THAILAND

Technology Transfer in Thailand

By Akira Suehiro

Toward a newly industrialized nation

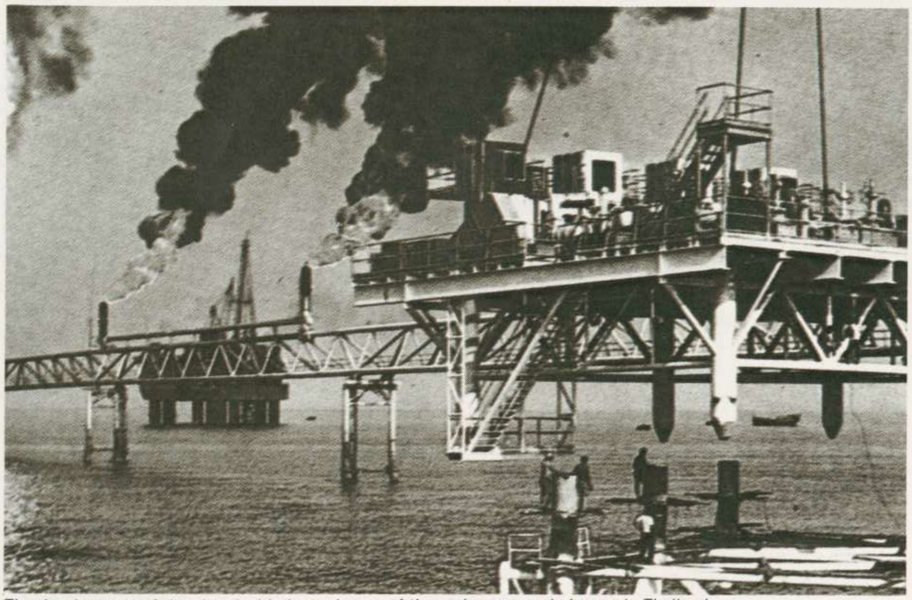
The fifth five-year Economic and Social Development Plan launched by the government of Thailand in 1981 reflects two broad policy goals. One is to correct the income gap between rural and urban areas and different regions of the country. The other is to promote the development of heavy and chemical industries, as exemplified by the Eastern Seaboard Large-Scale Industrial Project.

Efforts to reduce the income gap began as early as the mid-1970s with rural development plans and the Tambon project. They gained further momentum under the previous fourth five-year development plan. The fifth plan has been formulated to lift the Thai economy out of the stagnation caused by two rounds of sharp increases in oil prices. Specially, it seeks to promote rural development as a way of increasing farmers' income and expanding the domestic market, and to improve the industrial structure to develop Thailand's export and basic industries and to strengthen their international competitiveness. These two policy objectives are generally in accord with World Bank guidelines for the future of the Thai economy.

The transfer and dissemination of technology plays a decisive role in the development of both heavy and chemical industries and export industries. In Thailand's case, it was foreign businesses and foreign partners in joint ventures with local interests that took the lead in technology transfer in the early stages of industrialization. Thailand pursued an active industrialization policy in the 1960s based on import substitution, resulting in rapid growth in the textile, automobile, chemical and appliance industries. It was Japanese and other foreign companies that introduced mature technology into these sectors.

Problems with technology transfer

As industrialization progressed, attention shifted from the simple introduction of technology to the transfer and settlement of technology (e.g. machinery maintenance and repair) and to copying foreign technology. At the same time, emphasis was placed on the development of "native technology" appropriate to the needs of the Thai economy and the rediscovery of "traditional" technology, rather than on the importation of foreign techniques.



The development of the chemical industry is one of the major economic issues in Thailand.

This shift in emphasis reflected the growing need to strengthen the international competitiveness of Thailand's export industries, on the one hand, and the problems created by the pell-mell introduction of advanced technology in the heavy and chemical industries, on the other. In the meantime, the growing influence of local business interests led to criticism of some of the technology introduced by foreign firms. Multinational companies, for example, were charged with monopolizing advanced technology and refusing to make it available to their local partners. Such criticism was based on the belief that "subservience" to foreign technology was hampering autonomous technological development in Thailand.

Foreign enterprises were also blamed for bringing technology into Thailand in "package" form and thus indirectly impeding the development of related domestic industries and small businesses. In the textile industry, for example, it was pointed out that Japanese companies introduced a complete set of production processes ranging from materials manufacture to spinning, weaving, dyeing and finishing. This stirred resentment in Thailand on the grounds that it would retard the development of local dyeing and weaving mills.

Technology and industrial conglomerates

It goes without saying that technology transfer and, more importantly, technological development are essential to Thailand's industrialization. However, successful technology transfer hinges on two crucial questions. First, who is to undertake the transfer? And second, at what level should it be accomplished? Is it to take place at the level of individual enterprises, entire industries, or the national economy?

In a market economy, of course, private enterprises or entrepreneurs are primarily responsible for technology transfer. Even with enthusiastic government backing for technical training and technological development, technology transfer will not proceed as smoothly as officials and scholars might hope without the positive interest of individual businesses.

In this respect, it has been pointed out that Thai businessmen are relatively unconcerned about technology. In fact, foreign partners in joint ventures often blame local enterprises and businessmen for various problems in technology transfer. These include the shortage of skilled production workers and engineers, the relatively low status accorded engineers in Thailand and the lack of concern for technological development among local businessmen.

