A HISTORICAL PATTERN OF ECONOMIC GROWTH IN DEVELOPING COUNTRIES

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I. THE HISTORICAL STAGES OF ECONOMIC GROWTH IN DEVELOPING COUNTRIES

IT is impossible to study the economic growth of the developing countries in modern times without considering the mutual interactions between these economies and those of the advanced countries. When Western European Capitalism began to expand its production and trade on a world-wide scale, it awakened the less-developed areas of the world to modern economic development. This article will take up the Asian area, including Japan, as object of examination. Economic growth in the Asian area was brought about by the eastward advance of Western European capitalism. In this intermingling of Western European and Asian economies the following historical stages can be observed.

The first stage is the period when native Asian industry developed as a result of the exchange of native Asian products for Western European industrial products.

The second stage is the period when the native handicraft industry crumbled because manufactured consumer goods flowed into the Asian area after the Industrial Revolution in Western Europe.

The third stage is the period when Western European capital and techniques infiltrated the Asian area for the large-scale production of primary goods, such as raw materials and provisions necessary for the Western European economy, as well as for the construction of railroads and highways. During this period the exchange of Western European consumer goods for native primary products came to be established.

The fourth stage is the period when Western European capital came into the developing countries to develop modern industries, including the industries processing raw materials produced in those areas.

The fifth stage is the period when native capital began to run the industries processing native raw materials. In this period a conflicting relationship was generated between consumer goods imported from the advanced countries and those of the native processing industries. However, in this period, capital goods came to be imported from the advanced countries for the consumer-goods industries in the developing countries and,

in consequence, there was a conspicuous change from consumer goods to capital goods in the import structure.

The sixth stage is the period when manufactured goods in general began to be produced by native industries, whether the raw materials were domestically available or not. The capital goods required by these industries were imported at the expense of the induction of foreign capital and of the export of primary products.

The seventh stage is the period when the industrialization of the developing countries became so advanced as to make possible the export of manufactured consumer goods, and when the domestic production of some capital goods gradually came to the fore.

These stages, however, overlap each other and cannot be clearly classified nor applied to every developing country in Asia. For instance, Japan has attained the position of an advanced country in comparison with other Asian countries. She has attained a stage higher than the seventh stage. India and China can be said to have partially reached the seventh stage. The other countries, however, have not yet developed to the stage of capital goods production.

1. Development in Connection with Heterogeneous Economic Interrelation.

For the classification of the above-mentioned stages with respect to the interrelation between an advanced economy and a less-advanced economy, we can call the stages from the first to the third the period of differentiation of economic structures into advanced and less-advanced. Primarily, the Western European economy and the Asian economy have heterogeneous characters deriving from different natural environments, ways of life, and cultures. Out of this heterogeneous economic relationship, as a matter of course, something of an international division of labour is formed. When heterogeneous specialities are produced in different environments, international relations are formed therein and trade is commenced. Thus the specialities of Asian countries came to be exchanged for Western European products. However, at this stage, it is premature to call it an "international division of labour". The international division of labour comes into being only after the specialities trade, which has been initiated by heterogeneous interrelationship, has stimulated the production of specialities for export. This is none other than the heterogeneization of the international economies. At this juncture, Western European capital set out to exploit farms and mines in the Asian area and to develop the Asian economy as a complementary economy to that of Western Europe.

Heterogeneous economies have a possibility of creating complementary

relationship provided that the products of the one area can become the object of wants by the inhabitants of the other area. Western Europeans have manufactured in the Asian area the products which they themselves wanted and have turned Asia into a complementary area of Europe by so developing them. In this way, modern development of the Asian economy has been greatly accelerated by its heterogeneization with the Western European economy.

This heterogeneization of the international economy, i.e. the international division of labour, necessarily accompanies structural changes in the Asian economy and partially created a situation to be called "structural contradiction".

One of these changes is that, as indicated in the above-mentioned second stage, many handicraft industries which had existed among the natives were destroyed by manufactured consumer goods imported in exchange for the export of native specialities. Of course, the import of such items as matches and glasswares from Western Europe was instrumental in the elevation of living standard of the native population in view of the fact that those articles had not been produced in the locality. But, for instance, in various parts of Asia clothing had been produced by the handicraft industry, which was destroyed as a result of the import of cotton cloth from abroad, particularly from England. The handicraftsmen were thrown out of work and were degraded to being farm labourers. If the handicraftsmen were driven out of work and their standard of living downgraded to that of labourers, this situation could be called a "structural contradiction."[1]

When Western European industrial products which have the same

1 "Examples are easy to find of underdeveloped countries whose entire culture has been impoverished as trading contacts with the outside world have developed. In Bagdad, for example, of the old handicrafts for which the city was famous there survive only a few silversmiths who themselves have adopted patterns from abroad requiring less craftsmanship." (G. Myrdal, *Economic Theory and Underdeveloped Regions,* London: Gerald Duckworth & Co., 1957, p. 52)

In the early years of the Meiji Era in Japan, "Handicraftsmen were threatened by the newly imported plant industries, and the invasion of cheap merchandise produced by European and American capitalism wrought havoc upon them." (Tetsuji Kada, *Meiji Shoki Shakai Keizai Shisōshi* ((History of Social Economic Thought in the Early Years of the Meiji Era)), Tokyo: Iwanami Shoten, 1937, p. 535)

K. Marx quoted in his *Discours sur la Question du Libre Echange* (1848) the report that after the Industrial Revolution in England, English woven cloth was imported into India at a time when exports of Indian cotton goods came to a stop, resulting in the starvation of Indian fabric handicraftsmen.

"The process of the decay of the Indian industries was rendered complete by the competition of cheap machine-made goods from England." (V. Sundara Rajan, *An Economic History of India, 1757–1947,* Baroda: East & West Book House, 1955, p. 118).

uses as those of native handicraft industry products are imported, homogeneization of the international economy through the contact of these two products can be observed. Heterogeneity can be complementary and co-accelerative, while homogeneity can be substitutive and competitive. This substitutive and competitive relationship caused the native handicraft industry to submit to the pressure of the factory industries of the advanced countries. However, the structural contradiction caused by this homogeneization was the cost of creating an international division of labour which constituted the essential tendency of the international economy at that time, and this contradiction was gradually dissolved with the growth of modern industries in the less-advanced countries.

