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INDUSTRIALIZATION AND INTERNATIONAL TRADE

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(I)

The purpose of this article is to examine the effects of industrialization of backward countries upon world trade. The question is that whether the volume of world trade in future may be expanded or contracted by the development of manufacturing industries in under-developed countries. On this problem, there have been two conflicting opinions. The pessimists hold that the volume of world trade will be reduced, because backward nations may be able to produce those manufactured articles which they hitherto imported from advanced nations. Thus the amount of imports from advanced nations may gradually diminish. On the other hand, the rise of manufacturing industry in under-developed area may consume raw materials which were formerly exported to industrial nations in exchange for manufactured goods. Therefore, the export of raw materials may decrease.

In opposition to these pessimistic views, the optimists believe that the industrialization will increase the national income of agricultural countries, raise their standard of living, and give rise to new demands for various manufactured articles produced by advanced countries. Even if industrialization may advance in agricultural countries, and self-sufficiency may be attained for non-durable consumer goods, itwill take a long time before they can independently produce capital goods as well as durable consumer articles. Therefore, the export of industrial countries to agricultural nations may not

decrease in spite of the industrialization of the latter.

Now let us examine some of the important points in question.

(Ⅱ)

1. Mercantilists

As the forerunners of pessimistic opinions, we may mention mercantilist writers in the 18th century. They were so jealous of the development of manufacturing industries in foreign countries, that thay strictly prohibited the export of machinery and raw materials, calling this kind of export as "bad export". They feared that their export might dwindle when the foreigners become able to produce those manufactured articles by themselves which were formerly bought from abroad.

2. Robert Torrens

In the 19th century, Torrens maintained that as population and wealth increased, all countries might tend to become more and more self-sufficient, which would decrease the volume of international trade. In his work, "An Essay on the Production of Wealth" published in 1821 (pp. 288–289), we find the following passages:

"As the several nations of the world advance in wealth and population, the commercial intercourse between them might gradually become less important and beneficial. I have already shown that species of foreign trade which has the most powerful influence in raising profits and increasing wealth, is that which is carried on between an old country in which raw produce bears a high value in relation to wrought goods, and a new country where wrought goods possess a high exchangeable power with respect to raw produce. Now as new countries advance in population, the cultivation of inferior soils must increase the cost of raising raw produce, and the division of labour reduce the expense of working it up. Hence, in all new settlements, the increasing value of raw produce must gradually check its exportation, and the falling value of wrought goods progressively prevent their importation; until at length the commercial intercourse between nations should be confined to those peculiar articles, in production of which immutable circumstances of soil and climate give one country a permanent advantage over another."

Torrens founded his theory on the law of diminishing returns of land

and on the rising productivity of labour owing to the prevalence of the division of labour with the increase of population. In applying this theory to the actual circumstances of England, Torrens is rather optimistic to state that the difficulties may lie in the remote future. He believes that "when we look to Southern Africa and to the vast continents of North and South America, we shall be convinced that centuries must roll away before the full peopling of the world interposes difficulties in the way of England's exchanging her cheap manufactured goods for the cheap agricultural produce of less advanced countries."

3. Werner Sombart

Towards the end of the nineteenth century, Sombart pointed out the "tendency of falling export ratio", that is, the ratio of the value of export to that of production tended to fall. He asserts that it is fallacious to believe that the relative importance of international trade is increasing for the modern industrial nations; the opposite is true; in recent decades, at least in Germany, the relative importance of international trade to her total economic activities has been decreasing. As the reason of this tendency, he mentions the progress of industrialization in agricultural countries.

In his pamphlet, titled "the future of capitalism," which was published in 1932, the pessimistic view is more strongly expressed. His argument runs as follows:

"……The peculiar exchange of goods between Western Europe and the remaining countries of the world will cease. It will be impossible to maintain the exchange, in as far as the already mentioned industrialization of the agrarian population continues to progress. The absorbability of these nations in respect to industrial productions will diminish, the industrial export of Wertern Europe will fade away." Further he continues, "it has certainly been said that the evolution of capitalism in the new countries will mean an impetus for industrial export for the old capitalist countries. I believe this to be a fallacious conclusion. The new capitalist countries will essentially construct their own apparatus for the means of production, namely on their own initiative; and perchance after a short period of transition, will gradually have to abandon importation of goods entirely, for the simple reason of not having equivalent values to offer for the industrial productions intended for imports. They possess no equivalent values, merely because they cannot simultaneously build up their own industry and at the

same time export raw materials and foodstuffs to Europe."

In this way, Sombart is strongly opposite to the optimistic view which holds that the evolution of capitalism in the new countries may become an impetus for the export of manufactured goods from old capitalist countries, and he maintains that the industrialization of backward countries will reduce the volume of world trade.

Among other pessimists, we count Friedrich Engels, who predicted in his work, " Die Lage der arbeitenden Klasse in England " (1845), that the industry of Britain might be defeated by the rising industry of America. The monopolistic position of British industry, he argues, is menaced by the competition of newly industrialized nations, and her share in the world export may decline.

(Ⅲ)

We have so far dealt with some of the representative views on the side of pessimism. Now we will turn to some of the optimistic opinions.

1. David Hume

In the first place, we mention the name of David Hume. In his essay, " Of the Jealousy of Trade," he refutes the mercantilist opinion, stating that the increase of riches of neighbouring nations may be beneficial for the development of trade and industry of the country. His argument may be regarded as the foundation of the later optimistic opinions, and it may be permissible to quote his long passages:

" Nothing is more usual among states which have made some advances in commerce, than to look on the progress of their neighbours with suspicious eye, to consider all trading states as their rivals, and to suppose that it is impossible for any of them to flourish, but at their expense. In opposition to this narrow and malignant opinion, I will venture to assert, that the increase of riches and commerce in one nation, instead of hurting, commonly promotes the riches and commerce of all its neighbours; and that a state can scarcely carry its trade and industry very far, where all the surrounding states are buried in ignorance, sloth, and barbarism......"

" Nor needs any state entertain apprehensions, that their neighbours will improve to such a degree in every art and manufacture, as to have no demand from them. Nature, by giving a diversity of geniuses, climates and

soils, to different nations, has secured their mutual intercourse and commerce, as long as they all remain industrious and civilized. Nay, the more the arts increase in any state, the more will be its demands from its industrious neighbours. The inhabitants, having become opulent and skilful, desire to have commodity in the utmot perfection; and as they have plenty of commodities to give in exchange, they make large importations from every foreign country. The industry of the nations, from whom they import, receives encouragement; their own is also increased, by the sale of commodities which they give in exchange."

Thus, Hume insists that the prosperity of neighbouring nations is beneficial for the development of the trade of England.

This argument may be applied to the case of present-day industrial countries, which face the problem of industrialization of under-developed countries. If these under-developed countries become richer through industrialization, it may be beneficial for the growth of foreign trade of advanced countries.

It must be noted, that so long as the industrialization is helpful for the increase of national income and for the elevation of the standard of living of those under-developed countries, this argument may well claim general validity. But, if industrialization program is reckless and is not suitable for the conditions of under-developed countries, it may reduce the real national income and be rather harmful for the welfare of these nations.

2. Franz Eulenburg

Similar optimistic view as Hume's is found in the work of Franz Eulenburg. In his treatise "Außenhandel und Außenhandelspolitik" (1929), he maintains that as population and income increase, the demand for goods and services increases, and it becomes impossible to meet this increasing demand only with limited domestic resources; the deficit must be imported from abroad; to pay for imports, one country must expand her exports; consequently it will become more and more dependent upon foreign countries, and foreign trade will increase not only absolutely, but also relatively to domestic production.

His opinion is, therefore, quite opposite to that of Sombart, although he [Eulenburg] did not specifically treat the relation between industrialization and world trade.

3. Ernst Wagemann

By means of statistical investigations about Britain, United States and Germany, Ernst Wagemann, in his famous work, "Struktur und Rythmus der Weltwirtschaft" published in 1931 reaches the conclusion that the so-called "law of falling export ratio" (Das Gesetz der fallenden Exportquote), has no general and unlimited validity, and that the export ratio depends not only upon the structure of national economy and of foreign trade, but also upon the business cycle and long-wave movement of economic activity.

Wagemann further suggests that although industrialization brings about a growing self-sufficiency of industrial products, this self-sufficiency is concerned only with consumer goods which are manufactured by means of machinery imported from highly industrialized countries; therefore, demands for producer goods may not decrease, but increase.

Wagemann concludes that the tendency of falling export ratio is observed only for the export of consumer goods, and as to the producer goods the ratio of export to production is increasing.

4. Albert O. Hirschman

In his volume, "National Power and the Structure of Foreign Trade," A. O. Hirschman classifies world trade into four types of interchange, i. e., (1) exchange of commodities against invisible items", (2) exchange of foodstuffs and raw materials against foodstuffs and raw materials, (3) exchange of manufactures against manufactures, and (4) exchange of manufactures against foodstuffs and raw materials. Then he points out that the "traditional type of exchange," i. e., the exchange of manufactures against foodstuffs and raw materials amounts only to somewhat less than one third of the total world trade, while the exchange of manufactures against manufactures, although accounting for no more than one fifth or one sixth of world trade, tends to increase, and moreover has constituted approximately one half of the total trade in manufactures.

This finding suggests that the exchange of manufactures against manufactures between old and new industrial countries may not decline, but increase; therefore, it may be concluded that industrialization of underdeveloped countries may not be injurious to the development of world trade.

(IV)

We have thus far touched upon both the pessimistic and optimistic views about the effects of industriarization of backward nations upon world trade. Generally speaking, the optimists lay much stress upon the " income effects " —— that is, the rise of national income owing to industrialization may increase imports, and thus the volume of world trade may be expanded in the long run, except for the period of transition. On the contrary, the pessimists emphasize the " structural effect "——that is, the industrialization of under-developed nations changes their industrial structure from primary producing to manufacturing.

This structural change may alter the relation between backward and advanced countries from complementary to competitive. When the relation is complementary, the trade between them may go on well, but when they turn competitive, the trade may be impeded.

To pass a fair judgement as to which view is right, we should turn to empirical evidences concerning the relation of industrialization and foreign trade over a long period. As a reliable and comprehensive evidences, we refer to a study made by the League of Nations on the problem. The research was made chiefly by Folke Hilgerdt, and was published in 1945 under the title, " Industrialization and Foreign Trade."

This study reveals the following points :

1) until about 1930, the growth of manufacturing, far from rendering countries independent of foreign manufactured goods, stimulated the import of such goods ;

2) again up to about 1930, those countries in which manufacturing developed most rapidly as a rule increased their imports of manufactured goods more than did other countris :

3) after the breakdown of multilateral trade early in the thirties, this relationship between the growth of industry and of trade in manufactured goods was severed.

It is made clear from the above findings that the optimistic view holds true to the conditions prevailing before the great depression early in the thirties, but the pessimistic opinion claims validity for the situations thereafter.

Why the optimistic view has lost its ground since the great depression? The reason mentioned by the above study is that the multilateral trade system has been broken down since 1930. The revival and the maintenance of the effective working of the multilateral trade system is therefore the remedy for the harmonious development of both the advanced and backward nations. In other words, if the trade barriers be removed and all nations specialize in those branches of industry in which they have comparative advantages, and exchange their products freely each other, the volume of world trade would be enlarged keeping pace with the progress of industrialization.

In addition to the removal of trade barriers, the re-adjustment or the co-ordination of the international division of labour may also be necessary. According to the "law of comparative cost", benefits from international trade may be largest, when the difference of comparative costs is widest. The industrialization of backward nations tends to narrow this difference of comparative costs. It is necessary for the old industrial countries to widen the difference through new inventions and other technical improvements or establishment of new industries. The advanced countries specialize themselves in higher grade or new industries, leaving those of lower grade to new industrial nations. If we succeed in the re-adjustment of the international division of labour in this way, the world trade would expand, as the industrialization of backward nations advances.

ECONOMETRIC DETERMINATION OF FOREIGN EXCHANGE RATE OF JAPAN FOR 1926–1935

Hikoji KATANO

1. So far there developed certain kinds of theories to explain how the foreign exchange rate is determined. I do not attempt, in this paper, to review the theories. I will attempt to show, according to the labour theory of value, what the foreign exchange rate is and how it is determined.

