and transfer of high technology. The emphasis on these different objectives varies from one country to another. Most developing countries offer fiscal and other benefits to attract TNCs.

There are two different views regarding the role of the state in extracting full benefits from TNCs. The structuralist approach maintains that the state is an important actor in the negotiation process, although its bargaining leverage decreases over time owing to technological barriers and the oligopolistic nature of the market. Such monopolies generally lead to stifling price competition and increasing entry barriers.

In contrast, the "product cycle" approach suggests that competition from rival TNCs ensures the gradual transfer and the spread of financial benefits. Local firms are able to develop technical capacities using imported technologies. Unlike the structuralist approach, which assumes strong links between local businesses and TNCs, leaving the state to act on behalf of the society at large, the product cycle theory relies on pressure through competition. Doner (1991) modified this approach by highlighting the significance of a coalition between the state and local entrepreneurs. He used the Thai case to explain his argument. The following section argues that the role of the state in the case of Thailand's auto industry is merely as an arbiter of economic rent which is shared between assemblers and part makers.

The development of the Thai auto-industry was shaped by policies which emphasized protection of the local industry and local content requirements. The debate over auto policy is a familiar one. The auto TNCs, who discourage price competition, wanted a ban on imported vehicles. Local suppliers advocated increased local content. Economic technocrats argued, according to neoclassical economic doctrines, against diseconomies of scale in local production and for increased competition and liberalization of the industry. Technical officials insisted on a limited number of plants, etc. The outcome of the negotiations reflects most clearly the pressures from the interested groups.

The development of government policy toward the industry can be divided into four phases:

Initial Protection (1962-1969)

When Field Marshal Sarit Thanarat came to power after a coup d'etat in 1957, he soon realized he could not rely on inefficient state enterprises as a power base. Promoting private capital was an inviting alternative. The Investment Promotion Act of 1959 established the Board of Investment (BOI) which was given the authority to provide investment incentives to industries deemed vital to economic development. Sarit appointed himself as the first Chairman of BOI.

From 1962 and 1969, the auto industry was among the first industries that BOI promoted. It was classified under category B, which allowed a 50 percent reduction of import duties and trade taxes. At that time, import duties for completely built-up units (CBU) were 60 percent for passenger cars, 40 percent for commercial vehicles and 20 percent for trucks. Duties on completely knocked-down units (CKD) for promoted assembly were 30, 20 and 10 percent, respectively.

These incentives encouraged a few transnational affiliates to enter local production. The first joint venture was formed by Ford Inc. (U.K.) and the Anglo-Thai Motor Co. Ltd.—its local distributor. In 1961, the first year of production, the Thai auto industry assembled 310 passenger cars and 215 trucks, or about 12 percent of the total auto market (Siriboon and Nophakoon 1981). The first Japanese assembler, Toyota, entered into local production in 1964. Although Nissan—Toyota's arch rival—vehicles were assembled beginning in 1962, the assembler was fully-Thai owned and operated under Japanese technical assistance. By 1969, there were six assemblers, five of which were Japanese-related enterprises. The number of automobiles assembled in 1969 totalled 12,140.

Foreign exchange savings is considered a prime contribution of the auto industry. Toward the end of the 1960s, when the tax incentives granted to the first group of promoted assemblies were expiring, it became apparent that the industry had created negative rather than positive trade balances (Table 2). BOI commissioned a study to review its policies. This study, known as the Organ Report, confirmed the general public view that the auto industry generated a substantial trade deficit and suggested rationalization of the industry. In 1969, BOI stopped granting new privileges and the MOI set up the Automotive Development Committee (ADC) to review past policies jointly with private industry. As a consequence, MOI announced a rationalization plan in 1971 which introduced a new phase into the Thai auto industry's development.

Industrial Rationalization (1972-1977)

Rationalization guidelines, designed by liberal economists at the MOI in July 1971, aimed chiefly at achieving better economies of scale through restricting the number of models. An assembler was required to produce either passenger cars or commercial cars. Existing producers of passenger cars were allowed to produce no

more than three models, among which only one model with a 2000 cc. engine would be permitted. New passenger car assemblers were only allowed to produce one model with a 2000 cc. engine. Existing assemblers of commercial vehicles were not allowed to produce more than five models and new assemblers were limited to just three models. These restrictions provided a competitive edge to Japanese TNCs against American TNCs.

