THE MODERN INDUSTRIES AND THE TRADITIONAL INDUSTRIES

—at the Early Stage of the Japanese Economy—

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INTRODUCTION

First, it will be useful to make clear the points to be considered in this paper.

The remarkable development of the Japanese economy after the last quarter of the 19th century has been an interesting theme to the economist. Many economists have studied how the development of such industries as silk and cotton, machine manufacturing, and mining was possible, and how the transportation facilities like railways and ships and the financial institutions like banks and trust companies were introduced from foreign countries and developed in Japan. They have studied the role of the government which fostered these industries and also the favourable effects of foreign trade upon them. A great part of the development of the Japanese economy has been attributed by these economists to these industries and foreign trade as well as to the government's policies.

Agriculture has also been analysed because the attention of the economists has been attracted to the fact that not only did it supply the food to support the nation but it supplied a large part of the labour force which was indispensable for the development of the economy and that the income yielded there was an important source of capital accumulation.

However, only unsatisfactory analyses have been made on some other sectors of the economy, e.g., domestic industry and commerce. It is true that not a few economists have tried to study whether there were already any capitalist elements in the household manual manufacturing industry, but we cannot find many analyses from other points of view.

My standpoint in this paper is somewhat different from the conventional ones. I will divide the Japanese industries at that time into the two categories: 1) the modern industries, represented by large-scale

enterprises and factories which were newly introduced from foreign countries, and 2) the traditional industries of Japanese origin. (This division and some of the conditions which shall be referred to later seem to apply to many of the developing countries of the present day.) The interrelationship between the two categories of industries is my greatest concern in this paper.[1]

What I call the "traditional industries" are first characterized by the fact that both their techniques and products were almost free from foreign influences. Secondly, each establishment in those industries consisted of only a few people, in many cases only of the members of a single household and sometimes the members of a household and a few employees. The category of traditional industries thus defined cover, more or less, part of agriculture, domestic industry, commerce, and other service industries. Although I mainly treat the secondary and tertiary industries in this paper, agriculture may be included in the "traditional" group.

Of course I admit that the above definition of the traditional industries is rather vague. But any definition must inevitably remain in great measure a boundary area the precise classification of which is controversial. For example, there was no industry which was not at all affected by foreign techniques. Even in agriculture, which seems to have been least affected, threshing machines were introduced and widely used. In the textile industry manual weaving tools were gradually replaced by more improved machines. After 1910 electric power was gradually introduced in many industries. But such changes alone are not enough for the industry to be called modernized. It cannot be denied, of course, that with the improvement in the techniques some of the formerly family-scale workshops developed into "modern" large-scale factories operated by many employees. As we shall see later, however, it is also true that what I call the traditional industries, including agriculture, were still playing an important role in the Japanese economy through the Meiji and Taishō eras.

The first theme for me in this paper is to try to find how they could survive the eras in which the economy at large developed and was modernized remarkably. The second theme is to generalize the structural mechanism of the Japanese traditional industries so as to apply

1 In this connexion, see H. Rosovsky & Kazushi Ohkawa, "The Indigenous Components in the Modern Japanese Economy," *Economic Development and Cultural Change*, Vol. IX, No. 3 (Apr., 1961) p. 476. They define "Indigenous components" as "sectors or characteristics of the Japanese economy which are of 'native' origin" and try to evaluate the importance of such components in the Japanese economy in the 1950's.

it to the developing countries of the present days. And the third theme is to show and maintain the contention that the collapse of the mechanism of the survival of the traditional industries had much to do with the formation of the so-called "dual structure."[2]

I. THE SCALE OE THE TRADITIONAL INDUSTRIES

The structure of employment by the sector of industry around 1872–1876 was 78% (15,340 thousand) in agriculture, 4% in manufacturing, 7% in commerce, 9% in miscellaneous, and 2% in employees.[3] Most of those who belonged to "manufacturing" were craftsmen, and "miscellaneous" includes public servants, students, military men, scholars, and Shinto and Buddhist priests. This shows that the industrialization of the Japanese economy was far behind that of some advanced western countries. In England, for example, "agriculture" was 36% and "mining and manufacturing" was 30% in 1801, and in France the agricultural population was 52% of the total in 1866.[4] Japan was a typically agricultural country in those days and judging from the population composition and other indices, the role of the agriculture in the Japanese economy was almost as important as it was in Russia.[5]

The agricultural nature of the Japanese economy can also be explained by the composition of products. A source of production statistics in Japan, *Meiji Shichi-nen Bussan-hyō* 明治七年物産表 (Production Statistics in 1874), shows that of the total production in 1874 rice was 38.5%, wheat and fruits 3.3%, stock-breeding 2.0%, and other agricultural-forestry-marine products 14.7%, the aggregate products of the primary industry thus attaining 69.5%. Moreover, more than half of the mining and manufacturing products, which in all was 30.5%, were food and other daily necessities. For example, brewed or distilled beverages and

2 See also Nakamura Takafusa 中村隆英, "Kokunai Shijō no Hatten to Nijūkōzō no Seiritsu 國内市場の發展と二重構造の成立 (The Expansion of the Domestic Market and the Formation of the Dual Structure)," in Tamanoi Yoshirō 玉野井芳郎 & Uchida Tadao 内田忠夫 eds., *Nijūkōzō no Bunseki* 二重構造の分析 (Analysis of the Dual Structure), Tokyo, Tōyōkeizai-shimpō-sha, 1963.

3 Estimated by Furushima Toshio 古島敏雄 in his *Sangyō-shi* 産業史 (History of Industries), Vol. III, Tokyo, Yamakawa-shuppan-sha, 1966, pp. 72–73.

4 P. Dean & W.A. Cale, *British Economic Growth, 1688–1959*, London, Cambridge University Press, 1963, p. 142. C. P. Kindleberger, *Economic Growth in France and Britain, 1851–1950*, Cambridge, Mass., Harvard University Press, 1964, p. 229.

5 For this comparison I owe much to discussion with my colleague Mr. Kumon Shumpei 公文俊平.

food like *sake*, soy, and *miso* (bean paste) was 8.8%, textiles 2.9%, silk yarn 1.7%, and paper 1.4%. Machinery including ships was only 1.3% and metals and ores was 1.1%.[6]

This fact, however, should not be exaggerated. Although 78% of the total population was classified into "agriculture," it must be taken into account that many of these agricultural people had side-jobs in manufacturing and commerce. Studying the *Kainokuni Ninbetsu Shirabe* 甲斐國人別調 (Population Census in the Province of Kai) for 1879, Professor Umemura Mataji 梅村又次 says that in the Province of Kai 甲斐 (equivalent to Yamanashi 山梨 Prefecture) 33% of the agricultural population, 37% of those engaged in mining, manufacturing, and traffic industries, and 10% of those in other service had side-jobs of some kind or other. He says also that the ratio of population indicates 100 to 107 in comparison with their size between the regular and the irregular employee in such industries as mining, manufacturing, and traffic and it is 100 to 100 in service industries.[7]

It may of course be misleading to generalize these data to apply to the Japanese economy at large. For manufacturing and commerce in rural areas of Yamanashi Prefecture are very likely to have been more developed than the average, because it was one of the most important silk-producing prefectures at that time. At least, however, the above data suggest that market economy was already pretty well developed in Japan, with considerably many people engaged in domestic manufacturing and commerce either as their main jobs or side-jobs.

As for the ratio of the domestic consumption and the sales in the market of the agricultural products, Professor Yamaguchi Kazuo 山口和雄 estimates that 25 to 30% of the total disposable products of the farmers, i.e., the total yields minus the rent paid in kind, was sold in the market.[8] Considering that a higher percentage of the rent received in kind was marketed, we may well assume that almost 40% of the total agricultural products was traded in the market. Needless to say the products of the mining and manufacturing industries were largely sold in the market. Thus the high ratio of the agricultural population to the total does not necessarily mean that the Japanese economy was autarkical.