2. The production which has the sway over the capitalistic economy is the commodity production. According to the labour theory of value, the value of a commodity is the sum of the direct labour and the indirect labour. The direct labour is a direct labour hours needed for the production of a unit of the commodity, and the indirect labour is the value of the means of production needed for the production of the same. And the value of the means of production which is held in an indirect labour is again the sum of the direct labour and the indirect labour. Thus the value of a commodity, t, is primarily determined by the following simultaneous system of equations:

$$(1) \qquad \sum_{j=1}^{k} a_{ij}+\tau_i=t_i, \quad (i=1, \cdots, k, k+1, \cdots, k+l)$$

where k stands for the number of means of production, l for the number of consumption goods, and there may be needed a_{ij} units of the j-th commodity and τ_i units of the direct labour for production of a unit of the i-th commodity.

In the commodity production society in which there are a social division of labour and a capitalistic ownership of the means of production, direct producers are deprived of their means of production by the capitalist. They are obliged to make their labour power a commodity and to sell it to a capitalist by whom all means of production is kept. They form a wage-labour class which is a particular class in a capitalistic society. And in this society, each branch of social division of labour is held by the capitalist, and all products produced there are owned by him. For this reason, in a capitalistic commodity production society actual expenditure of labour is not social in itself, and must be remeasured by a social measure. That is to say, in such a society, each capitalist makes a hired labour to produce a particular value in use, and exchanges it others which are possessed by the other capitalists. In such a case, each labour of direct producers does not appear as a social labour directly. To be hired by capitalist, it produces any kinds of value in use. And, to be exchanged each other, it appears as a social labour. Therefore, individual direct labour is not social in itself, though it is expended to produce any particular kinds of value in use. It does not dominates many other kinds of value in use as a concrete and useful labors which is expended to produce particular kinds of value in use, but as a general and abstract human labour which is abstracted from them. And while such a general and abstract human labour has a qualitatively social character as above-mentioned, it must be remeasured by a social measure quantitatively.

That is to say, an actual labour hour needed for producing a unit of particular value in use is not a social measure, however much it may be needed, but only a socially necessary labour hour which is needed for producing the same value in use is social. But above mentioned socially necessary labour hour is not a socially average labour hour. Value used in the simultaneous equations system (1) is measured by such a socially necessary labour hour.

How does it appear in a commodity produced by private producers which contain a certain general and abstract human labour? In a commodity production society, there is no authority to consciously plan all social production. So that there is no bureau to authorize how much value a commodity contains. In such a case, there is no alternative but to show the value of a commodity based on the other particular commodity. And, in

order that a labour expended to produce a particular commodity is a completely social general and abstract human labour, it must be shown not only the equality between a labour contained in one commodity and in another commodity, but also the equality between a labour contained in one commodity and in all the other commodities. However, this may be impossible. And in a commodity production society, the values of all commodities are shown by money, in which the labour expended for production of money commodity is a socially necessary labour, a general and abstract human labour, in itself. Thus, all commodities but money express their sociality of labour expended to produce them in a form that represents so many units of money commodity one unit of each commodity equals. Thus, the value appears in a form of price.

Now, when gold (the 1–st commodity) is the money commodity, the rate of each value of commodity to the value of gold is: ……

$$(2) \qquad P_i=\frac{t_i}{t_1},\ (i=1,\cdots,k,k+1,\cdots,k+l).$$

We call this "value price" to make it distinct from the below mentioned actual "money price" and "production-price".

Next, how does an actual price is formed? In a capitalistic commodity production society, a fundamental motive of production is a capitalistic pursuit of profit. That is, he carries out production so as to gain a maximum profit for his invested capital. His invested capital for production is composed of a value of necessary means of production and wage paid for labors. Even if the wage rate is equal in each industry to produce different kinds of value in use, when an organic composition of capital is different in all industries, direct labour does not proportionate with value of capital. Therefore, in such a case, the above-mentioned condition of value price which is led by a capitalistic competition in order to maximize a revenue per capital (rate of profit). This is caused by the fact that the way to determine prices are different in both national value systems respectively.

Thus, capitalistic competition generates a price conditions in which the rate of profit is equal in all industries. This condition is as follows:

$$(3) \qquad (1+r)\left\{\sum_{j=1}^{k}a_{ij}p_j^*+\sum_{j=k+1}^{k+l}b_j\tau_i p_j^*\right\}=p_i^* \qquad (i=1,\cdots,k,k+1,\cdots,k+l),$$

where p_i^* stand for production prices measured by money commodity, gold;

r for an average rate of profit; and b_j for an amount of living materials needed for reproduction of one labour hour of direct producers. (3) is reexpressed in more simple form as follows;

$$(4) \qquad (1+r)\sum_{j=1}^{k+l} a_{ij}p_j^* = p_i^*,$$
$$\text{for } b_{ji}=a_{ij}(j=k+1, \cdots, k+l)$$
$$(i=1, \cdots, k, k+1, \cdots, k+l)$$

And in this system, in order to be only a positive average rate of porfit under all positive prices, all principal minor determinants composed of

$$(5) \qquad (E-A) \quad ; \quad A=(a_{ij})$$

must be positive. This means that there must be a surplus product; suplus value in capitalistic society.

Now, gold, which enables to render to its owner the service of a universal equivalent, operates as a national money with a national uniform (different kinds of a unit of the measure of value, a name of maney and a form of mintage in different countries). That is, gold, in a qualification of the universal equivalent, carries out its functions as the measure of value. But if it makes each value of commodity appear their prices, then gold must be connected with a certain amount of it as a unit of measure. This amount of gold as unit of measure construct a standard of money price. Now, this standard of money price is, on the one hand, pure traditional by nature, and on the other hand, must be needed to be generally available. For this reason, this has been, after all, prescribed by law: Namely this is determined by the general agreement of commodity owners. However, such a condition can be realized only in an individual country. This is due to the fact that there is not a general agreement of commodity owners in the whole world.

In a country, say Japan, a standard of money price " yen " is determined to stand for unit yen with u units of gold

$$(6) \qquad ¥1=Gu$$

Then, the condition of production price (3) is transformed into the condition of money price expressed by Japanese standard of money " yen ".

$$(7) \qquad (1+r)\left\{\sum_{j=1}^{k} a_{ij}p_j+\sum_{j=k+1}^{k+l} b_j\tau_i p_j\right\}=p_i,$$
$$(i=1, \cdots, k, k+1, \cdots, k+l)$$

where

$$(8) \qquad p_i=\frac{p_i^*}{u}$$

3. So far, we saw only about one country. But, from now on, we will study international relations. However, for simplicity, we assume the world composed of two countries, say Japan and the U. S. A.

Possibility with which these countries may be tied to transact each other depends upon the condition that production conditions are different in both countries. For, under such a condition, the above mentioned value prices for the same commodity are naturally different in both countries. The order of this defference are arranged as follows ……

$$(9)\qquad \left.\begin{matrix}(P_1^1-P_1^2)\\ \cdots\cdots\\ (P_m^1-P_m^2)\end{matrix}\right\}\oplus \qquad \left.\begin{matrix}(P_n^1-P_n^2)\\ \cdots\cdots\\ (P_s^1-P_s^2)\end{matrix}\right\}\ominus \qquad (s=k+l-1),$$

where superscripts 1 and 2 stand for Japan and the U. S. A. respectively and subscripts 1, ……, m, n, ……, s stand for a number of commodities to be orderly arranged from plus to minus. The principle of comparative cost shows that the 1-st commodity in this order is the most favourable one for the U. S. A. at the time of international transaction and the lower ordered commodities has lesser favour and at the last the favour is transformed from positive to negative, and that, for Japan, the favour appears as soon as the disfavour appears for the U. S. A. and the s-th commodity is the most favourable. Such a favour is caused by the fact that these favourable commodities may be chosen as exportable commodities for international transaction, which would produce more surplus value and increase the rate of profit in each country. However, in such a case, to what numbered commodity the U. S. A. choice falls as her exportable commodities and to what numbered commodity Japan's choice does fall are all decided by the conditions of production power and reproduction in both countries.

Thus we see the possibility of international transaction between both countries, based upon the difference in production conditions in both countries. But, as above mentioned, in the world market without any uniform standard of price, the value of commodity sold by Japan to the U. S. A. has, at first, Japanese price indicated by the unit of measure of "yen" value provided in Japan, and then has the U. S. A.'s price indicated by the unit of measure of "dollar" value provided in the U. S. A., *vice versa*. Thus, there

appear the necessity to convert one country's price into the other country's price.

In the first place, such a conversion must be carried out based upon the rate of values between Japanese money and the U. S. A.'s money. Such a rate of value is caused only by the fact that gold which is material of money has a certain amount of value in each country. But, in the actual international relation, one unit of gold in the U. S. A. can be passed freely as one unit of gold in Japan. So that an international rate of value of money depends upon the amounts of gold contained in the money of both countries. Now, each name of money is given to the certain amount of gold in each country. So that the money of both countries can be converted from one to another according to the amount of gold contained in money, say ¥100=$ 50. The rate of value of Japanese money to the U. S. A.'s money is expressed in such a conversion rate. Then the rate of value of money may be expressed as a form of the rate of conversion of money, and this prepares a standard of conversion of money, and this prepares a standart of conversion of price. As shown in such a case, a necessity of conversion of money is deduced from a necessity of conversion of price.

Thus, in the world market without a general will of the commodity owners, gold functions as a measure of value only with a conversion of price or money. And, in this case, gold can not function through any representatives as a credit and a paper money, but must work by itself, because a money of one country with its own nationality can not be circulated in its own form in other countries. Thus, a nationality must be converted from one country to another. Such a conversion of nationality is possible only with a medium of gold. So that, those who will buy commodity from abroad must exchange their country's money into the money usable abroad, or into gold. Thus, in this case, a conversion rate of money appears as a money exchange rate. This money exchange rate is called " mint parity ", because this rate is about the amount of gold contained in each country's standard money provided by respective countries. Now, when u^1 stands for an amount of gold contained in the Japanese standard money (" yen ") and u^2 in the U. S. A. ……

$$\begin{aligned} ¥\ 1 &= G\,u^1 \\ \$\ 1 &= G\,u^2, \end{aligned} \tag{10}$$

where the money exchange rate of the one country's money to the other

country's money is shown as u^1/u^2 or u^2/u^1 in

$$\text{(11)} \qquad \begin{aligned} \text{¥}\ 1 &= \frac{u^1}{u^2}\ \$1 \\ \frac{u^2}{u^1}\ \text{¥}\ 1 &= \quad \$1. \end{aligned}$$

4. Money exchange rate is generated from the simple commodity circulation between both countries. And, in the course of develpment of credit system, the above rate has been evolved into an exchange quotation rate.

Commodity transaction based upon credit system changes buyer to debtor, and seller to creditor. At certain stage of the development of international circulation and credit, there are debtors and creditors in each of both countries. In such a case, it is possible to internationally balance the credit and the debt. The balancing method is not essentially different from that practiced within a country. Generally speaking, its fundamental form is the transaction and transfer in terms of a bill of foreign exchange. And by this balancing, each country attains the saving of payment in coin (or the saving of sending of specie).

In this case, when a credit balances a debt in each country, the sending of gold is saved completely. But if a credit does not equal to a debt, and if the balance does not offset completely, a country with an excess-debt must pay the excess-balance of payment in gold. In such a case, gold functions as a universal means of payment in an international circulation.

Now, while an international balance of payment is offset and sending of gold is saved, an international payment is transferred into a payment within a country. In such a case, a foreign exchange bill, which is sent from a debtor in one country to a creditor in the other, does not function as a means of payment in a form of credit money, but merely one of the processes of balancing. And the greater the development of credit system and the centralization of payment are, the more the purchase and sale of bill on one hand and even the collection of it are balanced. In such a case, money is only a complete ideal culculating money. But there may always potentially be a metalic money within this culculating money. And under the certain conditions, such an ideal form of money must be transformed into its actual form (of metalic money), whether willing or no. But as far as the international balance of payment is offset, money functions only in the form of culculating money.

When the international balance of payment is offset, even if money functions only in the form of culculating money, there still be an international production relation by which the necessity of conversion of price and exchange of money are brought.

