

KOBE ECONOMIC & BUSINESS REVIEW

17th
ANNUAL REPORT



THE RESEARCH INSTITUTE FOR
ECONOMICS AND BUSINESS ADMINISTRATION
KOBE UNIVERSITY

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AN OUTLINE FROM OFFICE MANAGEMENT TO MIS IN JAPAN

Minoru BEIKA

I

The subject to be dealt with here covers some characteristic features of computerization or the so-called management information system in the business world of Japan. For these purposes it will be necessary to begin with the outline of its development in the United States of America, because its enormously rapid development has a great influence on many other industrialized countries including Japan.

Since electronic computers were developed after World War II, the history of computerization itself seems to be similar in the United States of America and Japan. The latter country has only a timelag of a few years. But the background conditions of the two computerization histories are very different, especially regarding their business industries. Our business industries have had few experiences of business mechanization such as the many kinds of calculating machines, accounting machines and punch card system machines, before the electronic computer. Business mechanization in the United States has a history of several decades beginning in the fourth quarter of the 19th century. Japan had little experience in office management. But it has energetically introduced computers since the latter half of 1950, and now has 5,000 or more computer sets. This represents only 10 % of the number of computers in use in the United States, but it is nearly equal to the number of some of the European countries; namely, West Germany, the United Kingdom, France and Italy. Therefore, at first, the short history of business mechanization in the United States will be reviewed here from the view point of Japan, and then the case of Japan will be examined.

II

The history of business mechanization in the United States began in the last quarter of the 19th century. For example, the typewriter for practical use was invented in 1868; the listing adding machine was developed in 1889; the cash-register in 1879; and corresponding to these inventions, the National Cash-

Register Co., Ltd. was established in 1884; the Remington Standard Typewriter Co. in 1886; and the Burrough Adding Machine Co. in 1905. As the result of these developments, the more integrated business machines, such as the accounting machine and bookkeeping machine, were developed from the single-purpose machines stated above, in the first decade of the 20th century. The so-called punch card system machine was invented by Herman Hollerith in 1887 and an other type of punch card system machine by James Powers in 1907: both served the purpose of data processing in the national census. The Tabulating Machines Co., the predecessor of I. B. M., was established in 1896, and the Powers Accounting Machines Co., the predecessor of Remington Rand, in 1911. The first step of business mechanization was accomplished by these office machines including the punch card system machines.

It is remarkable that the scientific management approach originated around the same 1910's thanks to F. W. Taylor and others. In the same years, many large scale industrial enterprises developed in the United States. The growth of large enterprises, the progress of scientific management techniques and the development of a variety of business machines, brought a new concept of clerical work in the business office: the concept of office management. A considerable number of books explaining the concept of the office management has been published since about 1915.

The National Office Management Association of the United States (NOMA) was established in 1919. A few representative companies adopted the office management concept for efficient management and set up an office manager in their organizations. W. H. Leffingwell, who was the president of NOMA and published in 1925 the representative book of office management, emphasized the importance of the function of office management and office managers at the general meeting of NOMA in 1925. The concept of office management was also clarified in the 1920th thanks to the business mechanization of the preceding 30 or 40 years and the scientific management techniques. At the same time, the function of the controller was created, based on the same considerations as for the office management. The internal control was realized through the introduction of the punch card system machines. The Controller's Institute of America was established in 1931.

After the Great Depression just before and after 1930, the clerical works in the offices of the business firms increased constantly due to the relations between business firms and the government of the New Deal policies.

During the Great Depression and at the beginning of World War II, the techniques of office management and the application of business machines did not change greatly, but the business machine industries developed considerably

due to the increase of clerical works. On the contrary to the United States, the business firms in Japan had few business machines, and relatively little interest in office management in the days before World War II. It will be explained in detail later.

III

The electronic computer was invented in 1946 in the United States: it was called ENIAC and only for scientific use. The computer for business use was developed only in 1951 and used practically first by the Census Bureau. It was in 1954 that business enterprises began to use electronic computers for clerical works for the first time: among them were G. E., U.S. Steel, Du Pont and other large-scale enterprises. In 1958 the transistorized computer appeared and in 1964 the computer with integrated circuit (I. C.) opened the third generation of the computer world. The history of the hardware of the computer is well known by many people. It can be omitted here. The writer is greatly interested in the history of the process of computer applications in business in the United States. Without being an expert regarding this process, he dares to say that the process of computer applications in the United States is related to that in Japan.

In the same way as the development of different kinds of business machines brought forth the concept of office management before the War, the development in the application of the computer has brought forth new concepts in data-processing and information handling. Therefore these processes will be traced here. The concept of the integrated data-processing system (IDPS) is well known now. In the understanding of the writer, this concept was formulated in 1954 by the U.S. Steel Corp.: the company created the new concept for using the new tool in business management. Some other new concepts of the same kind in computer applications can be found. The concept of the total system is one of them. It seems that it was first used by the Carborundum Co. in 1958 or 1959. The writer does not know the accurate origin of these concepts, but this is immaterial. Some say that the IDP of 1954, the Data Processing Center of 1956 by the Sylvania Electric Co. and the total system are the three milestones in the computer world of the 1950's.

At the same time, bank automation progressed thanks to the Banker's Association of the United States. One of the representative experiments was the adoption of the MICR (Magnetic Ink Character Recognition). The research committee for new means to overcome increasing clerical works related to check handling was organized in 1954. It was in 1958 that the committee decided to adopt the MICR system in most of the commercial banks.

The approach to apply new techniques of electronic data processing for office works by trial and error changed generally the concept of office management and its function. For example, the name of the Office Management Division of the American Management Association was changed to "the Administrative Service Division" in 1960. It means that the function of office management should be enlarged and given added importance as the fundamental factor in business management, and therefore the status of the head of office management should be raised from that of the middle management to the top management. In 1960, the volume of the memory storage of the computer was enormously enlarged and the access time was rapidly speeded up; and important appliances and communication facilities were further developed. On this background, the new concept for computer applications in business management developed creatively. This concept is the management information system. *The Management Information System and the Computer* by J. D. Gallagher was published in 1961 by the American Management Association. This book seems one of the representative books related to the MIS of the earlier time. The third generation of the computer accelerated the approach of the MIS. The on-line-real-time and time-sharing systems are influential means to promote it. As for the development of electronic data processing, three factors—the hardware of the computer, its software and their management applications—should be developed side by side balancedly. A certain concept of management application of the computer is necessary for guiding the development of these factors. The management information system is surely such a concept. Because computer application generally begins in ordinary routine clerical works, such as those related to purchasing, selling, production, accounting and static operations, and then gradually to control functions, such as stock control, production control, financial control and personnel control and so forth, after these experiments, the top management could use the more or less accumulated informations processed by computers for decision making. These trials for computer applications need coordination and cooperation in every function and at every level of management. The concept of the management information system is the promoter to lead these trials of computer applications.

The management information system generally means that the system supplies necessary informations for decision making in every function and of every level of the management (top, middle and supervisory levels) in the business firms. But the historical processes of several developed concepts, brought forth in the computer applications for these fifteen years or more, are more important than the concept of the MIS itself. The concept of the MIS is not only the goal of a certain stage of management innovation and the expectation

of computer application, but also one of the means to lead every level and function of management, as the concept is not meant to be static but dynamic and changeable.

The concept of the MIS is a thought including some kind of means and techniques. This is how the writer understands the developing process of the computer applications in the United States. Now the Japanese case should be considered.

IV

The development of the electronic data processing system in Japan has already been outlined by the same writer in *Kobe Economic and Business Review 12th Annual Report* 1965. But now the development from the stage of office management to that of the MIS concept is to be discussed from the view point of the processes of computer applications, related to those in the United States as stated above.

In Japan the business world before World War II demonstrated little interest in office management. Few books concerning office management were published at that time. The movement of rationalization expanded widely in Japan from the late 1920's, due to the Great Depression and the introduction of scientific management. But the movement was chiefly oriented to the problem of production and little to that of office work. Some specially far-sighted businessmen introduced the concept of office management to the business world, and some business firms imported business machines, such as punch card system machines. A few experiments for a rational improvement in business offices were made some business firms. But these were exceptional cases. There were not yet any accounting or bookkeeping machines. These conditions lasted till World War II. And then, due to the destruction by the War, the Japanese firms were not in a position to consider business mechanization for several years. It was after the Korean War (1950) only that the importance of office management was recognized and all types of business machines, such as accounting and bookkeeping machines, punch card system machines and others began to be imported by Japanese industrial enterprises.

The Nippon (Japan) Office Management Association was established in 1949. Since 1956 the post of "office manager" was introduced in the organization of many business firms by our business missions. At that time the adoption of the "internal control system" for management improvement was encouraged by the Department of Trade and Industry of the Government. Since 1949 business mechanization exhibitions have been held every year by the Nippon

Office Management Association. Business mechanization through punch card system machines was enthusiastically adopted by many business firms and study groups were organized national-widely by each user group of IBM and RR machines respectively in 1953 and 1955. It seems that the age of the introduction of the PCS covers the 10 years from 1949 to 1958-9, when in Japan electronic computers began to be used widely for business.

Therefore the concepts of IDPS, the total system and others were introduced all at the same time, before electronic computers found access to business offices. Since 1960 electronic computers are increasingly used and as the result, business firms in Japan learned in a short time, not only the concept and techniques of office management which was developed in the United States already in the 1910's, but also those of the IDP and the total system developed in the 1950's. Accordingly, they were confronted with many kinds of management problems resulting from business mechanization.

The concept of the MIS as stated above also is now fairly well understood by the managements of Japanese industries. Already around 1963-4 this concept was introduced and studied by many specialists concerned with computer applications. It was also recognized by middle managements in charge of business mechanization, but top managements showed a lack of understanding for it at that time. In autumn 1967 a business mission of top management people visited the United States to observe the actual situation caused by the rapid diffusion of computers and the concept of MIS in the American business world. Since then many top managements have emphasized the importance of the MIS in management improvement in Japan. The concept of MIS, so-to-speak, is now over-prevalent in Japan. The popularity of the mere word 'MIS' seems to mislead rather the process of management improvement in some points, because there is such a big gap between the actual conditions in management and the concept of MIS.

Without doubt the concept of MIS is very significant for the Japanese business world, but the real conditions, as I said before, that is literally rapid diffusion of every stage of business mechanization at one stroke should be understood well.

Still more attention should be paid to the necessity of creating new concepts and ideas for computer application leading to the improvement of management, taking into account the actual conditions in Japan. The energetic introduction of electronic computers and its hardware and software and new concepts is a strong point, but it tends to hinder the creation of new and original concepts and new ideas leading the improvement of management. In other words, for us Japanese the systems approach by the computer is one of the im-

portant problems. The consciousness of problems in management improvement is necessary for the systems approach. These are indeed urgent problems of business management in Japan.

JAPANESE ECONOMIC GROWTH SINCE THE MEIJI RESTORATION: A SOCIAL ACCOUNTING APPROACH

Nobuko NOSSE

§ 1 Introduction

In this paper I shall try to do two things; first, to describe the Japanese economic growth since the Meiji restoration of 1868 by means of the social accounting approach, second, to compare the model of the economic growth of the late comer Japan with two other models i.e. that of the U.K. as an example of an advanced economy and that of less developed countries in Asia.⁽¹⁾

As our observation spreads over an entire century, there are some obstacles to be overcome; first, there have been changes of prices, of composition of the commodities and of the state of technology, all of which make it difficult to compare in a consistent method, second, there is a lack of reliable information especially for earlier period, and the data of social accounts in a standardized system are provided only after 1930; for the earlier period the available data on the working gainfully occupied population is only in round figures and the estimates of the national income before 1930, established by a few private pioneers like those Prof. Ohkawa and Prof. Yamada before 1900 are not so reliable.⁽²⁾

We shall solve some of these problems by way of compromise. First, like most social accountants do, I consider mostly the change of prices by adjusting nominal aggregates such as nominal national income by the general deflator of GNE. Second, the explanation of statistical materials will be sketchy for the earlier periods, as I shall not use in my analysis real income per head of the population of the labour force, but real income per head of the entire population as a general index. Third, in this article we use the data of national income during 1878-1929 estimated by Prof. Ohkawa and the data estimated by the Economic Planning Agency for the period after 1930.

We shall survey first the Japanese economic development in a series of

-
- (1) These data have been given by Prof. Sir J. R. Hicks. As for the model of the advanced economy, we find it in Ch. 16 of *The Social Framework* (3rd ed., 1961), pp. 192-208. He wrote the model of less advanced countries in Part II of *Essays in World Economics*, 1959.
 - (2) The reliability of the estimates before 1900 has been discussed recently. See J. I. Nakamura, 'Growth of Japanese Agriculture, 1875-1920,' in *The State and Economic Enterprise in Japan* (ed. by W. W. Lockwood), 1965, pp. 249-324. Also J. I. Nakamura, *Agricultural Production and the Economic Development of Japan 1873-1922*, 1966.

social accounts of the four periods which represent the stages of economic growth; the transitional period, the first stage of economic development, the second stage of economic development and of the postwar economic growth. We examine, then, the contributing factors of each period and compare the Japanese economy with those of other nations.

§ 2 The Japanese economy in the successive four periods.

The four periods mentioned above coincide i) with the period from 1868 to 1885, the transitional period in which Japan started to go her way from the feudalistic system to the modern capitalistic system, ii) with the period from 1886 to 1919, the first stage of economic development when successful industrialization began, iii) with the period from 1920 to 1942, or the pre-World War II period, called above the second stage of economic development when the modernization of the Japanese industry was accelerated, and iv) with the postwar period from 1945 to the present date, called above the postwar period of economic growth, when Japan started to reconstruct out of the ruins of the war and has grown rapidly in economic power. In this article I shall subdivide these periods into shorter time intervals as follows; the first stage of development (1886-1919) will be subdivided into a first period covering the year between 1886 and 1909, and a second period covering the years from 1910 to 1919; the second stage of development (1920-1942) will be subdivided into a first period covering the years from 1920 to 1930 and a second period covering the years of 1931 to 1942. The postwar stage (1945 to the present time) will be subdivided into a first period covering the years 1945 to 1954 and a second period after 1954 to the present time.⁽³⁾

(1) The social accounts of the transitional period.

In the Japanese economy before the 1860s, there was an accumulated the latent wealth or a 'slack' which was readily the heritage of the Tokugawas; making it possible for Japan after the restoration to transform the feudalistic social framework into a modern capitalistic system.⁽⁴⁾

It seems that the items of the first national balance sheet of the transitional

(3) In this article the inter-war period is omitted because it was an abnormal period during which the military production greatly expanded, and we have not reliable data for main economic aggregates.

(4) Prof. Ranis wrote as follows: "Taking up the slack in any economy means making potential increments of productivity socially available, largely by means of reshuffling resources with a minimum need for additional investment." See G. Ranis, 'The Financing of Japanese Economic Development,' *The Economic History Review*, XI, Apr., 1959, p. 440. As for a survey of the heritage of the Tokugawas, see E. S. Crawcour, 'The Tokugawa Heritage,' in *The State and Economic Enterprise in Japan*, *ibid.*, pp. 17-44.

period included only items measurable in terms of money, representing the heritage of the Tokugawas, i.e. a kind of national wealth, a certain stock of gold and silver, the level of productivity of industries, especially of agriculture, the organization of the market and credit system, the network of transportation, the population, the labour power with a certain level of education, the pattern of human behavior toward economic objectives, etc.

In this period, the main reshuffler of the economic resources for creating a new economic system was the government, as in the case of all underdeveloped countries.

After reallocating to a new national social class through a government's reform, the working people who had belonged to the feudalistic social class such as 'Samurai' was now gainfully occupied in the primary industry up to 83.6% and in the non-primary industry up to 16.4% respectively, as Table 1 shows.

On the other hand, using forced saving in the form of land tax as a main source, the government began to invest a large amount of the social overhead capital in order to construct modern industries. In this period, it is remarkable that the ratio of transfer payment to government expenditure was very high.⁽⁵⁾ This transfer payment was a payment accompanied by stipends for the 'Samurai' class and this was nothing less than expenses for the abolishment of the feudal system and the creation of a modern social system.

There was little capital formation accumulated of the government investment or private capital formation in the traditional technology. And as a source of investment, the traditional sector which had attained a high level of productivity than of subsistence, financed itself thanks to traditional technology and the surplus was absorbed by transfer payments such as a land tax levied by the government in order to finance governmental investments and by deficits in the balance of payment. There were also funds for construction from abroad, among which the most famous are the bonds issued in 1869 at London for the construction of a railway from Tokyo to Yokohama—the first railway in Japan—.

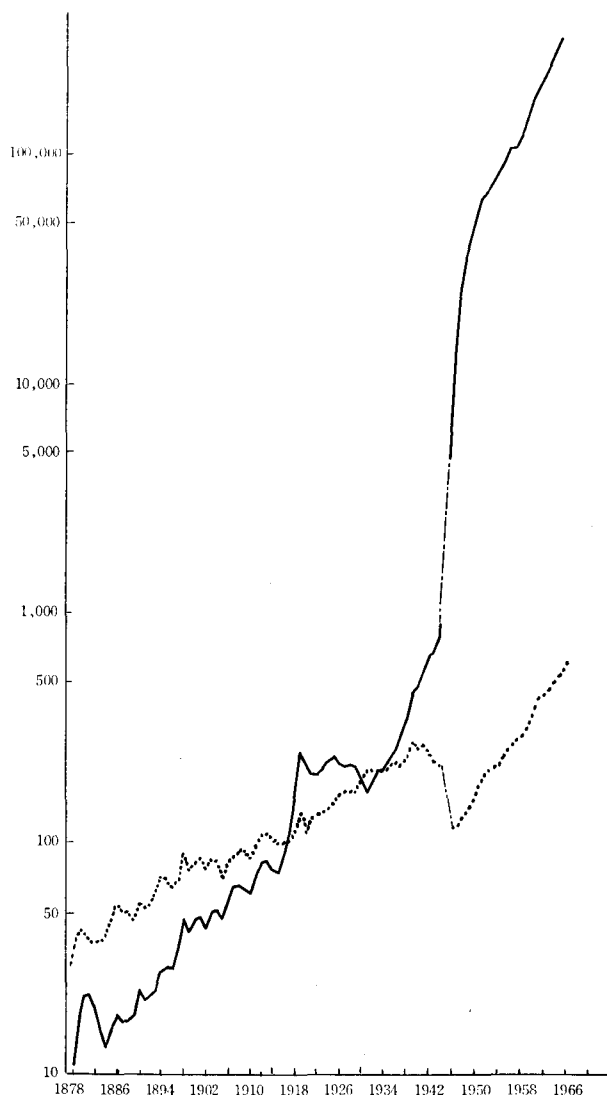
The production structure in the transitional period, according to the labour balance of Table 1, was largely traditional, in the composition of the gainfully occupied population in industries being 82.3% in the primary industry, i.e. agriculture, fishery and forestry and 17.7% in the non-primary industry, i.e. mining, manufacturing, service, etc. To what extent the traditional industries were dominant is also shown in Table 1.

The allocation of capital stock by the industries was 72.4% in the primary

(5) See K. Erni and Y. Shionoya, 'Government Expenditure,' No. 7 of *Long-Term Economic Statistics of Japan since 1868*, 1966, p. 29.

industries and 27.6% in the non-primary industries while the national income in the primary industries and that in the non-primary industries was 61.8% and 38.2% respectively of total national income. During this transitional period, the situation of the industry did not change as much as the figures of the opening balance compared with those of the closing balance. It is remarkable that the traditional industry not only occupied a dominant position, but also sustained

Chart 1 National income per head (nominal and real)



Remarks: The full line and the dotted line denote the nominal national income per head and the real national income per head respectively.

Source: *Hundred-Year Statistics, ibid.*, pp. 12-13, p. 32 and pp. 44-45.

its growth during the period although the rate of growth was smaller than that of the modern sectors as shown in the supplementary Table A.

The Chart 1 and Table 2 show the nominal national income per head and the real national income per head in the transitional period. The nominal national income per head fluctuated especially during the so-called 'Matsukata-Reform' period between 1881 and 1885. The trend of growth was 8.4% per annum in the average. On the contrary, the trend of the real national income per head was 7% per annum, thus less than the former. The level and the rate of growth of real consumption per head were low; the latter 4.6% per annum. The transitional period, therefore, is said to be the period of reshuffling of the resources which had been accumulated for the modernization of the Japanese economy and the level and composition of the industries themselves were not different from those of earlier periods.⁽⁶⁾

(2) The first stage of development (1886-1919)

This was the period during which the non-primary industries grew remarkably and tried to catch up with the primary industries.