The second structural contradiction as a result of international economic heterogeneization is that the advanced Western European countries came to politically govern the Asian countries as their colonies. This contradiction is what the theory of imperialism explains. The problem here is that the Western countries wanted to monopolize their colonies as complementary areas of their home economies and to maintain everlasting heterogeneous interrelations between their home economies and colonial economies. This is realized in their policy of heterogeneizing colonial economies.[1]

The heterogeneization policy was enforced, for instance, by England on its American colonies. On the one hand they encouraged in America those of their industries which could not have developed in England in order to make America a complementary economic area, while on the other hand they oppressed the growth, in the colonies, of the same kind of industries as in England. In other words, they discouraged the homogeneization of the American colonial economy with the English home economy. However, the industrialization of the colony and its homogeneization with the home economy eventually became an essential trend of the age until the heterogeneization policy of the home country could no longer

1 The following testimonial of a person called Martin is quoted in Rajan's *An Economic History of India, 1757–1947*: "Montgomery Martin, another witness, said: 'We have during the period of a quarter of a century compelled the Indian territories to receive our manufactures, our woolens duty free, our cottons at $2^1/_2$ per cent and other articles in proportion; while we have continued during that period to levy almost prohibitory duties or duties varying from 10 to 20, 30, 50, 100, 500 and 1000 per cent upon articles, the produce from our territories...'" (*ibid.*, p. 116)

"The policy of the government aimed at making India, 'the agricultural farm of England.'" (*ibid.*, p. 119)

In the Dutch Indies, "measures to replace goods imported from the Netherlands by native products were unlikely to meet with approval in the Second Chamber". (J.S. Furnivall, *Netherland India, A Study of Plural Economy*, New York: Macmillan Co., 1944, p. 332)

check the homogeneization trend and resulted in the Declaration of Independence of the American colonies. A similar process can be seen in the case of India.

2. *Development in Connection with Homogeneous Economic Interrelation*

The Asian economy made remarkable progress in the course of its heterogeneization with the Western European economy, but it soon switched over to development toward homogeneization. Although this is partly due to the fact that the less-advanced Asian area could not pose as a primary products producer forever, the chief impetus came from Western European capitalism.

Western European capital first went into the exploitation of farms and mineral resources to produce primary products on a large scale, thus effectuating heterogeneization with the economy of the home country, but it eventually turned to establish in the colonies processing industries similar to those in the home country. Here started the above-mentioned fourth stage.[1]

England had inhibited the rise of industries in the American colonies which were the same as those in the home country, but with the independence of America and the French Revolution, Western Europe entered upon the age of Liberalism. Accordingly, it became impossible to restrain Western European capitalism from transplanting industries to the colonies in pursuit of larger profits. It was natural that in those lands, in particular India and China, which had all the three beneficial conditions, i.e. low wages peculiar to Asia, cheap raw materials obtainable from native resources, and a selling market with a big population, Western capitalism came to build modern industries. However, industries and trade thus built up by the foreign capital could not help giving birth to modern industries by national capital, as mentioned in the fifth stage. Thus, national capital set out to build modern industries to cope with the imported products as well as with the industrial goods manufactured by imported capital. The degree of industrialization by means of national capital varies according to country. In Japan, modernization of industries was carried out rapidly almost exclusively through her national capital, and this is partly because she had been almost free from Western European colonization. Also, India and China saw remarkable progress in the development of their modern industries through national capital. But, in other colonial countries no noticeable advance of national capital was marked until after

[1] "The factory industry in India has been founded and built up by British businessmen." (Rajan, *op. cit.*, p. 127)

World War II. The rise of modern industry on the basis of national capital in a less-developed area means homogeneization with Western European industry. Here arises, first of all, a conflicting relationship between imported consumer goods and native-produced consumer goods, which gives birth to economic nationalism in the less-developed countries. This economic nationalism movement first takes shape in the raising of import tariffs on imported consumer goods or in the direct limitation of imports. If the protective policy is effective and imports are checked while production by national capital increases, the native industry might be said to have attained the take-off stage.[1] However, the policy of protecting domestic industry by means of an import check should be adopted only when ample development of the protected industry can be foreseen. Should this development fail to occur, nationalism in the less-developed countries may, on the contrary, impoverish the national economy.

The economic nationalism of the developing countries at first establishes consumer goods production on the basis of national capital, and then it proceeds to the national capitalization of industries so far operated by foreign capital and, further, to the production of capital goods by national capital. This series of developments signifies that the developing countries advance through the stages of homogeneization with the industries of the advanced countries.

3. *Development Stages of High-Degree Heterogeneization and High-Degree Homogeneization*

The establishment of consumer goods production with national capital, within its limitation, means homogeneization with the advanced country's economy and development through mutual conflict. However, national capital, in most cases, has to import capital goods in order to produce consumer goods by itself. Here arises a heterogeneous complementary relationship of capital goods importation and consumer goods production. In this case, the premise is that the export industry of the advanced countries has naturally developed from the production of consumer goods to that of capital goods. Consequently, as the consumer goods industries

1 In India, "tariff protection was thus an effective instrument for assisting industries and stimulating industrialization... The change in the content of her external trade reflects the partial industrialization which took place between 1914 and 1939. Imports of consumer goods declined from 37 per cent in 1926–27 to 20 per cent in 1938–39; while the imports of raw materials increased from 16 per cent in 1922–23 to 24 per cent in 1938–39. The imports of machinery and other capital goods which formed 19 per cent of the total imports in 1926–27, constituted 25 per cent in 1938–39". (Rajan, *op. cit.*, p. 125–26)

rise in the less-advanced countries, they form heterogeneous relations with the capital goods industries of the advanced countries. This is called high-degree heterogeneization, in which a high-degree complementary relation is formed which differs from the first stage heterogeneous relation between the native specialities industry and the Western European consumer goods industry. That is, the above-mentioned fifth stage sets in. At this stage native nationalism levies lower tariffs on capital goods imports in contradiction to the check policy on consumer goods imports, with the import of the former being promoted. However, national capital alone may not always be sufficient to import machinery and plants, nor is the export of special products enough to cover the import of capital goods. Either of these cases, or a situation in which both existed, could cause difficulties in the international balance of payments. This makes the induction of foreign capital necessary. Foreign capital had already been induced in the above-mentioned third or fifth stage, mainly in the stage of heterogeneization of the less-developed country's economy to the advanced country's economy, which led to the appearance of imperialism or colonialism by way of the capital exports of advanced countries.