Under the commodity transaction on credit, values of commodities in terms of moneies in both countries show its figures in the balancing process of payment as a credit and a debt. Conversion is necessary once again. For example, Japanese debt to the U. S. A. in terms of dollar must be converted into the terms of yen. That is, Japanese debt to the U. S. A. in terms of dollar must be offset by Japanese credit on the U. S. A. in terms of yen. In order to make the credit counterbalance the debt in Japan, Japanese debt in terms of dollar must be converted into the terms of yen. As this conversion is done at the time of payment, this substitutes an actual exchange of money, and has a different character with a conversion of price. Necessity of this conversion reflects with the necessity of money exchange. In other words, what appears originally as an actual exchange of money to money (of dollar to yen) is not realized by the balancing of payments. And yen and dollar as a culculating money are merely exchanged ideally, and this exchange is nothing but to take a form of conversion. Therefore, the rate of exchange, in this case, takes an ideal form of " rate of conversion ".

There is an actual money potentially within a culculating money. It may be expected to make it possible to transform a culculating money into an actual money. And in the exchange of mintage or coin, an exchange on a rate of value is possible. Therefore, even when a value of credit in terms of dollar is converted ideally into a value in terms of yen and this is exchanged with an actual value in terms of yen, the exchange is governed by the same law. So that, this conversion must be, at first, done on the money exchange rate. Thus the conversion rate (the cxchange quotation rate) is determined by the money exchange rate.

Exchange transaction is carried out for a balancing of payment. Selling and buying of exchange bill appears as a means to attain the end. Exchange bill is one kind of note to indicate a credit. But in such a case of foreign exchange, this may be transformed into a commodity as a bill which can be realizd as same amount of value in terms of foreign money. In the course of the development of credit system, when this bill does not appear in a market actually, but appears only as a form of selling of foreign money

mediated by a foreign exchange bank, it may appear as a commoditized foreign money.

Aside from a money exchange rate, here is formed an exchange quotation rate. The latter deviates from the former. Exchange quotation rate expresses a rate of conversion as an ideal money exchange rate which is generated on the process of international balancing of payment, and is a developed form of a money exchange rate.

5. How does it appears to deviate an exchange quotation rate from a money exchange rate?

On a money exchange transaction, moneies of all countries are corresponded and exchaged on the substance of metal and metals really and directly, by which the same amount of gold (the money commodity) is transformed from one form of mintage to the other. Therfore, then, a mutual offer of money is not divided into a demand and a supply respectively, and does not take the corresponding form. In this case, the mutual offer of money does not stand face to face with a different value.

And, on an exchange quotation transaction of money, a direct offer of real money is avoided in the first stage. An object of this transaction is limited within an ideal being of money value to be paid. Thus, at a certain time, a money value to be paid from abroad takes a form to be transfarred as a credit, or a form of foreign exchange bill, and independently appears as a quantitatively limited supply of money. On the other hand, those who have a debt for abroad make their appearance as demander. Their demand is independently decided by the amount of money value to be paid for abroad. Thus, as a money value to be paid from and to be paid for at the same time coincides with each other only by accident, this demand and supply always correspond with a different amount of money value. Such a evolution is only an expression of the expansion of contradiction upon a development of production relation in itself; from the relation of buyer to seller to the relation of debtor to creditor.

Those who transact in the credit abroad with a form of foreign exchange bill estimate and express many kinds of foreign money to convert them into their own national money. Such a value of their own national money is the starting point for them. That is, demand for the credit for the U. S. A. excesses its supply. Then, according to the law of competion, a dollar value is estimated over an yen value, *vice versa*. Thus, an exchange quotation rate

deviates by a difference reduced from the excess demand of an exchange bill out of a money exchange rate ……

$$e^* = \frac{u^1}{u^2} \pm f(E), \tag{12}$$

where e^* stands for an exchange quotation rate, and E for the excess-demand of an foreign exchange bill.

Under the gold standard system, the system in which a payment in specie is not obstructed and therefore a culculating money is freely transformed into a coin, a maximum and a minimum of an exchange quotation rate are determined by the cost which is composed of a transportation costs and others of a necessary amount of gold for the payment in specie. Such a limiting quotation is called the specie point; the maximum or minimum fixed price. When an exchange quotation rate fluctuates within the costs, the cost needed for payment is less than the cost for the sending of the specie. Therefore, the exchange quotation rate (12) is limited under the gold standard system as follows ……

$$\frac{u^1}{u^2} - \sigma \leq e^* \leq \frac{u^1}{u^2} + \sigma, \tag{13}$$

where σ stands for the above-mentioned costs. Thus, in either case, an ideal money exchange rate deviates from the rate of value of money.

The above mentioned process of estimation, expression and conversion is a social one which is free from the will of individuals concerned, and as an objective results of such a process the new conversion rate is continually formed. Thus a fluctuation of an exchange quotation rate appears.

Even if the rate of value of money does not change, a fluctuation of an exchange quotation rate is, in the first place, generated by the relation between demand and supply of foreign exchange bill. Fall of an exchange quotation rate is nessarily generated by an excess-payment, and rise by an excess-revenue. But, under the gold standard system, it fluctuates within the above mentioned limits between a maximum and minimum fixed prices. The fluctuations over this limit are all immediately absorbed into the sending of gold. Therefore, so long as the law of maximum and minimum fixed prices is accepted, even if an exchange quotation rate separates from a rate of value of money, the former is regulated by the latter. Under such a condition, an exchange quotation rate is stable. This stability condition is that an idealized money as a credit and a debt is always transformed

into an actual money. In other words, gold as money is always ordered out for an excess payment, or as an international circulation of the universal equivalent is not obstructed.

The second cause of a fluctuation of the exchange quotation rate is the change of a rate of value of money.

Even if a value of metal (a material of money) is not changed, when a defacement by circulation and a bad-casting by goverment appear, the amount of metal (gold) included in a unit of the country's money becomes less than the weight in law. In such a case, gold as mintage contradicts gold as the universal equivalent, so that the function of the universal equivalent in the interior circulation is crooked. And such a disorder propagetes into an international circulation, because gold as the universal equivalent functions in the world market. Thus the rate of value of a home money to a foreign money is fallen.

In this case, an exchange quotation rate falls whether one is willing or not, because the old value of home money indicated in an exchange quotation rate is already lost and then more coins than par value is needed for the payment in specie.

The other cause of reduction of money value, like the above mentioned, is a change of relative value of gold to silver between the country with the gold standard and with the silver standard. But we will not touch this problem in details here.

The same condition as above mentioned is caused if a paper money inflation is generated. Under such a condition, the gold mintage is all withdrawn from the circulation, and there is only a paper money in circulation. And, in thin case, the value of paper money falls, and represents the smaller amount of gold than it is. Thus money as a means of circulation is reduced in value. Then a contradiction between a gold represented in paper money as the universal equivalent appears. And this contradiction comes out as the premiun for gold, on the one and a general rise of commodity price, on the other. And an amount of gold as a standard of price is constant in law, it is already reduced economically. Therefore, the contradiction evolves to what there is between a gold as a standard of price and as the universal equivalent. And this, according to this contradiction, an exchange quotation rate is fluctuated by force.

An exchange of money is governed by the law of value. Therefore, the

law that the rate of money value governs an exchange quotation rate appears. The downward movement of an exchange quotation rate in the above mentioned two cases show models in which the law penetrates itself upon the respective forms under the respective conditions.

The fall of an exchange quotation rate of this kind is not caused by the international excess-payment, but by the fall of a rate of maney value. Therefore, even if the balance of payment in both countries is equalized upon the culculation by the mint parity, it may be generated. The sending of specie, then, can not recover the old exchange quotation rate. The fall of an exchange quotation rate caused by the reduction of money value can overcame if and only if the cause is rectified.

Such a fall of an exchange quotation rate, expressing a fall of the rate of money value, has a different chanacter from the one indicating a deviation of an ideal money exchange rate from a rate of money value. However, both can be generated at the same time. In other words, while a certain exchange quotation rate is provided by the temporary rate of money value, a fluctuation caused by the demand for and supply of the foreign exchange bill is generated at the same time.

6. Now, even when the rate of money value is constant, if the law of maximum and minimum fixed prices is destroyed by the force from outside, an exchange quotation rate may be over the maximum and minimum fixed prices. Such a fluctuation shows a deviation of an ideal money exchange rate from the rate of money value.

For example, when Japan has an excess payment over revenue and there is an excess supply of a foreign exchange bill over the demand for it, if, though an exchange quotation rate falls and reaches the minimum fixed price, the sending of specie is impossible, in other words, the calling of gold as the universal equivalent is obstructed, the quotation must fall over the minimum fixed price.

So far as the law of the maximum and minimum fixed prices is destroyed like this, an exchange quotation rate falls endlessly. It is, even in such a case, because, the conversion of a money in one country into the money in the other is carried out by force. However, now, an ideal money exchange rate does not only deviate from the rate of money value, but be free from it. And, in such a case, the law of value to govern the exchange of money to money is broken against one's will.

When the free circulation of gold as the universal equivalent in the world market is obstructed from outside, and when, say, quotation in terms of yen falls as the result of it, Japanese money standard seems to be reduced in its value economically within the crooked relations of an ideal exchange of money. That is, yen as a culculating money is transformed into what represents less amounts of gold than is indicated in the law. Thus, in this case, the reduction of money value as the culculating money in the world market appears at the first place.

As is shown above, when the real cut down of money standard is caused, there must be a contradiction between the gold as the money standard and as the universal equivalent. The money standard can not function as such.

Reduction of yen (or dollar) as a cluculating money may be already generated in a small degree even when an exchange quotation rate deviates from the rate of money value within the limit of the maximum and minimum fixed prices. However, as the exchange quotation rate in this case still be governed by the rate of value, a reduction of yen (or dollar) appear as a hitch of the function of gold as the universal equivalent. On the contrary, when a exchange quotation rate is no more governed by the rate of value and the limit of fall is endless, a reduction of yen (or dollar) has quite a different significance. This reduction is generated within the function of the culculating money to internationally counterbalance, but this must warp the functions in the circulation at home, because that a gold as the universal equivalent functions not only in the international circulation, but also in the circulatio nat home. When an exchange quotation rate falls, prices at home increase in proportion to the fall and the amount of money increases accordingly. But this phenomenon must not be confused with the fall by a paper money inflation.

7. Lastly, we will examine the actual experience about the above-mentioned fact. Inspection in detail is impossible from the point of view of the statistical data. But, broadly speaking, we may clarify it as follows……. Under the normal gold standard system, the mint parity is decided by the amount of gold contained in each country's money. However, under the conditions of a prohibition of gold export, parity is decided by the amount of gold to stand for each country's money. And the gap between the parity and the actual exchage quotation rate depends mainly on the net balance of payment of the country.

Here, as in the above mentioned, we consider the exchange quotation rate between Japan and the U. S. A. Investigated priod is over a decade from 1926 to 1935 ; during this period, gold export was prohibited for 1926–29, for 1930–31 the inflow and outflow of gold is free momentarily, and for 1932–35 it is prohibited once again.

The assumption in the above consideration is that the world is composed of two countries, Japan and the U.S.A. On the contrary, in the actual world, there is many countries, and all countries have respective kinds of money. However, even in such a case, if the convertibility among the worldly circulable money (say, dollar and pound sterling) is large, it may not cause a trouble to assume as in this article. For, whether the payment by Japan for the U. S. A. is due to dollar bill or the pound sterling bill will cause no trouble, if the convertibility between dollar and pound sterling is large. For the period 1926–35, we can accept that this convertibility is large enough. That is, comparing the Yokohama-New York T. T. selling rate ($ per ¥100) with the Yokohama-New York T. T. cross rate ($ per ¥100) which is made by making the Yokohama-London T. T. selling rate (£ per ¥100) connect with the London-New York cross rate ($ per £1), the difference is very small. (cf. Table 1).