The composition of the national income by the industries shown in Table 1, explains clearly this fact, as the ratio of the national income by the primary industries was 53.7% at the beginning of this period of the total national income and fell to 38.2% at the end of the period. Also, the ratio of the gainfully occupied population in the primary industries was 78.6% of the total gainfully occupied population at the beginning of the period and fell to 56.0% at the end of the period, while 22.6% of the gainfully occupied population moved from the traditional primary industries to the modern industries. This means neither did primary industries fall to the level of output, nor did the modern industries develop uniformly in this period. Far from it. The primary industries still grew, improving their technology and expanding investments especially for the working capital formation. And among the non-primary industries, the textile industry especially which started from the small scaled and labour intensive type, developed into a textile industry with modern technology, built by the government and then handed over to private ownership, while the heavy industry (i.e. metal, machinery, etc.) began later in the period.

The process of industrialization in this period is characterized by the changing structure of export and import. According to Table 3, primary export goods at the beginning of the period were tea, raw silk, china ware, etc. But exports of cotton yarn, cotton fabrics and silk fabrics increased year by year in the latter half of this period. Above all, the export of cotton yarn recorded a peak in 1915.

(6) See J. R. Hicks, *Essays in World Economics*, *ibid.*, pp. 180-188.

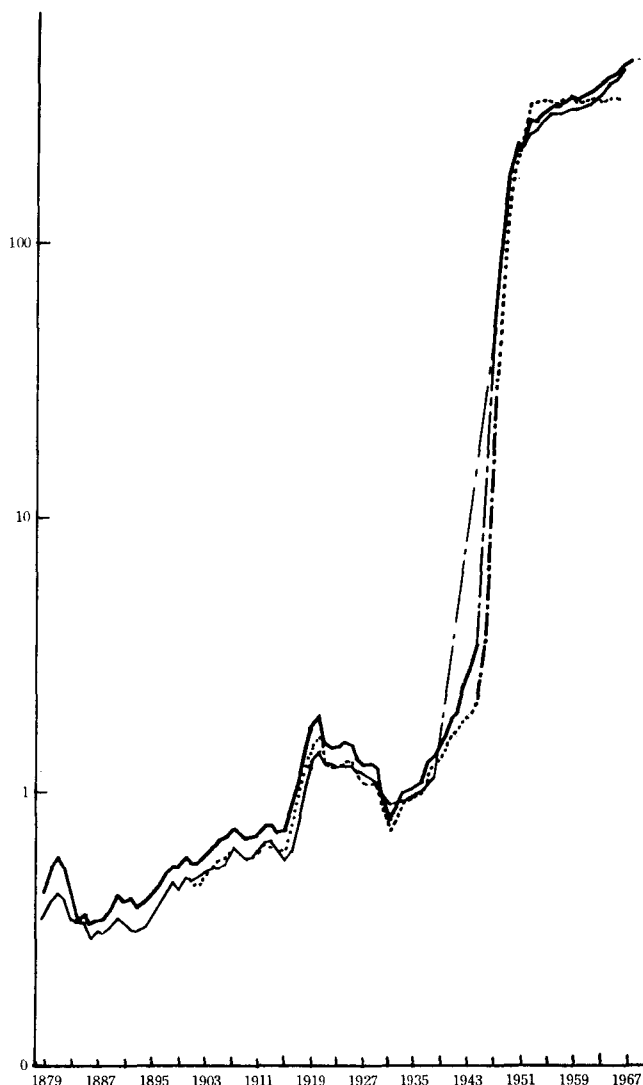
On the other side, imports of finished goods recorded a higher level in the first half of the period under review than before, but it decreased especially during World War I, while imports of food and raw materials grew at an accelerated rate. The import and export of capital goods during this period are also interesting to note. The imports of general machinery, rolling stock, tools, fixtures, automobiles and other vehicles which began in the transitional period increased continuously and these goods brought capital goods after industrialization and new technology—namely borrowed technology—to the Japanese economy, while in the middle of this period, exports of general machinery to the Japanese colonies i.e. Formosa and Korea, began in 1896 and those of rolling stock, tools and fixtures followed. We wish to emphasize this fact because i.) Japan reached now the stage where she could produce part of the capital goods by herself and save the funds for her own imports and ii.) the Japanese economy got the benefit of international trade for economic development after this period. This development, which appeared in the period for the first time, continued and obtained greater strength in the following periods.⁽⁷⁾

During the first stage of development, the weight of foreign trade in the general economic activity increased greatly. As Table 5 shows, $\frac{E}{Y}$ and $\frac{M}{Y}$ (E , Y , M stand for; exports, national income and imports respectively) which were 5.3% and 3.5% at the beginning of the period, increased especially in the latter half of the period and reached 18.5% and 19.6% respectively at the end of the period. The export quantity index q_e which was 3.1 at the beginning of the period rose to 28.2 at the end of the period, while the import quantity index q_m stood at 2.6 at the beginning of the period and rose to 30.4 at the end. As for the terms of trade during the period, they turned to the worse with the exceptional interval of the First World War boom, as Table 3 shows. The temporal gain caused by the First World War boom, was a nest-egg for the Japanese economic growth thereafter. In the period of this first stage of development, foreign capital flowed into Japan too. Japan received reparations amounting to 300 million yens as a result of the victory in the Sino-Japanese War and was utilized for importing capital goods. Among government expenditures, current expenditure and government investment increased, while transfer payments sharply went down compared with those of the transitional period. It is interesting to observe the following two categories of government expenditure; the investment for social overhead capital and the military expenditure. Many ports, railways,

(7) See H. Rosovsky, *Capital Formation in Japan, 1868-1940*, 1961, p. 94, Table 25. Also Ohkawa and others, *The Growth Rate of the Japanese Economy since 1878*, 1957.

roads, electric power, stations and schools were constructed by the government. Above all, construction of railways recorded a peak during the Russo-Japanese

Chart 2 Fluctuation of price indexes



Remarks: (i) The thick full line, the thin full line and the dotted line denote the index of the general price index, the consumer price index and wholesale price index respectively.

(ii) All indexes are estimated by setting the average price levels of 1934-36 = 1

Sources: *Hundred-Year Statistics, ibid.*, p. 32 & p. 51. Ohkawa and others, 'Prices,' No. 8 of *Long-Term Economic Statistics of Japan since 1868*, 1966, p. 22, pp. 135-136. p. 208.

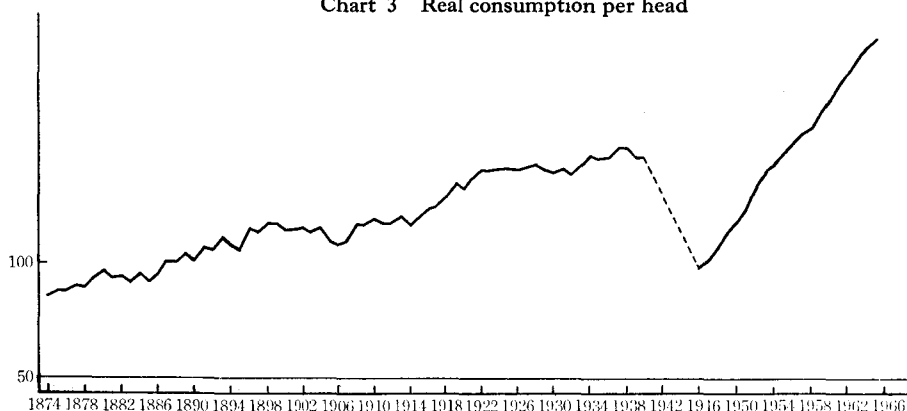
War of 1904-1905 when the ratio was 74.2% as the supplementary Table B shows.⁽⁸⁾

Table 1 also indicates the changing structure of capital stock in the Japanese economy. The ratio of capital stock in the primary industries was 70.2% of the total stock at the beginning of the period, 40.3% in the middle and 29.3% at the end of the period, while the ratio of capital stock of non-primary industries was increasing to 29.8%, 59.7% and 70.7% respectively of the total capital stock. The changes of composition corresponded to the changes of production structure, and this coincided with the fact that the output of the Japanese manufacturing industries exceeded the output of agriculture in 1919 at the end of the period.

According to Table 1, the trend of the nominal national income per head increased during the period in a circular fluctuation. These upward movements became stronger after the recovery from the 1910 depression. The nominal national income per head in 1919 amounted to 247 yen which was 13.4 times the national income per head of 1886, the beginning of the period. The rate of the growth of nominal national income per head was 6.5% per annum in the first half and 16.4% per annum in the latter half of the period, as shown in Table 2. On the other hand, due to the rapid growth of general prices, the rate of growth of the real national income per head was at 3.5% per annum in the first and 4.6% per annum in the latter half, smaller than that of the nominal one.

As for real consumption per head, it rose 60% during the period as Chart 3 shows. The rate of growth was 1.7% in the first half and 2.5% in the latter

Chart 3 Real consumption per head



Source: M. Shinohara, 'Personal Consumption Expenditures,' No. 6 of *Long-Term Economic Statistics of Japan since 1868*, pp. 140-141. p. 32.

(8) R. Minami, 'Railway and Electric Power,' No. 12 of *Long-Term Economic Statistics of Japan since 1868*, 1966, p. 6.

half. Due to the rising level of the living standard, the rate of increase of the Japanese population reached 10% or more after the middle of the period and this high rate was continued into the next period.⁽⁹⁾ It is remarkable however that primary education spread in the entire country. In 1900, (this was indeed less than 70 years after the restoration), the percentage of primary school attendance was 81.5%,⁽¹⁰⁾ which is a very high rate in a developing country, as Japan that was.

To summarize the period: traditional industries developed first followed by modern industries especially by the light industry, which followed with great speed. The products of these industries were exported and with the proceeds of the exports the Japanese economy financed to their imports and enjoyed economic development, thanks to the imports of capital goods and borrowed technology. In the latter half of the period, the modern heavy industry in Japan was born. The boom in the export industry induced by the needs of the First World War, extended the scale of the Japanese economy as a whole, accentuated the rising trend of national income per head and the real consumption per head.

(3) The period of the second stage of development (1920-1944)

During the period of the second stage of development the Japanese manufacturing industry grew on the firm foundation built in the preceeding period. In the first half of this period, the light industry was most flourishing, while agriculture which kept developing during previous period was now stagnant as the supplementary Table A shows. The labour balance of Table 1 shows that the ratio of the gainfully occupied population engaged in the primary industries to the total working population was still 54.5% at the beginning of the period, and then turned to 43.5% in 1942, while the ratio of the gainfully occupied population in the non-primary industries to the total working population increased by more than half. The index of the changing structure of the industry is given also by the data on the changing composition of national income by the industries in Table 1, as the ratio of national income earned by the primary industries to the total national income which was 34.0% at the beginning of the period fell to 15.1% at the end of the period.

The information on the changing structure after 1930 is available from the saving-investment account, the national capital account and the rest-of-the-world account provided by the Economic Planning Agency after 1930.

The ratio of the capital formation to GNE as shown in Chart 5, rose to

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- (9) The Bank of Japan, *Hundred-Year Statistics of the Japanese Economy*, 1966, pp. 12-13. The highest rate of Japanese population increment is 16.8% in 1925. As for the general survey of the Japanese population, see I. B. Taeuber, *The Population of Japan*, 1958.
- (10) *Hundred-Year Statistics*, *ibid.*, pp. 368-369.

10.8% in 1930, 24.8% in 1937 and 27.6% in 1944. The path of the investment shows that a capital-deepening process was taking place during this period. On the other side, the structure of capital stock by industries changed as the ratio of the capital stock employed by the primary industries to the total capital stock was 29.3% in 1919, 22.3% in 1931 and then fell to 18.9% in 1937, while the ratio of the capital stock in the non-primary industries increased to 70.7% in 1919, 77.7% in 1931 and 81.1% in 1937. This great rise coincided with the rise of the manufacturing industry, especially of the heavy industry, in the latter half in this period. The other indexes concerning the structure of the Japanese industry are given in the figures of foreign trade. According to Table 3, the quantity index of exports of raw silk recorded peak in the first half and the export of silk fabrics, cotton fabrics and of china ware recorded their peaks in the middle of the period.

In the latter half of the period, exports of capital goods, i.e. vessels, cement, iron etc., grew, while exports of producers' durable equipments grew too. Both the quantity indexes of exports and imports, q_e and q_m respectively, increased as q_e at the beginning of the period was 23.9 and q_e at the end of the period 71.2, while q_m was 29.9 at the beginning of the period and 48.6 at the end of the period. Meanwhile, the ratio of exports to GNE and of imports to GNE was smaller than that of the highest record in the previous period. This is especially true for the ratio of exports to GNE in the great depression of 1931 during which it recorded a dip in the real income curve.

As for the terms of trade, they fluctuated according to the short business cycles; the down swing carried over from the previous period turned to the peak

Chart 4 Terms of trade



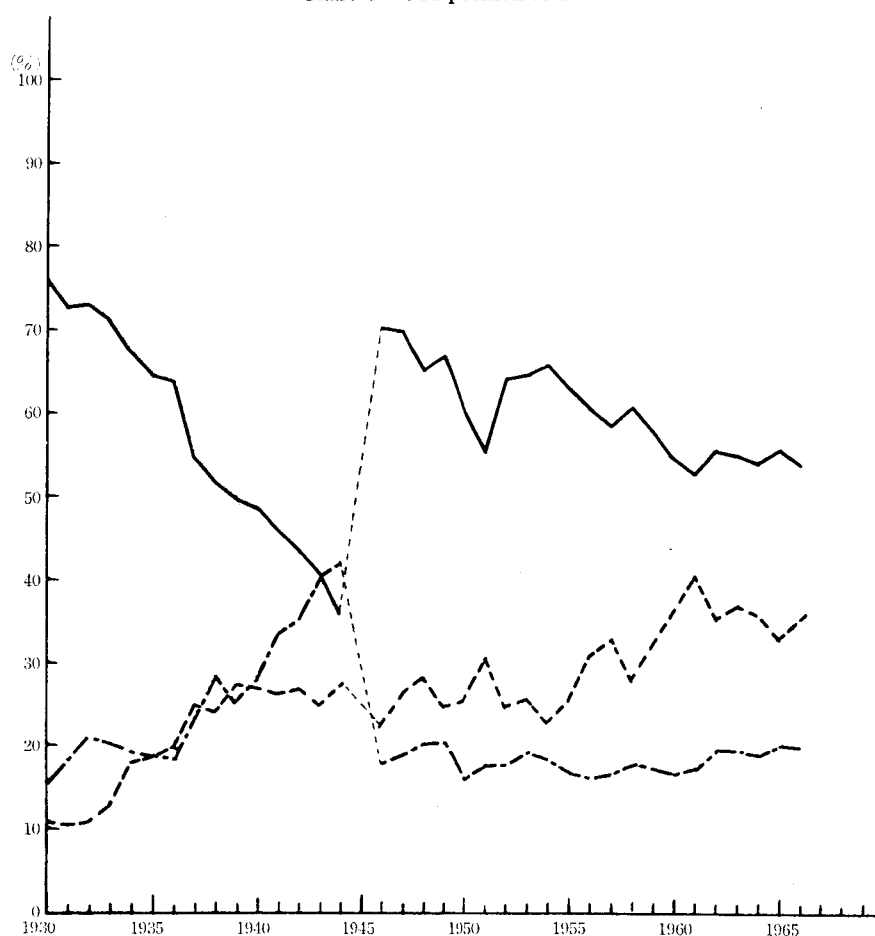
Rsmaks: The index numbers of the terms of trade for the prewar period is at the base of the prewar period (1934-36) and those for the postwar period is at the base of 1960. The reliable coefficients between these are not obtainable.

Source: 'Prices,' *ibid.*, p. 212.

in 1923 and then fell again after 1924 with intermittent rises in 1923, 1927 and 1931. The terms of trade rose again in the latter half of the period, especially in 1938. Years of unfavourable conditions were 1935, 1937 and 1930 the extent of being unfavourable in this order and the biggest down swing of terms of trade was the interval of 1931-1936, which coincided with the depression of 1930s.

The relationship between the swing of the terms of trade and the swing of exports and imports in this period seems rather difficult to understand, as the exports increased during 1931-37 and the terms of trade were unfavourable in 1925-26 while the imports increased during 1925-26, and as the exports diminish-

Chart 5 Composition of GNE



Remarks: — is the ratio of the private consumption expenditure to GNE.
..... is the ratio of the gross capital formation to GNE.
- - - is the ratio of the government expenditure to GNE.

Source: *Hundred-Year Statistics, ibid.*, pp. 50-51. Economic Planning Agency,
Annual Report on National Income Statistics 1968 Edition, pp. 46-47.

ed in 1930, and the terms of trade were favourable in 1938.

As for government expenditure, it gradually increased, as the ratio of government expenditure to GNE moved higher in the latter half, as Chart 5 shows. For example the ratio was 15.1% in 1931 and 28.2% in 1940. The ratio of military expenditure to the total government expenditure increased more, being 11.3% for the years 1917-1923, and then rose to 58.3% in 1945 (according to the supplementary Table B).

The rate of growth of the nominal national income per head and the real national income per head, shown in Table 1, illustrate also the economic development in this period. This period, compared with the prosperous previous period of the war boom, suffered from the great depression of the 1930s and the most negative interval concerning the nominal national income per head the interval from 1930-1933 which succeeded the already stagnant period up to 1929. The nominal national income per head in 1931 was level at 163 yens which was equal to the level of 1881. However the general price level was falling in the early 1930s as Chart 2 shows, and therefore the path of real national income per head was more steady and rising in this interval and then intersected with that of the nominal income. The move of prices in the 1930s is quite exceptional for Japan where inflational trends have been prevailing since the restoration up to the present time. The nominal national income per head rose continuously after the recovery of the economy in 1934 and in 1944 it was 771 yens or five times that of 1931, and the rate of growth was -2.5% per annum during the first half and 11.2% per annum during the latter half, while the rate of growth of the real national income per head was 3.5% per annum during the first half and 1.1% during the latter half.

Keeping pace with real national income per head, real consumption per head increased during the first half and fell near the end of the period. The amount of real consumption per head was 158 yens in 1920, 179 yens in 1925, 190 yens in 1939, only half of the level of the 1930s in 1944.

On the other hand, the ratio of being personal consumption to GNE tended to decrease during the period, being 76.3% in 1930 and 35.7% in 1944.⁽¹¹⁾

The second period of economic growth can be characterized as follows: in the first half of the period light industry was predominant while in the latter half heavy industry grew; also the nominal national income per head declined in the first half, but then recorded a sharp rise in the latter half while the real national income per head rose in the first half and rose also in the latter half at

(11) This is exemplified by using the data of real consumption and population provided by the Economic Planning Agency. *Hundred-Year Statistics, ibid.*, pp. 12-13 & p. 37.

a smaller rate than that of the growth of nominal income. At the end of the period, the price level, the military expenditure, and the war industry increased while both real consumption per head and the ratio of personal consumption to GNE fell.

(4) The period of the postwar economic growth (1945-1966)

This period covers about the first 20 years after the war, including the postwar economy under SCAP, the period of recovery, and the period of the economic growth at a rapid rate.

There is a great difference with regard to economic conditions between this period and the prewar times. There were:

- a) i. a loss of 45 % of the territory, ii. a loss of 41 % of the national wealth including personal estates, iii. a loss of 44 % of durable equipments of producers.
- b) 20 % increase of the population.
- c) Disposition of military elements (war industry, military service, government expenditure for military purposes etc.) in the whole economy.
- d) Institutional changes, i.e. land reforms, introduction of democratic acts for the labor force, and dissolution of the "Zaibatsu" or exemption of the heavy property tax, etc.
- e) Big gaps in the level of science and technology between Japan and the advanced countries. Moreover, a shortage of food and cloths, a low level of productive activity, and confusion in social life. Thus, the Japanese economy was caught in the mechanism of a hyper inflation and the anti-inflation policy of the government under SCAP was hardly able to produce a satisfactory effect. Both the real national income per head and the real consumption per head fell to the level of the first stage of development, i.e. to the subsistence level.

The opportunity for recovery from the ruins was given by the Korean War boom of 1950. The autonomous demand for commodities and services from abroad brought a chance for remedy of the deficit of the balance of payment after 1945 and a nest-egg for the reconstruction thereafter. The composition of national income by the industries also suffered from a considerable change in the postwar economic situation. In 1947, two years after the end of the war, the ratio of the national income by the primary industries to the total national income increased to 38.8 %, equal to that of the first stage of the development level. This phenomenon of regression reflected the relative shortage of food in cities in those years. But this ratio fell again to 21.6 % at the end of the first half of the postwar period and to 11.7 % in 1964, i.e. the last half. The diminishing scale of the national income by the primary industries is reflected in the

changes of the composition of the working population. The ratio of the employed population by the primary industries to the total employed population was 49% in 1948 and 26.8% in 1964. This means that a part of the working population returned to their native villages in the immediate postwar time and then moved again to the cities and into the non-primary industries. Once they moved into the non-primary industry, the ratio changed rapidly. And in the latter half the structure of the Japanese industry shows a basic change.