6 Furushima Toshio, p. 74.

7 Umemura Mataji 梅村又次, "Rōdōshijō Kōzō to Nōgyō—Meiji-nenkan wo Chūshin-ni 勞働市場構造と農業—明治年間を中心に (The Structure of Labour Market and the Agriculture—in the Meiji Era)," in Rōdō Tōkei Shiryō 勞働統計資料. (mimeograph)

8 Yamaguchi Kazuo 山口和雄, *Meiji Zenki Keizai no Bunseki* 明治前期經濟の分析 (Analysis of the Economy in the Early Meiji Era), enlarged edition, Tokyo, Tokyo-daigaku-shuppan-kai, 1963, p. 59.

The Japanese society experienced a rapid urbanization after the Meiji era. In England, France, Germany, and Russia the agricultural population continued to increase for some time after the period of the "Industrial Revolution." But in Japan the agricultural population did not increase either comparatively or absolutely. The decomposition of the peasantry and their engaging in many sorts of side-job means, on the other hand, that agriculture had no more room to employ people. The agricultural population was dissolved and more of them were engaged in various side-jobs. Some of those who were completely shut out from agriculture had to run a small business of their own, and still others had to go to towns to be employed in factories mainly of modern industries.

Table 1 shows the change in the ratio of the people engaged in different industries after the Meiji era. Firstly, we note that the agricultural population had a long-run tendency of a slight decline although it was almost negligible. Secondly, the number of the people who had an occupation increased at a rate of 4 to 5% in every five years. Although this rate of increase is rather low compared with that of the newly developing countries, yet the total labour population increased by twelve millionin about fifty-five years from 1880 to the 1930's. Thirdly, the increment of the population was employed in the secondary and the tertiary industries, but more in the latter than in the former. It is interesting to note that in spite of the rapid industrialization of the economy the tertiary industry was more important than the secondary as far as the population newly absorbed is concerned.

Now we may turn our attention to the so-called modern industries. Included in them are the public servants of the central and local governments, employees at factories having five or more employees each, employees of mining companies, and seamen. Most of these industries came into existence during the Meiji era. Those sections where techniques of production and method of management were introduced from overseas had more or less the capitalistic type of employment. Of course there were some other "modern" industries like financial institutions and commercial companies, and it cannot be denied that the mining and manufacturing industries still resorted to traditional techniques of production and management. However, such definition of the modern industries as enumerated above was necessary because comparatively reliable data are available on them and for the moment it is enough for us to know the approximate condition of them.

Table 1 also shows that the employment in the modern industries

increased at a very high rate of about 30% in every five years from about 1890 to 1920. But such employment was only 13% of the total employment around 1920 and less than 30% of the employment in the secondary and tertiary industries. As a matter of fact, therefore, the employment in the modern industries was not so large as might be supposed to have been from the rapid industrialization of the Japanese economy at that time.

For about fifteen years after 1920, the rate of increase in the employment in the modern industries kept becoming smaller and the ratio of such employment to the total employment and to that of the secondary and tertiary industries remained almost constant, or slightly declined. As far as we can judge from the structure of employment, it is evident that the modernization of the economy was retarded around that time. And this retardation is one of the grounds on which some economists argue that the so-called "dual structure" of the economy was formed after the First World War.

Now we can proceed to the employment in the traditional industries. Here we regard the difference between the total employment in the secondary and tertiary industries and the employment in the modern industries as employment in the traditional industries. Then an interesting characteristic is seen in its movement. Although it continued to increase throughout the period under our analysis, the rate of its increase became low between the Russo-Japanese War and the First World War and again became high after the World War. After all its ratio to the total employment increased from 24% in 1888–1892 to a little more than 38% in 1933–1937. Thus the employment in the traditional industries shows an inverse movement to that of the modern industries.

There are two reasons why these domestic manufacturing, commerce, and service industries could continue to expand along with the development of capitalism. One of the reasons is attributable to the fact that the modern industries did not develop in such a way as to employ much labour. And the other is that there were several conditions which were favourable to the development of the traditional industries. These two reasons will be studied in the following pages.

II. WHAT THE INDUSTRIALIZATION OF THE JAPANESE ECONOMY MEANS

After Japan opened her door to foreign countries by their pressure

of power in 1856, many foreign economic systems, industries, and techniques were introduced. Some of them were adopted as they were, and some others had to be changed so as to suit the conditions of the Japanese economy. There were also some of which adoption was finally given up.

The shogunate and some feudal lords in southwestern Japan eagerly began to try to import new industries, above all, weapon manufacturing. The Meiji government was also eager to learn from foreign countries. Among the economic systems introduced, the important ones were monetary unification (of which completion took almost twenty years) and banking, corporative, and exchange systems. As for new industries, iron and steel production, weapon manufacturing, and shipbuilding were begun mainly at military arsenals. The Ministry of Industry began mining, glass, cement, white bricks, and woollen textiles mainly to satisfy the official demand. The Ministry also set up several model plants for cotton spinning and silk manufacturing. (Some of the factories thus built by the Ministry were sold off to private enterprises later.) It also took an initiative to build up railways, telephones, and telegraphs. In the private sector of the economy, banks, railways, marine transportation, cotton spinning, silk manufacturing, fabrics, and paper either newly started or operated on a larger scale than ever.

Some of these modern industries developed very rapidly while others did not. They can be classified into three groups according to the tempo of their development. The group which developed most rapidly includes financial institutions and traffic and communication facilities. The second group includes light industry, like fabrics, and also mining, like coal. And the last group includes the heavy industry, like steel production, machine manufacturing, and chemicals.

Figure 1 shows how the capacity and the paid-in capital of some industries increased after the last quarter of the 19th century. We note the following characteristics in the first half of the Figure.

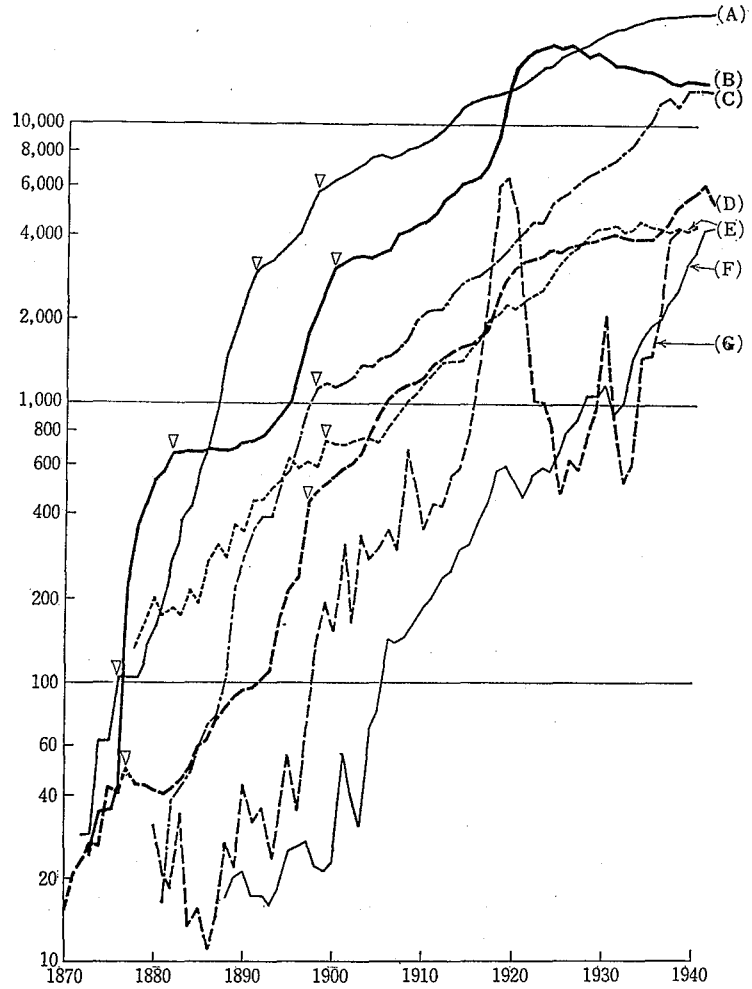
1877: The first peak of marine transporation. This was probably due to the Saigō Rebellion (*Seinan Sensō* 西南戰爭).