Table 1 Exchange Quotation Rate

	Yokohama on New York T. T. Selling Rate (A)	Yokohama on London T. T. Selling Rate	New York–London Cross Rate	Yokohama–New York Cross Rate (B)	(A)–(B)
	($ per ¥100)	(£ per ¥100)	($ per £1)	($ per ¥100)	($ per ¥100)
1926	46.865	9.6416	4.8581	46.8398	0.026
1927	47.425	9.7529	4.8613	47.4117	0.014
1928	46.457	9.5416	4.8662	46.4313	0.026
1929	46.069	9.4808	4.8573	46.0510	0.018
1930	49.367	10.1424	4.8621	49.3144	0.053
1931	48.871	10.8079	4.5335	48.9987	−0.127
1932	28.099	7.9741	3.5045	27.9452	0.154
1933	25.220	6.0033	4.2189	25.3273	−0.107
1934	29.511	5.8604	5.0393	29.5323	−0.021
1935	28.570	5.8333	4.9032	28.6018	−0.031

Source : The Annual Bulletin of the Financial and Economic Statistics of Nippon, The Institute for Commercial Research, The Kobe University of Commerce.

Under the prohibition of gold export, it is difficult to statistically distinguish the paper.money inflation from the exchange inflation. Therefore, our inspection does not distinguish these two kinds of inflation. Money value is reduced by whether the amount of paper money is increased or the export of gold is prohibited. Then, under the normal amount of paper money and the normal gold standard, the prices of commodities are

$$p_{io}=\frac{p^{*}_{io}}{u_o},\quad (i=1,\cdots,k,k+1,\cdots,k+l) \tag{14}$$

and when the production condition are constant and the value of money is reduced, these are

$$p_{it}=\frac{p^{*}_{it}}{u_t}\quad (i=1,\cdots,k,k+1,\cdots,k+l). \tag{15}$$

So that,

$$u_t=\frac{u_o}{\bar{p}_{it}}\ ;\ \bar{p}_t=\frac{\bar{p}_{it}}{\bar{p}_{io}}. \tag{16}$$

Assume that the basic time points in Japan and U. S. A. are the same, the of money value in both countries represents the money exchange rate at that time, or parity,

$$\frac{u^1_t}{u^2_t}=\frac{u^1_o}{u^2_o}\cdot\frac{\bar{p}^2_t}{\bar{p}^1_t}=\frac{u^1_o}{u^2_o}\cdot\frac{\dfrac{\Sigma w^2_i\bar{p}^2_i}{\Sigma w^2_i}}{\dfrac{\Sigma w^1_i\bar{p}^1_i}{\Sigma w^1_i}} \tag{17}$$

where superscripts 1 and 2 stand for Japan and the U. S. A. and

$$\frac{\Sigma w^1_i\bar{p}^1_i}{\Sigma w^1_i}\ \text{and}\ \frac{\Sigma w^2_i\bar{p}^2_i}{\Sigma w^2_i}$$

stand for the wholesale price indeces in Japan and the U. S. A. respectively. Thus, right side of (17) represents the so-called " purchasing power parity ". The culculated purchasing power parity is shown in Table 3 (F).

So far, our inspection depends mainly on the theoretical inference. And, in order to ascertain whether this theoretical inference can explain the reality throughly or not, we must undertake the last inspection. The last inference is that the gap between the real exchange quotation rate and the purchasing power parity depends on the net balance of payment. The result of inference is shown in Figure 1.

For this inspection, we divide the whole period into two periods; the first period 1926-29 and the second period 1932-35. Correlation coefficient for the first period is -0.909, and for the second period is -0.360. For the

Table 2 Wholesale Price Index

	Japan		U. S. A.		$\frac{(D)}{(C)}$
	1934–36 =100.0	1930=100.0 (C)	1926=100.0	1930=100.0 (D)	
1926	115.7	130.7	100.0	115.7	0.885
1927	109.9	124.2	95.4	110.4	0.888
1928	110.6	124.9	96.7	111.9	0.895
1929	107.6	121.6	95.3	110.3	0.907
1930	88.5	100.0	86.4	100.0	1.000
1931	74.8	84.5	73.0	84.5	1.000
1932	83.0	93.7	64.8	75.0	0.800
1933	95.1	107.4	65.9	76.3	0.710
1934	97.0	109.6	74.9	86.7	0.791
1935	99.4	112.3	80.0	92.6	0.824

Source: Economic Statistics of Japan, Statistic Department, The Bank of Japan. Statistical Abstract of the United States. United States Department of Commerce.

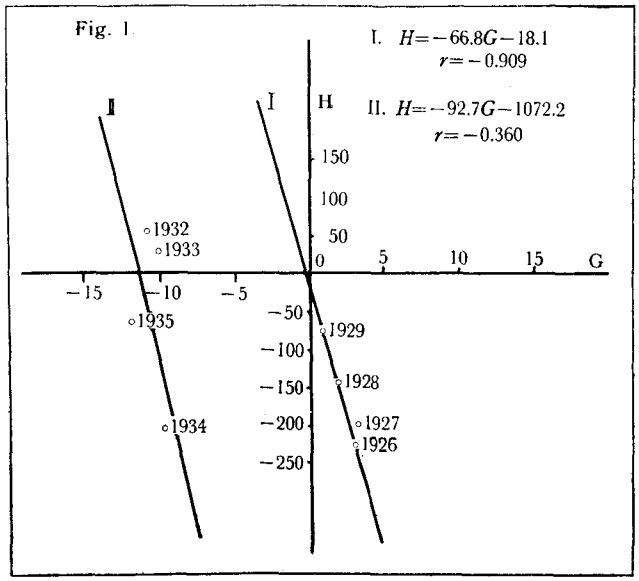
Table 3 Mint Parity and Purchasing Power Parity

	Mint Parity (E)	Purchasing Power Parity (F)*	(G)	Balance of International Payment (H)
	($ per ¥100)	($ per ¥100)		(in mil. of yen)
1926		44.113	2.743	−233.8
1927		44.262	3.163	−191.5
1928		44.611	1.846	−147.9
1929		45.209	0.860	− 74.0
1930	49.845	49.845	− 0.478	111.6
1931	49.845	49.845	− 0.974	98.1
1932		39.876	−11.777	55.3
1933		35.390	−10.170	31.8
1934		39.427	− 9.916	−200.1
1935		41.072	−12.502	− 61.9

*: $(F)=(E)\cdot\frac{(D)}{(C)}$

$(G)=(A)-(F)$

Source: The Annual Bulletin of the Financial and Economic Statistics of Nippon, The Institute for Commercial Research, The Kobe University of Commerce.



latter, we consider that this correlation is confused by the accumulation of compulsion in both the recovery period of the great depression and the period of disprohibitation of gold export. On the contrary in the first period without these causes of confusion, this correlation is very high. Therefore, for the comparatively normal first period, the above mentioned theoretical inference is about the case. However, for the second period with confusion, the other theoretical inference must be asked.

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PRESENT STATUS OF JAPAN'S SHIPPING

Ginjiro SHIBATA

1. ECONOMIC CONDITION AND SHIPPING BUSINESS IN JAPAN

Japan, whose population amounts to near ninety million within the narrow land area of about one hundred forty seven thousand square miles, must necessarily import tremendous amount of all sorts of materials for their industries and consumption. The shipping is, therefore, an essential industry for Japan as transportation facility proper as well as the source of international current revenue. Until 1930s unfavorable balance of trade had been fully covered by the receipts from our shipping business as shown in Table I.

After World War II, the aspect of our international payment, however, has changed extremely as compared with that of the pre-war period. A remarkable excess of imports over exports was shown every year until the last half year of 1954 when the exports advanced extraordinarily and the imports decreased unusually. Only the shipping trade increased its revenue to about 200 million dollars on an annual average during that period, and covered a considerable portion of the unfavorable balance of international payment. Thus, the shipping revenue has held a higher position among the items of our international accounts than the exports of cotton manufactures or steel materials or all kinds of machineries. But the extent of covering the unfavorable balance of trade was extremely reduced as

compared with those of pre-war time as shown in Table I, i. e. the percentages of the net receipt from the shipping item to the balance of trade were from 15% to 32% for the post-war time, while that percentage for the seven years of the pre-war time was about 180% on the average. The balance between the shipping receipt and the balance of trade for post-war time was covered mainly by the official grants by United States and other Governmental transactions with the United States until 1951, and subsequently by the " special demands " of the U. S. Army stationed in Japan. (financed from the fund of E. C. A. or later from M. S. A.)

But the special demands have been remarkably decreased recently and the other invisible incomes from other than the shipping business are not much to be expected, and yet a large amount of the excess of imports over exports will be inevitable owing to the economic structure of Japan, excepting a rare case that happened in a short time in the second half year of 1954. After all, to maintain the economic stability the shipping business is an indispensable factor for Japan.

TABLE I International Balance of Payments.

(In Millions of Yen)

Items / Years	Merchandise Trade			Shipping			Other items than shipping		
	Exports (FOB)	Imports (CIF)	Excess	Receipts	Payments	Excess	Excess in Current items	Excess in Capital items	Total
Annual average for 1930–36	2,006	2,083	−77	238	99	+139	+2	−189	−187
1951	569,384	723,539	−154,155	55,825	5,847	+49,978	+221,173	+11,445	+232,618
1952	463,919	737,424	−273,505	74,373	6,917	+67,456	+262,958	−14,244	+248,714
1953	452,819	865,994	−413,175	74,262	10,351	+63,911	+276,908	−62,984	+213,924
1954	573,716	858,499	−284,783	79,377	15,143	+64,233	+212,958	+14,417	+227,375

Source: "Economic Statistics of Japan," the Bank of Japan, 1955.

2. RECONSTRUCTION OF MERCHANT FREET IN JAPAN

The Japanese merchant marine, excluding the vessels under 1,000 G. T., is made up of 1,154 ships in number and 3,640,000 G. T. in tonnage as in

September 1955. Looking back upon the fact that at the end of the War there was only 1,340,000 G. T. in total, including recoverable sunken vessels and unseaworthy vessels for ocean voyage, it may be said that our merchant marine has remarkably recovered in tonnage and in quality during these ten years. But compared with the reconstruction ratio on the existent tonnage in foreign countries, it must be recognized that existing state of merchant marine in Japan is certainly inferior to theirs, that is, the latter at the end of 1954 was shown to be only about 80% as compared with those in 1936, and its position in the world was 3.7% in percentage and seventh in rank at the middle of 1954, while in 1936 they were 6.6% to the world total and the third in the world rank.

Immediately after the War, the occupation force's policy on the Japanese shipping seemed to have been negative for reconstruction of merchant marine which had served as a potential military power in the past, and a narrow permission was given only for the continuance of building of the "war standard vessels" whose works had been suspended for a time at the end of the War and the building of passenger boats for inland sea. Afterwards, to alleviate the extreme shortage of carrying capacity for inland transportation, the ship-building plans were annually permitted from the General Head Quarter of Allied Forces to both the official shipping incorporation and the independent shipowners from 1947 to 1949. But a regular reconstruction of the merchant fleet was started at length in 1950. That is, since 1950 independent shipowners have been permitted to build big vessels for overseas route as was in the pre-war time, and until the end of 1954, the shipowners have built 222 ocean-navigable vessels in number, 1,710,000 G. T. in tonnage as shown in Table II. Besides these new built vessels, there were 68 war-standard vessels in number, 510,000 G. T. in tonnage, which were remodeled into those qualified for the international class boat. Furthermore 56 slightly used vessels in number and 310,000 G. T. in tonnage had been imported from foreign countries since 1950. Thus, the total tonnage of ocean navigable merchant vessels of 3,000 G. T. and over, adding the formerly held vessels (about 70,000 G. T.) to the above mentioned tonnage, amounted to 2,610,000 G. T. at the end of 1954.

On the other hand, the world total tonnage of merchant ships (total of each 1,000 G. T. and over ships) developed from 64,005,000 G. T. in 1936 to 97,422,000 G. T. in 1954 and, as shown in Table III, the United States, Norway,

TABLE II Ship Construction
—— Seagoing Vessels Completed ——

	Freighters		Freight-Passenger ships		Tankers		Total	
	No.	G. T.	No.	G. T.	No.	G. T.	No.	G. T.
1949	37	207,390	—	—	6	72,000	43	279,390
1950	33	217,750	—	—	2	25,000	35	242,750
1951	43	307,930	—	—	5	66,200	48	374,130
1952	28	190,620	1	8,280	11	144,950	40	343,850
1953	31	238,260	1	10,100	5	64,000	37	312,360
1954	19	154,470	—	—	—	—	19	154,470
Total	191	1,316,420	2	18,380	29	372,150	222	1,706,950

Source : "Monthly Report of shipping," the Mitsui Shipping Co. Ltd.