This economic change is reflected in the composition of the exports and imports, as Table 3 demonstrates. The principal export commodities of the prewar period i.e. raw silk, cotton yarn and tea diminished, while the export of capital goods i.e. vessels, iron and other metal products and machinery gradually increased. As mentioned above, this tendency began in the latter half of the period of the second stage of economic development, and in the postwar period, especially in the latter half of the period, it gained force.

As for the expenditure side, the ratio of expenditure to GNE changed too. Most remarkable is the rise of the ratio of investment to GNE, accompanied by a fall of the ratio of government expenditure to GNE. The gradual recovery of the ratios of exports and imports to GNE are interesting too.

The rate of the investment growth recorded 57.8% per annum in the first half and 18.8% per annum in the latter half, as seen in Table 1. Investment has performed the role of a leading factor which gave a strong impulse to the Japanese economy. There were several reasons inducing an enormous investment drive in postwar Japan: i. a high reconstruction demand, ii. a high rate of profits in a demand pull situation, i.e. a) the extraordinary export demand in the Korean War boom, b) the strong demand for consumption induced by the equalization effect on income as the result of the land reform, trade unions etc.⁽¹²⁾ c) the demand for capital stock for replacement which had been delayed by the war and for new investment to catch up with foreign technology, and d) the competitive situation in the business world after the abolition of the 'Zaibatsu' enterprises, the economic policy of the government to encourage investment.

The rate of investment growth in the latter half sustained, albeit the level was lower than in the first half when there was a high increase of nominal price and the investment growth was often checked by the ceiling of the balance of payment which suggests that in this period the capital-deepening process proceeded at a higher speed than in the latter half of the previous period.

The ratios of exports to GNE and imports to GNE fell to the level of the

(12) Prof. Shinohara called this "high pressed economy." M. Shinohara, *Nipponkeizai-no-Seichō-to-Junkan*, 1961.

transitional period in the first years after the War, the balance of payment showed a deficit and the terms of trade were unfavourable. Just after the Korean War boom, these negative factors as the unfavourable terms of trade, the low level of the ratio of imports to GNE and of exports to GNE, and the quantity indexes of exports and of imports turned gradually again toward improvement.

First of all, the ratio of exports to GNE and of imports to GNE improved. The full recovery of the quantity indexes was attained after 1955, and even the terms of trade improved in the latter half of the postwar period. In the 10 years after 1955 the terms of trade were relatively favourable for the Japanese economy and this fact contributed to its rapid growth, because the balance of payment was 'a ceiling' against the continuous growth in postwar Japan, as in any economy of less developed countries.

As for the government expenditure, it diminished compared with the level of the prewar period. The ratio of government expenditure to GNE was low, as Chart 5 shows. Among the items of government expenditure, current expenditure and transfer payment for social security increased, while military expenditure, which was the main item in the previous period decreased greatly. It seems that the role of the government itself changed in this period, namely, it changed from the role as a state entrepreneur and as a supporter of the militaristic system to the role of a guardian of the downward rigidity of the economy as a whole.

As for consumption per head in the period, there were some encouraging factors i.e. the effect of the equalizing of personal income due to the democratic reforms mentioned above. In spite of this the ratio of personal consumption to GNE did not exceed 65 % in the period except in 1946, as shown in Chart 4. The smallest ratio was in 1961. It is remarkable that this year was the year in which investment strongly increased. According to the international comparison of the ratio of consumption to GNE by Prof. Kuznets, the Japanese ratio of consumption to GNE was the smallest, while her ratio of investment to GNE was the biggest among the countries while he mentions; under-consumption, therefore, was one dominant factor contributing to the Japanese rapid economic growth of the postwar period.

The movement of the nominal national income per head and the real national income per head in the postwar period are shown in Chart 1.

The former increased greatly, the rate of its growth being 47 % per annum in the first half and 12.4 % per annum in the latter half according to Table 2. The curve—in the list of the national income in Chart 1 represents the inter-war period where information is lacking. Compared the postwar period with the prewar periods separated by the dotted line, the nominal national income per

head recorded a sharp rise as a result of the postwar inflation, while the real national income per head recorded a big fall. It could not recover the level of real national income per head of 1939, the highest in prewar times, until 1957, or just 12 years after the end of the Second World War. The rate of growth of the real national income per head was only 8.4% per annum in the first half and 8.7% per annum in the latter half of the period. The big difference between the curves can be explained by the great rise of the general price level, as Chart 2 shows.

On the other hand, real consumption per head could not reach the level of real consumption of 1930 until 1953. The rate of growth of real consumption per head was 1.7% per annum in the first half and 7.1% per annum in the later half of the period. The price index of consumer goods of this period is shown in Chart 2.

To sum up the four periods of the Japanese economic growth for the purpose of comparison with the different patterns of development:

- A. The Japanese industrialization started out with the light industries especially the textile industry based on already well developed and traditional industries. Throughout the three prewar periods, the funds for industrialization i.e. the funds for imports from advanced countries i.e. buying raw materials, durable equipment for producers derived from exports of the products of the traditional industries. Thus by changing the structure of industries of the three prewar periods, the postwar economic growth was attained.
- B. The process of modernization of the Japanese economy is observable from i) the labour balance, ii) the composition of the national income by industries and iii) the capital stock. As for i, there is a downward movement of the ratio of the gainfully occupied population in primary industries to the total working population. The decrease was continuous except for a short time some years after the war and considerable in the latter half of the postwar period. As for ii, we observe that the same downward movement of the ratio of the national income by the primary industries to the total national income becomes more obvious. And as for iii, it also shows the downward movement of the ratio of the capital stock accumulated in the primary industries to the total capital stock and gives the data of the capital deepening in the second stage of development and the postwar period.
- C. The sources for investment were utilized sparingly through all the periods in the following manner: (i) borrowed technology was utilized with intelligence to modernize industries, (ii) the light industry was developed to the high level and industrial exports financed imports, (iii) the capital-

output ratio was relatively low as there were plenty of schooled labourers, (iv) windfall gains, i.e. reparations, profits from the war boom were utilized as a source of economic development.

- D. In the prewar periods, the principal item of GNE was government expenditure, especially military expenditure, while private investment was a dominant factor in the postwar period, especially in a latter half of the period.
- E. The main sources of funds for development were forced savings, voluntary saving and credit creation, i.e. forced savings in the form of land tax in the transitional period, savings and forced savings after the second period and credit creation in the postwar period.
- F. Prices rose continuously except only for a short period early 1930s while real consumption was maintained at a low level during all periods under review. The level rose gradually but was still low compared with other countries.
- G. The terms of trade were unfavourable as a general trend. To overcome this handicap, the Japanese economy adjusted its commodity structure of exports according to its changing industrial structure, in other words, Japan exported the output of the traditional industries in the earlier periods, the output of light industry in the second stage of the development and the output of heavy industry in the latter half of the postwar period. And she tried to increase the exports to cover the amount of imports.

The points summarized above show the features of the development of the Japanese economy as a late comer.

§ 3 The model of the Japanese economic growth, compared with the two types of economies; the model of the advanced economy and the model of the under-developed economy.

In this section then, we shall try to compare the model of the Japanese economic growth with the model of a mature economy with a low rate of growth and with the model of stagnant low income countries, both of which were having been defined by Prof. J. R. Hicks.

First, a mature economy as that of the UK has, according to Prof. Hicks, i) a solid background of accumulated capital stock i.e. working capital, durable equipments of producers, gold or international currency, ii) a well developed industrial structure where leading industries are interwoven with the other domestic industries and without a pool of disguised unemployment, iii) technology of labour and organization of business both of which are well developed; for this type of an economy, an increase of the national income, the economic policy of

the Keynesian type, can effectively be applied. The real national income per head fluctuates due to changes of i) the effective demand, ii) the terms of trade, iii) general prices, iv) the amount of international currency in hands and the international liquidity position. Even such an economy, when there is a state of the scarcity of resources like in the immediate postwar years, most to be supported by the following conditions: i) investment goods must be allocated in optimum proportion between investment for working capital and for capital equipment, ii) military expenditure must be maintained at a minimum level, iii) the national currency must be kept at a stable value if economic growth is to be attained. Prof. Hicks, applying the model of the UK economy since the Great Depression to the postwar economy, explains as follows:

- (i) In the 1950s the nominal national income per head of labour power fell as the result of the shortage of demand, but the real national income per head of labour power, especially that of the employed population recorded a certain rise due to the general price fall.
- (ii) British terms of trade in those days were favourable and compensated the decrease of the quantity of exports, also it brought an earlier recovery than in other countries which suffered from the great depression.
- (iii) In the postwar periods before 1955, the large amount of the resources was exhausted by the reconstruction and reinvestment of capital equipment, the terms of trade became extremely bad, and military expenditure increased because of rearmament. The national product intended for investment was not only in sufficient but allocated inadequately, therefore the result was a shortage of productive investment. Those were the factors which brought the rate of growth of real national income per head to a low level.

Secondly, underdeveloped countries, like the Asian low income countries, according to Prof. Hicks, are characterized by the following traits:

- (i) A plural society composed of many communities or tribes with their own customs and cultures.
- (ii) Little food surplus over the subsistence level and traditional industries predominant even when some modernized sectors exist in the economy.
- (iii) Agriculture in which the majority of people are engaged is stagnant and disguised unemployment is prevailing.
- (iv) Technology of labour and organization of business are not yet developed.

In such economies, monetary reliefs like the Keynesian economic policy is not helpful at all, in spite of their aim to increase income and wealth. Whether industrialization promoted by the government as a state entrepreneur would be a success or not depends on the relationship between the income created by

industrialization and the real saving from the time when investment is undertaken to the time when the stream of new products through the investments flows out, i.e. sustaining the stream of real saving sufficient to absorb wage income created in this period of time is a key problem for attaining successful industrialization. It is easily understandable that accumulation of capital is scarce and forced savings by means of taxation and credit creation are insufficient in such economies, therefore, there is a high possibility of big deficits in the international balance of payment and of inflation. To sustain economic growth, it is necessary to fulfill the following conditions:

- (i) To increase the productivity of agriculture.
- (ii) To develop the light industry with a low capital-income coefficient in the first stage for exporting the products of the industry and financing the imports of capital goods for industrialization.
- (iii) To create real savings by taxation or by little consumption.
- (iv) To fully utilize capital transfers from abroad like foreign grants as a nucleus.
- (v) To improve technology of labour and organization of business by means of education.
- (vi) To introduce private business systems instead of publicly owned systems to obtain efficient production.

Those conditions which were suggested by Prof. Hicks are not easy to work in practice, so that there are sustained stagnant situations in most low income countries. Now it is interesting to compare the anatomies of these two types of economies with the model of the Japanese economic growth as summarized above.

First, the Japanese economy in 1868 resembled the second type model. Only the difference between the two is that Japan is not a plural society, but a consolidated society. Fortunately, in the process of economic development, she fulfilled the conditions advocated by Prof. Hicks for industrialization. Secondly, the model of the Japanese economy after the period of the second stage of development had a resemblance with the first type model. For example in the divergence of the nominal national income per head and the real national income per head in the UK economy during the great depression, we observe the same situation as in Japan during the great depression. And some of the conditions which determine the rate of growth in a state of scarcity like in the UK economy of the postwar period are applicable and instructive for the Japanese economy. They are: i) minimum amount of military expenditure and ii) optimum allocation of resources between working capital, fixed capital and social overhead capital which are required for sustaining productive investment.

As for i, everybody agree that in the postwar Japanese economy the reduc-

tion of military expenditure contributed to the rapid growth of investment. And as for ii, people also agree that the biased allocation of resources to private fixed capital and social overhead capital contributed to the high rate of economic growth. Then, let us consider the terms of trade, on which economic growth also depends. In the Japanese economy since the restoration there are few favourable changes of the terms of trade i.e. only in the First World War boom and as a trend it has been declining. The problem of the terms of trade, like that of deficit in the trade balance, has been the nightmare for Japan during the century of development as for all other less-developed countries. But different from the postwar UK economy which suffered a sudden worsening and was obliged to sustain a low rate of economic growth, the Japanese economy attained a high rate of growth in this period.

Further, we must analyze the reason why the Japanese economy was able to grow although subject to the same conditions as the UK economy. It seems that there was certain mechanism operating in different directions to compensate for the handicap of the Japanese economy.

One direction of this mechanism was that in the export industry, i.e. cotton fabrics or shipping industry, was able to increase the quantity of the their exports by introducing large-scale methods and rising productivity compensating the handicap of the unfavourable balance of payment.⁽¹³⁾ Another direction was that even in the period of prosperity, wages (nominal and real) were maintained at a relatively low level to compensate for the handicap of the unfavourable terms of trade. As to the former, we have given by showing the changes of the commodity structure of exports and imports during the four periods, while as to the latter, we may indicate that the pool of disguised unemployment existed in Japan as a down swing movement of the ratio of the gainfully occupied population in the primary industries which survived in all the periods.

As indicated above, it is now understandable that i. the model of the Japanese economic growth is a model of a less developed economy with rapid growth, and ii. the model of the Japanese economy is a medium between the model of a mature economy and of a developing economy.

§ 4 Further remarks

Short summaries of each period of the Japanese economy are at the end of the description of the corresponding stages; therefore, we intend only to note some

(13) Prof. Shinohara added that in postwar Japan the exchange rate of 360 yens is relatively low and this helped to increase Japanese exports. Shinohara, *Nipponkeizai*, *ibid.*

problems remaining for the future.

First, the present analysis is a type of aggregative analysis, namely, it is an analysis based on the informations collected from national accounts. It is useful, of cause, but if the analysis would be able to rely on more detailed information, i.e. on the constituent transactions in sector accounts of the system of national accounts, on the system of FOF and individual commodity accounts, it would be more prospective for the anatomy of the economic development in Japan.

Secondly, the present analysis should be complemented by the stock approach, that is to say, by the national balance sheet with the sector balance sheets. Moreover, the commodity balance sheets of the leading industries, i.e. the balance sheets for foods, cotton fabrics and railway service and the balance sheet of the working capital i.e. the balance sheet of the inventory of export industries during all the periods under review would be worth while to be consulted.

Thirdly, measuring the effect of learning on labourers and the progress of technology would not only be suggestive for our analysis but an important task to be accomplished by social accounting for history.

Fourthly, in the present paper we have treated the primary industries as representatives of all non-modernized sectors. As a matter of fact, however, traditional business actually exists also in the non-primary industries, it survives for example, even in the manufacturing industries. A separation of the traditional sector from the non-primary industries is, therefore, needed for a more meaningful analysis of the Japanese economy which should be undertaken in future.

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Table 1. Balance-sheet of labour power and of capital stock.

Composition of national income

	Trans- itional period	The first stage of economic develop- ment				The second stage of economic develop- ment				The postwar eco- nomic growth			
		1886-1909		1910-1919		1920-1930		1931-1944		1940-1954		1955-1964	
		begin	end	begin	end	begin	end	begin	end	begin	end	begin	end
Labour balance L ₁	83.6	79.2	278.6	59.2	63.0	56.0	54.5	49.7	51.1	43.5	49.0	43.4	40.2
L ₂	16.4	20.8	21.4	40.8	37.0	44.0	45.5	50.3	48.9	56.5	51.0	56.4	59.8
Capital stock K ₁	72.4	70.2	57.9(1895)	40.3	29.3				22.3	18.9			
K ₂	27.6	29.8	42.1(1895)	59.7	70.7				77.7	81.1			
Composition of Y ₁	61.8	56.4	53.7	41.1	38.5	38.2	34.0	19.5	17.3	15.1	38.8	21.6	22.7
national income Y ₂	38.2	42.6	46.3	58.9	61.3	61.8	66.0	80.5	82.7	84.9	61.2	78.4	77.3
													88.3

Remarks: (i) L, K and Y denote working population, capital stock, and national income respectively, while subscripts 1 and 2 denote the primary industry and the non-primary industry respectively.

(ii) The estimate L at the beginning of the postwar economic period is that of 1948 and the estimate K in the transitional period and at the end of the second stage of economic development are those of 1881 and 1937 respectively.

Sources: "Capital Stock," *ibid.*, p. 15. K. Ohkawa, *The Growth Rate*, *ibid.*, p. 145 & p. 245. *Hundred-Year Statistics*, *ibid.*, p. 72 & pp. 44-45. Economic Planning Agency, *Annual Report on National Income Statistics*, 1968 Edition, pp. 40-41.

Table 2. Rates of growth of national income, consumption and domestic investment

Rates of growth	Trans- itional period	The first stage of economic develop- ment		The second stage of economic develop- ment		The postwar eco- nomic growth	
		1886-1909	1910-1919	1920-1930	1931-1944	1946-1954	1955-1965
Nominal national income per head	8.4	6.5	16.4	-2.5	11.2	47.7	12.4
Real national income per head	7.0	3.5	4.6	3.5	1.1	8.4	8.4
Real consumption per head	4.6	1.7	2.5	8.3	1.4	1.7	7.1
Domestic investment					22.1*	57.8	18.8

Remark: *The rate of investment growth in 1931 was -13.3% in this period.

Sources: *Hundred-Year Statistics*, *ibid.*, pp. 48-49. *Annual Report on National Income Statistics*, *ibid.*, pp. 36-37.

Table 3. Exports of primary commodities

	Tea	Raw silk	Silk fabrics	Cotton yarn	Cotton fabrics	China ware	Cement	Vessels	Iron & steelery	Machin-
Beginning of exports	1868	1868	1868	1890	1868	1868	1896	1886	1910	1896
The period of increasing exports	1875	1875	1901	1897	1900	1916	1930	1935	1935	1938
The period of maximum exports	1917	1031	1935	1914	1935	1935	1957	1065	1965	1964

Source: *Hundred-Year Statistics*, *ibid.*, pp. 282-285.

Table 4. Exports of and imports of producers durable equipments

Year	General machinery			Rolling stock			Automobiles & others			Tools, equipment, etc.		
	Imports	Exports to colonies	Exports	Imports	Exports to colonies	Exports	Imports	Exports to colonies	Exports	Imports	Exports to colonies	Exports
Beginning	1868	1897	1897	1883	1902	1935	1869	1897	1880	1873	1904	1896
The year of the maximum ratio of exports to colonies to imports	1936			1935			1939			1920		
The year of the maximum ratio of exports to imports*	1936			1935			1939			1920		

Remark: *Imports in 1915 which fell greatly are excluded.

Source: *Capital Stock, ibid.*, pp. 198-201.

Table 5. Indexes of Japanese transaction with the rest of the world

	Transitional period		The first stage of economic development				The second stage of economic development				The postwar economic growth			
			1886-1909		1910-1919		1920-1930		1931-1944		1946-1954		1955-1965	
Ratio of exports to national income A %	begin	end	begin	end	begin	end	begin	end	begin	end	begin	end	begin	end
	3.5	4.4	5.3	13.2	14.6	18.5	16.7	15.7	14.1	19.7	0.3	9.8	11.2	11.5
Ratio of imports to national income %	5.6	3.5	3.5	13.0	15.4	19.6	20.4	17.1	16.1	18.8	3.1	14.4	13.7	13.2
Quantity index of exports	1.1	2.5	3.1	14.3	17.0	28.2	23.9	41.8	43.2	71.2	6.1	39.2	51.6	127.9
Quantity index of imports	1.5	2.4	2.6	16.1	17.7	30.4	29.9	41.5	46.1	44.6	10.8	48.6	49.6	129.0
max. of A					26.2(1917)									

Notes: 1. The quantity indexes are estimated by setting the quantity of 1960=100.

2. The figure of the end of the second stage of economic development, of the beginning of the postwar economic growth, and of the end of the postwar economic growth are those of 1938, 1948 and 1962 respectively.

Source: Economic Planning Agency, *Japanese Economic Statistics*, vol. 1, 1957, pp. 267-268.

Table 6. International comparison of the ratio of consumption to GNP and the ratio of gross investment to GNP.

%

	Private consumption GNP	Gross investment GNP
U. K.	66.7	15.2
U. S.	63.7	17.8
France	67.0	18.8
W. Germany	58.7	23.8
Italy	68.2	20.9
Brasil	73.4	15.5
Ceylon	74.9	11.4
Thailand	76.8	14.3
Japan	59.5	29.2

Source: Kuznets, 'Quantitive Aspects of the Economic Growth of Nations,' VII, *The Share and Structure of Consumption, Economic Development and Cultural Change*, vol. X., No. 2, 1962, pp. 62-63.

Supplementary Table A. Indexes of real income

(1928-32=100)

	The primary industry	The second industry
1878- 82	35.6	4.4
1883- 87	38.2	7.8
1888- 92	45.1	10.5
1893- 97	57.5	15.7
1898-1902	68.6	23.5
1903- 07	70.2	23.8
1908- 12	79.9	30.7
1913- 17	79.3	43.8
1918- 22	94.4	54.1
1923- 27	100.0	66.8
1928- 32	100.0	100.0
1933- 37	112.1	139.7
1938- 42	123.7	209.0

Source: Ohkawa and others, *The Growth Rate of the Japanese Economy since 1878*, 1957, p. 18. Table 2.