In the course of imperialism, the capital exports of advanced countries are positive and active, while the capital import of developing countries are rather negative and passive. In the course of the homogeneization of the less-advanced country's economy with the advanced country's economy, the economic nationalism of the less-advanced countries becomes positive in its own economic development and induces foreign capital voluntarily for its own need. Economic nationalism tries to utilize foreign capital for its homogeneization with the advanced country's economy while excluding submission to colonialism. The capital export of advanced countries or the capital import of less-advanced countries is, namely, the exchange of capital goods of advanced countries for primary products and consumer products of less-advanced countries through the international division of labour. It is a heterogeneous relationship higher than the international trade of previous stages between manufactured consumer goods and primary products, which constituted the stage of high-degree heterogeneization.

However, this stage also involves the possibility of developing into the stage of high-degree homogeneization. Examples are the development of the steel industry in India and China, where steel is already being produced as a capital good, and moreover the production of secondary goods with steel as a material is now beginning, the domestic production of machinery and plants which are necessary for the consumer goods industries is also starting. If the first stage of the homogeneization process is the process of the consumer goods industries of a less-advanced

country catching up with those of an advanced country, this development of capital goods production in a less-advanced country shold be called the stage of high-degree homogeneization.

4. Homogeneization of Synthetic Materials and Natural Materials

What should be added lastly in the process of the heterogeneization as well as the homogeneization of an advanced country's economy and a less-advanced country's economy is the development of synthetic material industries in advanced countries. This has led to the production of artificial materials taking the place of natural materials in many fields of industrial materials such as dyestuffs, rubber, textiles, fertilizers, fat, and oil. There is a possibility that these fields will be enlarged. Here arises the homogeneization of natural materials industry with synthetic materials industry. While the primary industry depends largely upon nature, the synthetic industry depends upon a high level of scientific technique. Although conspicuous heterogeneity exists between the two, they are homogeneous in their uses, and present a conflicting and substitutive relationship. This homogeneization process has been caused by the elevation of scientific techniques in advanced countries. As against the previous process, which occurred as a developmental process in less-advanced countries, in this process new motive factors have been created on the part of advanced countries. This means, in one view, that as the old imperialism, which had penetrated into less-advanced countries seeking for materials and provisions as primary products, came to be gradually eliminated by nationalism, advanced countries began to produce artificial materials by means of chemical syntheses and adopted re-agriculturization policies in an effort to lessen their dependency upon less-advanced countries for those materials and provisions. From another angle, it might be said that the advanced countries have attempted to homogeneize their industries with the primary industries of less-advanced countries by synthetic industries and re-agriculturization in order to stave off the pursuit by less-advanced countries through their industrialization.

At any rate, the homogeneization of the synthetic industry and the primary industry is a matter of concern to the less-advanced countries and casts a dark shadow on the prospect of expansion of their exports of primary products. The only way for less-advanced countries to overcome this contradiction will be to weaken their vertical dependency upon the advanced industrial countries by pushing forward their own industrialization. In the meantime, the elevation of the national income level of less-advanced countries through industrialization will create a new horizontal

international division of labour irrelevant to the homogeneization of the industrial structure.

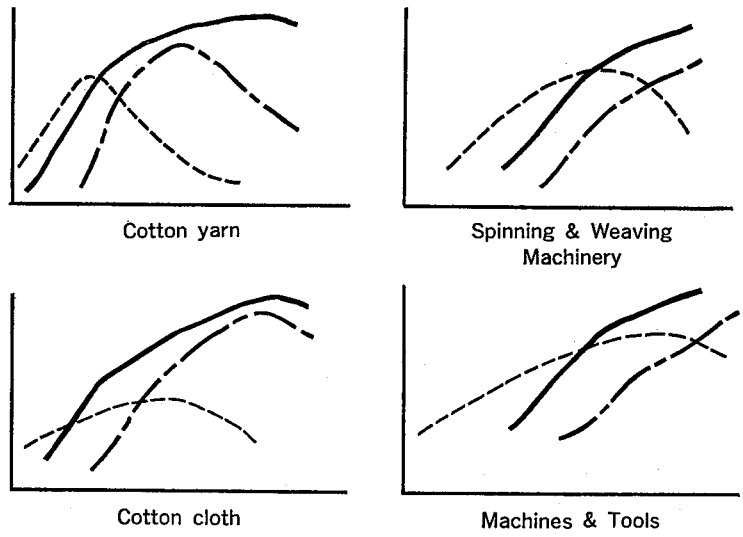
II. The Wild-Geese-Flying Pattern (Ganko Keitai) of Industrial Development in Developing Countries

The development process of heterogeneization and homogeneization of an advanced country's economy and a less-advanced country's economy, as well as that of high-degree heterogeneization and homogeneization, can be generally formulated into a historical theory called the "wild-geese-flying pattern" of the industrial development of less-advanced countries. The wild-geese-flying pattern of industrial development denotes the development after the less-advanced country's economy enters into an international economic relationship with the advanced countries. This theory leaves out of consideration the period during which less-advanced countries are in the stage of a closed self-sufficient economy or during which there is no international trade of any significance with a neighbouring country, since their economic structures are homogeneous with each other. A sort of formula for the industrial development of less-advanced countries after they have opened trade ports and entered into large-scale trade relations with the advanced Western European countries is the hereby termed wild-geese-flying pattern of industrial development.

Wild geese fly in orderly ranks forming an inverse V, just as airplanes fly in formation. This flying pattern of wild geese is metaphorically applied to the below figured three time-series curves each denoting import, domestic production, and export of the manufactured goods in less-advanced countries. Figure 1 is a model of the time-series curves of Japan's import, domestic production, and export in respect of cotton yarn, cotton cloth, spinning and weaving machinery as well as general machines and tools from about 1870 to World War II. The term wild-geese-flying pattern was derived from this model figure.

