

maintaining peace and order.

〈Malaya〉 Malaya's rubber plantations are famous, for they produce the largest amount of rubber for export in the world. Half the paddy-field farming is conducted by small-holders. Accordingly, Malaya conducts its land policies in a lukewarm manner. Not until 1955 was a tenancy law enacted, and this law was only intended to control farm rents which had skyrocketed after the war back to prewar levels. Tenancy contracts for more than a year are prohibited, which means that Malaya's land policy is contrary to the land reform policies of other countries, which are designed to bolster the tenants' right.

〈Taiwan〉 Taiwan is a country where Japanese-type land reform has been carried out in a most typical manner. It was started in 1949 with a reduction of farm rent, followed in 1951 by the transfer of land sequestered from former Japanese landowners. In 1953, the Government began to purchase land in excess of three hectares per landowner and to sell it to tenant farmers. Taiwan's land reform was, however, much less severe than that carried out in Japan. For example, land ownership by absentee landlords has been permitted to a certain extent, and landowners have been compensated for the land they surrendered with 10-year dated securities and Government stocks. But, unlike the other Southeast Asian countries, Taiwan carried out its land reform with a thoroughness comparable to Japan's. (*Shigetō Kawano*)

KŌSAKU TACHIBANA (ed.), *Tōnan Ajia no Kikai-Shijō* (Machinery Markets in Southeast Asia). Tokyo, Ajia Keizai Kenkyusho (the Institute of Asian Economic Affairs), Vol. I, Overseas Markets for Transportation Equipment, 1962, 430 p.; Vol. II, Overseas Markets for Electrical Machinery, 1963, 398 p.

I DEMAND FOR MACHINERY AND INTERNATIONAL COMPETITION

1. World Demand for Machinery

As a national economy develops, greater emphasis is placed on the secondary rather than the primary industries, with special importance being given to the iron and steel industry and to the manufacture of machinery. This comes about because economic development gives rise to an increased demand for the products of heavy industries rather than for other articles. In advanced countries there is a tendency towards modernizing industrial equipment and there is increased consumer spending on durable goods, while in the developing countries there are pressures for industrialization.

Observing this situation from the standpoint of world trade, we see that the world's export of machinery, which had stood at \$ 17,100 million in 1955, advanced by 76 per cent in 1961 to reach \$ 30,100 million. As against this, the world's total export of all items rose by only 43 per cent from \$ 92,800 million to \$ 133,000 million during the same period.

2. The Importance of the Developing Countries as Markets

The postwar expansion of world trade largely depended on the rapid expansion of trade among the advanced countries. This means that, as a result of declines in the requirements of raw materials brought about by world-wide technological innovations, exports of primary products of the developing countries have relatively fallen off, and these countries have suffered from the lack of foreign currency.

However, at the present time, in the advanced countries (such as the United States, West European countries, and Japan) supply is exceeding demand and symptoms of the oversupply of manufactured goods, particularly capital goods, are in evidence. As a result, a slowing-down in the rate of growth is becoming one of the most important economic problems.

On the other hand, the situation in most developing countries is such that they are compelled to curb their imports of capital equipment which are urgently needed for economic development, because of their shortage of foreign currency funds.

Machinery exports from the advanced countries to the developing nations, then, will play an important role in the future development of the world economy. And it is imperative for Japan to expand her exports of machinery, inasmuch as the developing countries are now manufacturing textiles and sundry goods locally—Japan's traditional export items—and are vigorously competing against Japan in these sectors. At any rate, export competition is growing more and more fierce in the international market.

3. The Study Group

"Machinery Markets in Southeast Asia", Vol. I and II, is part of series of research reports published by the Institute of Asian Economic Affairs and is of special significance in view of the above-mentioned situation.

Volume I is based on the results of research conducted in the fiscal year 1961 and deals mainly with the demand for transport equipment in the face of international competition, while Volume II, based on research conducted during fiscal 1962, deals with the question of electrical machinery. Other categories of machinery, namely machinery other than electric (SITC 71) and precision instruments (SITC 861), which are not dealt with in these volumes, will be the subject of future research. It is earnestly hoped that studies dealing with other than electrical machinery, particularly with regard to industrial machinery, including construction and chemical machinery, will be undertaken soon.

The staff members of the group, headed by Mr Kōsaku Tachibana, managing-director of the Japan Machinery Federation, were as follows: Mr Masayoshi Tamaoki, Mr Tadao Miyata, Prof. Hiroji Uno, Mr Yoshirō Asano, Mr Keiichi Terada, Mr Kazuo Fujimoto, Mr Yoshihiro Kogane, Prof. Kōichi Isobe, and Mr Eishi Hikinuma. The study group met several times every month and individually wrote the articles covering their particular areas of responsibility.