1877: The first peak of the establishment of banks. The establishment of the national banks was almost completed.

1892: The first peak of railway construction. Some of the important lines were of private railways which developed very rapidly.

1897–98: The second peak of marine transportation and railway construction. This was the boom period following the Sino-

Figure 1. DEVELOPMENT OF INDUSTRIES



Notes: (A) Mileage of railway lines (in kilometers). (B) Paid-in capital in all the banks (in hundred yen). (C) Number of spindles in the spinning industry (in thousand spindles). (D) Gross tonnage of vessels owned (in thousand tons). (E) Silk production (in ten thousand tons). (F) Pig iron production (in ten thousand tons). (G) Gross tonnage of ships built (in thousand tons).

Sources: For (A), (B), (D), and (E): Bank of Japan, *Meiji-ikō Hompō Shuyō Keizai Tōkei* 明治以降本邦主要經濟統計 (Hundred Years Statistics of the Japanese Economy), 1966. For (C): Tōyō Spinning Company, *Tōyōbōseki Shichijūnen-shi* 東洋紡績七十年史 (Seventy Years History of the Tōyō Spinning Company Ltd.), 1953. For (F): Arisawa Hiromi 有澤廣巳 ed., *Gendai Nihon Sangyō Kōza* 現代日本產業講座 (Lectures on Contemporary Japanese Industry), Vol. II, Tokyo, Iwanami-shoten, 1959, Appended Table. For (G): *Gendai Nihon Sangyō Kōza*, Vol. V, 1960, pp. 127–129.

Japanese War.

1898–99 : The turning-point of the increase in the number of spindles. Silk production became stagnant also during this period.

Thus we can say that the development of Japanese industries began at first in the social capital sector, such as railways and marine transportation, and the banking system, where construction was achieved in the 1880's. Those which followed were light industry, like cotton spinning and silk manufacturing, whose development reached first maturity around 1900. Heavy industry, like steel production and machine manufacturing, was the last to develop.

It was not until the end of the 19th century that heavy industry set out on its development. For example, the Yawata Iron Works (which was established in 1896 as a government enterprise) began operation in 1901. The Law for the Encouragement of Shipbuilding was passed in 1896 and by these two acts the building of large ships and starting of new steamship lines were subsidized by the government. There are several reasons why the development of the heavy industry was delayed. It was, for example, due to the narrowness of the market for its products, the absence of customs autonomy (which Japan acquired in 1911) and the consequently weak competitive power against foreign rivals, and also to the fact that much of the capital already accumulated flowed into light industry where a larger profit was expected. In the present paper, however, I shall abstain from discussing it any more because for the moment it is not my main interest.

The comparatively small employment in the modern industries mentioned above is partly attributable to the technological level in Japan in those days. As is often pointed out,[9] when underdeveloped countries try to import a new industry from abroad, they are not, unlike an already developed country, in a position to compare the relative prices of labour and capital goods and to choose the optimum combination. They would be able to do so if they had techniques which they had developed by themselves. But because they usually do not have their own techniques, they have no other alternative but to import the most advanced foreign techniques which require a definite proportion of labour and capital goods and are in many cases labour-saving and capital-inten-

9 See, for example, Tsujimura Kōtarō 辻村江太郎, "Koyōkōzō to Rōdō Bumpai-ritsu 雇用構造と勞働分配率 (The Structure of Employment and the Distribution of Income to Labour)," in Komiya Ryūtarō 小宮隆太郎 ed., *Sengo Nihon no Keizai Seichō* 戰後日本の經濟成長 (Postwar Economic Growth in Japan) Tokyo, Iwanami-shoten, 1964. (English version of this book was published by the University of California Press, 1966.) He owes this idea to Professor A. Gerschenkron.

Table 1. LABOUR FORCE BY INDUSTRY

A. Population (in thousand)

	Primary Industry	Secondary Industry	Tertiary Industry	Total	Secondary & Tertiary Industries	Of which Modern Industries	Of which Traditional Industries (non-agricultural)
1878–1882	15,124	1,104	2,363	18,591	3,467		
1883–1887	14,975	1,554	2,856	19,385	4,410		
1888–1892	14,835	2,013	3,373	20,221	5,386	550	4,836
1893–1897	14,771	2,468	3,919	21,158	6,387	749	5,638
1898–1902	14,811	2,934	4,507	22,252	7,441	1,023	6,418
1903–1907	14,722	3,378	5,182	23,282	8,560	1,497	7,063
1908–1912	14,696	3,877	5,805	24,378	9,682	1,953	7,729
1913–1917	14,663	4,345	6,467	25,475	10,812	2,493	8,319
1918–1922	14,686	4,651	7,587	26,924	12,238	3,440	8,798
1923–1927	14,706	4,859	8,797	28,362	13,656	3,729	9,927
1928–1932	14,902	4,918	9,578	29,198	14,496	3,820	10,676
1933–1937	14,579	5,999	10,111	30,689	16,110	4,285	11,825
B. Percentage Composition							
1878–1882	81.4	5.9	12.7	100			
1883–1887	77.3	8.0	14.7	100			
1888–1892	73.4	10.0	16.7	100		2.7	24.0
1893–1897	69.8	11.7	18.5	100		3.5	26.7
1898–1902	66.6	13.2	20.3	100		4.6	28.9
1903–1907	63.2	14.5	22.3	100		6.4	30.4
1908–1912	60.3	15.9	23.8	100		8.0	31.7
1913–1917	57.6	17.1	25.3	100		9.8	32.6
1918–1922	54.5	17.3	28.2	100		12.8	32.7
1923–1927	51.8	17.1	31.0	100		13.1	35.0
1928–1932	50.1	16.8	32.8	100		13.1	36.5
1933–1937	47.5	19.5	32.9	100		14.2	38.2
C. Percentage Increase over the Previous Period							
1878–1882							
1883–1887	Δ1.0	40.8	20.9	4.3			
1888–1892	Δ0.9	29.5	18.1	4.3			
1893–1897	Δ0.4	22.6	16.2	4.6		36.2	16.6
1898–1902	0.3	18.9	15.0	5.1		36.6	13.8
1903–1907	Δ0.6	15.1	15.0	4.6		46.3	10.0
1908–1912	Δ0.2	14.8	12.0	4.7		30.5	9.4
1913–1917	Δ0.2	12.1	11.4	4.5		27.6	7.6
1918–1922	0.2	7.0	17.3	5.7		35.0	5.8
1923–1927	1.3	4.5	15.9	5.3		8.4	12.8
1928–1932	Δ0.0	1.2	8.9	2.9		2.4	7.5
1933–1937	Δ0.8	22.0	5.6	5.1		12.2	10.8

Notes: 1. Employment in the modern industries includes public servants, employees at factories having five or more workers, employees of mining, and seamen.
2. As above summarized, there are many problems connected with the rates of total population increase. The reader is asked to regard these as being provisional estimates.