Explanation of the meaning of the wild-geese-flying pattern will be given in a later paragraph. I will only point out in this context the following facts with regard to the economic development of less-advanced countries. First, for all industrial goods there exists a sequential order, from import to domestic production and further to export. Secondly, the time for the curves of domestic production and export to go beyond that of import will come earlier in crude goods and later in refined goods, and similarly, earlier in consumer goods, and later in capital goods. Thirdly, the import curve falls in proportion to the rise of the domestic production curve, and it is probable that the export curve will sooner or

Figure 1. WILD-GEESE-FLYING PATTERN



Notes: 1. These curves cover the period from about 1870 to World War II
2. - - - - - Import
——— Production
- — - — Export
3. Vertical line denotes value

later begin to fall with respect to crude goods or consumer goods and the domestic production curve of these goods will also decline in the future.[1]

1. Fundamental Wild-Geese-Flying Pattern

First stage: The wild-geese-flying pattern is classified into several forms, the first of which is that manufactured consumer goods are imported from advanced countries and, in exchange for them, special products of less-advanced countries are exported. As mentioned above, some

1 For the "wild-geese-flying pattern" of industrial development please refer to my treatises listed below:

Kaname Akamatsu, "Waga Kuni Yōmō Kōgyōhin no Bōeki Sūsei" (The Trend of Foreign Trade in Manufactured Woolen Goods in Japan), in *Shōgyō Keizai Ronsō* (Journal of Nagoya Higher Commercial School), 1935, pp. 129 *sqq.* (in Japanese); "Waga Kuni Keizai Hatten no Sōgō Benshōhō" (Synthetic Dialectics of Industrial Development in Japan), *ibid.*, July, 1937, pp. 179 *sqq.* (in Japanese); "Waga Kuni Sangyō Hatten no Gankō Keitai, tokuni Kikai Kigu Kōgyō ni tsuite" (Types in the Development of Our Imported Industries, With Special Reference to the Machine and Tool Industry), in *The Hitotsubashi Ronsō*, Tokyo: Nov. 1956, pp. 68 *sqq.* (in Japanese); "A Theory of Unbalanced Growth in the World Economy", in *Weltwirtschaftliches Archiv.*, Hamburg: 1961, Bd. 86, Heft 2. pp. 196 *sqq.* (in English).

manufactured consumer goods thus imported have a destructive effect on the native handicraft industry of the less-advanced countries, with the result that most labourers discharged from the domestic handicraft industry move into the export industry for special products. Thus, the process of the above-mentioned heterogeneization or the international division of labour gets under way.

Second stage: Domestic production of previously imported consumer goods comes into existence, entailing the import of capital goods for the consumer goods industry, as mentioned above. Homogeneization in this field with advanced countries spontaneously effects a high-degree heterogeneization between the capital goods industry of advanced countries and the consumer goods industry or primary industry of less-advanced countries. The fundamental problem in this case is that there should be fostered a domestic consumer goods industry powerful enough to win in the competition with imported consumer goods and to recover the home market from the hands of foreign industries. The primary condition for this consumer goods industry to be established is the existence of a domestic market for these goods. Such a market has already been developed by the imported goods, which fact has been overlooked in Nurkse's theory. Nurkse holds that in less-advanced countries no demand for industrial goods exists because of their poverty, and in consequence, there is no incentive to investment. However, the reverse being the case, manufactured consumer goods are being imported in exchange for special products and form a big export market for the advanced industrial countries.[1]

In this process of recovering the domestic market, there will arise a struggle of economic nationalism in less-advanced countries. This presupposes the accumulation of capital and the technological adaptability of the people in those countries. Further, it calls for the government's protective policy to encourage and promote the consumer goods industries. Moreover, for the establishment of such domestic industries, there must be an abundant supply of raw materials, which may be found in the native resources as primary products, or at times as in the case of Japan, must for the most part be imported from abroad. In the latter case, not only capital goods such as machinery but also raw materials must be imported from abroad as production materials.

In Japan, with the rise of the cotton spinning industry since the 1880's, her domestic market was gradually recovered from imported products. Prior to this, the *Ansei* Treaty of 1858 had deprived Japan of

1 Albert O. Hirschman, *The Strategy of Economic Development*, (New Haven: Yale University Press, 1958) p. 120. In this book the author stresses the important role of imports in causing the industrialization of developing countries.

her tariff autonomy making it impossible for her to apply a protective tariff policy. It was probably due to the exellent technological adaptability of the Japanese in addition to low wages that her domestic products could overcome this handicap and win out over the competition with imported goods.

Such requirements are not always met in less-advanced countries. Therefore, it is a big problem whether these countries may be able to go through the same development process as did Japan.

Furthermore, establishment of a consumer goods industry presupposes the presence of energy resources, granted that machinery is imported. In Japan, there are some resources of coal and fairly rich resources of water power, which started to be exploited parallel with the rise of consumer goods industries. As a result, coal mining and electric power enterprises rapidly developed, and so did railroad and shipping enterprises. Such industries as those of energy, traffic, etc. form the external economy or the environmental economy. These should start with the birth of the consumer goods industry. The establishment of these environmental industries is made possible by the existence of a demand market for energy through the consumer goods industry. The development of the energy industry as well as of the traffic industry will in turn accelerate industrialization. Thus, in the second stage of the wild-geese-flying development, the consumer goods industry springs up accompanied by the energy industry and the traffic industry as environmental industries to support it. Leaving the environmental industries out of consideration, we can see conspicuously, in the second stage, the development of the domestic production of hitherto imported consumer goods and increased imports of capital goods as well as gradually decreasing importation of consumer goods. At what time the expanded domestic production turns to decrease imports should be empirically studied for each individual commodity. In case the increase in domestic demand surpasses that of domestic production, the increase of imports will continue despite the increase in domestic production. However, it is clear that at a certain stage of the development of domestic production, the imports of commodities of the same kind as domestic products will show a decreasing trend.

Third stage: This is the stage when the domestic consumer goods industry develops into the export industry. By this time most of the domestic markets have turned into markets for domestic industrial goods. As production is put on a larger scale for mass production, the products are exported in increasing numbers to overseas markets. Simultaneously, the domestic production of hitherto imported machinery comes to the fore, while the import of capital goods which are substitutive for domes-

tic machinery begins to decline in turn. In Japan, spinning machinery began to be domestically manufactured around 1900, and today India has started the manufacture of spinning and weaving machines.

As stated above, a wild-geese-flying pattern in regard to the consumer goods industry has been seen in the developments starting from the import period of the first stage, through the period of domestic production of the second stage, and up to the implementation of the export industry of the third stage. In addition, capital goods (excluding raw materials) to be invested in the consumer goods industry also start being domestically produced. If imported goods such as machinery are not merely used as they are, but are improved and adapted to the various conditions of the country, natural, racial, and technical, this series of consumer and capital goods manufacturing industries, such as cotton yarn spinning, cotton cloth, and spinning machinery industries, which are originally the industries introduced from abroad, will become domestic industries rooted and assimilated in the country during the third stage. This is the domestic industrialization of the import industry. For instance, Japan's own automatic looms have been exported to England, the origin of the modern cotton industry.