II SCOPE OF SURVEY

1. Subjects

As will be seen from the subtitles, the purpose of the research work was to investigate the nature of demands for machinery in Southeast Asia and to study the export drive being conducted among the advanced countries.

The objects of the analysis were as follows :

(1) to investigate the fundamental economic structure of the developing countries—restricted by the so-called mono-cultural trading system; (2) to examine the question of machinery requirements generally from the point of the economic development plans; (3) to investigate in detail by country, industry and commodity, i) the present condition of industry and commerce in the main countries, ii) the trend of import demands, iii) the division of the import market between the main exporting countries and the competition between the world's exporting nations.

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III SUMMARY

1. Overseas Markets for Transportation Equipment

In the final analysis, the overriding factor in determining the requirements of transport equipment within the area must be that the countries in the region are developing countries. They are troubled with shortages of foreign currency because their imports have increased and their exports stagnated owing to their monocultural economic structure. These countries are presently carrying out their economic development programmes with the aid of the advanced countries and international organizations.

Most of the countries of Southeast Asia are allocating 20–30 per cent of their total investment funds to improvements in transportation and communications as part of their economic development plans. They are transferring the emphasis from railway to road transportation, although it is true that in a number of countries such as India and Pakistan railways are still playing an important role in the transportation of freight, but, as far as passengers are concerned, motor vehicles are more efficient for short-haul and to aircraft for long-distance transportation. However, inland waterways, which are the oldest form of transportation, still persist in many parts of the region, mainly in the Indo-Chinese Peninsula.

Another feature of the “transportation revolution” is the increased use of diesel engines. Diesel-powered locomotives and diesel-engined buses are extensively utilized in this region.

In international trade, formerly such suzerain countries as Britain, the U.S., France, and Netherlands had advantages in these countries, but in or around 1953 France and the Netherlands suffered serious political and economic defeats, and since then their places have been taken by Japan and West Germany, which made their entrances first in the non-Sterling areas, and which are now engaged in fierce export competition with the U.S. and Britain.

The determining factor in export competition, however, is not necessarily the price factor, but in the over-all economic power of economic aid (provision of import funds), payment terms, quality, delivery date, and extension of after-delivery services. Further, political and diplomatic factors can neither be overlooked nor disregarded.

Railways in Southeast Asia suffered considerable damage during World War II. However, those of India, Pakistan, Burma, Malaya, and the Philippines have not only been renovated but also expanded since the termination of hostilities. In Indonesia, however, recovery has not progressed at the same rate. In India and Pakistan, efforts are being made to attain self-sufficiency in the supply of rolling stock, and as a result, their demands for rolling stock will be confined in the future to diesel-powered electric locomotives, alternating current electric locomotives, diesel-powered rail cars, and streetcars. The United States and West Germany are the leading suppliers of diesel-engined locomotives, while France is an important supplier of A.C. electric locomotives.

In areas where public means of transportation are not yet fully developed, bicycles provide a useful means of locomotion for the masses. Many countries are taking protective measures against imports and are fostering the local manufacture of bicycles, a comparatively simple industry which does not require advanced production techniques. India has raised a protective tariff barrier for this purpose and introduced foreign manufacturing methods in the 1950's. As a result, production exceeded one million units in 1960, and in spite of the need for improvement in quality and reduction of production costs, its bicycle manufacturing industry has developed to an extent where it can satisfy domestic demands and export its surpluses to Burma and Afghanistan. In Indonesia, Ceylon, and Pakistan there are plants where imported bicycles are assembled, while in Malaya, Burma, and Thailand efforts are being made to start bicycle manufacturing locally.

The tonnage of ships held by Southeast Asian countries is extremely small, with the combined tonnage of Indian, Pakistan, Indonesian, and Philippine bottoms comprising less than one per cent of the world's total. Consequently, the percentage of cargoes arriving on domestic ships is extremely low, with that for India, which leads all the other countries in the region in tonnage, being in the neighbourhood of 5 per cent. In order to strengthen their economic independence, India and the Philippines are attaching great importance to establishing their own ocean-going merchant fleets. While river transportation plays an important role in Indonesia, Burma, and Pakistan, expansion is hindered by a shortage of vessels. India and Pakistan have large Government-operated shipyards and Burma a small State-operated yard for constructing vessels for inland navigation. However, these shipyards are importing shipbuilding materials, and technology is on a low level. It is also doubtful whether they are efficiently operated. India and Indonesia have been leading the other countries during the past several years in the import of ships. The main suppliers of ships to these countries are Japan, West Germany, and Britain.

There are 1,350,000 automobiles, or one for every 500 persons, in the Southeast Asian countries. The number of automobiles per head of population is higher in Singapore, Malaya, Ceylon, etc. where the national income is comparatively high. In most Southeast Asian countries, automobiles are assembled from parts imported in knocked-down form, and in some countries the import of completely assembled cars is prohibited. Many countries are trying to change gradually to the local manufacture of automobile parts, but apart from India, little progress is seen here.