Foreign joint-venture partners particularly stress that Thai businesses are effectively owned and controlled by overseas Chinese and Thais of Chinese descent, who, they maintain, are seeking quick investment returns. Consequently, it is claimed, there is little interest in costly and time-consuming technological development. In the opinion of many foreign partners, the biggest obstacle to technology transfer in Thailand is not the technological monopoly of foreign businesses but the national character of Thai businessmen.

To check the validity of this argument, let me refer briefly to a survey I conducted on business groups in Thailand. One-hundred groups were selected on the basis of gross sales and assets for a study of their industrial foundations, capital ownership, backgrounds and growth patterns. Of the total, 24 were owned by local interests and belonged to local manufacturing industry conglomerates.

The study found some common characteristics among these 24 groups. First, 23 were owned either by overseas or local-born Chinese. Second, many of the manufacturing investments made by these groups were launched in the 1960s in response to the Thai government's investment promotion policy. Third, these manufacturing industry investments often took the form of joint ventures. In other words, these groups grew with the support of foreign capital and technology. Of 511 affiliated companies in the 24 groups, 211 were in manufacturing, of which 134 or nearly two-thirds had set up joint ventures with foreign (mostly Japanese) firms.

Even more interesting was the fact that 18 of the 24 groups had been started by import merchants or rice-exporters. Very few small factory owners or machine repairmen formed business groups during or after the 1960s, about the only exception being the Kwang Soon Lee group in the sugar industry.

In the case of importers, however, it is also worth noting that the products they handled were later manufactured by the business groups they established. For example, the Siam Motors group, the leader in the local automobile industry, had its roots in prewar hardware and used car dealers. After World War II these merchants founded more than a dozen auto assembly and parts manufacturing firms in joint ventures with Nissan Motor Co., eventually developing into the largest auto group in Thailand. Similar development patterns were seen in the Skuree group in textiles, the Soha Union group in garment accessories and the Union Paper group.

It should be noted that most of the major manufacturing industries in Thailand are in the hands of business groups established by former merchants—a fact which contrasts sharply with the Japanese experience. In Japan, large enterprises like Matsushita Electric Industrial Co., Sony Corp. and Toyota Motor Co. were founded by pioneering engineers. Even in companies established by non-engineer businessmen, engineers normally held key posts. Thus both businessmen and bureaucrats in Japan came to share a common belief that those who dominate technology also dominate the marketplace, and that those who lead in technological innovation also lead the industry concerned.

By contrast, the survey found that the predominant thinking in Thailand was that "marketing strategy took precedence over technological development." This view holds that technology is only one factor in corporate growth, and that the question whether to develop or import technology is primarily one of cost. Thus, foreign technology was introduced as long as it was more cost effective than independent technological development. The major concern of Thai industrial conglomerates was to control and rationalize distribution and financing, not to improve the production process. And as many of them were joint ventures, the tendency was to leave problems related to production and technology to the foreign partners.

We thus see that the lack of concern for technology among Thai business owners was attributable, not to the fact that they were Chinese, but rather to the historical reality that most had begun as merchants and that corporate growth was promoted through joint ventures with foreign enterprises.

On the other hand, overseas Chinese merchants who owned small factories in Thailand prior to the early 1960s suffered from the government industrialization policy favoring the introduction of foreign capital, as it deprived them of opportunities to introduce new technology. The result was a conspicuous and widening technology gap between small Thai businesses and foreign enterprises or joint ventures. This disparity in the development of traditional industries versus modern industries was the most significant feature of Thailand's industrialization in the 1960s.

Logic of individual businesses and of national economy

At least in Thailand, technology transfer needs to be addressed in terms of individual businesses and the national economy. As I have already explained, major manufacturing concerns in that country emphasized marketing over technology. There was nothing wrong with this strategy in itself. Aimed at maximizing corporate growth and profits, it was in fact the most rational choice for them to make. This is shown clearly by the fact that a number of merchant groups developed into giant conglomerates in a relatively short 10–20 years.

However, what is rational for an individual business is not necessarily rational for a national economy. The domination of manufacturing by merchants and bankers hampered the rise of engineering talent in Thailand. And the slow development of small- and medium-sized enterprises led to stagnation in related industries. Taken together, these worked to crimp the country's international competitiveness. This has now become a very serious problem for the Thai government as it strives to develop export industries and promote heavy and chemical industries.

The industrialization of Thailand in the 1960s–70s was directed at the domestic market and paid off mainly in the durable and nondurable consumer goods sectors. This is why those local businesses that followed a market-oriented strategy achieved such rapid growth. It is doubtful, however, whether these groups will continue to play a central role in the country's industrialization in the 1980s. Technology is becoming an increasingly important factor in the development of export industries, as well as heavy and chemical industries.

The Thai government appears to have only two options: either promote technological development itself in place of private business, or else depend almost entirely on foreign businesses for both capital and technology (in which case, the conventional form of cooperation through joint ventures would no longer be feasible). Neither course, however, would be the right way to promote autonomous economic development. Herein lies the quandary of technological transfer in that country.

In summary, the problems involved in technology transfer in Thailand do not stem from Chinese ownership of local businesses nor from the nature of the Thai people. Rather they derive from the historical process and direction of the country's industrialization. Meaningful solutions cannot be found without reexamining the issue from this point of view. Criticism of Chinese ownership or multinational corporations alone cannot produce any truly effective prescriptions. ●

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