Fourth stage: In the third stage the consumer goods industry was already homogeneized with that of the advanced countries, attaining the same standard as that of the advanced countries; therefore, those countries are no longer less-advanced countries as far as this industry is concerned but have joined the ranks of advanced countries as an exporter of these goods. In the fourth stage this advanced status is further elevated. A characteristic phenomenon of this stage is that the export of consumer goods begins to decline. This is attributable to the fact that consumer goods are put into production in other less-advanced countries and development in a wild-geese-flying pattern is under way. Another feature is that in this stage, capital goods domestically produced in the third stage begin to be exported. In other words, in place of the decreasing export of consumer goods, capital goods are exported and reach the stage of high-degree heterogeneization in regard to other less-advanced countries, as mentioned above. However, the domestic production of machinery as well as its export to less-developed countries forms a stage of high-degree homogeneization towards advanced countries, causing a conflicting relationship with the advanced countries with respect to capital goods export.

This fourth stage of wild-geese-flying development is what Japan has now arrived at. Although Japan's export of consumer goods to less-advanced countries is showing a downward trend, there is an indication

that the export of consumer goods to advanced countries is on the increase. The reason is that in advanced countries the capital goods industry has developed tremendously, while the consumer goods industry is becoming stagnant, and in addition high costs due to high wages make the import of consumer goods from less-advanced countries more profitable. Thereupon, what had been imported from advanced countries in the early development stages of less-advanced countries are now, conversely, exported to advanced countries from the less-advanced countries. Thus, there arises a tendency in which the most advanced industrial countries import consumer goods from medium-advanced industrial countries, resulting in an international division of labour through high-degree heterogeneization. The wild-geese-flying pattern sees its completion in the fourth stage, with respect to capital goods such as machinery, by going through the importation beginning from the second stage, the initiation of domestic production in the third stage, and the switch-over to export in the fourth stage. Here, domestic industrialization is also achieved for the capital goods industry. However, there is a possibility that another new stage will be developed in regard to the capital goods industry. It is the stage during which the export of spinning machinery, for instance, is eventually decreased, and this may inevitably happen when other less-advanced countries develop the domestic production of the machinery.

2. *Wild-Geese-Flying Pattern Development from Crude Goods to Elaborate Goods*

In the foregoing paragraphs, I have referred to the fundamental wild-geese-flying pattern of development describing how consumer goods and capital goods form a wild-geese-flying order in three or four different stages. It must be noted in this connection that these consumer goods, and capital goods as well, vary both in kind and quality. Take cotton cloth as an example: there are numerous differences in quality from the crude to the elaborate according to the difference of denier and processing grade. Also, the kinds vary between low-class and high-class goods.

Moreover, as to capital goods, there are a number of differences in kind and quality constituting a big discrepancy in the elaborateness of the machinery make-up. Consequently, taking the existence of international trade for granted, the industrial development of less-advanced countries will, as a matter of course, take the form of the development of a wild-geese-flying pattern from crude goods towards elaborate goods. First, import of crude industrial goods is initiated, and in time it develops into their domestic production and, further, into their export. Meanwhile, the

import of crude goods decreases, but conversely the import of elaborate goods increases in proportion to the increase in the national income. However, the grade of domestic production is raised from crude goods to elaborate goods, and that of export goods is also elevated proportionately. When the development of less-advanced countries reaches the third stage with the consumer goods industry developing into the export industry, crude goods are exported first as a matter of course, in which case the importing countries are naturally less advanced than the exporting countries. Take Japan as an example: Before the industrialization of Japan, other countries in Asia, including China, had industrial structures homogeneous with Japan, chiefly producing such agricultural products as rice, tea, silk, etc. However, the industrialization of Japan made the industrial structure of Japan heterogeneous with those of other Asian countries, with the result that crude textile goods was first exported to those countries. As similar textile industries came into being in the less-developed areas of Asia, Japan turned to produce and export higher quality textile goods. The elevation of quality was in compliance with the rise in the income standard of the less-developed area, and at the same time, it resulted in expanding its export market to the advanced industrial countries of the west, which are bringing their production and export to bear upon heavy and chemical industry. The development of a wild-geese-flying pattern from crude goods to elaborate goods was also the development of the export market from a low income area to a high income area.

As for capital goods, those which were exported in the fourth stage of the wild-geese-flying development were of a comparatively simple type, and their destinations were less-developed areas. In Japan, however, as more and more elaborate and complicated machines were imported from the advanced industrial countries, there took place the domestic production of more elaborate machines which were increasingly exported. Thus, as in the case of textile goods the export market expands from the less-developed area to the advanced area to the degree that products become more elaborate.

3. *Development of Advanced and Less-Advanced Countries in a Wild-Geese-Flying Pattern*

The third type of a wild-geese-flying pattern is clear from what is stated above. The countries of the world form a wild-geese-flying order from the advanced countries which have reached the stage of high-degree heavy and chemical industries to the less-advanced countries which are still in the stage of primary industries. The less-advanced 'wild geese' are chas-

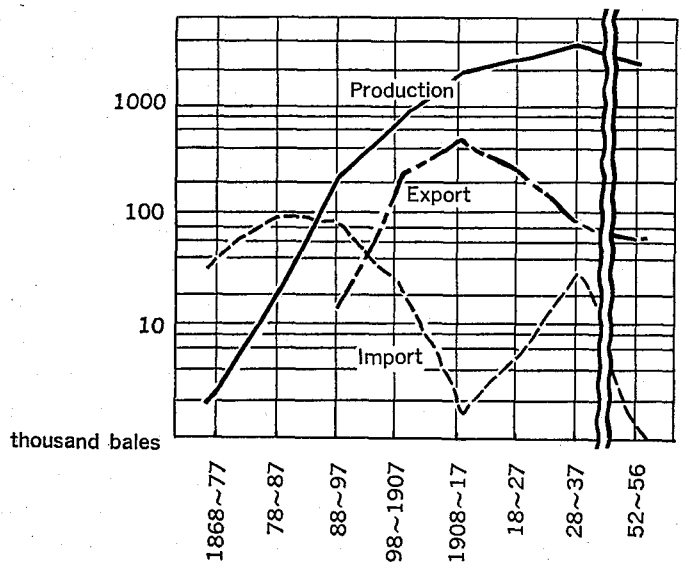
ing those ahead of them, some gradually and others rapidly, following the course of industrial development in a wild-geese-flying pattern, as described above.