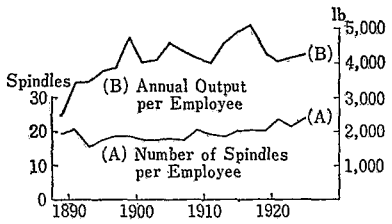
Sources: For Primary Industry: Minami Ryōshin 南亮進, "Nōringyō Shūgyōsha no Ichi Suikei 農林業就業者の一推計 (An Estimate of Employment in Agriculture and Forestry)," *Keizai Kenkyū* 經濟研究, Vol. 17, No. 3 (1966).
For Secondary and Tertiary Industries: Kazushi Ohkawa, *The Growth Rate of Japanese Economy Since 1878*, Tokyo, Kinokuniya, 1957.

sive. Therefore, when a developing country intends the modernization of its economy with such a labour-saving type of technique, it is natural that there should not be much demand for labour, if the absolute amount of capital invested is small.

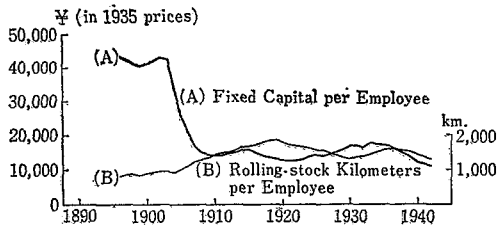
Now we shall apply this argument to some actual cases in Japan to learn how much labour was employed. Figure 2 shows the relation between the labour employed and the amount of the fixed capital in three industries. As they were rather capital-intensive, we shall take up as an example the cotton spinning industry, which seems to have been the least capital-intensive of the three. In this industry there was a close relationship between the numbers of employees and spindles, with their ratio remaining almost constant over a long period (Curve A) and it is also interesting that the productivity of labour did not rise very much after around 1900 (Curve B). Since the cost of equipment per spindle was about 20–25 yen in the 1890's, and assuming that each employee operated 20 spindles, the fixed capital per head was 400–500 yen or in the 1935 price 1,500–2,000 yen. The cost of equipment of the industry was

Figure 2. CAPITAL-INTENSIVENESS OF SOME INDUSTRIES

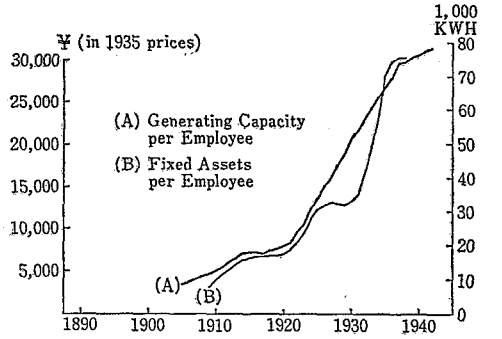
Cotton Spinning Industry



Japan National Railways



Electric Power



Sources: For Cotton Spinning Industry: *Dai Nihon Bōseki Rengōkai Shiryō* 大日本紡績聯合會資料 (Report of Japanese Cotton Spinners' League).
For Japan National Railways and Electric Power: Minami Ryōshin 南亮進, *Tetsudō to Denryoku* 鐵道と電力 (Railways and Electricity), Long-Term Economic Statistics No. 8, Tokyo, Tōyōkeizai-shimpō-sha, 1965, p. 209.

very high for the per capita G.N.P. in those days. It may well be said that the spinning industry was very labour-saving already in the middle of the Meiji era. Railways and electricity were naturally more labour-saving and unlike the spinning industry their labour-saving nature became more and more remarkable in later years.

Supposing that many of the modern industries were mostly labour-saving like the above three industries, it is quite natural that they did not employ so much labour. And this fact suggests that more labour than otherwise might have had to be employed in the traditional industries.

Next we shall turn our attention to how much investment was made in different industries. Reliable and accurate statistical data are not abundant but for the moment we shall be satisfied with the numbers of corporate enterprises and the paid-in capital in each industry.

We learned already that among the modern industries the financial industry and the railways were the first to develop in the early Meiji era. Table 2 shows that in 1894 the paid-in capital in the corporations belonging to these two and the marine transportation which constituted an important part of the social capital amounted to about 70% of the total capital invested. It is also shown that cotton spinning, paper (mainly produced for newsprint), and pottery (like cement) were important among manufacturing industry. As for foodstuffs, investment in such newly introduced types of production as beer, sugar, and wheat flour was dominant, amounting to two-thirds of the total paid-in capital in food manufacturing. Although the small figures in the lines of chemicals, ceramics, and machinery represent backwardness, the weight of shipbuilding, which was stimulated by the government, was comparatively large. Another industry in which comparatively much investment was made was the mining represented by coal and copper.

The following scheme can be built from what we have seen above. The modern industries at the early stage of the capitalism of the Japanese economy mainly consisted of new industries introduced from foreign countries. And the first group of them developed in the field of social capital, i. e., financial institutions and transportation. Those which followed them were the industries of producers' goods such as coal, copper, cotton yarn, and cement as well as of investment goods like ships. In the sector of the consumption goods, few modern industries developed except those for some kinds of food.

The rightness of the above judgment in respect to consumption goods is proved to some extent by Table 3. It shows what percentage of the aggregate output of several consumption goods in 1909 was prod-

Table 2. THE COMPOSITION OF BUSINESS CORPORATIVES

(A) Number of Enterprises and (B) Amount of Paid-in Capital (in thousand yen)

	1889		1894		1899		1904		1909	
	A	B	A	B	A	B	A	B	A	B
Total Absolute Figures	3,768	103,232	2,104	197,167	7,631	683,820	8,913	431,292	11,549	1,367,164
Percentages	100	100	100	100	100	100	100	100	100	100
Agriculture, Forestry & Fishery	17.3	2.5	5.2	0.6	2.3	0.3	2.7	0.3	3.2	1.1
Trading	12.3	10.6	26.7	5.1	27.2	5.5	27.5	6.2	29.8	7.0
Banking & Insurance	12.3	53.2	19.1	28.7	28.3	42.1	29.6	41.4	25.0	37.3
Other Services	1.5	1.0	4.8	1.1	5.0	1.5	5.8	1.3	5.3	2.1
Manufacturing	54.2	28.3	28.9	17.0	27.4	16.9	24.4	12.8	27.1	20.6
Foodstuff	3.0	1.8	4.9	1.5	6.6	1.8	6.8	1.9	7.5	3.9
Textiles	26.7	13.7	11.8	10.4	8.5	7.9	6.9	5.8	7.9	7.3
Cotton Spinning	1.1	7.3	2.4	7.2	0.8	4.4	0.4	3.5	0.3	4.1
Silk Yarn	18.0	3.4	7.1	1.0	3.9	0.7	13.0	0.4	2.7	0.4
Chemicals	1.5	0.8	0.8	0.7	0.9	0.5	1.4	0.6	1.8	1.5
Ceramics	1.9	0.9	0.5	0.5	0.4	0.1	0.3	0.1	0.6	1.1
Machinery	1.7	1.1	0.7	0.3	1.2	1.2	1.1	1.6	1.8	2.0
Pottery	4.0	2.1	2.0	0.9	2.8	1.1	1.6	0.7	1.7	1.4
Coal & Petroleum Products	0.2	0.2	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.0
Paper & Pulp	1.2	1.8	0.8	1.4	0.6	0.9	0.4	1.0	0.5	1.4
Publishing & Printing	2.6	1.0	1.5	0.3	1.2	0.1	1.2	0.2	1.0	0.3
Lumber	2.2	0.5	0.1	0.0	0.9	0.2	0.9	0.1	1.3	0.6
Miscellaneous	9.0	4.4	5.5	0.9	4.2	2.5	3.9	0.6	2.9	1.2
Electricity & Gas	0.4	1.0	1.0	1.2	0.7	1.2	0.9	2.2	1.3	6.3
Mining	3.3	3.4	4.9	4.4	1.4	4.0	1.4	2.5	1.3	12.8
Land Transportation	—	—	5.8	34.8	5.0	23.3	5.0	28.7	4.8	8.1
Marine Transportation	—	—	3.6	7.0	2.6	5.7	2.7	4.5	2.7	4.8

Note: "Banking & Insurance" includes National Banks in 1889 and 1894.