2. Overseas Markets for Electrical Machinery

Part I of Volume II shows that electrical machinery covers a wide range of categories from capital goods to consumer articles, and that each of these different categories fits into a different trade pattern. Then, detailed expositions are given of the electrification plans and schemes to develop electrical machinery industries in Southeast Asian countries as factors determining the import of electrical machinery. Part II, Country Descriptions, outlines com-

Table 1. FLOW OF ELECTRICAL MACHINERY EXPORTS

(In million U.S. dollars)

Year	Exports of Electrical Machinery by 11 Principal Exporting Countries	Exports to 11 Southeast Asian Countries
1951	1,628	151
1952	1,947	198
1953	2,109	186
1954	2,200	184
1955	2,394	197
1956	2,781	234
1957	2,999	264
1958	3,134	248
1959	3,350	266
1960	3,962	248

Source: Vol. II, Part I, p. 50. (Table 4) *cf.* U.N., Commodity Trade Statistics 1951-60, *passim*.

Table 2. COMPOSITION OF IMPORTS BY COUNTRY

(1958-60 Average)

India	42.5%
Malaya	10.7
Pakistan	10.6
Philippines	9.7
Indonesia	7.5
Thailand	7.3
Three Indo-Chinese Countries	4.8
Ceylon	3.6
Burma	3.3
Total	100.0

Source: Vol. II, Part I, p. 48. (Table 3) *cf.* U.N., Commodity Trade Statistics, 1958-60, *passim*.

Table 3. COMPOSITION OF IMPORTS BY ITEMS

	Heavy Electrical Machinery	Household Electrical Appliances
India	45.1%	3.3%
Burma	30.5	23.0
Malaya	25.2	25.0
Thailand	17.4	26.2
Ceylon	9.6	57.0

Source: Vol. II, p. 88 (Table 23) and p. 91.

Table 4. COMPOSITION OF EXPORTS BY COUNTRY

	1960 Exports	1960 Exports to Southeast Asian Countries
United States	27.1%	18.3%
Germany (East, West)	22.1	16.0
Britain	16.5	33.2
Netherlands	8.8	4.6
Japan	7.0	15.2
France	6.6	4.3
Belgium	2.9	—
Sweden	2.6	2.8
Italy	2.5	3.4
Canada	2.5	—
Austria	1.2	—
Denmark	1.1	—
Total	100.0	100.0

Source: Vol. II, Part I, p. 50. (Table 3)

petition during the past several years between the advanced countries, by main machinery items, in three different markets, namely, India, the largest market in Southeast Asia; Burma, which has recently attracted attention in connection with Japan's reparations to that country; and Thailand, which has never experienced colonial domination.

The export of electrical machinery by 12 principal exporting countries increased by 2.4 times from \$ 1,628 million in 1951 to \$ 3,962 million in 1960. However, the export of electrical machinery to the 11 Southeast Asian countries expanded by only 64 per cent from \$ 151 million in 1951 to \$ 248 million in 1960, and it is remarkable that the amount of exports by these countries has remained on the same level since 1956.

Classified according to receiving countries, India took the largest portion with 42.5 per cent of the 1958-60 average. Among the supplying countries, Britain led the others with 33.2 per cent in 1960, followed by the United States with 18.3 per cent, West Germany with 16.0 per cent, and Japan with 15.2 per cent. The combined total of exports by these four countries accounted for 83 per cent of the total.

The composition of imports by items shows India and Ceylon as countries diametrically opposed in import patterns, India importing capital goods and Ceylon consumer articles. India's imports of heavy electrical machinery comprised 45.1 per cent of her total imports, while her imports of household electrical appliances were limited to 3.3 per cent.

The future trade of many Southeast Asian countries can be expected to follow the Indian example. The local manufacture of consumer goods will be encouraged, whilst major items of capital goods will be imported.

Southeast Asian countries are allocating about 10 per cent of their available funds for the development of electrical power resources. At the present, power is generated in small-scale steam and diesel power plants, but future developments will include hydro-electric schemes. The construction of a multi-purpose dam as part of the integrated development plan of the lower valley of the Mekong River is a good instance of this.

IV PROSPECTS

Import requirements of machinery in Southeast Asia are characterized as follows:

- 1) They are most related to movements in national income and industrial production indices;
- 2) generally speaking, the price factors are not especially important;
- 3) the ability of the countries in the region to pay for imports depends largely on payment terms and the degree of economic co-operation extended by exporting countries.

In short, the expansion of machinery exports to the Southeast Asian markets demands long-term policies, such as lightening of deferred payment terms, expansion of Government credits, promotion of private investment, and technical co-operation. In promoting such policies, however, favourable consideration must be given to the question of their industrialization and of the purchase of their primary products.

(Katsuhisa Yamada)