The advanced 'wild geese' which are in the lead are flying onward, incessantly achieving technological innovations and trying to maintain a certain distance of heterogeneous difference from the less-advanced 'wild geese'. It can be said in this connection, however, that this technological innovation, combined with the tendency on the part of less-advanced countries that their economies become homogeneous with those of advanced countries, has the function of producing a contradiction in the world economy in that it creates synthetic materials whose products become homogeneous with natural raw materials and foodstuffs of primary industries. But, at the same time, the contradiction due to economic homogeneization is continually being overcome by the other function of technological innovation, that is, to heterogeneize the economies of advanced countries with those of less-advanced countries. If the development of advanced countries and less-advanced countries in the wild-geese-flying pattern is to proceed at the same speed, the homogeneization by the progress of the less-advanced countries means the heterogeneization by a similar progress in the advanced countries, and substitutive conflicts which arise every moment will be offset by complementary co-accelerations which take place every moment. However, these countries, advanced and less-advanced, do not necessarily go forward at the same speed in their development of a wild-geese-flying pattern, nor do they always make gradual progress, but they are at times dormant and at other times make leaping advances. That the economies of advanced countries are sometimes stagnant and sometimes make leaping advances causes the economies of less-advanced countries to make similar movements. Some of the less-advanced countries always remain in a stagnant state falling more and more behind in the wild-geese-flying order, while others, like Japan, joined the ranks of advanced countries by making rapid advances and are strengthening a high degree of homogeneization. However, the wild geese order of industrial development from the advanced countries to the less-advanced countries is not a one-series row, but is divided into several wild-geese-flying rows, one following another. There is a wild-geese-flying group with America taking the lead, and a Western European group with England and Germany taking the lead, as well as a comparatively small group with Japan taking the lead. It is needless to say that those groups consisting of advanced and less-advanced countries complexly intermingle with each other.

III. Some Illustrations of the Wild-Geese-Flying Development

The above-mentioned theory of the wild-geese-flying development of less-advanced countries is based upon an empirical study of the economic development of Japan over the period since the early Meiji Era, when she entered the realm of international trade. A model of the series of actual statistical figures is already shown in Figure 1. Let us show in the following figure several cases of wild-geese-flying development based on actual figures. The bottleneck in such studies is that it is difficult to make a retrospective study on the series of a certain commodity going back to its original kind because the commodity classifications both in trade statistics and in production statistics were often changed and diversified during the period of observation. I have herein graphed out in Figure 2 Japan's import, domestic production, and export of cotton yarn to begin with, despite its duplication with the model in Figure 1, as this denotes the typical wild-geese-flying pattern of manufactured consumer goods.

Figure 2. IMPORT, PRODUCTION, AND EXPORT OF COTTON YARN IN JAPAN

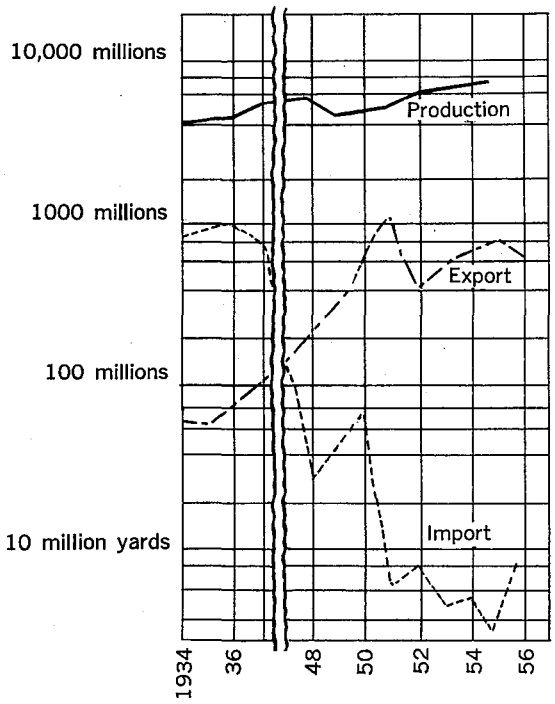


Sources: Tōyō Keizai Shimpō-sha, *Nihon Bōeki Seiran* (Close Review of Japanese Foreign Trade), 1935. Ministry of Finance, *Gaikoku Bōeki Nenpyō* (Chronological Table of Japanese Foreign Trade), Ministry of Commerce and Industry, *Kōjō Tōkei Hyō* (Plant Statistics Table), Ministry of International Trade and Industry, *Kōgyō Tōkei Hyō* (Industry Statistics Table),

Figure 2 shows that the import of cotton yarn kept on increasing after Japan opened her ports under the Ansei Treaty (1858) until 1880. However, the domestic production of cotton yarn rapidly increased from 1870 to 1880, while the import of cotton yarn began to decline. The export of cotton yarn began to increase from the 1890's. At the turn of the century the growing export showed a speedy rise, surpassing the declining import. One of the interesting points about the wild-geese-flying pattern of cotton yarn in Figure 2 is that imports decreased down to a negligible figure around 1910 and then again increased up to World War II. Other points are that exports began to decline from their peak of 1908–1917 and that production declined in the period after World War II to a point lower than that of prewar days. All this was due to the rise of cotton yarn spinning in the countries less advanced than Japan, which caused the downward trend of Japan's cotton yarn export. Japanese spinning companies advanced to the Shanghai area of China. Meanwhile, the cotton spinning industry built by Chinese national capital flourished there also, at least as far as coarse thread cotton yarn was concerned, having reached the third stage of wild-geese-flying development. Consequently, with respect to coarse yarn it became advantageous for Japan to import it rather than to produce it at home, and the Japanese cotton spinning industry was levelled up to the production of fine yarn. Japan began to place an importance on the fostering of heavy, chemical and machinery industry after the outbreak of the Manchurian Incident in 1931 and so it became even necessary for her to depend partly upon the import of cotton yarn. This resembles the above-mentioned circumstances under which the Western European countries, England in particular, which reached the higher stage of industrialization centred on heavy, chemical, and machinery industries, turned to import cotton yarn and cotton cloth from the less-developed areas.