These regulations were, however, undermined by cooperation between a local politician and a local general assembler who wanted to circumvent the model restrictions. Consequently, the restrictions were revoked before they could become effective. An announcement by ADC in February of the following year aimed to rationalize the industry by advocating minimum capacity and investment levels. Producers were required to assemble no fewer than 30 vehicles per eight hour shift and the minimum investment in machinery was fixed at 20 million baht. Restrictions on vehicle types, models and engine size were abandoned.

At the same time, local content requirements were introduced and became effective on January 1, 1975. Local content (LC) was fixed at 25 percent for passenger cars, 20 percent for commercial vehicles with windshields and 15 percent for commercial vehicle without windshields. The local content was measured according to the following formula:

LC = A/(A+B)

A = Value of local contents

B = Value of the deleted CKD kit, plus import duties

This simple formula no doubt created a number of difficulties and biases. The requirement was in favor of lower cost models, meaning Japanese models. It was argued that parts and components for these models were more readily available than for others (Siriboon and Nophakoon 1981). Higher cost models tend to have a higher value of B. Moreover, the value of B is influenced by changes in exchange rates. B also includes import duties which make it impossible to use LC as an indicator of foreign exchange savings. The value of A can be easily inflated and is also subject to transfer pricing abuse, especially when upstream production is by the same conglomerate. Most importantly, "A" is not necessarily equal to local value added. When CBU imports were still allowed, the incentive from the import duty differential between CBU and CKD was not high enough. This resulted in a relatively high ratio of imports of CBU in the first half of the 1970s.

As the sectoral balance of trade continued to worsen, the auto industry was singled out as a major negative factor. The sectoral trade deficit leaped to 6,890 million baht in 1977 from just 1,089.9 million baht in 1972. In 1975, the existing industry capacity was six times its total sales. Consequently, unit cost was exceedingly high.

Despite such high costs, the number of local producers of parts and components increased substantially to 180 by 1977 (Doner 1991). A range of local parts and components were, however, produced by Japanese affiliates (Board of Investment 1991). Locally-produced parts and components were technically simple, for example, alternators, exhaust pipes, filters, radiators and starters. The local content requirement favored relatively large suppliers of original equipment rather than small local workshops.

Localization (1978-1986)

In January 1978, the Thai government banned CBU imports and increased import duty on CKD to 80 percent. The import ban raised the effective import duty on CBU to infinity. Eight months later new local content requirements were announced. The local content of passenger cars had to be at least 25 percent, increasing to 35 percent within two years and going up 5 percent every year thereafter until it reached 50 percent. It was also stipulated that by 25 August 1981 all assemblers should achieve 40 percent local content. Motorcycle assemblers were required to meet the 50 percent local requirement, increasing to 70 percent within two years.

In addition, the "mandatory deletion" of specific parts, for example, brake drums and exhaust systems,

which had been locally-produced for some time, was also introduced. The mandatory deletion of brake drums was the outcome of lobbying by an influential local joint-venture between the Japanese engine producer Kubota and Siam Cement. This measure signaled forthcoming mandatory local production of increasingly sophisticated components to disgruntled Japanese transnational assemblers.

The localization policy was severely criticized by economists, including Japanese scholars (Adachi and Siriboon 1982). Adachi argued that it was impossible to have an auto industry without an auto-assembling industry. Increasing local content would strengthen the monopolistic power of the established Japanese TNCs.

> *Deletion of a part will only partially save on foreign exchange way below the full price of the part. On the other hand, substitution of local parts more often than not requires import of equipment and material for local production, constituting little local added value. The problem is ever more serious with the increasing ratio of local content. Economically speaking, if the price elasticity of deleted CKD import is lower, then the higher is the local content. It is a big joke when a host country runs a policy that strengthens the monopoly position of foreign firms without knowing it (Adachi and Siriboon 1982).*

The CBU ban was applauded by Japanese TNCs who, of course, were the largest producers. Smaller assemblers, more reliant on CBU imports, were seriously affected. Consequently, many non-Japanese models, for example, Hillman, Simca, Dodge and Holden, were eliminated from the local market.