Supplementary Table B. Ratio of the military expenditure to the government expenditure

Year	Military expenditure
	<u>Government expenditure</u> %
1894-1895	49.2
1900	29.5
1904-1905	74.2
1914-1920	27.1
1917-1923	11.3
1931-1932	12.7
1937-1940	42.7
1941-1945	58.3

Source: Emi, K., and Shionoya, Y., *Government Expenditure*, *ibid.*, p. 22.

EFFICIENCY OF OPTIMAL GROWTH POLICIES FOR DEVELOPMENT

Hikoji KATANO

1. Introduction

Two distinct policies have been advanced to secure enough capital accumulation in a developing economy. The first, originated by F. P. Ramsey [2], is a policy to accumulate enough capital to maximize total consumption over a certain time horizon. The second, advanced by L. G. Stoleru [3], is a policy to accumulate enough capital to secure full employment in minimum time. In this paper, we attempt to clarify some characteristics of these development policies and to examine the efficiency of these policies. Our conclusion is that the optimal growth policy to secure full employment in minimum time is efficient from the view point of capital accumulation, and that the optimal growth policy to maximize total consumption over a certain time horizon is not efficient from the same point of view.

2. The Model.

In the analysis that follows we shall work with a two sector closed economy. The first sector inputs capital (K_1) and labour (N_1), and produces capital goods (X_1); the second sector produces consumer goods (X_2) by inputs of capital (K_2) and labour (N_2). Then the production functions are

$$(2.1) \quad X_i = \beta_i K_i$$

$$(2.2) \quad N_i = \alpha_i K_i$$

where β_i and α_i stand for output-capital ratio and labour-capital ratio respectively.

We assume no foreign aid, no lag between production of capital goods and investment, no possible shift of existing capital from one sector to the other, no depreciation prevailing in either sector. Then, using the general notation $\dot{x} = dx/dt$, the equation of capital accumulation is

$$(2.3) \quad \dot{X}_1 = \dot{K}_1 + \dot{K}_2, \quad \dot{K}_i \geq 0.$$

We now introduce a control variable u defined as a ratio of gross investment in the capital goods sector to total gross investment,

$$(2.4) \quad u = \frac{\dot{K}_1}{\dot{K}_1 + \dot{K}_2}$$

Then we have the investment allocation equations,

$$(2.5) \quad \begin{aligned} \dot{K}_1 &= u\beta_1 K_1 \\ \dot{K}_2 &= (1-u)\beta_1 \dot{K}_1. \end{aligned}$$

Total labour supply (L) grows at a constant rate (n) at the same time the total population grows,

$$(2.6) \quad L(t) = L(0)e^{nt}.$$

Growth of total labour demand (N) depends on capital accumulation in either sector,

$$(2.7) \quad N(t) = \alpha_1 K_1(t) + \alpha_2 K_2(t).$$

Now let us assume that there is unemployment at initial time point ($t=0$), and that full employment is expected to be attained at time T . Then we have

$$(2.8) \quad L(0)e^{nt} \leq \alpha_1 K_1(t) + \alpha_2 K_2(t)$$

for $0 \leq t \leq T$, and

$$(2.9) \quad L(0)e^{nT} = \alpha_1 K_1(T) + \alpha_2 K_2(T).$$

at time T .

3. Full employment in Minimum Time.

Our first problem is to find the optimal growth process to accumulate enough capital to secure full employment in minimum time. Postulating that full employment can be achieved at time T , the demand-supply situation at time T is

$$(3.1) \quad L(0)e^{nT} = \alpha_1 K_1(T) + \alpha_2 K_2(T).$$

Thus the problem is, in turn, to find the optimal growth process to minimize the time T .

To find the optimal growth process, our planning authority can control so as to minimize

$$(3.2) \quad \int_0^T dt$$

subject to

$$\dot{K}_1 = u\beta_1 K_1$$

$$\begin{aligned}
 \dot{K}_2 &= (1-u)\beta_1 K_1 \\
 0 &\leq u \leq 1 \\
 (3.3) \quad L(0) &> \alpha_1 K_1(0) + \alpha_2 K_2(0) \\
 L(T) &= \alpha_1 K_1(T) + \alpha_2 K_2(T) \\
 K_1(0), K_2(0), L(0) &= \text{given} \\
 0 &\leq t \leq T.
 \end{aligned}$$

The optimization will be carried out by using the Pontryagin's Maximum Principle.⁽¹⁾

The Hamiltonian is defined as

$$(3.4) \quad H = -1 + p_1 \dot{K}_1 + p_2 \dot{K}_2.$$

The necessary conditions for the control $u(t)$ to be optimal are

- (a) the control variable $u(t)$ is chosen at value $u^*(t)$ so as to maximize H subject to the conditions (3.3),
- (b) there exists continuous functions $p_i(t)$ which, together with $K_i(t)$, satisfy the canonical differential equations,

$$(3.5) \quad \dot{K}_i = \frac{\partial H}{\partial p_i}, \quad \dot{p}_i = -\frac{\partial H}{\partial K_i}.$$

- (c) for the optimal control $u^*(t)$, we have

$$(3.6) \quad \text{Max. } H = \text{constant}$$

through $0 \leq t \leq T$,

- (d) as the transversality condition, we have

$$(3.7) \quad \frac{p_1(T)}{p_2(T)} = \frac{\alpha_2}{\alpha_1}$$

To be on the optimal growth process, the Maximum Principle suggests us to choose the control variable at the value of

$$(3.8) \quad u^*(t) = \begin{cases} 1 & \text{for } 0 \leq t \leq \tau_1, \\ 0 & \tau_1 \leq t \leq T. \end{cases}$$

This means that investment must be concentrated on the first sector through the first stage ($0 \leq t \leq \tau_1$) and it must be concentrated on the second sector through the second stage ($\tau_1 \leq t \leq T$). And the turning time point (τ_1), the terminal time point (T), and the terminal capital stock situation [$K_1(T)$, $K_2(T)$] are uniquely

(1) see, Pontryagin, L. S. [1].

determined by

$$\begin{aligned}
 (3.9) \quad & K_1(T) = K_1(0)e^{\beta_1 \tau_1} \\
 & K_2(T) = K_2(0) + \beta_1 K_1(0)e^{\beta_1 \tau_1}(T - \tau_1) \\
 & \beta_1(T - \tau_1) = 1 - \frac{\alpha_1}{\alpha_2} \\
 & L(0)e^{nT} = \alpha_2 K_2(0) + \alpha_2 K_1(0)e^{\beta_1 \tau_1}.
 \end{aligned}$$

where

$$(3.10) \quad \beta_1 > n$$

must be maintained for existence of the solution.

4. Maximization of Total Consumption.

Our second problem is to find the optimal growth process to accumulate enough capital to maximize total consumption over a certain time horizon T . Here the time horizon T is the same as postulated in the preceding section for achieving full employment in minimum time.

For the purpose, our planning authority can control so as to maximize

$$(4.1) \quad \int_0^T \beta_2 K_2(t) dt$$

subject to

$$\begin{aligned}
 (4.2) \quad & \dot{K}_1 = u\beta_1 K_1 \\
 & \dot{K}_2 = (1-u)\beta_1 K_1 \\
 & 0 \leq u \leq 1 \\
 & K_1(0), K_2(0) = \text{given} \\
 & 0 \leq t \leq T.
 \end{aligned}$$

We use the Pontryagin's Maximum Principle for the optimization to be carried out. In this case, the Hamiltonian is defined as

$$(4.3) \quad H = \beta_2 K_2 + p_1 \dot{K}_1 + p_2 \dot{K}_2.$$

The necessary conditions for the control $u(t)$ to be optimal are

(a) the control variable $u(t)$ is chosen at value $u^*(t)$ so as to maximize H subject to the conditions (4.2),

(b) there exist continuous functions $p_i(t)$ which, together with $K_i(t)$, satisfy the canonical differential equations

$$(4.4) \quad \dot{K}_i = \frac{\partial H}{\partial p_i}, \quad \dot{p}_i = -\frac{\partial H}{\partial K_i},$$

(c) for the optimal control $u^*(t)$, we have

$$(4.5) \quad \text{Max. } H = \text{constant}$$

through $0 \leq t \leq T$,

(d) as the transversality condition, we have

$$(4.6) \quad p_1(T) = p_2(T) = 0.$$

To be on the optimal growth process, the Maximum Principle suggests us to choose the control variable at the value of

$$(4.7) \quad u^*(t) = \begin{cases} 1 & \text{for } 0 \leq t \leq \tau_2, \\ 0 & \tau_2 \leq t \leq T. \end{cases}$$

This means that investment must be concentrated on the first sector through the first stage ($0 \leq t \leq \tau_2$) and it must be concentrated to the second sector through the second stage ($\tau_2 \leq t \leq T$). Such a time-pattern of investment allocation is the same as we found for achieving full employment in minimum time. However, we should notice that the turning time points τ_1 and τ_2 might be different. The turning time point (τ_2), the terminal capital stock situations $[K_1(T), K_2(T)]$, and the initial values of auxiliary variables $[p_1(0), p_2(0)]$ are uniquely determined by

$$(4.8) \quad \begin{aligned} K_1(T) &= K_1(0)e^{\beta_1 \tau_2} \\ K_2(T) &= K_2(0) + \beta_1 K_1(0)e^{\beta_1 \tau_2}(T - \tau_2) \\ \frac{1}{2}\beta_1\beta_2(T^2 - \tau_2^2) - \beta_1 p_2(0)(T - \tau_2) + p_1(0)e^{-\beta_1 \tau_2} &= 0 \\ p_2(0) &= \beta_2 T \\ p_1(0) &= \beta_2 e^{\beta_1 \tau_2}(T - \tau_2) \end{aligned}$$

Solving these simultaneous equations, we can have

$$(4.9) \quad \beta_1(T - \tau_2) = 2.$$

This shows the turning time point (τ_2) between the first stage and the second stage of the optimal growth process for maximizing total consumption over a certain time horizon (T). Correspondingly, the turning time point (τ_1) between the first stage and the second stage of the optimal growth process for securing full employment in minimum time (T) is, as shown in (3.9),

$$(4.10) \quad \beta_1(T - \tau_1) = 1 - \frac{\alpha_1}{\alpha_2}.$$

From (4.9) and (4.10), it is clear that τ_1 is different from τ_2 . This means that the optimal growth process for securing full employment in minimum time (T) is

capital accumulation, the terminal capital stock situation must be on the efficient growth frontier BC. For the purpose, the turning time point (τ) of time pattern of investment allocation should satisfy the following condition,

$$(5.2) \quad \frac{dK_2(T)}{dK_1(T)} = \beta_1(T - \tau) - 1 \leq 0,$$

where T is given and constant.

6. Efficiency of Optimal Growth Policies

Now we are in a position to examine the efficiency of optimal growth policies mentioned above.

(a) Full Employment in Minimum Time: For the optimal growth policy to secure full employment in minimum time, the turning time point satisfies the condition (5.2),

$$(6.1) \quad \beta_1(T - \tau_1) - 1 = -\frac{\alpha_1}{\alpha_2} < 0.$$

It follows that the terminal capital stock situation for this optimal policy can be on the efficient growth frontier. This is shown as point E on Figure 1. Thus we find that the optimal growth policy to secure full employment in minimum time is efficient from the view point of capital accumulation.

(b) Maximization of Total Consumption: For the optimal growth policy to maximize total consumption over a certain time horizon, the turning time point does not satisfy the condition (5.2),

$$(6.2) \quad \beta_1(T - \tau_2) - 1 = 1 > 0.$$

It follows that the terminal capital stock situation for this optimal policy can not be on the efficient growth frontier, but it must be on the inefficient growth frontier. In this case, this is shown as point G on Figure 1. Thus we find that the optimal growth policy to maximize total consumption over a certain time horizon is efficient from the view point of capital accumulation.

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DECASUALIZATION OF DOCK LABOUR

—Experiences at the Port of Kobe—

Hiromasa YAMAMOTO

The Dock Labour Decasualization Act was passed in the Diet in May, 1965 and the main part of the act is enforced since July, 1966.⁽¹⁾ This act aims at securing the necessary dock labour at important ports on the one hand, and to stabilize employment and earnings of dock workers on the other hand.

Since the end of World War II dock workers' unions had demanded for legislation in order to overcome the fluctuation of employment peculiar to the industry. In 1961 port congestions occurred in many ports in Japan due to the shortage of port facilities and low labour productivity of the dock industry in face of the increasing import and export cargo. In addition, short supply of dock labour in recent years made room for illegal activities of people who gathered day workers privately and placed them in the dock industry so as to gain intermediate profits. All these conditions led to the legislation in the act of 1965.

In this article we intend to point out the merits and demerits of the act in relation to the enforcement of the act at the Port of Kobe, and then to make a proposal for remedies of the act.

I. Outline of the Dock Labour Decasualization Act.

The Dock Labour Decasualization Act is enforced at the six important ports of Japan including Kobe.⁽²⁾ The act includes provisions concerning the Dock Labour Decasualization Scheme, the registration of dock labour, employment, job training, welfare and the retirement allowance plan.

An outline of the provisions which relate to the decasualization of employment of dock labour follows:

1. Formulation of the Dock Labour Decasualization Scheme

The Ministry of Labour formulates respective Dock Labour Decasualization Schemes for each of the six main ports every year. The scheme of each port specifies the following points:

- a. the necessary number of dock workers for loading and discharging

(1) Law No. 120 of 1965 and Law No. 37 of 1967.

(2) The six important ports are Tōkyō, Yokohama, Nagoya, Ōsaka, Kobe and Kammon.

cargo at the port,

- b. among them, the number to be filled by the registered day workers,
- c. hiring procedure, job training and other practices necessary to adjust demand and supply of dock workers, and
- d. regulation of employment of dock workers.

2. Registration of dock workers

- a. registration of permanent employees

When an employer intends to employ a specified dock worker permanently, he must report the name and the kind of job of the worker to the local employment security office. Then the office will issue the permanent employee card to the worker.

- b. Registration of day workers

The worker who intends to work continuously in the dock industry at one of the six main ports is required to register his name and his qualification as dock worker in the register book of the local employment security office at the port. The office will accept applications of registration upto the number of registered day workers which is determined by the Dock Labour Decasualization Scheme. The registration is valid for a year. The registered day worker must carry his register card when he engages in dock work.

3. Hiring Procedure.

The registered day workers must present themselves at the employment security office every morning in order to be hired in the dock industry. On the other hand employers are forbidden to hire dock workers through other agencies than the employment security office.⁽³⁾ Employers are to order the necessary number of gangs to the employment security office by the evening of the previous day. According to the orders, the office will despatch the registered day workers on a rotation basis, and if the registered men cannot fill the demand of the day, then casual day workers are sent to employers.

4. Employment Security Payment

When the registered day worker is not despatched although he has reported to the office or when he is not employed without any fault of his own, he is qualified to receive the employment security pay. Employment security pay is also paid to the registered day workers when they attend a job training course for dock workers. The daily amount of payment for registered men varies according to their wage rates and the period of their employment. The fund for this payment is composed of the contributions by employers, the deductions from daily wage

(3) As an exceptional case, the act permits employers to hire dock workers directly when the employment security office cannot despatch the necessary number of qualified workers.

payments for the registered men and a subsidy from the government.

II. Merits and Demerits of the Act—Experiences at the Port of Kobe—

The enforcement of the Dock Labour Decasualization Act has achieved several improvements in the employment of dock workers at the Port of Kobe. Since the enforcement of the Act stevedoring agents employ more dock workers as permanent employees. In the Dock Labour Decasualization Scheme of 1966 the number of permanent employees of the Kobe area was estimated at 9,660 men which reflected the actual employment at the end of 1965 when the scheme was formulated. But in October 1966 the permanent employees amounted to 13,046 men or an increase of about one third of the estimated number. The number of permanent employees has shown a gradual increase in the following years, too. The status of permanent employees may be desirable in itself for the workers because of the stability of employment, but the actual reason why the permanent employees have increased will be discussed later.

As for day workers including the registered men and also casuals, all are hired through the employment security office. Though the act permits the practice of hiring dock workers by means of "shape-up" or other methods as an exceptional case if the employment security office cannot despatch enough qualified workers, seldom use of these practices has been made in Kobe. Thus, the enforcement of the act seems useful to prevent employers from relying upon evil hiring practices such as shape-up by which gangsters had often exploited dock workers.

Together with the introduction of the registration system for those who intend to work continuously in the dock industry, the act provides the registered day workers with favorable hiring practices by which they are given the priority over casuals to be despatched, and they are hired on a rotation basis in order to allocate employment opportunities.

However, the enforcement of the act is accompanied by difficult problems to be solved at the same time. One of the most important problems is that the

Estimated number of dock workers to be registered in accordance with Dock Labour Decasualization Schemes, Port of Kobe

	1966	1967	1968	1969
Permanent employees	9,660	14,180	14,180	14,930
Registered day workers	7,750	3,580	3,580	3,060
Total	17,410	17,760	17,760	17,990
1966:100	100	102.0	102.0	103.3

Source: Employment Security Office.

Actual number of the registered dock workers, Port of Kobe

	Oct. 1966	Oct. 1967	Oct. 1968	Sept. 1969
Permanent employees	13,046	13,691	14,493	14,487
	100	104.9	111.1	111.0
Registered day workers	3,497	2,832	2,857	1,997
	100	81.0	81.7	57.1

Source: Employment Security Office.

Total man-days worked by permanent employees and day workers,
Port of Kobe (1,000 man-days)

	Oct. 1966	Oct. 1967	Oct. 1968	Apr. 1969
Permanent employees	265.6	287.5	291.1	260.6
	100	108.3	109.6	98.1
Day workers ¹⁾	42.6	41.1	30.9	27.1
	100	96.4	72.6	63.6

Note: ¹⁾includes the registered day workers and also unregistered men.

Source: Employment Security Office.

registered day workers who should make up a stable labour pool have not necessarily the stability of their employment or earnings secured. The registered day workers were, in the average, hired 14.7 days a month in 1968 and 13.9 days in 1969. When we consider the workable days of registered men engaged in the various kinds of jobs, we find large fluctuations. For example, holdmen had 5.5 workable days in January 1969, being the lowest number per month of the year and 23.7 workable days in August of the same year as the highest, while odd-job men had 14.4 workable days in January 1969 as the lowest number and 24.4 workable days in August 1969 as the highest. Together with the fact that the registered day workers had fewer workable days than the permanent employees who worked usually twenty-five days a month, the daily and seasonal fluctuations of workable days for the registered day workers resulted in unstable and poor earnings for them.

As previously noted, when registered day workers cannot be hired notwithstanding their presence at the employment security office, they are qualified to receive employment security pay. But the administration of the security payment does not necessarily meet the needs of the registered day workers in Kobe. According to the provisions of the act, the amount of the pay is calculated on the basis of days the registered man worked during previous two months and on the average daily earnings he received. If he was able to work more than twenty-four days during previous two months, he is qualified to receive the full amount of pay which comes to about sixty per cent of the daily wage earning he usually

gets. But the amount of pay decreases in proportion to the days he was out of employment. Therefore, though the employment security pay is meant to cover and stabilize poor earnings of the registered day workers when the demand is slack, in effect this payment is not satisfactory if the demand fluctuates largely and falls below to a level where they can work only a few days a month. For example, in March 1969 holdmen received security payments that were in the average as low as a quarter of their average daily earnings because of fewer employment opportunities in January and February. Needless to say, the amount of pay was far from enough to maintain their living. Moreover, if the registered day worker is not employed more than seven days a month, he loses his qualification to receive the day worker health insurance benefits.

As a result, since the enforcement of the act the decasualization scheme has failed to maintain the projected number of registered day workers, and the actual number of them has been decreasing. In response to the situations, the employers have tended to employ more permanent employees.⁽⁴⁾ Though stevedoring companies have gradually introduced various kinds of labour saving devices to meet the demand of service, they have had to rely upon the increase to permanent employees in the face of the decrease of day workers.

In the previous passage the increase of permanent employees is regarded as one of the merits of the act. Indeed the status of permanent employee may be desirable for the employees themselves. However, we should not overlook that the increase of permanent employees is at the root of the failure to maintain the projected number of registered day workers, and at the same time it resulted in making the employment for the rest more unstable.

III. Problems to be Solved.

1. Large Fluctuations of Demand for Dock Labour—Characteristics of the Port of Kobe—

As it is well known, dock labour is characterized by the fluctuations of demand. That is especially true in the case of the Port of Kobe. It suffers from much larger fluctuations of demand for dock labour than the other ports where the Dock Labour Decasualization Act is also enforced.