TABLE III Marchant Ships under Principal Flags
—— Vessels of 100 G. T. and over ——
(Unit : 1,000 G. T.)

Flags	Year	Totals		Tankers			Non-Tankers		
		No.	Tonnage	No.	Tonnage	%	No.	Tonnage	%
World Total	1936	29,197	64,005	1,475	9,195	14	27,722	54,809	86
	1954	32,358	97,422	3,450	24,624	25	28,908	72,798	75
United States (Seagoing Vessels)	1936	2,486	9,434	388	2,490	26	2,098	6,945	74
	1954	4,323	24,880	560	4,955	18	3,763	20,285	82
United Kingdom	1936	6,891	17,183	372	2,314	13	6,519	14,869	87
	1954	5,740	19,014	738	4,595	26	5,002	14,059	74
Norway	1936	1,857	4,054	229	1,658	41	1,628	2,396	59
	1954	2,286	6,805	428	3,795	56	1,858	3,010	44
France	1936	1,340	2,973	41	240	8	1,299	2,733	92
	1954	1,257	3,841	116	964	25	1,141	2,877	75
Italy	1936	1,072	3,057	71	349	11	1,001	2,708	89
	1954	1,143	3,798	159	1,144	30	984	2,654	70
Holland	1936	1,408	2,507	88	423	17	1,320	2,084	83
	1954	1,683	3,443	125	692	20	1,558	2,751	80
Japan	1936	2,367	4,216	26	188	4	2,341	4,027	96
	1954	1,727	3,578	179	709	20	1,548	2,869	80
Sweden	1936	1,244	1,507	14	117	8	1,230	1,390	92
	1954	1,252	2,701	133	810	30	1,119	1,891	70
Germany	1936	2,085	3,708	25	126	3	2,060	3,582	97
	1954	1,797	2,226	72	228	10	1,725	1,998	90
Denmark	1936	695	1,134	14	104	9	681	1,030	91
	1954	704	1,614	57	447	28	647	1,167	72

Source : *Lloyd's Register of Shipping.*

Sweden, Netherlands, Denmark and Italy increased their tonnages steadily since 1936. Only Japan and Western Germany have not recovered their tonnages of pre-war time.

A fact, however, must be acknowledged in the first place that the present structure of trading areas of Japan have become widely different those of pre-war time and the sphere of our maritime activity has necessarily changed into a new condition. For instance, the foodstuffs and industrial raw materials, the principal import goods of Japan, had formerly been imported mainly from Korea, Formosa, Manchuria and Chinese Mainland in the pre-war time; that is, in 1936 the volume of imports, including all goods, from above mentioned four regions accounted for 48% to the total national imports and likewise those from whole eastern Asiatic area for 72.8%.

Whereas, in the present day, the Canadian wheat is imported in place of the Korean, American coal in place of the Manchuria and Aden's salt in place of the Kwantung's (a province of Manchuria). Thus, on the whole, the annual imports from above mentioned four regions account for only about 5% at present, while about 95% of total imports are those from North, Central and South America (about 50%), far distant Asiatic area (about 25%), Europe, Oceania and Africa (latter three areas' total is at 20% about).

TABLE IV Japan's Imports and Exports classified by Areas and Regions.

(Unit: 1,000 Yen)

Areas or Regions	Imports				Exports			
	1936	1952	1953	1954	1936	1952	1953	1954
Asia	1,942	227,756	287,562	265,259	2,267	236,237	235,630	286,852
Europe	325	50,050	73,068	69,526	303	64,381	42,748	52,667
America	1,055	377,910	413,700	460,686	719	107,587	126,499	182,355
Africa	108	19,091	20,113	18,462	198	34,003	46,361	49,857
Australia & Oceania	211	55,534	73,026	49,769	98	16,035	7,705	14,794
Total	3,764	730,354	867,469	863,785	2,693	458,243	458,943	586,525
Korea	518	7,351	3,084	2,916	648	16,851	38,459	24,684
Formosa	359	22,955	23,054	20,552	244	21,814	21,948	23,737
China	394	5,365	10,692	14,677	658	216	1,634	6,875
Hongkong	3	2,474	2,852	1,426	58	28,999	22,400	27,815
Total	1,274	38,145	39,682	39,571	1,608	67,880	84,441	83,111

Similarly, the present destinations of Japan's exports have widely changed from those in pre-war time. That is, in 1936, the exports to Korea, Formosa, Manchuria and Chinese mainland had taken up annually about 60% of the total exports, while these figures in post-war time is only about 15%. The rest is exported to the longer distant areas. (Table IV)

Consequently, the navigating distance by the Japanese shipping has been much extended as compared with that in the pre-war time. As for the imports only, it is said that each navigation distance is extended from 3,500 miles (nautical) to 5,500 miles on an average, and the ton-mileage index in cargo shipping is shown to have increased from 100 in 1936 to 158 in 1954. (The Department of Transportation: White Paper on Shipping, p. 20) After all, in spite of the increase of the shipping business by 158%, the potential shipping capacity remains at only 80% as compared with that of 1936.

3. CONSTITUTION OF JAPANESE MERCANTILE MARINE

(a) *Classification by the Service of Shipping.*

The constitution by the service of the shipping of the mercantile marine of a country is determined by the geographic and economic grounds of the country. Accordingly, each country of the world has its own characteristic mercantile marine constitution. As by the statistics at the end of 1954, of the total shipping capacity owned by Japan, 74% was freighters, 4% freight-passenger ships, 21% tankers and only 1% was passenger ships, and it must be noted that the passenger boats were small ships all employed on domestic lines.

The constitution of the mercantile fleets of the leading marine transport countries is as shown in Table III. If we look up the tonnage ratios of tanker and non-tanker in the world statistics in 1936 they were 14% and 86% respectively. But tankers increased year after year and in the middle of 1954 the ratios became 25% and 75% respectively. This is the proof of the fact that the importance of mineral oil in the world economy is increasing and that at the same time it signifies that the profit due to oil transport is comparatively large to the marine transport industry. But the importance of the tanker to the marine transport industry varies remarkably by the

country. The countries that own tankers more than the world average (25%) are: Norway with 56% stands first followed by Italy, Sweden, Denmark and Britain in order. On the other hand, the countries owning less than the world average are: Germany with 10% standing at the lowest, preceded by the U. S. A. with 18%, Japan with 20% and Holland with 20%. But as to Japan, she owned in 1936 only 26 tankers, 117,000 G. T. and its ratio was only 4%. But this in 1954 increased to 179 tankers, 709,000 G. T. This is an increase of six times and must be said a remarkable advance. This advance is only surpassed by Sweden which realized an increase of about 7 times. Contrasted with the fact that the increase of the non-tankers in the same period had barely reached 70%, the growth of the tankers is remarkable. All this is due to the fact that mineral oil occupies an important position in the foreign trade of Japan and to the high profit earning capacity of tanker business.

(b) Type of Vessels.

The Japanese mercantile vessels classified by type are given in Table V. The post-war tendency is toward the large type ships. In 1936 4,000-6,000 G. T. type ships were most numerous, but in 1954 6,000-8,000 G. T. type vessels became most numerous. In 1936 large vessels above 10,000 G. T. totalled to only 247,869 G. T. (5.9%). But in 1954 the total tonnage of such ships remarkably increased to 489,807 G. T. (13.7%). This tendency toward large type vessels is due as had been noted above to (1) the change of the sphere of destinations of Japanese trade and the consequent extension of the range of Japanese mercantile marine navigation, (2) to the post-war increase of the liners' activity with consequent decreasing activity of the trampers, (3) to the construction of many tankers which found it profitable to employ large vessels. Moreover, the tendency toward large vessels for mercantile marine is worldwide. This tendency is especially noticeable in Panama which owns many newly constructed ships and in the U. S. A. which lies astride the two oceans of the Atlantic and the Pacific and obliged to carry on long distance navigation (Table VI). Along with this worldwide tendency, Japan is taking up the tendency toward large ships. But its realization has not been quite to the extent as was realized in other countries engaged in marine transport business. This has been the case with Germany also. Thus, in the average tonnage Japan has not come up to 2,000 G. T. and in

TABLE V Tonnage of Japanese Merchant Fleet, Classified by Type

(Unit: 1,000 G. T.)

Gross Tons	1936, Dec. 31	1949, Dec. 31	1954, June 30
100– 1,000	311	476	442
1,000– 2,000	319	153	127
2,000– 4,000	912	466	462
4,000– 6,000	1,235	108	415
6,000– 8,000	819	439	1,322
8,000–10,000	370	56	319
10,000–15,000	180	144	418
15,000 & over	68	0	72
Total tonnage	4,214	1,842	3,577
Total number	1,787	1,319	1,727
Average tons per vessel	2,358 G. T.	1,381 G. T.	2,072 G. T.

Source: "Mouthly Report of Shipping," the Mitsui Shipping Co. Ltd.

TABLE VI Average Tonnage per Vessel under Principal Flags

—— Vessels of 100 G. T. and over ——

	1951			1953		
	1,000 G.T.	Number	Average Tons per Vessel	1,000 G.T.	Number	Average Tons per Vessel
Japan	2,182	1,529	1,427.3	3,250	1,669	1,947.5
United Kingdom	18,550	5,983	3,100.5	18,584	5,784	3,212.9
United States*	25,036	4,479	5,589.5	25,067	4,527	5,669.9
France	3,367	1,246	2,702.0	3,826	1,260	3,036.3
Germany	1,031	1,440	715.6	1,750	1,671	1,047.0
Holland	3,235	1,595	2,028.1	3,372	1,646	2,048.5
Panama	3,609	607	5,946.2	3,907	593	6,588.3
Soviet Union	2,222	989	2,246.4	2,292	1,049	2,185.3
Sweden	2,113	1,247	1,694.6	2,575	1,268	2,031.1
Italy	2,917	1,071	2,723.9	3,456	1,120	3,085.5
Norway	5,816	2,199	2,644.7	6,263	2,218	2,823.6
World Total	87,245	31,226	2,794	93,352	31,797	2,935.9

* Excluding Lakeboats.

Source: Lloyd's Register of Shipping.

Germany it is no more than 1,050 G. T. This is due, in both countries, to the loss of large ships by war and to the slow recovery after the war.

(c) Constitution according to the Age of the Vessels.

Compared with the mercantile marine of foreign countries that of Japan shows the decided preponderance of younger ships in the constitution. Of all the ships younger than 5 years in age freighters and tankers together occupy 43%. But most of the remaining ships are the wartime standard ships inferior in efficiency hurriendly constructed during the war, or the old ships imported from foreign countries after the war. Most of these ships are not suitable to make long distance voyage and are mostly employed in the waters in the Far East, and the navigation expenses are much more costly than the new ships. Of all the Japanese ships these wartime standard ships and the old ships older than 25 years in age constitute 36% of the freighters, 30% of tankers, and are destined to drop out, earlier or later, from the marine market. Thus it is not valid to say of the Japanese mercantile marine that it has the preponderance of newly built ships, but it is

TABEL VII Age of Vessels under Principal Flags

(Unit: 1,000 G. T,)

Ages / Flags	Under 5 Years	%	5–9 Years	%	10–14 Years	%	15–19 Years	%	20–24 Years	%	25 Years & over	%
Japan	1,569	43.8	879	24.6	493	13.8	177	5.0	99	2.8	361	10.0
United Kingdom	4,134	21.7	4,459	23.4	5,436	28.6	1,989	10.5	781	4.1	2,216	11.7
United States	957	3.9	5,373	21.6	17,421	70.0	408	1.6	230	0.9	491	2.0
France	1,207	31.6	980	25.6	622	16.2	209	5.5	288	7.5	519	13.6
Germany	807	46.1	51	2.9	90	5.1	127	7.3	160	9.2	515	29.4
Holland	607	18.0	944	28.0	675	20.0	424	12.6	263	7.8	459	13.6
Panama	795	20.4	1,008	25.8	860	22.0	83	2.1	189	4.8	972	24.9
Soviet Union	104	4.5	94	4.1	327	14.3	167	7.3	330	14,4	1,270	55.4
Sweden	736	28.6	766	29.7	222	8.6	151	5.9	140	5.4	561	21.8
Italy	411	11.9	649	18.8	1,043	30.2	58	1.6	156	4.5	1,141	33.0
Norway	2,526	40.3	1,247	19.9	857	13.7	526	8.4	484	7.8	622	9.9

Note : The figures for Japan, United Kingdom and United States are for June 1954 ; those for other flags are for the end of 1953.