Source: *Teikoku Tōkei Nenkan* 帝國統計年鑑 (Statistical Yearbook of the Japanese Empire), for different years.

uced at factories having five or more workers. A slight look at it will reveal that this percentage was lower than might be expected and that conversely a large portion of the consumption goods listed, especially those which are usually classified as "miscellaneous goods," was manufactured by domestic manufacturing. In other words the traditional industries were largely in charge of the production of consumption goods.

Table 3. SHARE OF THE SMALL-SCALE HOUSEHOLD PRODUCTION

(in thousand yen)

	(A) Total Production	(B) Production at Factories Having Five or More Employees	(B)/(A) (percentage)
Alcoholic Liquor	4,196*	1,958	46.7
Soy	2,197*	993	45.2
Canned Food	4,299	2,613	60.8
Silk Fabrics	100,234	46,233	46.2
Cotton Fabrics	116,412	61,816	53.1
Bricks	5,491	4,528	82.5
China & Porcelain	12,358	3,553	28.8
Lacquer Ware	7,521	494	6.6
Matches	14,059	11,006	82.6
Rush-mat	6,327	5	0.1
Fancy Matting	4,105	397	9.7
Japanese Paper	18,219	3,257	17.9
Straw Plait	5,070	334	6.6

Note: The figures bearing asterisk are given in 1,000 *koku*.

Sources: (A): Nōshōmu-shō 農商務省, *Dai-nijūroku-ji Nōshōmu Tōkei-hyō* 第二十六次農商務統計表 (Statistical Report of the Department of Agriculture and Commerce), 1911.

(B): Nōshōmu-shō 農商務省, *Kōjō Tōkei-hyō* 工場統計表 (Census of Manufacturers), 1911.

What has been said hitherto may apply to the developing countries in general. If the modern industries which have been introduced from advanced countries usually develop first in the field of the social capital or the field of producers' goods or investment goods and if they do not employ enough labour, those who are out of work must either be employed somewhere else or be left unemployed. It is for this reason that a further study on the traditional industries is necessary.

III. MECHANISM OF THE DEVELOPMENT OF THE TRADITIONAL INDUSTRIES

Although the modern industries developed rapidly, their capacity to employ was relatively small and their market was almost confined to

investment in equipment in other industries, the demand of both central and local governments and exports. It was necessarily up to the traditional industries to satisfy the domestic demand for consumption and employ the excess labour force which was not absorbed in the modern industries. Indeed, as we have already seen, the employment in the traditional industries increased remarkably in those days.

There were five reasons for such increase in employment in the traditional industries; (1) that the traditional pattern of consumption did not change, (2) the change of the economic system in the period, (3) the development of the modern industries, (4) the increase in exports, and (5) that the traditional industries began to produce some new commodities. In order to know how the traditional industries developed, a study of the reasons for their development is necessary.

1. The Traditional Pattern of Consumption

Studying the household expenditure on consumption goods in 1955, Professors Ohkawa and Rosovsky estimate that 48.7% of the total expenditure was on what they call "indigenous" consumption goods.[10] According to them, 78.3% of the food purchased, 13.0% of the clothes, 35.4% of the light and heat, 77.0% of houses and their repairs, 42.0% of the furniture and utensils, and 10.4% of other miscellaneous expenditure were indigenous. Because these are figures for a year after the Second World War, the ratio of the expenditure on each class of indigenous goods to the total expenditure must have been much higher in the Meiji era. Oil and electric lamps, beef and pork, and woollen fabrics such as light serge and blankets are examples of the modern consumption goods of those days but there were perhaps not many others which were widely used or consumed.

As for the expenditure in rural districts around 1910, we have Table 4, which is for Minamitsugaru 南津軽 County of Aomori 青森 Prefecture and Nakakubiki 中頸城 Country of Niigata 新潟 Prefecture. It also reveals how little the modern consumption goods had yet prevailed. It can be seen from the data of the two districts that the expenditure on modern consumption goods was only about 3% of the total. The ratio is somewhat high for clothes and expendables, and yet there is no doubt that the traditional pattern of consumption expenditure was still almost as it had been before.

I do not intend to study the reason why the traditional pattern of consumption remained unaffected. But the rapid westernization of the

10 K. Ohkawa & H. Rosovsky, p. 489.

Table 4. CONSUMPTION IN RURAL DISTRICTS

I. Minamitsugaru County, Aomori Prefecture, 1908 (in thousand yen)

	Total Consumption	Modern Consumption Goods	Contents
Food & Beverages	3,523	23	Refined sugar, cigars, canned foods, beer, whisky, ice water, and lemonade
Clothes	104	40	Woolen cloth, flannel, light serge, blankets, knitted goods, and cotton yarn
Furnishing	217	10	Rickshas, baby-carriages, horse carriages, bicycles and books
Expendables	268	60	Matches, foreign paper, shoes, petroleum, and medicines
Total	4,115	133	

Source: *Minamtsugaru Gunze* 南津輕郡是 (Economic Plan of Minamitsugaru County), 1911.

II. Nakakubiki County, Niigata Prefecture, about 1916 (in thousand yen)

	Total Consumption	Purchases from Outside the County	Modern Consumption Goods	Contents
Food & Beverages	5,883	467	32	Beer, lemonade, soda water and other soft drinks, beef, milk, and canned foods
Clothes	1,137	1,133	37	Suits, bifurcated socks and socks, blankets, and accessories to suits
Furnishing	279	89	4	Shoes
Expendables	630	311	189	Notebooks, pencils, bicycles, books, magazines, newspapers, watches, medicines, lamps, petroleum, and electric lamps
Total	7,929	1,990	252	

Sonrce: *Niigata-ken Nakakubiki Gunze* 新潟縣中頸城郡是 (Economic Plan of Nakakubiki County, Niigata Prefecture).

mode of living in Japan was not to be seen until the end of the Second World War, or perhaps not until the late 1950's when various kinds of electric appliances came into wide use and people began to eat western dishes.

Most of the traditional daily necessities had to be supplied by domestic industries because they had been specialized in such production. Besides, the growth of population increased the demand for their products. On the other hand, as long as the modern industries were newly introduced from foreign countries they were handicapped in producing the traditional commodities. For example, the new power-loom was suitable to weave a wide piece of cloth (e. g., one yard) but not a narrow piece (about 1.2 feet). Wide cloths were mostly either exported or were sold to meet the official demand or to be further processed. And the weaving

machines for narrow cloths were long operated by hand.[11] And the modernization of food production was much behind that of the weaving machines.

2. *Changes in the Economic System*

The development of the newly introduced financial institutions and the transportation was often favourable to the traditional industries. This can be seen in statistics on the depositors and borrowers of National Banks in 1886 (Table 5). Both the deposits of and the loans to merchants are very conspicuous, which suggests the heavy dependence of commerce upon banks. Since commerce as well as agriculture was the most important part of the traditional industries, it is very clear that the newly introduced financial system greatly helped their development, above all in rural districts.[12]

Table 5. DEPOSITORS AND BORROWERS OF THE NATIONAL BANKS AT THE END OF 1886 (percentage)

	Nobility & Ex-*samurai* Families	Agriculture	Manufacturing Industry	Commerce	Corporate	Miscellaneous	Total	Total Absolute Figures (in thousand yen)
Whole Country								
Deposits	16.56	3.35	1.14	57.11	14.11	7.03	100	19,167
Loans	17.56	10.59	0.70	57.94	8.34	4.65	100	35,063
Tokyo								
Deposits	21.75	0.03	1.18	52.04	19.40	5.61	100	6,735
Loans	39.44	2.00	0.44	41.24	14.81	3.07	100	8,717
Whole Country Except Tokyo								
Deposits	13.75	5.15	1.12	59.87	12.33	7.80	100	12,431
Loans	10.94	13.43	0.79	63.47	6.19	5.17	100	26,345

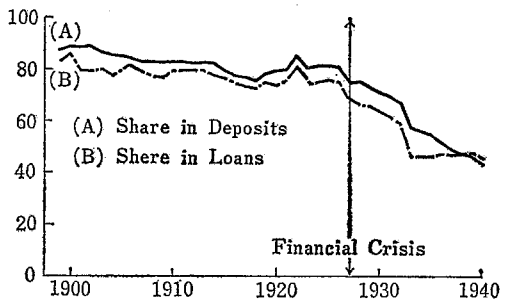
Sourse: Estimates by Fujino Shōzaburō 藤野正三郎 from the Ministry of Finance, *Ginkō-kyoku Dai-kyūji-Hōkoku* 銀行局第九次報告 (The Ninth Report of the Bureau of Banks). Fujino Shōzaburō, *Nihon no Keiki Junkan* 日本の景氣循環 (Business Cycles in Japan), Tokyo, Keisō-shobō, 1965, pp. 561–566.