The Port of Kobe is the last port of call in Japan for many liner services

(4) The reason why stevedoring agents have come to employ more permanent employees is not simple. At first they employed as permanent employees those who had been hired as regular gangs attaching to the company in order to secure reliable labour force. But, as the registered day workers decrease, they have to employ more permanent employees so as to secure more workers.

connecting various parts of the world. The entries and clearances of liners to and from Kobe in a month are concentrated on a limited number of days which include the last few days and the beginning few days of a month. Consequently at the Port of Kobe the daily demand for dock labour becomes largest during these days, and the difference between the peak and the off-peak demand is very great. Moreover, in rainy days the demand falls to nearly zero. In addition to the daily fluctuations, there are seasonal fluctuations. The volume of cargo which passes through the Port of Kobe usually becomes larger in summer and in December.

Daily fluctuations of the number of gangs: Gangs engaged loading and unloading aboard ships, Port of Kobe

No. of gangs		0-50	51-100	101-150	151-200	201-250	251-300	301-350	351 and over
No. of days in a month	Oct. 1968	0	0	1	4	5	12	9	0
	Nov. 1968	4	1	0	0	5	12	8	0
	Dec. 1968	4	0	0	0	4	5	11	5
	Jan. 1969	1	0	3	2	12	7	2	0
	Feb. 1969	2	0	2	3	7	7	6	0
	Mar. 1969	2	2	2	4	5	10	6	0

Source: Association of Stevedores.

When the demand for dock labour fluctuates and the disparity between peak and off-peak demand is large, it is quite difficult to attain stability of employment if the supply of labour is to be fully adjusted to the changing demand. The device to reduce to a minimum the fluctuations of demand may be a desirable way to attain stable employment and earnings for dock labour, if the total demand can be maintained without reduction. For this purpose the customs, the Port Authority of Kobe and other governmental agencies, have tried to get the cooperation of the shipping companies and shippers. But their efforts have had little success. The shipping companies and shippers have not been cooperative enough to change their sailing schedules or shipping dates. Because lading at the end of a month is advantageous for shippers due to the commercial custom of Japan, and liner companies tend to set sailing schedules which make possible to get more cargoes.⁽⁵⁾ Therefore, the large fluctuations of demand for dock labour at the Port of Kobe still remain, though a part of the peak demand at the end of a month has been moved to make another peak in the middle of a month. Consequently, at present

(5) Customs Office of Kobe, *Funazumi Kamotsu no Getsumatsu, Gessho Shūchū ni tsuite* (Concentration of Lading at the End of a Month), Dec. 1968, (pamphlet written in Japanese).

stevedoring agents have to adjust the supply of their service to the daily changeable demand,⁽⁶⁾ and that leads naturally to the unstable employment of dock workers.

2. Reconsideration of the Dock Labour Decasualization Scheme

As we have mentioned before, the Decasualization Scheme intends to estimate and secure the necessary number of dock workers as permanent employees and registered day workers. However, the scheme does not necessarily make clear whether the necessary number of dock workers corresponds to either the peak demand or the average demand. In the case of the Port of Kobe where there are large fluctuations of demand for labour, the determination of which principle should be adopted will greatly influence the execution of the scheme and also the interests of the groups concerned.

If the scheme determined the scale of the regular labour pool such as to correspond to the peak demand, it will be acceptable for the shipping companies and shippers while it burdens stevedoring agents: that is, the employers of dock workers with heavy contributions to the employment security fund in order to maintain a large volume of unemployed labour during the days of the off-peak demand while the increase of costs is not easily absorbed by the increase of cargo handling charges.⁽⁷⁾ In contrast, if the scale of the regular labour pool is set corresponding to the average demand, the peak demand will naturally be met unsatisfactory for the Port of Kobe where there is a limited availability of casual day workers. In the Kobe area there are relatively few casual day workers and composed mainly of aged unskilled men, being thus less qualified for dock work and which can be employed only as odd-job workers. Therefore the possibility of adopting the latter criterium to fix the regular labour pool, depends upon whether or not the shipping companies and shippers accept cutoffs during the peak demand or delays in loading and unloading of cargo.

From the above considerations regarding the determination of the scale of a regular labour pool, it becomes clear that the interests of the stevedoring agents do not necessarily coincide with those of the shipping companies and shippers. It becomes also clear that the successful enforcement of the scheme cannot be attained without the cooperation between the employers of dock workers: that is, stevedoring agents and the users of their service, irrespective of which principle

(6) However, in the summer season stevedoring agent often cannot meet the peak demand for their service because of short supply of labour. At that time delays of sailing occurs some time, but fortunately there are now few severe port congestions.

(7) The change of charges for cargo handling requires the permission by the Ministry of Transport, and the Ministry is deemed to be reluctant to increase charges because of its economic policy against inflation.

being adopted to determine the scale of the regular labour pool. If this scale is set corresponding to the peak demand, the users of the cargo handling service must share the costs of maintaining the unemployed labour force, unless an increase of charges for cargo handling is granted by the Ministry of Transport. If the average demand sets the scale of the regular labour pool, the users have to renounce the quick despatch of cargo in the days of peak demand.

For the purpose to secure the cooperation between the employers of dock workers and the users of the cargo handling service, it is essential to determine first of all the optimal size of the regular labour pool to minimize the handling costs of the cargo flow through the port, and secondly to find a reasonable way of sharing the cost burdens among the groups concerned. In estimating the optimal size of the regular labour pool, the main factors to be considered are the warehouse charges and extra expenses of the shipping companies which occur due to delayed sailings and the costs for maintaining a variable size of the regular labour pool at a time when port facilities and the productivity of the dock labour are constant. The costs for maintaining a regular labour pool depend in part on the hours of work, and these should be determined in consideration of the conventional hiring practice and also from the standpoint of preventing labour accidents.⁽⁸⁾

After the optimal size of the regular labour pool is estimated, the costs for maintaining should be added to the charges of cargo handling. The Ministry of Transport should grant a charge if this becomes necessary. It means that the users of the cargo handling service such as the shipping companies and shippers, have to share the responsibilities of maintaining an adequate labour pool, so as to secure a constant flow of cargo without hindrance through the port. This proposition is based on the fact that stevedoring agents who employ dock workers are not in a position to make monopolistic profits in the market for their services. In the dock industry there are many small scale firms, and the charges for their services are essentially competitive, though the charges cannot be changed without the permission of the Ministry of Transport. In addition, stevedoring agents are in many cases controlled by the shipping companies and warehouse companies through financial and personnel connections. Therefore, the shipping companies and warehouse companies may be regarded to a certain extent as the employers of dockworkers.

The cooperation between stevedoring agents and shipping companies and also shippers may be secured under the present Port Labour Decasualization Act, if the act is properly interpreted. But, in order to tighten the cooperation be-

(8) The concept of optimal hours of work is vague in content and cannot be determined adequately. Refer to Y. Utsumi, *Rōdōjikan no Riron to Mondai*, 1962.

tween them, it is necessary to change the framework of the act. As mentioned above, the users of the cargo handling services may be regarded as the employers of the dock workers. The act should be amended so that the concept of the employer in the act includes not only the direct employers of dock workers but also the indirect employers: that is, the users of the cargo handling services.

The act has another point to be revised. The present act allows employers to keep permanent employees as they wish without any restriction. Certainly the system of permanent employees is desirable for both the employers and the employees. It provides the workers with a stable employment. It also provides the employers with a reliable labour force and good teamwork. But when the ratio of permanent employees becomes bigger in comparison with the regular labour pool, the registered day workers are threatened by intensified fluctuations of their employment opportunities. An unbalanced demand and supply of labour may appear among the individual stevedoring agents because each firm has more or less specified customers and the existence of a large number of permanent employees makes it difficult for the individual stevedoring agents to adapt the supply of their service to the changing demand. Therefore, from the standpoint of the effective use of dock labour, the Decasualization Scheme should not permit the employment of permanent employees except for jobs as supervisors and crane operators of special kinds. Also the present permanent employees should be integrated into the regular labour pool, and the employment security office should despatch the registered members to the employers on a rotation basis as the orders come in. Except for permanent employees, the integrated regular labour pool can afford a reliable labour force when adequate job training courses are open to them.

IV. Conclusion.

Based on four years of experience since the Dock Labour Decasualization Act has been enforced at the Port of Kobe, we have pointed out the necessity of revising the act. The most important amendment concerns the concept of the employers, which must be widened to include the users of cargo handling services so that the shipping companies which have the responsibility to secure stable employment and earnings of the dock workers will have to bear their share of the expense. Another amendment should prohibit permanent employees or limit the number of workers who may have the status of permanent employees.

The revision of the act becomes more urgent if we take into consideration that the economic circumstances of ports are going to change. In the near future most liner cargo will be containerized. Containerization, introduction of new type

of loading machines and also the change in packaging, all will contribute on a large scale to the reduction of the demand for dock labour, and severe unemployment will be inevitable, if no measures are taken. The shipping companies take the lead in the introduction of economic and technical innovations which affect the demand for labour. Stevedoring agents play a minor role. Henceforth, without the cooperation of the shipping companies, the employment problems of dock labour, including the retraining and reallocation of labour, cannot be solved adequately.

THE CHARACTERISTICS OF RECENT CORPORATE MERGERS IN JAPAN

Jiro ONO

I

A big economic problem, that of Corporate Mergers is now widely and seriously disputed in Japan, as everybody is aware.

The following questions arise:

What are the main motives for the recent corporate mergers in Japan? Can some of the mergers, especially the so-called "Large-scale Corporate Mergers" be the major cause of economic concentration in Japan? Will the economic powers concentrated through the mergers control the price-behaviour of various kinds of commodities? Can larger firms created through mergers be operated much more efficiently than before? What kinds of other business problems are connected with the mergers?

Many questions remain indeed unsettled in Japan, as Weston has appropriately pointed out in his excellent study treating the mergers in the United States.⁽¹⁾

In this paper and the ones to follow, the writer intends to analyze the economic background and the characteristics of the recent corporate mergers in Japan, with special reference to the postwar period.

(1) Weston, J. Fred; *The Role of Mergers in the Growth of Large Firms*, 1953, pp. 1-2.

II

The success of Japan's postwar industrial growth has been accomplished thanks to various political and economic conditions as its background.

First, the occupation forces abolished the Japanese military and made the Japanese people enforce the so-called "New Constitution" which stipulates the renunciation of every kind of war. It had as a result the USA-Japan security treaty, exempting Japan from the major expenditure for its national defense. Therefore, the Japanese government, formed by the present Liberal Democratic Party and its antecedents being in power ever since the end of war except for a short period, was able to utilize the thus saved resources for the industrial

recovery of the country by means of its fiscal-and monetary-policy, for example, through the public investment in various kinds of transportation facilities and through financing, with specially advantageous loan-terms, of several key industries by some public financing corporations specially established for the industrial reconstruction and development.

The agricultural reformation implemented following the instruction of the occupation forces also had a great effect on the postwar industrial growth of Japan in that it resulted in a much higher agricultural productivity than that of the prewar period, and increasing the agricultural income, which contributed to the political stabilization of postwar Japan and also increasing the demand for production of other industrial sectors.

The democratization policy of the occupation forces also gave a rise to active labor movements for the purpose of an increase of the wage level, especially in large firms.

All these: the renunciation of war, the agricultural reformation and the appearance of active labor movements changed the prewar distribution structure and resulted in the increase of disbursement for the people's living of a higher grade than that in the prewar period, which in turn has steadily enlarged the demand for various kinds of industrial products and justified the extremely aggressive investment of firms.⁽²⁾

Secondly, even after the war Japan was still pursuing its traditional industrial technology and its capability of R&D, which had been developed for military purposes during the war. Later this invisible asset played important role in expanding exports and in applying various kinds of imported new foreign technology to Japan's current industrial production.

Imported foreign industrial technology after the war is said to have been related to about 8,500 items,⁽³⁾ and it was readily digested to strengthen the national industrial competitive power although many yet undeveloped but important fields, such as space-development, petro-chemicals, aircrafts, etc. were neglected. From the viewpoint of technological innovation, at least up to the present, the huge amount of investment seem justified.

Thirdly, Japan has maintained its own educational system which can sufficiently supply industrial firms with various kinds of cheap labour, as well as engineering and managerial competence. This advantage is now losing ground due to the so-called "High Economic Growth Policy" resulting in the availability of abundant employment opportunities, and a shortage of employees in many firms. In the traditional social system of Japan, however, the cost of intellectual labour, for example, that of teaching, medical treatment, legal advice, etc., is still rated very low in comparison with the other developed countries.

Fourthly, however, it must be stressed that Japanese corporations have depended on debt financing from ordinary commercial- or savings-banks, that is, mainly on short-term bank loans. This state of affairs, which can easily be seen from the average debt-to-net-worth ratio in the capital structure of Japanese corporations of about 4 to 1 as of September 1966,⁽⁴⁾ and which makes the structure of Japanese corporations very vulnerable. At least till now, in the closed economic system, this vulnerability has had the effect of adjusting the postwar business cycles and the international balance of payment through the government's monetary policy: that is, the aggressive investment which is usually financed by the short-term loans of commercial-or savings-banks can easily be discouraged or again promoted by the manipulation of the central bank's official discount rate.

In other words, various measures taken by Japan following the instruction of the occupation forces, together with the heritage of traditional systems, changed the structure of income distribution, established a sufficient domestic market for various kinds of industrial products, and promoted the investment and technological innovation of individual firms. Furthermore, aggressive investment and imported or developed new technology have changed the industrial structure and strengthened Japan's capability to export. On the other hand its international balance of payment which tends to fluctuate according to the process of business cycles, especially the behaviour of equipment investments by firms, has been successfully adjusted through a monetary policy which is very effective owing to the financial vulnerability of firms, though a number of small- and medium-scale firms have to be sacrificed in the process.

In April 1964, however, Japan joined the Organization for Economic Co-operation and Development (OECD), accepted Article 8 of the International Monetary Fund (IMF) obligations, and liberalized trade restrictions on all but a few products which have to be protected for the time being against foreign competition for Japan's economic growth and stabilization. At the same time, Japan decided to liberalize the restrictions on the entry of foreign capital.

These developments mean that Japanese industrial firms can no longer operate within the protected closed national economic system and that they will now be exposed to the rigor of international competition.⁽⁵⁾ That is, Japanese firms can no longer depend on their own domestic market for their aggressive investment and technological innovation because the products of other developed- and developing-countries can be imported if they are cheap, and a large share of business of Japanese firms may be lost in its domestic market. Moreover, a number of Japanese firms are exposed to the danger of being easily acquired and controlled by American or European giant firms, as it had been witnessed in

Europe where a few American giant corporations bought up extremely aggressively stocks of some important European automobile firms and finally acquired the power to control them. The danger is considered much more serious in Japan because of the financial vulnerability of Japanese firms.

Therefore, the key Japanese business leaders, the leading officials of the Ministry of International Trade and Industry (MITI) and some well known economists are afraid that Japanese industrial firms may have to face such kinds of great trials as the above-mentioned, which will necessarily follow from Japan's joining the international open economic system and from its playing a role in the development of the welfare of the whole world. It is stressed that a number of Japanese firms have to keep up the growth of their own domestic market at the present rate, and that the key industries must not be owned or controlled by foreign firms because their control would have an important influence on Japan's own economic, social and political developments which might be unwillingly distorted, although the liberalization of restrictions on international transactions is certainly necessary.

Under these circumstances which characterize the present environmental conditions the motives of "Corporate Mergers" have become quite different from those at prewar period.

In the next section, we will outline "Corporate Mergers" in Japan after the war.

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- (2) Yoshino, M. Y.; *Japan's Managerial System*, 1968, pp. 30-40 and p. 166.
 - (3) Arizawa, Hiromi ed.; *Sangyo no Kōzō-Kaizen to Kigyō-Gappei (The Improvement of Industrial Structure and Corporate Mergers in Japan)*, 1969, p. 29.
 - (4) Yoshino, M. Y.; *ibid.*, p. 139 and p. 180.
 - (5) Yoshino, M. Y : *ibid.*, p. 177.

III

The prewar industrial structure of Japan was characterized by the so-called "Zaibatsu" system, which was a private enterprise grouping owned and controlled by one family. There were the Big Four: that is, the Mitsuis, the Mitsubishi, the Sumitomos and the Yasudas as the most popular Zaibatsu families, though, strictly speaking, there must be mentioned also other smaller Zaibatsu families. Anyway, the main part of the prewar Japanese industry was firmly owned and controlled by a few wealthy families.

In the postwar period, however, the Zaibatsu system was abolished by order of the occupation force: that is, the shares of corporations owned by a few Zaibatsu families were offered for sale in the open stock market to be portioned out among

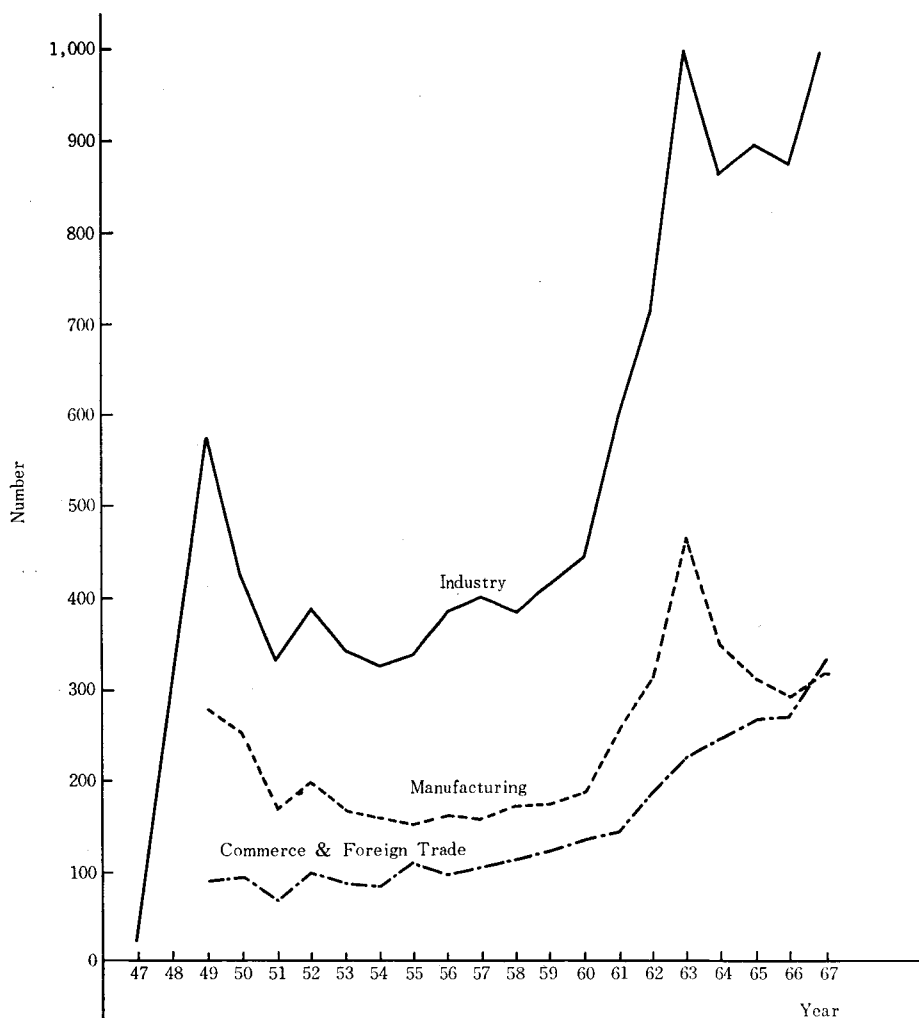
Table 1 Number of Corporate Mergers in Industry between 1949 and 1967