Source : " Monthly Report of Shipping", the Mitsui Shipping Co. Ltd.

nearer to the truth to say that it has little else to depend on for its operation than the small portion of the newly built ships in the fleet. The comparison of this feature with that in foreign countries is given in Table VII. In this table it is seen that Panama, Greece and Italy have many old age ships, which is due to the fact that their mercantile fleets are constituted of the slightly used second-hand ships imported from foreign countries. This feature is in good contrast with that in Japan, Denmark and France, where the newly built ships form the nuclei of the mercantile marine. In the U. S. A., Britain, Holland and many other countries somewhat old ships from 5 to 15 years of age constitute the central strength of their marcantile fleets.

4. ACTIVITY OF THE JAPANESE MERCANTILE MARINE

(a) Disposition of the Ships.

As of Dec. 1955, the freighters of the Japanese mercantile marine plying on high seas rose to 3,228,000 D/W (2,230,000 G. T.) and the tankers to 925,000 D/W (585,000 G T.). Of the freighters, the tonnage of the liners and that of trampers are about equal. 81% of the freighters and 87% of the tankers are plying on high seas.

In the postwar reconstruction of Japanese mercantile marine emphasis was laid on the reconstruction of the liners plying on high seas. The lines in the Far East which had been developed by Japan with many long years' efforts had been encroached by foreign ships during the occupation period, and in 1952 when the military control of occupation was removed, the marine policy then adopted was to increase the liners connecting the high sea lines with the Far East. In consequence, at the end of 1952, the shipping capacity on the lines was estimated at 1,000,000 D/W and at the end of 1953 at 1,400,000 D/W which showed an increase of about 5 times in a short space of time of less than 2 years. This is of course due to the convertion of trampers to liners. At first the liners' increase was most rapid and remarkable on the Far East—New York line and the Japan—India, Pakistan line. Before the war, these two lines fully used up more than one half of the shipping capacity of the Japanese liners, and even in the postwar situation both outward and homeward bound voyages on these lines could anticipate considerable carriage of cargoes. Moreover, in these lines there is no

powerful well knit organisation as "shipping conference" hostile to the re-entrance of Japan into the market. These are the causes that helped the growth of the Japanese mercantile marine in these lines. At the end of 1952, 47% of Japanese liners were employed on the New York line and 15% on the India-Pakistan line. But in 1953, the opening of new lines entered on a new stage, and the lines to the Latin Americas, Europe and Australia were instituted and attempt was made to newly institute the liner service in the shipping market plying between the third foreign countries. At the end of 1952, the ships employed on the Latin America lines were only 4 which at the end of 1953 increased to 24 and the liners to Europe increased from 5 to 20 (prewar number 42). Of these liner routes, the Europe line, the Around the World line, the South America West Coast (via Northwest of North America) line and the South Africa line pertain of the nature of the liner routes plying between the third foreign countries, carrying cargoes, besides those from and back to Japan, moving between these foreign countries. But the rising curve of the liner capacity began to flatten in 1954. Although new liner routes to the west coast of Africa and Middle Near East were opened in 1954, the total level capacity at the end of the year fluctuated along the line of 1,400,000 D/W. In 1955 the monthly number of the navigations on the highsea liner routes was 35.5, which was only 60% of the prewar number and shows how tardy was the rate of restoration as it is also in the rate of increase of the shipping capacity. On the other hand, the present status of the foreign liners shows an increase of 130% over that of the prewar period, and enjoy the position that had been enjoyed by Japanese ships before the war.

Contrasted with the above, the shipping capacity of the trampers in April 1952 reached 1,560,000 D/W, 81% of 1,930,000 D/W which was the capacity of the total freighters. But the subsequent advance of the liner routes induced many trampers to be transfered to the liner routes market and the tramper shipping capacity was reduced to 1,200,000 D/W at the end of 1952. The capacity maintained this level for some period, but on the wave of marine transport prosperity since the spring of 1954, the trend again took the increasing turn, and in August 1954 the capacity reached 1,400,000 D/W. To sum up, the increase of the shipping capacity of Japan up to 1953means the increase of the liners, and the increase after 1954 means the increase of that of the trampers. Table VIII shows in what directions the Japanese

ships were distributed in 1954.

TABLE VIII Distribution of Lines of Japanese Shipping
(Monthly Average for 1954)

	No.	D/W T.
1. Greater Coasting Area	115.6	795,960
A area		
Korea	0.5	2,744
Okinawa	11.5	24,217
Formosa	4.5	19,260
Sakkalin	0.5	2,816
China	10.2	61,049
B area		
Philippine	39.8	285,657
Angaur	1.3	7,819
Indochina	4.6	36,846
Malaya	18.3	177,201
Siam	9.2	57,015
C area		
Indonesia	5.8	51,092
Burma	6.7	54,592
Others	2.7	15,652
2. Highsea Area	217.2	2,139,295
India & Pakistan	45.1	402,476
Southern Pacific	19.5	170,247
Central & Near East	6.3	64,804
Europe	14.7	150,902
North America (Pacific)	31.2	318,393
(Atlantic)	39.3	410,631
Latin America & Africa	47.3	479,760
Round the World	13.8	142,082
3. Between the Third Countries	14.4	138,299
Total	347.2	3,073,554

Source: "Monthly Report of Shipping", the Mitsui Shipping Co. Ltd.

(b) Loading Condition of Japanese Ships.

As of 1954, the amount of freight transported on the Japanese ships

plying on highseas is estimated at 15,624,000 M. Tons of imports and 2,508,000 M. Tons of exports. Besides, 3,280,000 M. Tons of cargoes are carried between the third countries. As can be seen in Table IX the amount is very small compared with what it had been before the war, which is due to the shortage of the capacity.

As to the proportions of the freight by the commodity, on the side of imports, the proportions for rice, iron ore, timber and mineral oil are always high. On the other hand the proportions for raw cotton, sugar and coal are remarkably low. On the side of exports, the proportions for sundry goods is always high, and the proportions for coal, fertilizer and cement can not come up to it. Generally speaking, on the side of imports, the proportion of freighting of high priced commodities is low, and on the side of exports, the reverse tendency is seen. This is the feature resulting necessarily from the constitution of the Japanese foreign trade, the details of which are shown in tables X and XI.

As to the regional proportions of freight, the freighting proportions of Japanese ships in the regions of South East Asia, India-Persia and Australia-South Pacific generally keep up high level. Contrasted with this fact, the freighting proportions in the regions of Europe-Africa and North & South

TABLE IX Loading Condition of Japan's Imports and Exports

—— Monthly average in 1,000 M. Tons ——

Year	Imports					Exports				
	Total	on Japanese Ships		on Foreign Ships		Total	on Japanese Ships		on Foreign Ships	
		Loading	%	Loading	%		Loading	%	Loading	%
1936	2,771	1,579	57.0	1,192	43.0	1,092	732	67.0	360	33.0
1947	371	30	8.1	341	91.9	147	120	81.6	27	18.4
1948	615	52	8.5	563	91.5	153	106	69.3	47	30.7
1949	1,064	121	11.4	943	88.6	188	64	34.0	124	66.0
1950	875	234	26.7	641	73.3	261	45	17.2	216	82.8
1951	1,723	564	32.6	1,164	67.4	302	80	26.5	222	73.5
1952	1,978	900	45.5	1,078	54.5	421	133	31.6	238	68.4
1953	2,607	1,122	43.0	1,485	57.0	413	156	37.8	257	62.2
1954	2,794	1,302	46.6	1,492	53.4	476	209	43.9	267	56.1

Source: "Shipping" (monthly bulletin), the Nippon Shipping Exchange Corp.
"Monthly Report of Shipping", the Mitsui Shipping Co. Ltd.

TABLE X Freight on Japanese Ships by the Commodity

(Unit: 1,000 M. Tons)

	Total Freight			Freight on Japanese Ships					
	1953 Jan.–Dec.	1954 Jan.–Sept.	1955 Jan.–Sept.	1953 Jan.–Dec.	%	1954 Jan.–Sept.	%	1955 Jan.–Sept.	%
Imports to Japan									
Rice	1,079	1,278	946	659	61	766	60	761	80
Barley	706	679	430	173	25	163	24	246	58
Wheat	1,687	1,790	1,790	681	40	585	33	1,064	59
Sugar	1,094	777	758	236	22	233	30	235	31
Salt	1,384	1,180	1,287	465	34	621	53	495	39
Cotton	484	381	362	132	27	166	43	255	71
Phosphate ore	1,068	981	1,132	472	44	432	44	537	47
Coal	4,066	2,771	2,051	1,416	35	662	24	772	38
Iron ore	4,312	3,885	3,931	2,875	67	2,644	68	2,671	69
Scrap iron	1,141	801	862	475	42	157	20	200	23
Timber	1,207	1,004	1,541	779	65	638	63	644	42
Others	4,893	3,478	8,685	1,194	24	879	25	1,363	16
Total	23,121	19,005	23,775	9,557	41	7,946	42	9,243	29
By Tanker	8,168	6,775	2,578	3,899	48	3,802	56	1,371	57
Grand Total	31,289	25,780	26,353	13,456	43	11,748	46	10,614	40
Exports from Japan									
Cement	795	644	851	211	27	176	27	316	37
Steel	701	644	1,117	255	36	251	39	426	38
Coal	485	235	297	15	3	7	3	98	33
Timber	198	195	297	45	23	30	15	42	16
Fertilizer	598	549	570	153	26	219	40	139	22
Others	2,180	1,692	2,464	1,174	54	1,007	60	1,357	55
Total	4,957	3,959	5,596	1,860	38	1,690	43	2,378	43

Source: Data from the Department of Transportation and the Department of Finance.

America (especially in the East Coast) are remarkably low. In the regions of Korea, Formosa, and Red China the activity is not so remarkable as in other Asiatic regions.

Japan depends for the supply of iron ore and timber on South East Asia, and that the freighting proportions of the Japanese ships are high is reasonably due to the fact that the countries in this region do not own good merchant ships and also to the fact that these cargoes are just suitable for trampers. On the other hand, that freighting proportions for coal, raw cotton and sugar from North America are low is due to the shortage of the ships plying on high seas. Again, that the freighting proportions of the Japanese ships for coal and fertilizers, chiefly exported to Korea and Formosa, are low compared with those for other countries is due to the fact that the newly created mercantile fleets of these countries carry the greater portion of the cargoes.

TABLE XI Imports and Exports loaded on Japanese Ships and Foreign Ships

	Imports			Exports		
	Value in ¥1,000,000	Tonnage in 1,000 M.tons	Value per M.tons in ¥1,000	Value in ¥1,000,000	Tonnage in 1,000 M. tons	Value per M.ton in ¥1,000
on Japanese Ships						
1950	8,167	609	13	36,526	2,225	16
1951	61,005	605	101	94,548	6,373	15
1952	154,948	1,609	96	218,848	11,459	19
1953	207,448	1,775	117	310,015	14,334	22
1954	276,356	2,507	110	370,753	16,337	23
on Foreign Ships						
1950	289,866	2,521	115	297,674	8,420	35
1951	427,772	2,493	172	642,686	14,360	45
1052	303,295	3,447	88	511,503	12,279	42
1953	251,495	3,182	79	557,458	16,955	33
1954	302,903	3,206	94	484,451	17,137	28
Total						
1950	298,033	3,130	95	334,200	10,644	31
1951	488,777	3,098	158	737,234	20,733	36
1952	458,243	5,056	91	730,352	23,738	31
1953	458,943	4,957	93	867,473	31,289	28
1954	579,279	5,714	101	855,205	33,514	26

Source: Data from the Customs Division of the Department of Finance.