11 Sampei Takako 三瓶孝子, *Nihon Kigyō-shi* 日本機業史 (History of Weaving Industry in Japan), Tokyo, Yūzankaku, 1961. She says that narrow cotton cloths began to be gradually replaced by wide cloths around 1932–33 and that the replacement became faster after the Second World War. (pp. 296–312.)

12 An eminent and comprehensive study in this respect is *Nihon Sangyō-kinyū-shi Kenkyū—Seishi-kinyū Hen* 日本産業金融史研究製絲金融編 (Study on the History of Industrial Finance in Japan—Finance for Silk Manufacturing), Study of the Japanese Industrial Economy Series No. 1, Faculty of Economics, the University of Tokyo, Tokyo, Tokyodaigaku-shuppan-kai, 1966. This is an excellent monograph on the finance for silk manufacturing. It says that banks loaned a large amount of funds to silk manufacturers directly or *via* the merchants who sold their cocoons and silk yarn.

Although no nation-wide data on depositors and borrowers of banks are available for the following years until the last half of the 1920's, we may well assume that banks in general kept doing much of their transactions with the traditional industries in local districts until after the First World War or the middle of the 1920's when local banks began to be amalgamated with large city banks. This assumption comes from the fact of the centralization and the local distribution of banks. As we saw in Figure 1, the growth rate of the paid-in capital of the banks was especially high (a) until 1885, (b) 1895 to 1900,[18] and (c) during the First World War. Even in these periods, however, neither the capital of large city banks nor their deposits and loans increased so much that any remarkable centralization of banks was seen. To speak conversely, the ratios of the deposits and loans of the local banks to the totals declined only slightly until some years before the financial crisis of 1927, except during the First World War. Figure 3 shows, for example,

Figure 3. STATUS OF THE LOCAL BANKS AMONG THE COMMON BANKS



Sources: Calculated from the Bank of Japan, *Meiji-ikō Hompō Shuyō Keizai Tōkei* 明治以降本邦主要經濟統計 (Hundred Years Statistics of the Japanese Economy), Tokyo, 1966, pp. 198–201, and Association of Local Banks, *Chihō-ginkō Shōshi* 地方銀行小史 (Short History of Local Banks), Appended Table.

18 Regarding the reason why banks increased during 1895 and 1900, see *Wagakuni ni okeru Ginkō-gōdō no Sūsei* 我國に於る銀行合同の趨勢 (History of the Amalgamation of Banks in Japan), edited by Kinyū Kenkyū-kai 金融研究會. It attributes the increase in the number of banks to the following facts. (1) The Japanese industries at that time had not yet been much centralized but were widely dispersed all over the country. Besides, they were run on a small scale and the demand for capital of each of them was small. (2) Both the government and the people wanted new banks to be established because they thought that the banking system was a motive power for economic development. (3) Banking was generally thought not only to be a very noble but also a safe and profitable business, and the influential people in different local districts were tempted to run a bank. (4) The government was very generous in authorizing the establishment of banks. It was not conditioned for example on such a strict minimum of capital as it is now.

Table 6. BORROWERS OF BANK LOANS CLASSIFIED BY OCCUPATION

A. Whole Country (proportion of total percentage)

	June, 1928			June, 1933			
	Commerce & Manufacturing Industry	Agriculture	Others	Commerce	Manufacturing Industry	Agriculture	Others
COMMERCIAL BANKS							
Six Greatest Cities	81.2	0.4	18.4	44.2	26.2	0.6	29.2
Other Cities	67.0	5.9	27.1	42.0	17.7	5.0	35.2
Banks not in Cities	57.2	22.3	20.4	36.9	16.1	33.1	25.0
Total	71.8	7.4	20.8	42.0	22.4	5.8	27.7
SAVINGS BANKS							
Six Greatest Cities	75.4	0.6	24.0	56.3	10.7	0.5	32.5
Other Cities	65.7	6.7	27.6	54.2	10.7	5.3	29.8
Banks not in Cities	61.9	19.0	19.0				
Total	71.1	4.0	24.9	54.9	10.7	3.1	31.5

B. Important Banks in Aichi, Gifu, and Mie Prefectures (percentage)

	End of 1936	End of 1941
Manufacturing Industry	23.6	44.0
Textile	12.4	9.5
Machines & Iron	1.4	24.3
Chemicals	—	1.6
China & Porcelain	1.9	3.0
Lumber	4.5	4.0
Others	3.4	1.6
Commerce	32.3	21.8
Textile	18.1	13.1
Machines & Metals	4.0	2.7
Others	10.2	6.0
Agriculture, Forestry, & Marine	2.9	1.5
Public Utilities	6.4	3.5
Finance & Security Corporations	11.8	4.6
Public Bodies & Co-operative Societies	0.9	3.5
Immovables	4.9	2.9
Others	17.2	2.9
Total	100.00	100.00

C. All Banks in Akita Prefecture (percentage)

	End of 1937
Agriculture	31,9
Lumber	11.3
Finance	9.5
Public Bodies	7.8
Brewing & Distillation	5.3
Commerce in Sundries	5.1
Drapers	4.3
Mining	2.2
Dealers in Marine Products & Fertilizers	1.6
Transportation & Warehousing	1.4
Miso (bean paste) & Soy	1.1
Electricity & Gas	0.0
Others	18.5
Total	100.00

Sources: For A: Unpublished estimation by Hara Akira 原朗 from the Ministry of Finance, *Zenkoku Futsū Ginkō oyobi Chochiku Ginkō Kingaku-betsu narabini Shokugyō-betsu Kashidashikin Shirabe* 全國普通銀行及貯蓄銀行金額別並びに職業別貸出金調 (Statistics on the Loans by the Common Banks and Saving Banks Classified by the Amount Borrowed and by the Occupation of the Borrowers). For B: The Tōkai Bank, *Tōkai Ginkō-shi* 東海銀行史 (History of the Tōkai Bank), 1961, p. 121. For C: The Bank of Akita, *Akita Ginkō Hachijūnen-shi* 秋田銀行八十年史 (Eighty Years History of the Bank of Akita), 1959.

that in 1927 56.1% of the total loans and bills discounted by the common banks was still accounted for by those banks which had their head-office in some place other than in Tokyo and Ōsaka.[14]

Although these high ratios of the local banks are not necessarily followed by the fact that the traditional industries in local districts enjoyed abundant credit from the banks, we luckily have some data to prove it. From Table 6, we see that even after the banks were much centralized in later than the middle of the 1920's, the amount of finance supplied to the traditional industries was still very high. The finance supplied to commerce was more than half of the total and the credit granted to agriculture was negligible. Both (B) and (C) of Table 6 show also that in a rural district a considerable portion of the finance of banks was made to those traditional industries which were peculiar to that district, such as manufacturing and trade in fabrics and pottery in Aichi 愛知, Gifu 岐阜, and Mie 三重 Prefectures, and brewing and lumber in Akita 秋田 Prefecture.