Category of Industry	Year																		
	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
Agriculture, Forestry and Fishing	5	11	4	2	2	6	2	3	4	4	9	2	4	5	7	9	11	9	9
Mining	9	8	6	9	4	6	5	5	4	4	5	11	5	14	11	8	19	7	7
Construction	13	10	3	18	17	13	19	19	22	9	19	13	34	40	45	39	36	52	53
Manufacturing	275	250	190	197	169	159	151	160	155	169	173	185	254	311	438	346	313	288	315
Food	43	34	32	26	26	35	32	32	24	22	34	46	51	55	76	56	50	53	54
Textiles	65	57	47	43	35	21	15	28	22	21	24	18	30	36	53	38	24	20	34
Lumber	24	9	10	10	11	9	15	10	10	14	8	12	6	20	22	18	18	17	28
Paper and Pulp	—	—	—	—	—	—	—	—	—	—	—	4	3	5	7	17	15	3	10
Printing and Publishing	12	23	9	9	7	6	6	7	8	9	11	12	10	9	12	17	15	13	13
Chemicals, Petroleum and Coal Products	49	41	36	32	22	30	26	16	30	16	22	12	32	47	37	28	29	21	26
Rubber and Leather-Products	—	—	—	—	—	—	—	—	—	—	—	1	5	3	15	6	3	3	2
Ceramics	15	22	8	14	4	11	6	6	2	8	6	10	4	14	18	14	16	14	20
Metals	16	23	21	16	26	13	16	13	8	20	17	23	10	30	79	56	42	62	42
Machinery	41	31	23	46	32	26	28	40	43	49	35	39	93	81	110	85	74	62	74
Other Manufacturing	10	10	4	1	6	8	7	8	8	10	16	8	10	11	9	11	27	20	12
Commerce and Foreign Trade	88	91	73	97	87	89	109	98	106	112	122	127	144	184	241	243	261	267	329
Banking, Trust and Insurance	8	9	10	7	11	6	11	16	19	8	7	7	7	8	11	9	25	11	19
Real-Estate	7	4	1	9	8	8	9	8	15	17	18	17	27	38	72	51	40	61	78
Transportation and Communication	23	26	27	25	27	18	15	44	36	32	32	44	60	54	97	74	83	62	84
Warehousing	5	3	5	2	3	2	3	2	3	3	2	3	8	5	4	4	3	7	—
Gas and Electric	0	0	0	0	1	0	0	0	2	1	0	1	2	1	3	1	0	0	0
Amusements	9	4	6	7	8	5	5	11	9	8	14	8	8	19	64	60	88	99	101
Other Services	6	2	3	11	5	6	8	9	14	10	11	13	20	36	—	—	—	—	—
Other Industry	0	2	3	1	2	7	1	6	9	4	1	9	18	0	3	20	15	8	0
Total	448	420	331	385	344	325	338	381	398	381	413	440	591	715	997	864	894	871	995

Table 2 Number of Corporate Mergers According to Size of Firms (in Paid-in Capital) between 1950 and 1967

Amount of Paid-in Capital after Mergers (million yen)	Year	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
less than 0.5		27	12	15	10	6	11	10	2	4	3	2	2	6	0	3	1	1	3
0.5-1		34	34	24	9	15	13	18	18	10	9	8	6	9	11	5	6	11	6
1-5		215	139	162	156	151	141	150	135	152	149	144	147	146	188	182	220	205	218
5-10		62	58	71	52	33	47	75	84	85	95	100	125	131	187	160	169	142	181
10-50		68	66	70	64	73	88	89	98	81	94	94	176	221	320	313	318	341	367
50-100		7	8	17	24	15	11	17	30	16	18	33	63	72	115	67	57	63	77
100-500		7	12	19	19	23	15	13	18	23	30	41	45	91	116	90	93	67	94
500-1000		0	2	4	5	5	4	2	4	2	7	8	9	10	15	14	16	11	9
1000-5000		0	0	3	5	4	7	6	9	7	8	9	13	23	28	17	8	23	29
5000-10000		0	0	0	0	0	1	1	0	1	0	0	3	3	5	4	3	2	4
10000 and over		0	0	0	0	0	0	0	0	0	0	1	2	3	12	9	3	5	7
Total		420	331	385	344	325	338	381	398	381	413	440	591	715	997	864	894	871	995

Figure 1 Number of Corporate Mergers between 1947 and 1967



Japanese people. All firms, whether large or small, were liberalized from the ownership of Zaibatsu and became independent of any type of private control immediately after the war, though a few types of new private enterprise groupings—so-called “Kigyo-Shyudan”—were reconstructed after 1953 as we shall see later. At the same time, in 1945-46, the movement towards “Corporate Mergers” restarted in the postwar industry of Japan.

The number of mergers accepted by the Fair Trade Commission (FTC) between 1949 and 1967, classified according to categories of industry, is shown in Table 1,⁽⁶⁾ from which we can find the following facts about the corporate mergers in Japan:

First, the corporate mergers have some relations with business cycles though they are vague. According to the MITI's report on the mergers, it seems that they took shape in depression periods, and that, the actual mergers were realized only within six or eighteen months later,⁽⁷⁾ at least before 1962. Another report also points out that, as a whole, the curve of the number of mergers has two peaks in the postwar period, the first being in the depression period of 1949 to 1950, during which the government tried hard to reduce the drastic inflation through fiscal- and monetary-policies following the so-called Dodge-policy, and the second in the depression period of 1962 to 1963.⁽⁸⁾ The writer, moreover, would like to add a third peak in the depression period of 1966 to 1967 which is called a structural depression brought about as the result of Japan's extremely aggressive industrial investment from 1956 to 1965, though, at the same time, also an inventory-adjustment had to be performed as usual.

Secondly, as everybody will infer, the above-mentioned trend of corporate mergers can be explained, though only partly, as a means to achieve one of their principal motives. The first peak in the number of mergers appeared in the serious depression period just before the Korean War. It is said that about eleven thousand firms went bankrupt between September 1949 and March 1950, and that the number of unemployed increased from 260 thousand to 430 thousand in the same period.⁽⁹⁾ One of the main motives for mergers in that period was to acquire a depressed firm, to reorganize a bankrupt firm and to conclude a settlement with its creditors. (We can often find the mergers where the new company was established for the sole settlement of debts.)

On the other hand, the second and the third peaks were characterized by quite different motives. The Chamber of Commerce and Industry of Tokyo, in its recent report, points out that the mergers just for the settlement or the reorganization of bankrupt firms have decreased. For instance, according to the report, the corporate mergers promoted for this kind of financial purposes were 311 (31.2%) in 1963, 175 (19.6%) in 1965 and 136 (17.8%) in 1968.⁽¹⁰⁾

Especially as regards the corporate mergers in 1963 which amounted to the largest number — 997 — in the postwar period, the FTC says in its annual report: "The number of mergers accepted by the commission showed an increase of 312 cases, 34% in comparison with 1962." The reason was that Japan had to liberalize its restrictions on foreign trade and foreign capital entry, following the acceptance in 1964 of Article 8 of the IMF obligations. The leading businessmen and officials of the MITI thought that Japanese industrial firms were to face a much more serious international competition. Domestically, moreover, Japan was in the recovery process from the depression of 1962. That is, the reorganization of an industrial structure more adaptive to the new developments was required,

with the result that "Corporate Mergers" were carried out as the most effective and useful solution.⁽¹¹⁾

Therefore, as to the main motives or the aimed effects of mergers in the recent two peaks' periods, we notice several more constructive consideration on compared with the first peak.⁽¹²⁾

(1) Regarding the sales of the corporations, their increase in revenue or the expansion of their domestic market share was the most important factor of the mergers, though it was feared that the new corporations might lead to a restriction of free competition and the reconstruction of monopolistic systems in the future. At the same time, the mergers were effective in decreasing the local sales offices and warehouses, in reestablishing new rational sales-networks and in strengthening the corporation' sales-forces, with the result that they were able to reduce their sales- and advertisement-expenses, in comparison with their increased sales.

(2) As for the production activities of the merged corporations, the most obvious effect was the cost-reduction expected to be achieved by expanding the production scales and by redistributing the production activities among the various factories in a more rational way, which did mean not only a horizontal concentration, but also a rationalized vertical consolidation of the manufacturing activities located in various places of the country. Moreover, it was considered naturally to control or to readjust the merged corporations' investment-plans and to innovate their technology and management, because horizontal concentration and vertical rationalization were usually obtained by closing old inefficient factories and by building new ones of higher productivity. The MITI specifically stressed the effect that mergers allowed corporations to avoid duplicated excessive investment of un-merged companies, reducing their competition. The optimum products-mix and stabilization by the diversification of products or services also appeared as a major motive in some cases.

(3) The mergers had an unexpected effect on the corporations' personnel practices, and at the same time, they brought about other difficult problems as will be mentioned later. The recruitment of new young employees was made easier, as Japanese people are inclined to think that the larger a firm is, the more reliable it is. Moreover, many obsolete executive people could be abolished and thus the corporations' general office expenses reduced. Of course, qualified people were expected to be relocated to more suitable posts in order to save personnel expenses. Especially important were the effective transfers of excellent managers, engineers and other specialists because of their shortage at the present time.

(4) The mergers had a substantial effect also on the purchasing activities of corporations. That is, the relations between the mother corporations and their

affiliated firms (the so-called *Shita-Uke-Kigyo*) were readjusted and rationalized after the mergers, because as a rule each of the merged corporations had had its own old inefficient group of affiliated firms. The reorganization or the modernization of the old affiliated firm systems is one of the most significant tasks of the Japanese industry and, if realized, is considered one of the most worthy effects of corporate mergers.

(5) According to various kinds of reports and papers, the R&D activities of firms are expected to be rapidly improved and strengthened by corporate mergers, and some corporations report that their R&D activities have been promoted since their mergers and also that the import of new technology became easier owing to the increased research-staff and R&D budget. It is true that the R&D activities have to be expanded because Japan must be in a position to develop new industrial technology in order to overcome a much more serious international competition in the near future. However, it is still doubtful whether the R&D activities can be so rapidly strengthened as the very result of corporate mergers or not, though some specialists have emphasized the importance of so-called large-scale research projects, which are expected to be carried out much more easily by larger merged corporations.

(6) Some corporations stressed that their financing ability would be improved by the mergers, that is to say, the larger the firms were, the easier they could borrow from banks. An improvement of their capital structures or an increase of their equity capital, however, may not be expected, though the MITI has emphasized the necessity of improvement, there is no reasonable relation between the mergers of corporations and their sound capital structures.

(7) In some cases, especially in the maritime transportation and the securities industry, the mergers were promoted in accordance with the instruction of the competent authorities or the recommendation by the big commercial- or savings-banks. The MITI, the Ministry of Finance and the Ministry of Transportation have often tried hard to promote mergers of corporations under their supervision to rescue or to improve them. In the maritime transportation, the corporations were hard hit by the instruction of occupation force dated November 24, 1945 which stopped payments "upon any claim arising—from war damage" (memorandum of the Supreme Commander for the Allied Powers to the Japanese government). In order to survive, most shipping firms were merged and reorganized into six large corporations between 1963 and 1964, following the instruction of the Ministry of Transportation. Many securities corporations carried their traditional speculative management-consciousness even to the postwar period, which brought about the well known business failure of the Yamaichi Securities Corporation in 1965, with the result that the Ministry of Finance advised the

mergers of securities corporations as one of several devices for their modernization. On the other hand, as everybody is aware, the postwar Japanese industrial firms have always owed about eighty percent of their financing to the main commercial- or savings-banks, which are called "city-banks" in Japan, with the result that a special type of enterprise groupings (*Kigyo-Shyudan*) developed in which the different firms of a group firms center round a main city bank. These banks also promoted mergers of corporations under their control in order to make the corporations' business activities sounder and to protect their own interests or the money borrowed from them.

To summarize, the main motives and the aimed effects of the corporate mergers in the last two peaks periods were to reduce the corporation expenses—in fact, there are a number of corporations whose increase of profits or profitability was one of the most significant effects of the mergers—to strengthen the R&D activities, to increase the financing- or borrowing-capability and to overcome the much more serious international competition of the future. They are substantially different from those of the first peak period. We can see here how severely the leading businessmen and the leading officials of the competent authorities consider the international trials expected in the not too distant future, though, of course, such difficult problems cannot be solved only by the so-called reorganization of the industrial structure or the "corporate mergers".

Thirdly, we must mention the difficult problems or the obstacles⁽¹³⁾ in the foregoing corporate mergers, which are well characterized by the managerial system of Japan (*Nihon-teki Keiei*).

(1) It was the labour problem or the personnel management problem that proved to be one of the greatest obstacles on the way to the mergers of most of the merged corporations.

In Japan, with rare exceptions, the employees of corporations are now all unionized. By 1965, the union membership exceeded the ten million mark, representing approximately thirty-six percent of the entire work force.⁽¹⁴⁾ The core, however, is usually a labour union organized on an enterprise basis to which almost all employees belong, whether they are mechanics or programmers of EDP or office workers, except those in the shipping industry. That is to say, unions are not organized along the lines of craft, industry or region. A number of such unions in a certain industry, then, forms an bigger industrial union, which in turn is affiliated with the *Sōhyō* (the General Council of Trade Unions of Japan supporting the Socialist Party) or the *Dōmei* (the Federation of Labour supporting the Democratic Socialist Party). In other words, each of the merged corporations had had its own agreements with the labour union in regard to the systems of wages, retirement allowances and other kinds of employees' welfare.

In some cases, the labour unions were against mergers plans that might result in a disadvantage for the employees. At best, they required the top-managements to secure their existing interests, that is, the level of wages, the position of each employee, the fringe benefits and other working conditions. Thus, the managements of corporations which were to merge had to confer with the unions about the possible readjustment of the level of wages and retirement allowances, the possibility of relocation of the employees, the necessary conditions to lay off some of the employees and other problems of working conditions. In almost every case, the level of wages was readjusted to accord with the highest of the merged corporations, and the paid retirement allowances—for the employees who seized the opportunity to leave the corporation at the time of merger—mounted up to such huge amounts that most merged corporations had difficulties to finance the payments.

Also in the viewpoint of the labour unions, the mergers were very serious problems, because, if one of the unions in the merged corporations belonged to a different mother organization (for example, the Sōhyō) from the other's (for example, the Dōmei), they had to reexamine their fundamental labour-movement policy and, sometimes, also their political ideology to consolidate and to determine their new mother organization. The decision-making, thereafter, would have a decisive influence on the reactions to various kinds of the government's political or administrative commitments for the new union and its members.

On the other hand, the Japanese traditional system of life-time employment and the seniority-based reward system made it difficult to relocate or to dismiss employees and managerial staff. Especially, a few top-managers opposed in some cases the merger plan only to protect their own present status in the corporation. Almost all merged corporations were troubled by the difficulty to deal with persons who had belonged to different kinds of managements before and who became excessive after the merger.

The improvement of human relations and the emotional harmony among the workers in the newly merged firm was also an important problem, because the Japanese life-time employment system had formed its own traditional climate (the so-called *Shafū*) for each corporation, which had to be reformed now into a new one.

(2) Certain kinds of tax and expenses connected with the mergers must not be disregarded.

As for the tax, it must be examined on the consideration that the income of shareholders of the "purchased" or "merged" corporations resulting from their liquidation is taxable as valuation-profits of the corporations at the time of merger and that a registration fee must be paid.

The first kind of tax on the so-called liquidation income and the valuation-profit, being the balance between the book value of the new stock issues after the merger and the amount of the old capital stock accounts before the merger, is twice imposed on the same object viewed from different standpoints and its rate amounts to a considerable large percentage.

Theoretically, the real value of the stock issues of the new corporation is usually established as the sum of the capital stock, the capital surplus, the revaluation surplus, the earned surplus and so forth: all of which have to be adjusted on the so-called going-concern basis and compared with the sum of the above-mentioned accounts of the old corporations in order to determine the liquidation income and the revaluation-profit. According to the Japanese income revenue code, however, only the capital stock account is taken as a capital item to be revalued in order to determine the taxable liquidation income. Therefore, it is possible for the corporations to manipulate the book values of various kinds of accounts in order to make the liquidation income null, to be exempted from the tax, if the top-management dislikes to establish a new accounting- or administrative-responsibility of the corporation at the time of the merger. The details of these kinds of accounting and tax problems of merger will be discussed in one of the following papers, but, anyway, these kinds of tax are practically imposed upon only a small number of the merged corporations (4.4% to 17.6%), though in an exceptional case one of the corporations of which the paid-in capital after the merger was over four billion yen had to pay a tax of 368 million yen.

The registration fee is 0.15% of the increased amount of capital stock in the case of mergers through "acquisition", and 0.15% of the amount of the capital stock of the newly established corporation in the case of fusion, but 0.7% for the excessive amount of the new corporation's capital stock over the old. This fee is an unavoidable charge, and it is considered as one of the motives promoting mergers by acquisition.

In other words, there remain several important theoretical problems concerning tax and fees of corporate mergers, and the possibility that taxes may become a heavy burden for the merged corporation.⁽¹⁵⁾

Regarding the income tax system, we have to point out that the special treatment for deferred loss, especially for deferred depreciation charges, by which this kind of expense items is usually permitted for revenue of the next five years, can not be applied in the case of mergers. This is said to be a serious obstacle for the improvement of financial structure of merged corporation.

(3) Since 1953, we have reconstructed the enterprise groupings of the *Zaibatsu* type, although their character is quite different from that of the prewar firms, besides the above-mentioned new type of enterprise groupings centering around

a main city-bank. The leading corporations, the main city-banks and the brain councils of these groupings promote sometimes mergers within an enterprise grouping, but, in other cases, they were against mergers of corporations to protect their own interests, for example, in order to keep an excellent supplier or a sound borrower under their control. The same attitude against mergers is often found among minor shareholders of merged corporations, though their influence is not significant.

However, it is a recent tendency that mergers between competitive corporations are being promoted, though we can say that till 1968 mergers meant the consolidation of corporations affiliated with each other in such a way that both had the same main city-bank or belonged to the same enterprise grouping. In other words, corporate mergers in Japan are a step forward the very reorganization of the industry, beyond the rigid framework of existing enterprise groupings. (4) The merged corporations had to readjust and to unify their office-management systems, the data processing systems and the traditional customs of various kinds of working-systems, which were very complex problems even in an ordinary firm. Moreover, they had to make use of idle plants and machines and offices inherited by the merger, as profitably as possible. The process of readjustment and unification of the various kinds of physical and immaterial working-systems into a new one was substantially important in the mergers, though it required an unexpected long time.

(5) The attitude and the decision of the FTC in each case of corporate mergers has been the most important factor to determine whether the merger would be possible or not. At least till now, however, the decision criterion of the commission whether or not to grant a merger has been only the concentration of the market-share of firms, that is, the degree of influence it would have on the price-behaviour of a certain commodity. Of course, this influence must not be disregarded, and we have experienced that mergers were rejected by the commission in two famous recent cases; one concerning three major paper- and pulp-corporations and the other two major steel-corporations at least in the original form. But it is also true that the effects of corporate mergers must not be evaluated only from the viewpoint of free competition of firms. It seems that the FTC is assuming a more flexible attitude, especially regarding present mergers.

Fourthly, we must mention, though briefly, the number or tendency of corporate mergers according to the different categories of industries (Table 1) and according to the scale of the firms measured by the amount of paid-in capital (Table 2).

It is said that the number of mergers was the largest in the category of manufacturing industries but the fact remains that the number of mergers in

the commerce and foreign trade category has rapidly increased too and that it was higher than that in the manufacturing industries between 1966 and 1967. These phenomena, of which details will have to be reexamined later, are considered to reflect the recent drastic change in the domestic and international distribution systems. On the other hand, as regards the scale of corporate mergers, it seems that their weight has shifted from small- or medium-scale firms to large corporations. Certainly, there are the examples of so-called large-scale corporate mergers, which were sensationally reported in the press. However, it is the small- or medium-scale firms with a paid-in capital after the merger from one million to ten million yen that occupy the first place regarding the number of mergers (Table 2). The situation, of which the reasons will be also examined later, may reflect the character of the Japanese industrial structure, that is, its own type of vertical affiliation between large-scale corporations and small- or medium-scale firms.

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In conclusion, we have tried to outline the background and the situation of corporate mergers in Japan and pointed out several important problems involved. The details of individual problems will be reexamined and discussed in following papers in such a way as to form a complete systematic study.

October 28, 1969

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- (6) The number for 1949 is the data for June 18, 1949 to March 31, 1950. Strictly speaking, 571 mergers were accepted by the Fair Trade Commission from April 1, 1949 to March 31, 1950, though we can not give the details. MITI, ed.; *Kigyō-Gappei no Kōka to Mondaiten — Kigyō-Gappei Hakusho (The Effects and Problems of the Corporate Mergers in Japan — White Paper on Corporate Mergers)*, December 1962, pp. 5-6. FTC; *Annual Report, 1963-1968* (These reports are generally called *Dokusen-Hakusho — White Paper on Monopoly*).
 - (7) MITI, ed.; *ibid.*, p. 7.
 - (8) Ōsaka Ichiritsu Daigaku Keizai Kenkyūsho (Research Institute of Economics, Ōsaka City University); *Sangyō-Saihensei to Kigyō-Gappei (The Reorganization of Industry and Corporate Mergers in Japan)*, 1967, pp. 79-80 and p. 82.
 - (9) Ōsaka Ichiritsu Daigaku Keizai Kenkyūsho (Research Institute of Economics, Ōsaka City University); *ibid.*, p. 80.
 - (10) Tōkyō Shōkō Kaigisho (Chamber of Commerce and Industry of Tōkyō); *Kigyō-Gappei no Jittai (The Investigation of Corporate Mergers)*, 1969, p. 11.
 - (11) FTC; *Annual Report*, 1968, p. 21.
 - (12) MITI, ed.; *ibid.*, pp. 72-74. Tōkyō Shōkō Kaigisho (Chamber of Commerce and Industry of Tōkyō); *ibid.*, pp. 11-16. Nihon Seisansei Honbu (Japan Productivity Center); *Kigyō-Gappei ni Kansuru Chōsa-Hōkokusho (The Research on the Recent Corporate Mergers in Japan)*, 1967, pp. 22-26.
 - (13) MITI, ed.; *ibid.*, pp. 30-43 and p. 75. Tōkyō Shōkō Kaigisho (Chamber of Commerce and Industry of Tōkyō); *ibid.*, pp. 26-106. Nihon Seisansei Honbu (Japan Productivity Center); *ibid.*, pp. 7-8. Ōsaka Ichiritsu Daigaku Keizai Kenkyūsho (Research Institute of Economics, Ōsaka City University); *ibid.*, pp. 263-288.
 - (14) Yoshino, M.Y.; *ibid.*, p. 114.
 - (15) MITI, ed.; *ibid.*, pp. 40-42.