(c) Conclusion

As can be deduced from the above, the standpoint of the Japanese mercantile marine in the Asian region and that in the other regions are quite different. In the former region, the Japanese ships transport certain fixed proportion of the Japanese trade which may increase or decrease at times. But in the other regions, the freighting proportion of the Japanese ships follow different tendency from that of the fluctuation of Japanese trade. The quantity of the cargoes carried on the Japanese ships remains almost the same, independent of the fluctuation of the Japanese trade, and remains at low rate. To be more specific, in the South East Asian region and the Indian region the capacity of collecting cargoes for Japanese ships and the shipping capacity of the ships on the lines and the present amount of the trade are generally stable and fixed; but in the American and European regions, the space in the Japanese ships tends to be less than their cargo collecting capacity demands, and though the ships alway carry full cargo, a large amount of cargoes is left over for foreign ships to carry. In the European, American and African regions there are abundant Japan destined cargoes for trampers. But due to shortage of suitable ships the distribution of the ships in the regions is rendered impossible. If, therefore, trampers are distributed in these regions, it will reasonably result in the increase of the freighting between the third countries. Provided that there is abundance of Japan destined cargoes in the American, European and African regions, and that the cargoes for the outward bound voyage from Japan is nil, the navigation does not usually pay. Since the later half of 1954 many Japanese ships have been engaged in the freight transport between third countries in the Atlantic waters and on their home bound voyage, the ships take on board the cargoes destined to Japan. That is clearly due to this paying account. In summer 1954 the distribution of Japanese trampers plying between the third countries suddenly increased to over 200,000 D/W, and 250,000–300,000 D/W continue still to be distributed. Of these figures 100,000–150,000 D/W are distributed in the Atlantic waters.

The future of the marine transport of Japan, whose trade structure has been changed to that of far distant trade, must aim at the activity in the sphere as a member of the world shipping circles. For this the ships must be of large type and high speed, and their port services must be highly efficient. Such qualitative improvement are of course necessary and

indispensable, but the increase of the shipping capacity is as well indispensable as a matter of course. The writer of the article thinks it necessary to establish a firm national marine policy implementing all these insistences.

THE DISTINCTION BETWEEN "SHASEN" AND "SHAGAISEN" AS HISTORICAL CONCEPTS IN JAPANESE SHIPPING

Seiji SASAKI

1. PREFACE

The idiomatic shipping terms "Shasen" and "Shagaisen" in Japan are the most peculiar and significant contrapositive words on account of their practical much-usage and their close relation with the developmental process of the modern shipping industry. It was a general, but somewhat hasty interpretation of the term that the vessels owned by the "Nippon Yusen Kaisha" and "Osaka Shosen Kaisha" —— including lately the "Toyo Kisen Kaisha" —— were called "Shasen" and all the other Japanese vessels were called "Shagaisen". In other words, the term "Shasen" was represented by the word ships of "Big Two" or "Big Three".

It was a general tendency in many books of Japanese shipping history, published hitherto, that the opening and enlargement of the regular service (liner business) which mainly the N. Y. K. and O. S. K. operated with the aid of the government protection was overestimated, and that the growth and activity of Shagaisen was accordingly treated as secondary or attendant affairs. The great development of these "Big Two", naturally, had their

own peculiarity and importance and they played always the largest and leading part in the progress of the Japanese shipping since the Meiji era. It was quite an obvious fact. The modern Japanese shipping industry as a whole, however, was by no means consisted solely of the big two or three companies with their ships, so-called "Shasen". All the developmental process of Japanese shipping can not be sufficiently understood till the growth of "Shagaisen" as well as "Shasen" is taken into account, because the contribution and influence of "Shagaisen" on Japanese shipping as a whole could not be underestimated than that of "Shasen".

The writer holds the following opinions for these years and attempts to study the history of "Shagaisen";

1) It must be clearly recognized and analyzed that there were confrontation or competitive relationship between "Shasen" as a privileged class and "Shagaisen" as an unprivileged class through-out the history of the modern Japanese shipping industry.
2) We will be able to find out the historically essential transition of the business type "from private carrier to common carrier" more distinctly in the developmental process of "Shagaisen".

However, the concepts of "Shasen" and "Shagaisen", the fundamental standard of their distinctoin and their most essential significance were very ambiguous. There are not yet a reliable definition. Many facts prevent us to understand their essential meaning; the terms were solely used as simple and convenient idiom in the shipping circle; there were no evidence that showed their early and general sense of usage; and there were some changes or developments in their meaning of usage. Thus what could say at most is that "the distinction between Shasen and Shagaisen is based on the sole business convinience", and "their meaning is indistinguishable". The concepts "Shasen and Shagaisen", because of "their non-scientific distinction," have not yet been analyzed by anyone, and their essential meaning, their influence and relationship to the process of Japanese Shipping, and the course of their appearance, change and stoppage have hardly been studied.

This article will mainly describe them from the stand point of 2) and study the progress of the historical concepts.

2. THE APPEARANCE OF THE TERMS "SHASEN" AND "SHAGAISEN"

As is generally known, the terms "Shasen" and "Shagaisen" appeared in usage first at about the 25th year of Meiji (1886) in this country. This fact shows their very close connection with the growth of the steamers, especially of cargo steamships. Although the thought that "Shasen" are the vessels owned by the N. Y. K. and O. S. K., and "Shagaisen" are all the other vessels, was a general opinion, this distinction was originally connected with the steamer, without including the sailing vessels. Indeed, at about 25th of Meiji, when the terms "Shasen" and "Shagaisen" were first used, the Japanese shipping market passed through the transition from sailing vessels to steamers, and there were three kinds of vessels, Japanese type sailing vessels, European type sailing vessels and steamers. So apparently it might be better to suppose that all the vessels that belonged to the N. Y. K. and O. S. K.——Toyo Kisen Kaisha not yet established ——were "Shasen" disregarding the vessel-kind. If that was so, the appearance of such a distinction proves of older date. We must carefully recognize the historical fact that those terms "Shasen" and "Shagaisen" appeared, for the first time, in the 25th of Meiji, when it was eight or nine years after the establishment of the N. Y. K. and O. S. K. It must be distinctly remembered that there were at least two historical affairs; 1) the N. Y. K. had just become a perfect steamship company, in the strict sense of word, after the sale of a last sailing vessel "Tametomo-maru" in June 24th of Meiji; 2) the lesser shipowners who had been the older shipping interests than the N. Y. K. and O. S. K. and later composed the earliest "Shagaisenshu" (owners of Shagaisen), began now to introduce the steamers arround the 20th of Meiji. Upon this ground, the distinction between "Shasen" and "Shagaisen" just appeared as that of the steamer.

Among the usage of steamer, especially the introduction of the cargo steamship had more closely important relation with the origin of the terms. The adoption of the steamer, besides the N. Y. K. and O. S. K., had already been put into practice. In the local short-hauls, coastroute or island-route, there were fairly the early development of the so-called "small steamship service" engaged mainly in the passenger traffic. Those, however, did not

use yet the term " Shagaisen ".

Since 19th of Meiji (1886), when Nisaburo Hiroumi bought a larger steamer " Hokuriku-maru " (615 gross tons), so many cargo steamers were emulatively imported and operated by other private firms ; Shichihei Ooya, Gonzaemon Ukon, Yasaburo Hamanaka, Michihisa Baba and N. Hiroumi in " Kitamaesen " group ; Gohei Kishimoto, Kensuke Hachima and Seshu-nada-kogyo Co. in " Han-shin " group (Osaka and Kobe area) ; Soichiro Asano and Kikusaburo Oaki in " Kanto " group, they were the most well-known shipowners and constituted lately the earliest " Shagaisenshu ". This was a most direct and important move which caused the distinction between " Shasen " and" Shagaisen ".

It was a common tendency in the world history that the steamer was at first adopted in transporting the passenger or mail, and their introduction to the cargo traffic was fairly late. The cargo had, generally, less capacity to bear high freight, which the steamers required in the early days to realize, so as to cover their cost (both building and operating). Moreover, these were, in this country, special circumstances, which required of us to increase the steamers as quickly as possible and protect a few privileged companies strongly on account of the military or defense necessity. This made the N. Y. K. and O. S. K. the exclusively privileged companies in the Japanese shipping circle. Both of them engaged mainly in the mail and passenger traffic by aid of subsidy and established early their superiorities enough to bring pressure on the growth of other steam-ship firms in this field. On the other hand, a very rudimentary national economy as a whole limited the general development of the steamer, with the still continuance of the sailing vessel in the cargo traffic.

In spite of such considerations, some shipowners since the sailing vessel period attempted at last to substitute their European sailing vessels for the steamers. They could not readily hitherto adopt the steamer on account of their financial, technical or psychological reasons, however when the distinguishable superiority of the steamer because not only clear both in its economy and function, but the fear of the unevitable encroachment on the cargo traffic, in which the sailing vessels had traditonally been engaged, began to realize by the " Big Two ", and above all, the N. Y. K., the strongest shipowners decided to adopt the steamers and continue their job. Then their long experience and performance in the cargo traffic could make their

position more powerful than that of the old "small passenger steamships". Moreover, for the circumstances that the "Shasen" were giving a great pressure to another shipping firms and enjoying the exclusive priority, those new owners of the steamers formed an organization "Nippon Kaiun-gyo Domei-kai" (Union of Japanese Shipping Industry) in 25th of Meiji to maintain and enlarge their own services. This formation of "Shagaisen Union" was a demonstration against the N. Y. K. and O. S. K. in spite of any announced purpose. Since this time, the two competitive powers became perceptible in the Japanese shipping circle; one was the group composed of the N. Y. K. and O. S. K., another was the group of those new-comers. It brought forth the possibility and necessity to distinguish between both groups. And this was the historical background, in which the terms "Shasen" and "shagaisen" were originally used.

3. THE ESSENTIAL GROUND OF THE DISTINCTION BETWEEN "SHASEN" AND "SHAGAISEN"

The terms "Shasen" and "Shagaisen", themselves, may be pure and simple Japanese expression. The "company's vessels" in English is expressed as "Kai-sha-sen" in Japanese and "Shasen" is a curtailment of "Kai-sha-sen". And the vessels outside "Shasen" are "Shagaisen". In the strict expression, it is not right that the company (Kai-sha) are limited only to the N. Y. K. and the O. S. K., and "Shagaisen" are confined to the vessels of the private (non-company's type) shipowners, for there were some firms with the name of company —— for example, "Seshu kogyo Co.", "Nippon Kisen Co." and "Seiko Co., etc. The latter, however, were so less apart from the private organization both in their capital-fund and business scale. And if we understand the word "company" as a large and powerful firm, only the N. Y. K. and O. S. K., which were the most representative shipping firms in that time, were worthy of its name.

Nevertheless, the above consideration was simply able to show the apparent meaning and external distinction between "Shasen" and "Shagaisen". The terms were not only the most universal and historical words, but had very important influence or developmental significance on the process of Japanese shipping as a whole.

The term appeared, as we have seen, just in the epoch-making period of

Japanese shipping history, and its standard of distinction, its significance or its method of expression were gradually developed and canged in the succeeding periods. How can we grasp the essential meaning of the term? The writer believes that we can seize the meaning only through the confrontation or in the competitive relationship between both groups. The "Shagaisen" were really a competitive, actively or passively, force against the old-established "Big two". Even when the N. Y. K. and O. S. K. controlled the entire coast routes, divided into east part and west part, and now began to advance toward overseas markets, they had still the imperfect and unexploited activities in the domestic field. For those two companies which engaged mainly in the passenger and mail traffic, the transportation of the cargo was a great subject to solve in the coastal trades. Therefore the "Shagaisen" which attempted to maintain their tradition with the steamers in this field were themselves the self-defensive resisting power, as well as the new competitive force against "Shasen"——the vessels of the N. Y. K. and O. S. K. We may well understand by the following fact that those competitive vessels were called "Hantaisen" (opposite vessels) until the term "Shagaisen" came into general use.

Now such shipowners established an organization "Nippon Kaiun-gyo Domei-Kai" and opposed as a powerful rival against "Shasen". As a group definition each term, either "Shasen" or "Shagaisen" was a compound word, and above all the individual shipowners of "Shagaisen" had the various business scales and the multifarious management types. Nevertheless they were always called "Shagaisen" in a lump, as far as they were a distinct existence from "Shasen". In fact, every book that discusses the growth of "Shagaisen" does it always in comparison with that of "Shasen".