Shown in Figure 3 is a wild-geese-flying pattern development of the Indian cotton cloth industry in comparison with the cotton industry of Japan. As long-range statistics are unavailable regarding the Indian cotton industry, only the period covering years before and after World War II has been taken up. As the statistical materials do not cover long-range development, we cannot clarify in this figure the process in which imports of cotton cloth first increased and when the rise of domestic production followed. However, the importation of Indian cotton cloth took a downward trend after the 1936 peak, while the exportation took an upward trend at about that time until it attained its peak in the period after World War II, particularly during the war in Korea. It is presumed that had it not been for Korean War, India's export of cotton cloth would

Figure 3. IMPORT, PRODUCTION, AND EXPORT OF COTTON CLOTH IN INDIA

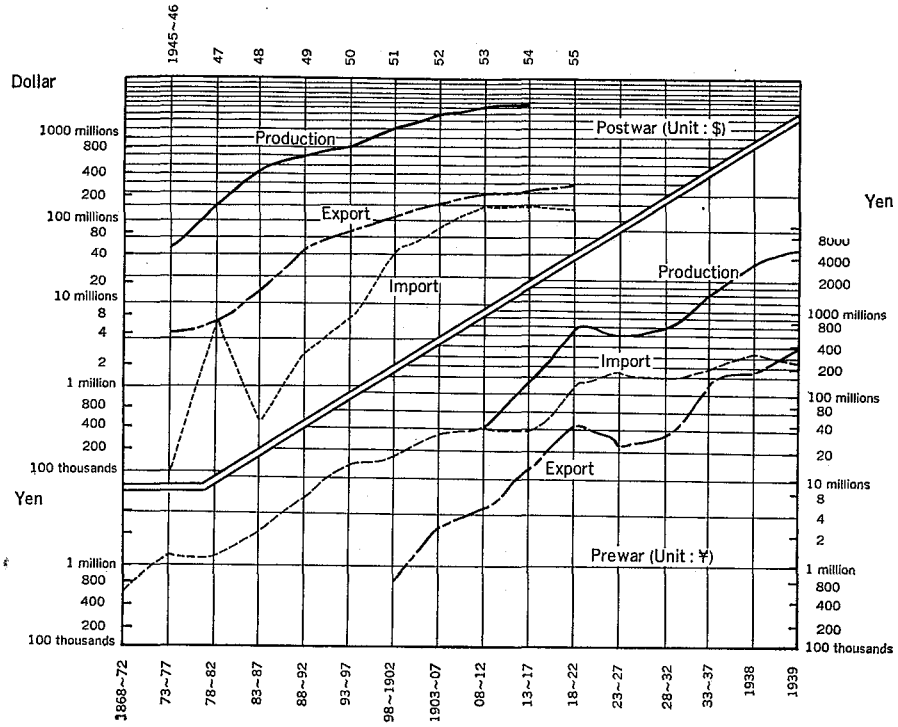


Note: The unit of cotton cloth production is metric.
Sources: For export and import, *Statistical Abstract for India* (prewar figures) and *Statistical Abstract for the Commonwealth* (postwar figures); for production, U.N., *Statistical Yearbook, 1956.*

have drawn a curve of gradual increase. The wild-geese-flying pattern shown in Figure 3 is the third stage, denoting the period of Indian cotton industry established as an export industry.

As for the wild-geese-flying pattern development of the machine and tool industry in Japan, Figure 1 shows its model. Figure 4 shows the import, domestic production, and export of Japan's machines and tools based on statistical data. The lower part of Figure 4 shows the trends after the early years of Meiji, i.e. from 1868 to World War II, while the upper part shows trends from the termination of the war in 1945 to 1955. The production statistics by money value in Figure 4 show the results of research conducted every five years between 1909 and 1919, and every year after that period. Trade statistics can be traced back to 1868. The import of machinery shown in the lower part of Figure 4 mounted to the one million yen bracket in the 1870's. Considering that

Figure 4. IMPORT, PRODUCTION AND EXPORT, OF MACHINES AND TOOLS IN JAPAN



Source: Tame as Figure 2.

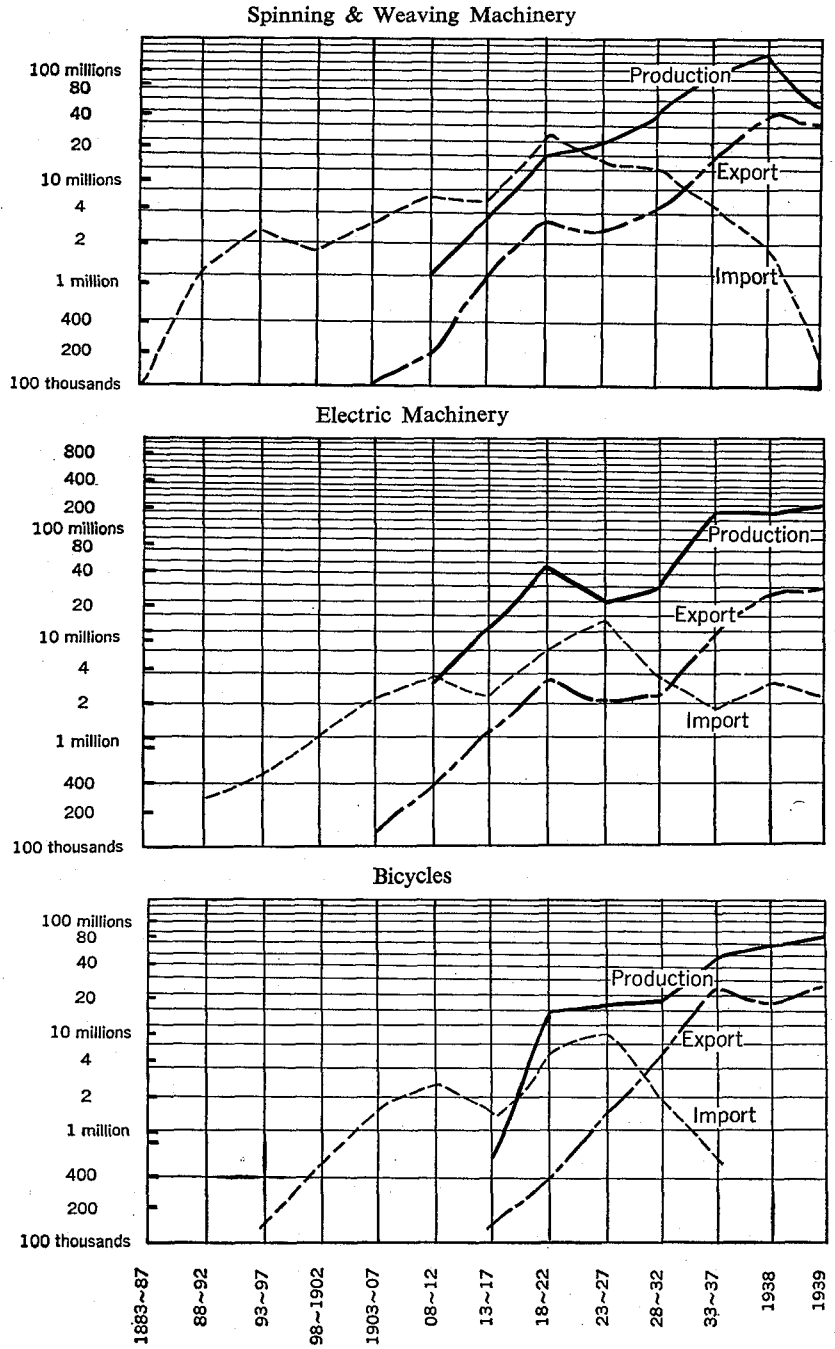
Japan's import of cotton cloth was then in the five million yen bracket, needless to say the imports at that time were mainly consumer goods. Industrialization in Japan made a long step forward in the 1890's, and from that time on the import of machinery rapidly increased. Although it is not possible to determine in this figure the time when the production of machinery surpassed the minimum one-hundred thousand yen bracket, it is clear that it was sometime before 1890 when export statistics started. Though the export of machinery started comparatively early, among the items exported in the early period were *Jinrikishas* listed as an important item. Original invention in Japan as it is, it is out of consideration in the study of a wild-geese-flying development. Before and after 1900 such consumer goods as table-clocks and wall-clocks became important items, and thereafter the export of machinery for production means appeared. On the occasion of World War I, Japan showed a rapid increase in the production as well as import of machinery, while its imports showed a slow decline. A setback was seen after that war, but after