Because it is natural for commercial banks to make much of their loans to commerce, it may seem that a high ratio of such loans does not necessarily mean that the banks helped greatly the traditional industries in general. But it must be remembered that the finance supplied to commerce helped not only commerce itself as one of the traditional industries but also indirectly other traditional industries which were closely connected with it by means of the putting-out system.

Another change in the economic system which should not be overlooked is the development of transportation like railways. Its favourable effects upon the development of the traditional industries need hardly be mentioned. As a result of the railway construction in the silk manufacturing centres like Nagano 長野 and Gumma 群馬 prefectures the time for transportation was shortened, the cocoons could be sent to the destination before they rotted, and the cost of transportation was naturally much reduced. Fukui 福井 and other prefectures which produced silk fabrics for exportation could now buy the materials in larger quantities from more distant places. It may also be added that the market for various goods of the traditional industries was greatly expanded.

The traditional industries in general owe much of their development to the changes in the environment and especially to the development of the modern industries.

14 Ministry of Finance, *Ginkō-kyoku Nempō* 銀行局年報 (Annual Report of the Bureau of Banks).

3. The Modern Industries

The fact that the modern industries developed mainly in the sectors of social capital and the productions of producers' goods necessarily means that they rarely competed with traditional industries, much less drive them away. As a matter of fact, foreign raw cotton and cotton yarn gradually took the place of domestic cotton and yarn, and muscovado disappeared from the market as the sugar refinery developed. Indigo and safflower were replaced by imported dyestuffs. However, it is not that the modern industries and foreign trade impeded the development of the traditional industries, but rather that the development of the former opened a way to a new field of activity and expanded the market for the latter.

The development of the spinning industry, for example, now made it possible to offer the yarn to the manufacturers of cotton fabrics at a lower price. Around in 1884 Kunitake Kijirō 國武喜次郎, who had been formerly a manufacturer of *kurume-gasuri* 久留米絣 (a cotton fabric with a splashed pattern mostly produced in the Kurume district of Kyūshū Island) and now a manager of the Tamashima Spinning Co. (established in 1881) in Okayama 岡山 Prefecture, invited other manufacturers to have shares in his company.[15] The traditional industries (the manufacturers of cotton fabrics in this case) could rely on a constant supply of the material from the modern industries (the spinners), while the latter could make use of the capital of the former. The cloths of a wide size and laces manufactured in the modern industries were also used as materials in dress-making and the production of sundries. This mutually dependent relationship was formed not only in fabrics but in other industries like flour and sugar.

Another favourable effect of the development of the modern industries was the growth of the incomes of those who were engaged in them, which expanded the market of the products of the traditional industries. The construction of railways and other transportation facilities, for example, employed a large number of workers many of whom were from rural districts. After the construction was completed and as these new industries developed, more and more labour was employed if not very much for the increase in the total employment. The increase in their income soon led to the increase in their demand for consumption goods. Because these goods were mainly produced in the traditional

15 Kinukawa Taichi 絹川太一, *Hompō Menshi Bōseki-shi* 本邦綿絲紡績史 (History of the Cotton Spinning Industry in Japan), Vol. II, Tokyo, Nihon Mengyō Kurabu, 1938, pp. 168–170.

industries, the expansion of their market was to a large extent attributable to the increase in the income yielded from the modern industries.

Although what we can do is only reasoning the existence of such a mechanism and cannot analyse it quantitatively, our reasoning is no doubt right. The modern industries would not have developed irrespective of the parallel development of the traditional industries. In fact the development of the former stimulated the development of the latter. Nor could the Japanese economy have developed so remarkably without the mutually dependent relationship between the two. Such relationship is often apt to be overlooked but it is one of the most important factors which should be taken into account in a study of the Japanese economy of those days.

4. The Foreign Trade

The effect of foreign trade upon the traditional industries is also very important. Table 7 lists the staple exports from 1880 to 1920, showing that they varied greatly in the composition between different years, especially between 1890 and 1900.

It is shown in the table that the expansion of the contemporary Japanese exports was chiefly attributable to silk yarn, silk and cotton fabrics, matches, stockinets, buttons, and other sundries. If we remember that around in 1868 three items of primary industry, i. e., silk yarn, cocoon egg-cards, and green tea, were respectively 40.2%, 23.8%, and 21.5%, making more than 85%, of the total exports, the remarkable increase of the exports of the traditional secondary industries in later years suggests they owe much of their development for their products. In the years listed in the Table silk yarn was still dominant, but on the other hand, silk fabrics, matches, and cotton fabrics gradually increased. At the same time the exports of some other products of the traditional industries which had been negligible such as straw plait, fancy matting, china and porcelain, brushes, western umbrellas, cotton towels, and buttons increased so much that they were ranked among the leading thirty items in 1900. In later years these industries developed into what we now call "medium and small export industries."[16]

Because of the new foreign market, they could continue to develop without a fundamental progress in their techniques of production. Even when their techniques advanced, it was in such a way that the fixed capital would not be much increased as a consequence. As to the silk-

[16] The production of some new items like matches, brushes, and western umbrellas will be treated in later pages.

Table 7. THE STAPLE EXPORTS (percentage)

Ranking in 1900		1880	1890	1900	1910	1920
1.	Silk Yarn	30.8	24.8	22.3	28.6	18.5
2.	Cotton Yarn		0.0	10.2	10.0	7.4
3.	Coal	3.9	8.6	10.0	3.6	2.2
4.	Silk Fabrics	0.1	2.1	9.3	7.2	7.7
5.	Copper	1.5	9.6	6.4	4.6	0.2
6.	Green Tea	26.2	10.9	4.0	2.9	0.8
7.	Matches	1.3	2.7	2.9	2.3	1.4
8.	Cotton Fabrics	0.1	0.3	2.9	4.5	16.2
9.	Silk Handkerchiefs		4.5	2.2	1.1	0.4
10.	Straw Plait		0.2	2.0	1.3	0.7
11.	Rice & Paddy	0.8	2.4	1.7	1.3	0.3
12.	Electric Lamps		0.9	1.7	0.9	0.1
13.	Fancy Matting		0.6	1.6	0.9	0.0
14.	Glasswares	1.9	2.4	1.6	1.7	2.6
15.	Camphor	2.1	3.5	1.5	0.7	0.2
16.	China & Porcelain	1.7	2.2	1.2	1.2	1.5
17.	Alcoholic Beverages	0.0	0.1	0.6	0.8	0.5
18.	Dried Cuttlefish	2.3	2.2	0.6	0.4	0.2
19.	Lacquer Ware	1.6	1.0	0.5	0.2	0.1
20.	Agar-agar	1.0	0.6	0.5	0.4	0.1
21.	Fish-oil & Whale-oil	0.0	0.1	0.5	0.4	0.1
22.	Umbrellas	0.0	0.2	0.4	0.4	0.2
23.	Sulphur	0.1	0.5	0.3	0.3	0.1
24.	*Shiitake*-mushrooms	1.2	1.0	0.3	0.2	0.1
25.	Japanese Wax	0.9	0.5	0.3	0.2	0.0
26.	Sleepers for Railways			0.3	0.6	0.2
27.	Brushes			0.2	0.4	0.4
28.	Canned & Bottled Food	0.0	0.0	0.2	0.4	0.4
29.	Cotton Towels			0.2	0.4	0.2
30.	Buttons			0.2	0.3	0.5

Source: Tōyōkeizai-shimpō-sha 東洋經濟新報社, *Nihon Bōeki Seiran* 日本貿易精覽 (Japanese Foreign Trade, a Statistical Survey) 1935.

reeling, for example, the old fashioned reels were still in use in those years while some progress was made by the putters-out or the unions of the manufacturers in conditioning, standardization, collection, and packing of reeled silk.