ESTUDOS BRASILEIROS NO JAPÃO

Yoshiaki NISHIMUKAI

I.—Situação atual dos estudos brasileiros no Japão.

Como é do conhecimento geral, após a II Guerra Mundial, a situação no mundo sofreu transformação estrutural acentuada, tendo sido criados problemas, novos e graves, de natureza política e econômica.

No campo da política a relação entre o “Oriente e o Ocidente”, isto é, a relação entre o mundo livre e o mundo socialista, constitui ainda hoje um problema importante, e no campo econômico “problemas do Norte-Sul”, isto é, as soluções dos problemas existentes entre os países economicamente desenvolvidos e aqueles subdesenvolvidos se erigem como igualmente importantes.

Em face dessas novas realidades do mundo, às ciências sociais coube a incumbência de fornecer novos instrumentos teóricos para possibilitar a elucidação das mesmas. Por exemplo, no campo das ciências econômicas surgiram, como nova ramificação das pesquisas, as teorias de desenvolvimento econômico dos países subdesenvolvidos ou em vias de desenvolvimento. E no processo dessas pesquisas foram sendo reconhecidas as necessidades e importância das pesquisas e levantamentos políticos, econômicos e sociais desses países. Estas assertivas não se limitam apenas às ciências econômicas. Elas são válidas também nos campos de outras ciências sociais. Em todos os campos, sente-se a necessidade da realização dos ditos “estudos dos países estrangeiros”.

Entretanto, a necessidade dos estudos de países estrangeiros não nasceu apenas por exigências práticas baseadas na realidade do mundo de após-guerra. Fundamentalmente, advém do fato de que todos os países sentem a necessidade de aprofundar a compreensão mútua. Tendo como momento a Segunda Grande Guerra, todos os países experimentaram na própria carne de como eram precários os conhecimentos sobre os outros povos.

Porisso mesmo, trata-se de um esforço natural de todos os países as tentativas, nos dias de hoje, de intercâmbio cultural internacional mais intenso e aprofundamento de suas compreensões mútuas. Nesse sentido, se faz mister um maior impulso nos estudos dos países estrangeiros.

Sob esta perspectiva, ao voltarmos as nossas vistas para a situação atual dos estudos brasileiros no Japão, deparamo-nos com uma realidade assáz acabrunhadora. Não poderemos deixar de dizer que os estudos brasileiros no Japão se

acham num estágio acentuadamente insatisfatório. O número de pesquisadores é reduzido, como são absolutamente insuficientes os órgãos de pesquisas, como precárias são os aparelhamentos adequados. Em decorrência disso mesmo, são pobres os resultados alcançados. Dos 17.758 trabalhos científicos, dados, comentários, etc., publicados no Japão nos anos de 1967 e 1968, apenas 119 trabalhos diziam respeito à América Latina, isto é 0,66% do todo, sendo que os assuntos brasileiros participaram com 22 trabalhos, com a insignificante porcentagem de 0,12%. Se forem considerados apenas os trabalhos científicos essa participação diminui ainda mais sensivelmente. Relativamente à América Latina eram de 51 trabalhos, dos quais 16 versaram sobre temas brasileiros, partilhando 0,31% e 0,09% do todo, respectivamente. Para aqueles que conhecem as relações entre o Japão e o Brasil, que vêm de longa data, essas cifras são efetivamente difíceis de serem acreditadas, mas infelizmente são o retrato da realidade.

Então, por que se encontram em tão baixo nível os estudos brasileiros no Japão?

Básicamente, as suas causas podem ser procuradas:

- a) na atividade tradicional, em fase dos estudos, dos países estrangeiros, vigorante no Japão;
- b) na atitude, em face das pesquisas por parte dos cientistas sociais, vigente no Japão.

Inicialmente, faremos um retrospecto dos estudos dos países estrangeiros no Japão. Desde o advento da era Meiji, o objectivo tradicional dos estudos dos países estrangeiros no Japão foi a absorção das culturas dos países adiantados a fim de servir na promoção da sua modernização. Ao Japão, um país atrasado sensivelmente em face ao avanço do mundo inteiro, em decorrência do longo período de clausura de suas portas aos países de fora, se era necessário, para a sua modernização, a absorção e introdução da técnica e conhecimentos pertencentes aos países mais adiantados, as atitudes acima são perfeitamente explicáveis, justificáveis e de certa maneira inevitáveis. Entretanto, o grave é que transcorridos 100 anos desde o advento da era Meiji persista ainda, fortemente arraigada, essa atitude. Voltando aos mesmos dados anteriormente citados, dos trabalhos, artigos, comentários, etc. que enfocaram exclusivamente os temas estrangeiros, constata-se que a maior parte se refere à Europa, com 44,3% do todo, sendo que os Estados Unidos participam com a porcentagem de 19,7%. Quer dizer que as áreas ditas adiantadas ocupam 64% da cifra total. Quanto às áreas subdesenvolvidas, com exceção das regiões asiáticas, que mantêm relações muito especiais com o Japão e cujas participações montam em 20,3%, os trabalhos que se referem à América Latina envolvem 4% e a África registra a porcentagem de 3,8%. Como demonstram essas porcentagens, os estudos

dos países estrangeiros, que se levam a efeito no Japão, podem ser entendidos como pesquisas relativas aos países mais desenvolvidos. Pode-se dizer que essa maneira de encarar a questão forma uma tradição.

Esta tradição trouxe a introdução de uma metodologia errônea no que se refere às pesquisas dos países estrangeiros. Quer dizer, as ciências sociais introduzidas no Japão eram aquelas desenvolvidas dentro do ambiente do sectarismo da especialização, vigorante na Europa do século XIX. Em decorrência disso, quando o Japão pretendia compreender os países estrangeiros, revelou-se o inconveniente de tender para o aprofundamento da questão através do prisma exclusivo das especialidades. Na Europa, onde os clássicos gregos e romanos foram herdados e as tradições do Cristianismo servem de alicerce comum a todos, as pesquisas podem ser imediatamente conduzidos pelos canais da especialização sem os seus inconvenientes. Isto porque, dentro da análise de fenômenos nacionais peculiares, há perfeita possibilidade de encontrar-se os princípios comuns. E mesmo antes disso, havia a compreensão mútua, apriorística, baseada no ambiental cultural comum. Entretanto, quando o Japão, possuidor de ambiente cultural diverso, se propôs a estudar na Inglaterra, na França, na Alemanha, e outros países, a adoção da metodologia corrente na Europa, pura e simplesmente, serviu-se da absorção dos conhecimentos e da técnica dos diversos campos das especificidades. Ora, isso não foi de molde a ser de perfeita utilidade para a apreensão global, unitária, das características dos povos, das suas terras, das suas culturas, dos seus regimes, como não foi suficientemente útil para compreender-se que países eram a Inglaterra, a França, a Alemanha. Entretanto, no quadro dos objetivos colimados pelos estudos dos países estrangeiros pelo Japão, isto de certa maneira era inevitável.

Surge aqui uma dúvida importante. Não seriam, ou teriam sido, naturalmente diversos do tradicional, os estudos brasileiros no Japão? Como é do domínio de todos, a relação direta entre o Japão e o Brasil foi-se aprofundando através da migração. Nesse caso, distinta da absorção de uma cultura adiantada, deve ter-se constituído o centro das preocupações a indagação a respeito do Brasil como país receptor de seus nacionais. E, paralelamente, deve ter sido necessário o esforço no sentido de fazer os brasileiros entenderem o Japão e os japoneses. Nesta acepção, os estudos brasileiros no Japão deveriam existir sob o império de atitude inteiramente diversa daquela tradicional, subsistente nas pesquisas dos países estrangeiros no Japão.

Entretanto, antes da guerra, nos estudos dos países estrangeiros persistia, como principal corrente, a tendência de considerar-se as pesquisas dos países desenvolvidos como estudos dos países estrangeiros. Os pesquisadores de ciências sociais, criadas na Europa e nos Estados Unidos, valiam-se de seus

instrumentais de análise para procederem o exame dessas sociedades. E as metodologias, as teorias e os modelos desenvolvidos a partir dessas pesquisas referentes a essas sociedades, foram sendo considerados válidos e adequados para as demais sociedades. E em decorrência disso, não se sentiu a necessidade de efetuarem-se pesquisas e levantamentos de regiões onde os dados quantitativos seriam difíceis de obtenção, a fim de se aprimorar cada vez mais essas teorias e esses modelos. Os cientistas sociais consideraram que melhor poderiam contribuir, e com maior facilidade, para as teorias sociológicas, pesquisando-se a Inglaterra, do que estudando o Brasil que demandaria muito mais trabalho e esforço. Este tipo de pensamento foi sobremaneira acentuado e de uso corrente entre os economistas do Japão, economistas que se dedicavam aos estudos do Brasil ou das coisas da América Latina eram considerados não muito ortodoxos. Assim, antes da guerra, os estudos brasileiros foram conduzidos por um reduzidíssimo número de pesquisadores e por pessoas ligadas aos trabalhos de emigração. É de se notar aqui que o objetivo dessas pesquisas era, fundamentalmente, a promoção da emigração, dando-se, pois, ênfase especial à consolidação direta da política emigratória. Assim, eram absolutamente insatisfatórios no que diz respeito à compreensão da interioridade do Brasil.

Entretanto, as transformações sofridas nas relações nipo-brasileiras no pós-guerra, conferiram acentuadas motivações aos estudos brasileiros. Para o Japão, que perdera parte do seu território e para quem deixaram de existir os países imigratórios na Ásia, a América Latina, e particularmente o Brasil, transformaram-se em regiões de suma importância no que diz respeito a sua imigração. E a própria emigração se modificou de caráter. De temporária passou àquela de caráter definitivo. Ademais, desde o início da década de 1950, acentuaram-se as implantações de empreendimentos japoneses no Brasil, e ultimamente essas relações caracterizam-se pela maior preferência do capital à mão-de-obra, pela maior cooperação econômica do que pela migração. Essas mudanças exigiram o aparecimento da necessidade de maior compreensão do mundo interior vivido no Brasil e do brasileiro, transcendendo aquela compreensão adstrita apenas ao quadro da migração. Assim, ultimamente o interesse para com o Brasil e suas coisas se está elevando a um nível verdadeiramente científico. Isto é mais acentuado no campo das ciências humanas como a história, a geografia e a antropologia, valendo ainda tal assertiva, de certo modo, para as ciências sociais.

Entretanto, o método de pesquisa dos assuntos brasileiros no Japão, à semelhança da absorção da técnica e dos conhecimentos provenientes de países adiantados, como acontecera outrora limita-se a abordar os assuntos considerados de acordo com as respectivas especializações. Com a abordagem semelhante torna-se extremamente difícil a apreensão do Brasil como um todo. Os japoneses

vinham estudando a China, dedicando-lhe longo tempo, e institucionalmente o país possui órgãos que pesquisam a cultura chinesa, como existem centros educacionais para tal fim. Entretanto, as experiências, tanto de antes da guerra como de pós-guerra, disseram bem da insuficiência da compreensão global da China, da apreensão da interioridade da sociedade chinesa, em virtude de ter-se adotado o método de pesquisa de aproximar-se ao objeto através dos campos das respectivas especializações. Da maneira como estão, os estudos brasileiros no Japão seguirão os mesmos destinos dos estudos chineses. É diverso, obviamente, para o Japão, em face da gravidade do problema, de que ao estudar o Brasil,—que apresenta diferenciação qualitativa frente aos países europeus desenvolvidos e frente aos Estados Unidos,—os cientistas sociais japoneses estão tentando a abordagem estribando-se nas especializações conferidas pelos conhecimentos europeus ocidentais. Por exemplo, ao explorar-se o campo das ciências econômicas, constata-se a tendência de dar soluções cabais valendo-se do instrumental da análise econômica oferecido e utilizado pelos países capitalistas desenvolvidos. Entretanto, o instrumental da ciência econômica moderna, precisa e altamente abstrata, ao ser empregado nas pesquisas da economia brasileira, sofre já de per si uma limitação no seu âmbito da aplicação. E já aí residem os limites das pesquisas da economia brasileira. E um outro ponto do problema é a existência de uma acentuada diferença no grau de profundidade nos estudos de acordo com o campo de especialidade. Por exemplo, mesmo que os estudos de acordo com o campo de especialidade, mesmo que os estudos sobre a técnica de planejamento referente ao programa de desenvolvimento econômico do Brasil sejam elaborados com acentuada profundidade, se as pesquisas dos 'background' político e social desse programa não forem efetuados simultaneamente e com a mesma acuidade, esses estudos não poderão converter-se numa verdadeira compreensão vivida do plano de desenvolvimento do Brasil. No presente estágio, em que as pesquisas nos diversos campos das especializações não se acham desenvolvidas num mesmo nível, as pesquisas integradas e combinadas praticamente inexistem. Alás, o desenvolvimento de pesquisas e estudos, separados em especialidade estanques, tem sido a tendência científica em todos os campos, e não só no campo das ciências sociais.

II.—Metodologia dos estudos brasileiros.

A meu ver, muitos pontos obscuros que dificultam a compreensão científica perfeita entre os dois países residem na inconsistência, no que se refere à metodologia dos estudos estrangeiros no Japão. Se essa metodologia básica adquirir a consistência necessária, acredito que "os estudos brasileiros", no Japão, se

desenvolverão bastante.

Um método de “estudos estrangeiros” que tem aparecido com destaque, ultimamente, é o de ‘area studies,’ utilizado com frequência pelos pesquisadores americanos, ingleses, franceses, alemães e russos.

Esse método surgiu, principalmente após a II Grande Guerra, pela necessidade de cada povo conhecer mais integradamente o povo vizinho, refletindo a fase histórica em que as nações se aproximam cada vez mais. Contrastando com o espírito analítico, de visões parceladas relativamente profundadas, cresce o espírito de síntese, de conhecimento global integrado. Na disciplina de “estudos estrangeiros” a compreensão da ‘biography of a nation’ tornou-se a tarefa primordial.

Por outro lado, o movimento de revisão processado no mundo da ciência contra o espírito demasiadamente analítico-científico do século XIX contribuiu para o desenvolvimento desse método.

A especialização e a objetivação do estudo que, no século XIX, propiciou um grande avanço às ciências exatas, quando atinge as ciências humanas, distorce a realidade viva e dinâmica que, por ser um todo integrado, não pode ser departamentalizado em comportamentos estanques para a sua compreensão verdadeira. Foi uma reação ao conhecimento enciclopédico do século XVIII, que abrangia uma área muito grande, mas pouco profundo, apesar da forte tendência em considerar a ciência humana como em todo integrado.

A réplica ao espírito demasiadamente analítico do século XIX aparece logo no início do século XX. Nos Estados Unidos a implantação do sistema educacional de ‘general education’ nas universidades, mostra nitidamente o espírito de síntese que vigora entre os cientistas sociais. O método da ‘area studies’ exige do pesquisador uma atitude permanente de análise e de síntese. A integração, a generalização, a departamentalização e a especialização dos aspectos físico-geográfico, histórico, político, econômico, social, ideológico e cultural torna-se imprescindível, quando se visa, além do conhecimento objetivo da área estudada, a sua compreensão exata.

Porém, alguns professores como E. O. Reischauer afirmam que ainda o método da ‘area studies’ não ultrapassou o estágio de um simples coordenador de diversas disciplinas especializadas, não se constituindo em disciplina autônoma.

O método da ‘area studies’ utilizado principalmente nos Estados Unidos poderá trazer contribuições valiosas ao desenvolvimento dos “estudos brasileiros” no Japão e ao desenvolvimento dos “estudos japoneses” no Brasil. Para isso, acho necessária a combinação do conhecimento da língua da região a ser estudada (area language), do conhecimento objetivo da região (area knowledge) com o trabalho de pesquisa na própria área (area work).

O conhecimento da língua da região a ser enfocada é indispensável como um meio para se chegar a compreensão fiel de toda a estrutura cultural. Na disciplina de estudos estrangeiros, a língua é ensinada independentemente, ou é aprendida separadamente pelo interessado. O ideal seria o ensino da língua coordenado com o ensino de outras matérias. Nos Estados Unidos, por exemplo, no desenvolvimento de estudos estrangeiros, são efetuados seminários sobre diversos aspectos da região a ser estudada: história, geografia, antropologia, estrutura jurídica, política, econômica, social, artística, literatura, etc. Esses seminários são ministrados por professores especialistas de cada matéria, para que o estudioso de "Estudos Estrangeiros" tenha uma visão integrada e global da região antes de se processar a especialização da pesquisa. Para evitar distorções que, muitas vezes são causadas pelo individualismo do pesquisador, é bastante incentivada a "pesquisa em grupo" (group research). O estudo sobre uma região, ou um país estrangeiro deverá sempre ser concluído com um programa de pesquisas e estudo no próprio local enfocado. Dependendo da especialização do estudioso, o estágio in loco pode ser realizado no arquivo histórico, se se trata de historiador, na cidade se se trata de sociólogo, ou numa vila se se trata de antropólogo. A pesquisa deve obedecer a uma sistemática pré-estabelecida; instala-se no local o "centro de pesquisa de campo" (field research center) que disporá de biblioteca, de todo um instrumental necessário à pesquisa; nomeia-se o coordenador da pesquisa de campo (field director), processando-se, sob a sua coordenação, um treinamento cuidadoso de pesquisadores de campo. A pesquisa no campo é uma realização que, por sua envergadura, não pode ser realizada sem a colaboração de órgãos como as faculdades locais, que poderão dispor de suas instalações e materiais para auxiliar a pesquisa, assim como de entidades públicas e privadas para custearem os pesados encargos do trabalho no campo.

III.—Estudos Brasileiros no Japão.

Uma vez descrito como se processa o desenvolvimento de estudos estrangeiros nos Estados Unidos, quanto ao desenvolvimento de estudos brasileiros no Japão, as seguintes medidas poderiam ser tomadas:

a) em primeiro lugar, ampliar o número de faculdades que ministram o ensino da língua portuguesa. A maioria dos cientistas sociais do Japão olvidam a importância da língua espanhola e da portuguesa para o estudo dos países latino-americanos. A difusão maior das línguas inglesa, francesa e alemão, atesta a mentalidade dominante ainda hoje no Japão, de que estudos estrangeiros são feitos, somente, para absorver conhecimentos de países estrangeiros

desenvolvidos, não se importando com os países sub-desenvolvidos. Atualmente, somente 10 faculdades, ministram aulas de língua espanhola, somando-se o número de seus alunos apenas 525. A maioria dêesses, entretanto, especializam-se em literatura espanhola, dando-se pouca importância ao estudo dos países latino-americanos. Ainda existem algumas escolas que ministram especificamente o ensino da conversação espanhola.

Quanto ao ensino da língua portuguesa, apenas duas das dez Escolas ministram-no, somando o número de alunos apenas 50. Essa insuficiência no ensino da língua portuguesa tem concorrido para o desinteresse, por parte dos cientistas sociais, do estudo latino-americano. Muitos cientistas sociais, considerados como especialistas em estudos latino-americanos são deficientes quanto ao domínio da língua, e tentam analisar o Brasil com um instrumental forjado pelos cientistas europeus e americanos, totalmente inadequado para a compreensão do fenômeno latino-americano. Apenas o fato de se confiar menos nas publicações em língua francesa e inglesa, e buscar na própria fonte os dados essenciais do estudo, trará um grande progresso ao desenvolvimento dos “Estudos Brasileiros” no Japão.

b) Em segundo lugar, a introdução de um sistema universitário que possibilite o desenvolvimento do método ‘area studies’. As 10 faculdades japonesas que ministram a língua espanhola e portuguesa, dão maior atenção ao ensino da língua propriamente dita. Uma das faculdades, por exemplo, que possui estrutura adequada para a introdução do método ‘area studies’ dedica 780 horas das 2160 horas que dispõe durante 4 anos, para o ensino da língua. 600 horas são dedicadas ao ensino generalizado das ciências sociais. As horas restantes, que equivalem a 36% do total das horas de aula, são dedicadas mais especificamente ao estudo utilizando o método ‘area studies,’ não se limitando ao Brasil, mas à toda América Latina.