the Manchurian Incident in 1931 the same trends as in World War I appeared as a result of the heavy industrialization of Japan, with the export curve in 1939 having surpassed the import line. As shown in the upper part of Figure 4, after World War II the export curve took a position above the import curve, but the imports rose rapidly out of the necessity for the modernization of Japan's industry. This should be regarded as proof of the industrial revolution in restored Japan. As modernization is achieved in almost all areas of industry, the import curve will be stagnant while the export curve will continue to rise rapidly.

Next, let us pick up from among the products of Japan's machine and tool industry two or three items which had completed the course of wild-geese-flying development before World War II. As such, spinning machinery, bicycles (including parts), and electric machinery are shown in Figure 5. Of these three industrial goods, it is shown that the import of spinning machinery rose rapidly after the early years of the Meiji Era; this reflects the establishment of Japan's cotton spinning industry in the 1890's. At about the time of World War I, Japan's spinning industry advanced conspicuously, followed by the increased import of spinning and weaving machinery. This peak was reached about 1918–1922 and thereafter the imports show a downward trend. This was of course due to the rapid advance of Japan's spinning and weaving machinery industry before and after World War I. The amount of production surpassed that of import in the 1920's. The exports increased accordingly, surpassing the import line in the 1930's. As Japan's economy rushed into a semi-war structure with the outbreak of the Sino-Japanese war in 1938, both production and export declined. Though they rose again after the war, a future decline in export and consequently in production is foreseen if the development of the developing countries in a wild-geese-flying pattern is taken into account. As for the import of electric machinery, it showed a gradual increase, though not as rapid as that of spinning and weaving machinery, until it reached its peak in 1923–1927, later than spinning and weaving machinery, and then began to decline. When production statistics were started in 1909, the amount of production was less than that of import, but soon after that the production curve exceeded the import curve. The exports surpassed the imports at about the same time as in the case of spinning and weaving machinery.

Lastly, the importation of bicycles was recorded from the 1890's, a little later than the two cases above. It increased gradually until it reached its peak in 1923–1927, as was the case with electric machinery, and then it declined suddenly. The production exceeded the import during World War I, while exports advanced very rapidly, surpassing imports

Figure 5. A WILD-GEESE-FLYING PATTERN OF MACHINERY (PREWAR) IN JAPAN



Source: Same as Figure 2.

earlier than the above two commodities. The production of bicycles is comparatively simple from technical point of view. There fore, although their import was started later than the other items, the domestic production rose earlier and the export increase was more rapid, with the result that imports quickly dwindled almost to a negligible point. This is different from the case of electric machinery, whose import has shown downward trends and yet is lingering around a fairly high level because it involves complicated techniques as well as a variety of types.

So far we have graphed out wild-geese-flying patterns of several commodities based on statistical data to illustrate the historical stages of the economic development of less-advanced countries. For the furtherance of this sort of study, statistical data should be prepared in connection with many industrial goods, for example, the various kinds of electric machinery. Also, statistics of the importation, production, and exportation of those commodities in less-advanced countries must be collected over the longest possible period of time. Provided this is accomplished, the following would be possible. Firstly, it could be determined in what stage of wild-geese-flying development a certain less-advanced country stands in respect of various commodities of consumer goods and capital goods. Secondly, how the production and trade of the country is being transformed according to each development stage could be made clear, and at the same time how they would change in the future could be foreseen. Thirdly, other countries trading with the above country may be able to predict a falling trend of the export of a certain item of consumer goods or a rising trend of the export of a certain item of capital goods. Of course, to make such predictions we must make an inquiry into how far it is possible for a certain country to advance the stages of a wild-geese-flying development. Some countries may advance quickly and some slowly, while others may stand still at a certain stage. There is such a case as the growth of the Japanese transistor radio industry after World War II in which the wild-geese-flying development completed its course from import to domestic production and, further, to export in the short period of several years. In Japan, there are also such cases as electronic instruments which are still in the import stage, and other cases where domestic production has reached thesecond stage but it is uncertain whether it can develop into an export industry of the third stage.

These various patterns of wild-geese-flying development should be explained by studies on the economic circumstances of the individual countries. At the same time it should be noted that the industrial policy of a country has a great influence on the wild-geese-flying pattern, as, for instance, import restrictions cause a sharp decline in the import curve.