5. *New Commodities Produced in the Traditional Industries*

The new products like matches, silk fabrics, china and porcelain, stockinets, buttons, and western umbrellas, which we saw in the preceding Section, were produced by the industries which come within the category of traditional industries. For their level of techniques was not much different from that of the other traditional industries. Their

method of management was what we call the handicraft system or the domestic industry of the putting-out system. Their fixed capital was relatively small, but they could have a comparative advantage in the competition with their rivals because they employed relatively much labour whose price was cheap though its productivity was low.

There were characteristic features in these industries. Some of the machines and equipment which had been introduced from foreign countries were simplified as much as possible so that they became more capital-saving. One of the examples of such simplification is the technique of silk manufacturing which was first imported from France and Italy. Around in 1875 a new machine for manufacturing silk yarn was invented in Nagano Prefecture.[17] It was a blending of the French and Italian styles but was simpler than both its originals and because of this was the prototype of the mechanical production of silk yarn which developed later in that prefecture. As for silk fabrics, the Jacquard power-loom was imported around 1872 to weave patterns. But because it was made of iron it was expensive and difficult to use. Unsatisfied with it, Araki Kohei 荒木小平 modified it, changing its main parts from iron to wood, and later it was further improved by Ideguchi Unokichi 出口卯之吉 and some others. This improved machine was widely used at Kiryū 桐生 in Gumma Prefecture, Yonezawa 米澤 in Yamagata 山形 Prefecture, and in Fukui Prefecture. While the silk fabrics industry was thus improved gradually, the batten was introduced and, being fixed to the traditional power-loom, made its productivity still higher.[18]

Another example of labour-intensive production was the match manufacturing which began in 1875 and continued to develop, finding its large market abroad. In this industry, the labelling of match-boxes was an important by-work of housewives. It had also been manual work for women workers until around 1940 to arrange match-sticks before chemicals are applied to the heads. Also until the 1930's the packing of the sticks in the boxes was done by hand.[19]

The above three cases suggest first of all that one of the most

17 Furushima Toshio, p. 239.

18 For the Jacquard and the batten, see Sampei Takako, op. cit. She says: "While the power-loom of which shutters were operated by hand was not efficient, those which were equipped with battens not only promoted efficiency greatly but could produce new patterns of cloth. The adoption of battens was very important and satisfied the increasing domestic and foreign demand for silk fabrics in the Meiji era—the growing stage of the Japanese capitalist economy." (pp. 49–72).

19 Komiyama Takuji 小宮山琢二, "*Nihon Chūshō-kōgyō Kenkyū* 日本中小工業研究 (Study on the Medium- and Small-Scale Industries in Japan), Tokyo, Chūōkōron-sha, 1941.

important conditions for the development of the production of these new commodities was that the techniques to produce them were relatively simple and that the simple techniques could be more simplified so as to be very labour-intensive and thereby to be more profitable. On the contrary if the techniques were too advanced and capital-intensive and could not be modified to be capital-saving, those commodities which needed such techniques would not be profitably produced in Japan in those days.

IV. CONCLUSION

As a conclusion of what I have hitherto mentioned, I shall restate it abstractly, thereby generalizing the experience of the Japanese economy in the Meiji era. I shall also comment briefly on how the so-called "dual structure" came into existence when the traditional industries ceased to develop.

1. Some Suggestions on the Problems of the Developing Countries

The experience of the Japanese economy in its early stage of capitalism can be generalized as follows: Suppose the labour force is increasing in a country which has little capital accumulated. Even if such a country imports the most advanced and capital-intensive techniques of production from more developed countries, it is quite unlikely that the relevant industries will sucessfully develop and employ enough labour in the country unless some other necessary conditions be satisfied. If the non-agricultural traditional industries do not develop and absorb the excess labour, the modern industries will not continue to develop. Even if they grow for awhile and transportation and communication facilities like railways are constructed, without the parallel development of the other sectors of the economy they will surely cease to develop sooner or later. And the problem of unemployment will still remain unsolved.

In the case of the Japanese economy, modern industry developed first in the field of social capital. Next, the fibre industry, developed and fostered by the government, and finally heavy industry followed it. In studying this rapid development of the modern industries, greatest attention must be paid to the fact that when the investment in social capital (which was made either directly or stimulated by the government) reached a certain stage, private enterprises began to start up light industries one after another and that almost at the same time the traditional industries developed, both of them relying on each other.

Fortunately some amount of capital had already been accumulated among the public. There was a market to consume their products or a new market was cultivated either in Japan or in foreign countries. The income yielded in the modern industries increased the demand for the products of the traditional industries, which in turn demanded the producers' goods produced by the others.

All these conditions account for the rapid modernization of the Japanese economy although there were several handicaps of course. For example, due to the unequal customs treaties signed with foreign countries it had long been impossible to protect the infant industries. Besides, there was little foreign capital inflow. Although the governmental investment in social capital kept increasing, the rate of increase began to decline in contrast with the increase in military expenditure, especially around 1900, and formation of social capital was much retarded.

In spite of these special circumstances, the process of the development of the Japanese economy seems to suggest something useful to the developing countries. That is, if one of the most important conditions for such development was the parallel development of the modern light industry and the traditional industries following the investment in social capital, the developing countries of the present day must also have their own "silk yarn, cotton spinning, and matches." They must also find enough market not only in their own country but in foreign countries, even if they can import the capital for development. The process of the development of capitalism of the Tsarist Russian economy, for example, seems to have much in common with that of the Japanese economy, although I cannot afford to study it in the present paper.

2. Formation of the Dual Structure

We saw in Table 1 that in the early 1920's the rate of the increase in the development of the modern industries suddenly began to decline and the employment in the traditional industries began to increase again. At that time most European countries were suffering from a serious unemployment problem. But it was not seemingly conspicuous in Japan, for the excess labour was somehow employed in the traditional industries. However, the circumstances were not so favourable for their continued development as before, which we shall see below. But they had to absorb the people who flowed out from the rural districts but were not employed in the modern industries, which lowered their ability to absorb the labour.

There were several conditions which prevented the traditional industries from developing. One of them was their technical changes of production. Some of the traditional industries adopted electric motors as the source of power, and others were equipped with somewhat larger machines like the iron power-loom. Now small-scale manual production could not compete with the production at factories equipped with such improved techniques and larger amount of funds. The traditional industries now began to dissolve, some surviving and others dropping out. Those who lost jobs had to find somewhere to earn their life. But the modern industries had not much room for new employment and agriculture already had excessive labour. Thus, many of them were compelled to work in the traditional industries, mostly in the petty retail trade and other services. The sediments at the lower part of the traditional industries gradually piled up.

Second, the old pattern of consumption gradually began to change from the boom-years of the First World War. The taste for the consumption goods of western origin became popular, above all in the cities. Besides, there was an evident tendency for the population to flow into the cities and the number of salaried men also increased. In response to the structural change in the market the modern industries began to produce some of the consumption goods which until then had been produced by the traditional industries. The tempo of the expansion of the market for them declined as they were compelled to compete with the modern industries.

What was worse, there was a tendency of industrial monopolization in the hard times following the post-war boom. Above all, as a consequence of the amalgamation and centralization of banks, finance to the traditional industries was severely tightened. Moreover, this was a worldwide depression period and the prices of their products fell precipitously.

There were too many unfavourable conditions both inside and outside of the traditional industries. But they persistently remained in the economy and instead they expanded in the number of their constituent units if not in their scale. Their relative income declined. The income and wage differentials between the modern and the traditional industries became large.

It was at this time after the First World War that the dual structure was formed, which we shall define as the mechanism by which both the large-scale enterprises and the medium and small-scale enterprises co-exist in spite of the wide differential in their respective incomes.