Se tomarmos o exemplo de uma outra faculdade, das 2220 horas de aula que dispõe durante 4 anos, são dedicadas 90 horas para assuntos econômicos latino-americanos, 30 horas para assuntos culturais, 60 horas para teoria econômica latino-americana, correspondendo o total de horas dedicadas a assuntos latino-americanos, apenas a 180 horas, o que significa 8,1% do total geral de horas de aula. O Brasil é considerado apenas uma parte da América Latina, diminuindo o número de horas a êle dedicadas.

Essa deficiência deve-se, em grande parte, à insuficiência quantitativa de professores. Quando nos Estados Unidos, para uma matéria específica existem um grupo de professores, muitas vezes com orientação diferenciada, no Japão, um só professor ministra, no caso de estudos estrangeiros, todos os aspectos de uma região estrangeira.

c) Em terceiro lugar, é preciso oferecer maiores oportunidades de pesquisa de campo. Muitos pesquisadores, professôres ou não, visitam anualmente países estrangeiros desenvolvidos como os Estados Unidos, a Inglaterra, a Alemanha, a França, sendo praticamente nulo o interesse pela pesquisa de campo, no que se refere a países latino-americanos, em particular ao Brasil. Quando o interesse cultural científico pelo Brasil é baseado em relações simplesmente pessoais ou casuais, acredito ser muito difícil o desenvolvimento de um intercâmbio cultural entre os dois países, de maneira sólida. Conheço casos de pesquisadores jovens que após uma aprendizagem satisfatória da língua portuguesa e munido de conhecimento básico suficiente sobre o Brasil, não tiveram oportunidade de realizar uma pesquisa de campo no Brasil, tendo que contentar-se com um estágio precário no Centro de Estudos Latino-Americanos nos Estados Unidos.

IV.—Conclusão.

Desenvolvi, do ponto de vista do método 'area studies' as dificuldades que os cientistas sociais, interessados na América Latina, encontram na atual conjuntura do mundo cultural-científico do Japão. Essas dificuldades não são exclusivas ao estudo sobre o Brasil. No mês de setembro de 1964, cerca de 60 cientistas sociais participaram de um simpósio onde foram debatidos vários aspectos da região latino-americana.

Destacamos o avanço dos estudos sobre o Brasil, dentro os estudos sobre os demais países da região. Esse avanço é, porém, muito relativo, e é até inconcebível que um país estrangeiro que conta com uma população de 600.000 pessoas de origem japonesa, que mantém com o Japão um intercâmbio comercial considerável, com mais de 50 empresas japonesas operando intensamente, seja tão esquecido pelos cientistas sociais do Japão.

A NOTE ON THE INTEGRATION OF ECONOMIC THEORY AND ORGANIZATION THEORY

Hideki YOSHIHARA

I

Typical modern firms are large-scale, multiproduct firms existing in an oligopolistic market. A considerable proportion of goods and services which we need in our daily life is produced and distributed by these firms. Moreover, they exert a predominant influence on many medium and small firms. The modern large firms are the most important component of our national economy. Thus, we may well say that without the knowledge of their behavior, we can not understand or even discuss economic problems of our day.

Then, do we have an adequate theory which can explain the behavior of our modern large firms?

When we pick up and open any standard textbook of economics, we surely find a theory dealing with the behavior of firms. This theory is usually called "the theory of the firm" or "the classical economic theory of the firm." In this theory, it is assumed that (1) the firm decides the output quantity and price level to the point where marginal costs are equal to marginal revenues, and (2) the firm achieves the least costly combination of factors of production. In other words, the theory assumes that the firm behaves in a perfectly rational manner toward the goal of profit maximization.⁽¹⁾ Then, is this theory able to explain and predict adequately the actual behavior of firms?

As early as in the 1930's, a group of economists in Oxford University conducted an empirical research on the behavior of firms to test this theory. The research revealed that in the case of the representative firms in England of that time neither marginal costs nor marginal revenues played any role in the output and price decision making processes. Instead, businessmen set prices by applying standard mark-up to costs, that is, they used the full-cost (or mark-up) method of pricing. This research finding cast a doubt on the validity of the theory of the firms for the first time.⁽²⁾

Since that time many empirical and theoretical studies have been made and at present the following tentative agreement has been reached on this theory. The theory can not adequately explain and predict the actual behavior of firms. It is primarily a theory of markets, which has the purpose of assisting in the

theoretical investigation of the way in which resources are allocated by a price mechanism.⁽³⁾

Next, let us turn our attention to the field of organization theory. Both the classical theories of organization such as the "scientific management theory," the "human relations theory" and the "management process theory," and modern organization theory as developed by Chester I. Barnard, Herbert A. Simon and James G. March, are primarily concerned with problems of organization and management of the business firm. Then, are these theories of organization perhaps to be regarded as the theory of firm behavior which we need?

Much of organization theory has aspirations toward a general theory applicable to all kinds of organizations, and therefore the property of being business organization tends to be abstracted in these theories. In addition, in the study of organizational behavior, organizational theorists generally relegate economic theory and analysis to a secondary place and instead give first place to sociological and psychological approaches. Thus, while organization theory has succeeded to a considerable extent in casting light on the human behavior in an organizational setting, it has failed, at least in the direct sense, to cast light on the economic behavior of business firms.

From above argument it becomes clear that neither the theory of the firm in economics nor organization theory, although both seem to satisfy our need at the first glance, can be regarded as a theory of firm behavior. In fact, until quite recently our modern large firms remained a "no man's land" in this respect.⁽⁴⁾

This unpleasant and challenging state has induced many students interested in firm behavior to make an active search for a new theory of the firm. There are various search efforts for a new theory, but we can identify two main approaches. One is the approach taken by economists trained chiefly in the classical economic theory of the firm and the other is the approach taken largely by those organization theorists who have a profound knowledge of modern organization theory. We shall consider these two approaches in the following two sections and see if they have succeeded to advance a new theory of firm behavior.

II

Since inadequacies of the classical economic theory of the firm were revealed, many economists responded by introducing elements of organization theory into its framework. Among them are the well-known economists William W. Cooper, William J. Baumol, James D. McNulty and Oliver E. Williamson. In addition, Richard M. Cyert and James G. March, now famous as initiators of "the behavioral theory of the firm," adopted this approach in the early days. We shall

call these theoretical efforts "the new economic theory of the firm."⁽⁶⁾

Has this new economic theory of the firm realized the anticipated result of overcoming the inadequacies of the classical theory? We would like to answer this question by examining the early Cyert-March model as an example.⁽⁶⁾

What Cyert and March attempted to do was "to augment oligopoly theory by introducing into it some fundamental propositions of the theory of organizational behavior." For this purpose they chose the following four propositions.

1. Decisions by a group will, in general, be more dependent upon firm policy than will decisions by an individual.
2. If a decision contrary to firm policy is reached by a decision-making unit, it will be more stable if made by a group than if made by an individual.
3. As the length of the communication chain is increased, factors are introduced that have the effect of inhibiting change.
4. The character of the communication chain introduces a bias into the information transmitted to the decision-making unit.

They then proceeded to present two extreme model firms which incorporated the above four propositions in the following way.

In Firm 1, the decision-making unit consists in a committee of equals and does not have responsibility for establishing the criteria for pricing decisions (i. e., the unit is decentralized and is subject to dicta from above with respect to price policy). At the same time, communication chains between the decision-making unit and the primary sources of information are long; and information on demand, competitor's behavior, and official firm policy are all channeled through a relay point (e. g., an accounting department) that emphasizes the importance of costs and cost conservatism. In Firm 2, the decision-making unit is an individual and he has responsibility both for the specific decisions and for the criteria for pricing (i. e., the unit is centralized). Communication chains tend to be short, and information on demand, competitor's behavior, and firm policy are channeled through a relay point (e. g., a sales department) that emphasizes demand and the importance of sales.

Firm 1 would be a firm in which price changes tend to be infrequent and reaction to competitors primarily passive; conversely Firm 2 would exhibit frequent price changes and price leadership with respect to competitors. Cyert and March then explored to determine the effects of these organizational characteristics on market equilibrium.

Let there be two duopolists in the market (Firm 1 and Firm 2). Following Cournot, let there be no costs, let the market demand function be:

$$p = 25 - \frac{x_1 + x_2}{3}$$

where p = price

x_1 = output of Firm 1

x_2 = output of Firm 2

and assume that each duopolist expects no reaction on the part of the other in response to a change in output:

$$\frac{dx_1}{dx_2} = \frac{dx_2}{dx_1} = 0 \text{ (conjectural variation terms)}$$

Then, an equilibrium is reached at

$$x_1 = 25$$

$$x_2 = 25$$

$$p = 8.33$$

To explore some of the implications of the organizational models, Cyert and March assumed that in the market specified above, Firm 1 and Firm 2 had reached the Cournot equilibrium point. They then postulated a shift in market demand, such that

$$p = 30 - \frac{x_1 + x_2}{3}$$

Under the assumptions previously outlined, it can be predicted that Firm 1 will tend to: (a) be slow in changing its perception of the market demand; (b) underestimate demand when its perception does change; and (c) give a positive value to the conjectural variation term. To provide a specific solution, it is argued that Firm 1 might have expectations with regard to the market demand function and the conjectural variation term as follows:

$$p = 25 - \frac{x_1 + x_2}{3}$$

$$\frac{dx_2}{dx_1} = 1$$

Similarly, it can be predicted that Firm 2 will tend to: (a) change its perception of market demand quickly; (b) overestimate demand; (c) give a value of zero to the conjectural variation term. Thus, it is asserted that Firm 2 might have the following estimates of key information:

$$p = 100 - x_1 - x_2$$

$$\frac{dx_1}{dx_2} = 0$$

Under these conditions, the market solution obviously deviates significantly from the standard Cournot solution.

$$\begin{aligned}x_1 &= 10 \\x_2 &= 45 \\p &= 11.67\end{aligned}$$

The effect is to make Firm 2 dominant in the market.

Cyert and March thus presented us an example of the approach where organization theory variables were introduced into the framework of the classical economic theory of the firm. Now, has their attempt succeeded in overcoming the inadequacies of the classical theory?

It must be pointed out that they attempted to add some propositions of organization theory to the classical economic theory of the firm only in a supplementary way, leaving the basic framework of the classical theory unchanged. In their model no innovative changes were introduced into the basic framework of the classical theory. Therefore, all the familiar inadequacies of the classical theory remain in their model.

Now, we must examine more closely the inadequacies of the classical theory. We may identify three points as its major inadequacies.

1. Its motivational assumption that the firm seeks to maximize profits and its cognitive assumption that the firm operates with perfect knowledge are unrealistic in the sense that they lack empirical evidence. What evidence we have contradicts to a great extent both assumptions. Therefore, it may be said that the classical theory is based on unrealistic assumptions.⁽⁷⁾

2. The classical theory views the firm as an impersonal "black box." The internal mechanisms and workings of this black box are outside its attention focus.⁽⁸⁾

3. The classical theory is primarily interested in the firm behavior in equilibrium. As a result it is usually difficult to find empirical data for testing the validity of the theory. Moreover, it has neither an interest in nor an ability to deal with the actual behavior of firms which are not in equilibrium.⁽⁹⁾

The early Cyert-March model, when it takes over the basic framework of the classical theory, inherits these inadequacies at the same time.

On the basis of the critical examination of the early Cyert-March model we may well conclude that the new economic theory of the firm, so long as it adopts an approach of augmenting the classical theory by introducing into it elements of organization theory in a supplementary way, can not be expected to be a theory of firm behavior. To develop such a theory, we must abandon the basic framework of the classical theory and find a new basis.

III

The second approach to integrate the economic theory of the firm and organization theory consists of adding some elements of the economic theory to organization theory. In this approach, as opposed to the first one, the basic framework is that of organization theory, especially modern organization theory. This approach is chosen by Cyert and March in their research project which goes by the name of "the behavioral theory of the firm."⁽¹⁰⁾

Cyert and March say:

Viewed as a theory of organizations, the behavioral theory of the firm belongs to the third, "decision-making," branch of organization theory described in Chapter 2. It postulates the same basic structure of the decision-making process and the same fundamental psychological mechanisms as does the other literature belonging to that branch, applying them to the specific context of the business firm.⁽¹¹⁾

In short, Cyert and March focused their attention to modern organization theory which concerned itself at a general level with the decision making process in an organizational context and they attempted to redevelop it specifically as the theory of decision-making process in business organizations.

This behavioral theory of the firm is described by Cyert and March as follows:⁽¹²⁾

1. It takes the firm as its basic unit.
2. It takes the prediction of firm behavior with respect to such decisions as price, output, and resource allocation as its objective.
3. It puts an explicit emphasis on the actual process of organizational decision making as its basic research commitment.

In developing their theory, they have started with the conception that an organizational decision is the execution of a choice made in terms of objectives from a set of alternatives on the basis of available information. This conception has led them to the construction of the following four major subtheories:⁽¹³⁾ (1) A theory of organizational goals that explains how goals are formed, how they are altered, and their influence on organizational behavior. (2) A theory of organizational expectations that treats the search procedure and information-gathering behavior of organizations. (3) A theory of organizational choice to treat the organizational selection of alternatives and the decisions made among them. (4) A theory of organizational control to explain the differences that occur between decision making and implementations. In the course of the construction of these subtheories, they have developed four critical concepts. They

represent the heart of the behavioral theory of the firm.⁽¹⁴⁾ First, the quasi-resolution of conflict; most organizations exist and thrive with considerable latent conflict of goals. Second, uncertainty avoidance; organizations tend to avoid uncertainty rather than deal with it by calculations of expected return. Third, problemistic search; search is stimulated by a problem and is directed toward finding a solution to that problem. Fourth, organizational learning; organizations learn from their experiences and modify procedures over time.

Cyert and March, and a number of collaborators at the Graduate School of Industrial Administration, Carnegie Institute of Technology have applied these critical concepts to the development of models of decision making in business organizations. Three different models have been developed.⁽¹⁵⁾

Each of the models is in the form of a computer program and the analyses have been made by simulation. The first model is a specific model of price and output determination in one department of a large department store. The second model is a specific model of output determination in a major American duopoly, the can industry. The third model is a general model of price and output determination. It is an abstract representation of organizational decision making in an American oligopoly.

What are the contributions of the behavioral theory of the firm? As its contributions, we must above all point out the development of a new theory of firm behavior which represents a marked success in overcoming inadequacies of the classical economic theory of the firm.

1. The behavioral theory is built upon "realistic" assumptions. Four critical concepts, that is, quasi-resolution of conflict, uncertainty avoidance, problemistic search and organizational learning all have their empirical evidence.

2. The behavioral theory treats the decision making process in business organizations and thus casts light on the internal workings of the "black box" of the firm.

3. The behavioral theory is concerned with the actual firm behavior which is not in equilibrium and uses a computer simulation technique to test its propositions.

The behavioral theory of the firm may thus well be considered as a most promising new theory of firm behavior.

But we must point out here that it has some deficiencies and limitations. They may be classified as follows.

1. It focuses on a specific kind of decisions made by the firm, that is, operating decisions. Other kinds of decisions such as administrative decisions and strategic decisions do not receive enough attention.

2. The behavioral model of the firm thus far developed has the characteristic

of a short-run adaptive model. In this model short-run feedback-react decision procedures are emphasized, but instead long-run adaptive mechanisms of the decision processes do not receive adequate consideration.

3. The behavioral theory is a descriptive theory which describes how decisions are made in the business organization. But it is not yet translated into a normative theory aiming at aiding and improving the decision making process.⁽¹⁶⁾

4. The analysis of the decision making process within a business organization requires both the theory of choice mechanism and the theory of organizational influence.⁽¹⁷⁾ But the behavioral theory relies too heavily upon the theory of choice mechanism that the theory of organizational influence is not fully utilized.

Encouraging to us is the series of studies following the same line of thoughts as Cyert and March's pioneering work. The most important of these are;

A Model of Budget Control

..... Andrew C. Stedry⁽¹⁸⁾

A Model of Trust Investment Behavior

..... Geoffrey P. E. Clarkson⁽¹⁹⁾

A Model of Information and Decision Systems

..... Charles P. Bonini⁽²⁰⁾

A Model of Investment Decision

..... Robert W. Wright⁽²¹⁾

A Model of Diversification Decision

..... H. Igor Ansoff⁽²²⁾

A Model of Long-Range New Product Planning

..... Raymond M. Haas⁽²³⁾

These studies have succeeded in overcoming some of the above mentioned deficiencies of the pioneering work by Cyert and March and thus brought the new theory of firm behavior a step further.

IV

Modern large firms play an important role in our economic system. But until quite recently these firms remained a no man's land in the sense that we lacked a theory which could explain their behavior. Neither the classical economic theory of the firm nor the theories of organizational behavior, although they are concerned with such firms, can be regarded as a theory of firm behavior which we need.

Recently a number of students interested in firm behavior have initiated a search for a new theory of firm behavior. Economists have attempted to revise

the classical theory by introducing into it some results of organization theory and thus developed a new economic theory of the firm. But this theory, so long as it accepts the classical theory as its basic framework, can not be expected to be a theory of firm behavior which we pursue.

The second approach of integrating the economic theory of the firm and the theory of organizational behavior has been attempted in the research project, "the behavioral theory of the firm." In this project modern organization theory has been adopted as the basic framework and redeveloped as a theory of decision making process in business organizations. This behavioral theory of the firm, while tests of the theory are not yet completed and some deficiencies are not yet eliminated, has made a long stride towards developing a theory of firm behavior which can explain adequately how modern large firms behave.

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THE RESEARCH INSTITUTE FOR ECONOMICS AND BUSINESS ADMINISTRATION, KOBE UNIVERSITY



HISTORICAL SKETCH

In 1919, a research organization named the Institute for Commerce was founded in Kobe Higher Commercial School, one of the chief predecessors of Kobe University, with a gift made by F. Kanematsu & Company, a leading mercantile firm in Kobe. The organization was designed to carry on and facilitate integrated research on business and commerce and to formulate and publish the results of these studies and investigations in such form as to make them available to the business community.

With the founding of Kobe University of Commerce, successor of Kobe Higher Commercial School, in 1929, the Institute extended its research activities by adding several divisions. One was the famous Latin-American Library, which soon became the center of research in this field in Japan. A room for statistics equipped with various computing machines was established and began publication of *Juyo Keizai Tokei* monthly and *Sekai Boeki Tokei* annually. A filing room was prepared to deposit press clipping files systematically arranged by topics and dates. Another room was designed to become the center of all possible original records and data having to do with the beginning and progress of Japanese business.

On the campus of Kobe University of Commerce, another organization named the Institute for Business Mechanization was founded in 1941 utilizing business machines donated by the IBM Corporation and others. With Professor Yasutaro Hirai as its head a broad and forward-looking plan for business mechanization in Japan was developed.

In 1944, Kobe University of Commerce changed its name to Kobe University of Economics. After the war, however, the University was consolidated with three other colleges in Hyogo Prefecture to become Kobe University. With this development, the two Institutes were also amalgamated into the Research Institute for Economics and Business Administration, Kobe University. At present, the Institute, with its sixteen full-time professional staff members, carries on studies and investigations in international economy, business administration, and information systems in Japan.

LOCATION AND BUILDINGS

The Research Institute for Economics and Business Administration is located on the campus of Kobe University, Rokko, Kobe. It is a three-storied building named the Kanematsu Kinenkan and has a floor space of about 2,900 square meters, which includes a president's room, forty-one offices, six rooms used as a library, a room for statistics, three conference rooms, etc. Adjoining is a one-story building recently built to install business machines.

ORGANIZATION

Under the directorship of the president, the Institute operates with two research groups, each has five sections respectively. Each research group and its sections are as follows:

A Group of International Economy

- (1) International Trade
- (2) Economy of Latin-America
- (3) Maritime Economy
- (4) International Finance
- (5) International Law of Economy

B Group of Business Administration

- (1) Business Administration and Information Systems
- (2) Accounting
- (3) International Management
- (4) Business Statistics
- (5) International Labor Problems

Besides the regular work of the Institute, research committees may be created to carry on any special work requiring the joint study of academic and business circles. At present, there are three committees, that is, International Finance Committee, the Committee of International Economic Cooperation and Overseas Business Operations in 1970's and Information Systems Committee.

For convenience and greater efficiency in carrying out its research activities, the Institute has a general office which is responsible for 1) the collection and preservation of a comprehensive collection of books, periodicals, pamphlets, and original records and data of finance, trade, commerce, industry and business generally; 2) the classification, cataloguing, indexing, arranging, annotation and

compilation of these research materials; and 3) the formulation and publication of the results of the investigations and studies accomplished by the professional staff members of the Institute.

As an affiliated institute, the Documentation Center for Business Analysis has been recently established. It is the first systematic information facility in the field of business administration in Japan that has been recognized and authorized by the Ministry of Education. The purpose is to collect and to make intensive control of all kinds of materials on business administration and to make them available to scholars, universities, governments, and business world with the aid of modern documentation techniques.

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