The method for calculating local content was also substantially altered. ADC assigned scores to every part and component in percentages. Weights were based on technical criteria for existing and expected contribution to local technical capacity, that is, higher scores for pressed products rather than their contribution to value added or production costs. The point system was criticized because it was unrelated to either economically meaningful indicators of value added or foreign exchange savings.

Transition Toward Low Protected Industry (1987-present)

Thailand exported cars and buses for the first time in 1987, when 488 passenger cars and 40 buses were exported to Canada by a local joint venture with Mitsubishi. According to its contract with Chrysler of Canada, the joint-venture would deliver 100,000 vehicles within six years. This event was hailed as a major breakthrough, although many still wondered whether the exports were actually profitable, given the high levels of protection.

During this period, plans to establish local production of engines were revived after having been dropped in the early 1980s. Four contenders, all Japanese TNCs, were promoted for the assembly of diesel and gasoline engines. Imports of engines were banned and a progressive content requirement was set up.

Despite emerging export possibilities, the local auto market remained highly-protected. Imports of CBU under 2300 cc. were still banned and CBU over 2300 cc. had to pay 300 percent import duties. High levels of protection rendered domestic vehicle prices far above prices of comparable models in other countries. For example, the Toyota Starlet was priced at 350,000 baht in 1988 in Thailand, but the same model was sold for 279,870 baht in Italy (MOI 1990). A Mercedez 300E was 2.5 million baht in Thailand, while the same model was sold at around one million baht in France and Italy. Total taxes for a 2300 cc. passenger car were over 616 percent for CBU and 125.3 percent for CKD.

Recognizing the high cost of the industry and the pending outcome of the Trade-related Investment Measures (TRIMs), the Anand government, dominated by liberal technocrats, decided to slash import duties on motor vehicles in 1991. Import duties on vehicles over 2300 cc. (CBU) were reduced from 300 percent to 100 percent and CKD duties were reduced from 112 to 20 percent. This substantially reduced the total tax from 616.8 percent to 210.8 percent for CBU and from 125.3 percent to 106 percent for CKD.

The decision severely affected auto assemblers. Overnight the highly-protected Thai industry was exposed to external competition. The effect of the transition remains to be seen, but Japanese TNCs are expected to

retain their competitive edge owing to their more flexible technology.

As to the three criteria of local content, rationalization and exports, Thai auto policy is more effective than that of Indonesia, Malaysia and the Philippines, all ASEAN countries (Doner 1991). Doner contributes this success to the coalition of the Thai government and local subcontractors, initially through ADC and later through the Joint Public and Private Sector Consultative Committee (JPPCC), chaired by the prime minister and represented by the three major business associations, the economic ministers and the secretariat of the National Social and Economic Development Board (NESDB).

Others have found the performance of the Thai auto policy less impressive, especially the technological spillover to local suppliers who are not part of the Japanese production family (Adachi and Siriboon 1982; Mingsarn 1990; and the Board of Investment 1991).

THE NEED FOR NATIONAL POLICY COORDINATION

An examination of the local content policy for automobiles made in Thailand reveals that its primary objective is to save foreign exchange. The government's attempt to institute the local content program was, in fact, to improve the auto sector's trade deficit, rather than to foster greater national capacity in automotive technology. Firms are now free to produce more parts, but these are invariably simple parts easily produced. Moreover, the mandatory items are often those already traditionally produced. Nor has the time table for producing these items been strictly adhered to. More importantly, there have been no systematic programs to technically support local part makers. The Thai auto industry was made to feel that protection, an important instrument for generating rents, would never be removed. In contrast, Japan's auto industry invested heavily in technology during the government's protection period, knowing that the protection period would not last long (Goto and Irie 1990). The Citizen's Car Project also disciplined Japanese car makers to produce fuel-efficient and low cost vehicles. In Thailand, in contrast, the assembly industry has been allowed to become high cost.

The Thai case study shows a lack of policy co-ordination. When the government used market mechanisms to replace both import bans and the local content policy, it should have given some priority to using the ASEAN Free Trade Area (AFTA) to enlarge the country's local parts and components markets, particularly as Thailand has a competitive edge in some subsidiary auto items. Unfortunately, this was not done.

Over the past 30 years, the Thai auto policy has gone from high to low protection. Japanese TNCs have displayed remarkable flexibility and tenacity in response to these changes in policy. They keep an extremely low profile and wait patiently for long-term profit.

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