A history of the Japanese shipping till the World War II may be discussed as a history of the process of the competition between "Shasen" and "Shagaisen". The writer thinks that those apparently commonplace terms enable us to understand the essential and historical meaning only through such mutually opposed relationship.

The change or development process of the concepts "Shasen" and "Shagaisen" will also become more clear, when the extensibility of the confrontation between both competitive powers is completely grasped. It must be noticed that even those shipowners who early were not called "Shagaisen" or "Shagaisenshu" came to be included lately in the term,

and then became even the main or leading members. The Mitsui Bussan Kaisha or Mitsubishi Shoji Kaisha were the famous examples; the former, above all became a strongest member of "Shagaisen" by the growth of its competitive ability and relation against "Shasen", and led the advancement of the "Shagaisen", though it started from the neutral position. The Toyo Kisen Kaisha was another exceptional existence which started from the position of "Shagaisen" and developed lastly to that of "Shasen"—— by virtue of its splendid growth and the limitation or stoppage of the competition against "Shasen". All show that the distinction between "Shasen" and "Shagaisen" was not simple and convinient and based essentially on the confrontation between the two.

4. THE DEVELOPMENT OF THE CONCEPTS "SHASEN" AND "SHAGAISEN"

Every term is apt to change from simple to complex in the course of times. It will be almost a common phenomenon. Such "magical development of the term" was also seen in those words. The terms "Shasen" and "Shagaisen" were originally simple or fairly convinient names corresponding to the undeveloped shipping industry in that period. However, when the modern business of the merchant shipping and the international maritime terms were introduced into Japan, the terms "Shasen" and "Shagaisen" gradually put on complicated and broad-common expression and began to change their concepts or meanings. The most concrete and universal development was the appearance of the use "Shasen" as "liner" and "Shagaisen" as "tramp".

One pair of terms "Shasen and Shagaisen" has often been interpreted as synomious with another pair "Liner and Tramp" in many books of Japanese shipping history. It was nothing else but the reflection of following correlation; "Big Two" or "Big Three" which constituted exclusively the "Shasen" group were the most typical liner companies, and therefore almost all their vessels were composed of the so-called "liner-boat"; on the other hand the "Shagaisen" were mainly "tramp" not only in the middle Meiji era, but in the succeeding period. As far as it was, the synomious interpretation may be seemingly true. But this peculiar idiom which was current only in Japan, is not the same with the international and more

scientific term. Although we could look for some similiarities between "Liner" and "Shasen" or between "Tramp" and "Shagaisen", the perfect identification will be a blunder. It will not only be a contrary to the historical fact, but spoil the foundamental distinction and significance.

Even before the middle Meiji era there were many regular services which were operated by the smaller passenger-steamer. Also in the cargo traffic some shipowners engaged early in the Tokugawa era in the regular services with their sailing-vessels, though such vessels could not yet be called "liner" in the strict sense. Those "constant traders" advanced gradually to the "liner" by virtue of their own introduction of the steamer and the development of the coastal trade. In the twenties of Meiji some firms outside "Shasen" group operated already the distinct "liner" service. For example, Isaburo Amagasaki (lately established Amagasaki Kisen Co.) opened Okayama Line, Banshu Line and Nagasaki-Kagoshima Line, and Shichihei Ooya operated the foreign lines, like between Niigata and Vladivostok, by the government order. In the succeeding period "Shagaisen" had an inevitable transition from tramp to liner. Nevertheless those regular vessels were still called "Shagaisen" distinguished from "Shasen", as far as they belonged to the firms outside the N. Y. K., O. S. K. or T. Y. K. Contrarily "Shasen" included also the tramps which were engaged in the irregular service, as well as "Shagaisen". Those vessels, however, were still called "Shasen" as far as they were owned by the "Big Two" or "Big Three". Thus there were a distinction between the terms "Shasen" or "Shagaisen" and the terms "Liner" or "Tramp".

In spite of the essential difference they were often interpreted synonymously. And such an embellishment with the scientific or international gloss was, in a sense, seemed a development of the terms "Shasen" and "Shagaisen". The thought "Shasen" as "liner" was strengthend by the inclusion of the Toyo Kisen Kaisha, established in April 29th of Meiji (1896), into "Shasen" group. This company was similiar to "Big Two" (N. Y. K. and O. S. K.) in relation to the capital-fund, business scale or management type, though this company was established by Soichiro Asano who had been a most famous "Shagaisenshu", and the main line of this company "North American Line" was an essentially or potentially competitive route with that of the N. Y. K. We must remember that the personal career of Mr. Asano and his competitive feeling against "Shasen" disappeared with the

establishment of the T. Y. K. and his appointment to president, and that the real competition was limited by the goverment who supported the foundation of this company and designated the aforesaid line to their Order Line and gave the subsidy. Thus this company belonged to "Shasen" group. By the way, it has to be emphasized that it was an example which "Shagaisen" developed till "Shasen"; that even a small or humble shipowner could become to a member of "Shasen", if he could develop to as powerful and large organization as "Shasen"; and the terms "Shasen" and "Shagaisen", as we have seen, were never the fixed concepts.

At any rate the term "Shasen" thickend the liner's character, and a privileged feeling which was found out under "Shasen" sense, prevented their group to expand farther, even if other "Shagaisenshu" developed gradually to as powerful position and practiced as similar regular service as "Shasen". The liner service, itself, required a large business structure, and had an international connection and a natural tendency toward monopoly. It prevented the other firms to advance toward the liner service. Thus "Shasen" enjoyed exclusively the profit from their regular services and maintained the identifiable position with the "liner".

The generalization of the thought "Shasen is equal to liner and Shagaisen is equal to tramp", the identification of the distinctions between "Shasen and Shagaisen" with that between "liner and tramp", and the tendency of substituting the latter for the former, those were the beginning of the declining process for the terms "Shasen and Shagaisen", as well as the development process. Those led inevitably a rarefaction of the necessity to distinguish between "Shasen" and "Shagaisen" as similarly as the terms "liner and tramp".

An important tendency "from tramp to liner" in the world shipping industry was also adequate to the development process of "Shagaisen" in Japan. Compared with the remarkable development as the liner in "Shasen", which could be realized in accordance with their common carrier type, the expansion to regular service in the "Shagaisen" group were fairly fallen behind, for most of them started as the private carrier and engaged mainly in the cargo traffic. The historical development rule "from private carrier to common carrier", however, was distinctly carried through in the growth process of "Shagaisen". Most of them transfered their management type to common carrier, and in this process they advanced step by step to the

regular service, receiving the international influence.

To carry on the liner service, naturally, it required so much capital. Many shipowners or operators of "Shagaisen", however, could accumulate enough capital through the three wars in a few decade from Meiji to Taisho era. Since the last year of the World War I (1918), many members of "Shagaisen" began one after another to set up the regular services, among which that of the Taiyo Kaiun Kaisha and the Yamashita Kisen Kaisha was conspicuous. For example, the former engaged in the American Line and the latter opened the Formosa Line in the year. As soon as such a great development of the liner service was extended on almost general scale of "Shagaisen" business, the idiomatic thought "Shasen is equal to liner" or "Shagaisen is equal to tramp" had no longer its appropriateness for the practical purposes.

At length the terms "Shasen" and "Shagaisen" were led to disappear for the reasons that practically the conception of both was so often and so predominently used as synomymous as with the meaning of the "Liner" and "Tramp", though there were essential difference between them, and that under the remarkable tendency of "Shagaisen" mentioned above from tramp to liner, there became no grounds to distinguish "Shasen" from "Shagaisen" upon the concepts "Liner" and "Tamp". It may be said that the international terms "Liner" and "Tramp" have substituted the national terms "Shasen" and "Shagaisen". Thus we rarely hear the term "Shasen" and "Shagaisen" spoken since about the World War II, but we should not forget to pay attention to that competitism or rival spirit which formed the original basis of such a distinction between "Shasen" and "Shagaisen" has been still alive up to this time in the form of the competition between "Big Two" and other firms. It may be a fate of the Japanese shipping industry.

THE BANKING SYSTEM IN THE MIDDLE MEIJI ERA (1870–1910)

Masahiro FUJITA

I

The Meiji Economy taught us its remarkable development. The forces of change which had been released by the Restoration and strengthened by deliberate policy of the Meiji Government affected in some measure every branch of agricultural, industrial and commercial life. But it would be wrong to imagine that all parts of the Japanese economy were brought quickly under the direct influence of the West. Japan attained the powerful position by herself. The Sino-Japanese, the Ruso-Japanese Wars were best steps to develop. During 1890–1914, the so-called the middle-Meiji (era), we found our splendid forward economic growth. Meanwhile, such capitalistic extension brought into the inharmonious result, in the long run we must notice, first of all, this fact.

The remarkable features of this period, especially of the banking instiution and function may be expressed as follows :—

1) In the establishing of industrial capital, the representation in relation to modern industry and banking capital was the spinning finance, but the electric industry finance was the delegate of highly developed capitalistic economy.

In the case of the electric industry finance, the characteristics of the highly developed capitalism are its concentration (that is an overwhelming development of fixed capital, highly developing in concentration and accu-

mulation of the growth of the banking capital and industrial capital).

2) In the silk-reeling industry, " modern industrial finance " conditions appeared gradually by the accumulation and concentration of capital to some extent.

3) The early capitalism conditions of the financial domination of commercial capital in the textile industry declined.

4) In the agricultural finance, our agriculture did not as yet attain the status of satisfactory modern agriculture, so modern agricultural finance remained under-developed.

Table 1

Number and fund sources of Banks all over the country

(million yen)

year	number of banks	capital (stock)	deposit	loan
1893	628	3712		
1894	761	5427		
1895	726	7470		
1896	1054	14655		
1897	1300	23231		
1898	1485	27913		
1899	1634	30210		
1900	1854	35614		
1904	2227	37319	80310	107804
1906	2210	40113	167050	124879
1908	2172	45882	157990	160836
1910	2144	49571	202797	169075

Table 2

The accumulation of capital to the financial institution

(million)

Year	Big Five		National special financial institution		Private bank except Big Five		Total
	Amount	%	Amount	%	Amount	%	
1893	30	15%	57	45%	109	55%	196
1901	120	11%	202	30%	727	70%	1049
1910	312	12%	691	38%	1637	62%	2641

Big Five: Mitsui, Mitsubishi, Yasuda, Sumitomo, Daiichi,

II

Some monetary and fiscal policies required further emphasis, first of all, because of the part which they played in nourishing the growth of Japanese capitalism through its infancy. In Meiji Japan, as in all countries undertaking economic development, one crucial problem was to mobilize savings out of a mass of small incomes, by one means or another, and to generate a flow of investment funds into new forms of enterprise. Although government investment was itself a small part of total, the whole process of capital formation was inevitably influenced by the State at many points.

A rising tempo of investment followed almost automatically from the new impulses the techniques which flowed into Japan, once she abandoned the policy of seclusion, threw off the old shackles on freedom of enterprise, and embarked on a new era of political unity, legal security, and technical advance. Such a development had long been latent in pre-Restoration Japan. It was now quick to manifest itself in the new climate of opportunity. Private capital formation was aided by wide inequalities in wealth and income; also by the resistance offered by traditional Japanese values to higher standards of material consumption. Yet the new circumstance was not either of these factors so much as new incentives and opportunities to use wealth in productive ways rather than to hoard or consume it. This process, however, required a steady growth of currency and credit to keep pace with the growth of production and its shift to a commercial basis. It called for new financial mechanisms to create and mobilize liquid purchasing power for private investment as well as state expenditure. And it could be accelerated by employing these mechanisms to inflate profit expectations so as to draw increasing resources into capital formation. In part such resources might previously have been idle, as in the case of mines, forests, or underemployed farm labor. In some degree they had to be drawn from labor and capital previously devoted to consumption. In large measure they were newly created in the process of growth.

The turbulent financial history of 1868 to 1881 reveals these processes at work. Only by large issues of paper money could the Meiji regime initially meet its requirements. As quickly as possible, however, it sought a more orderly solution. The land tax reform of 1873 created a state system

of national revenue collected mainly from the agricultural class. Meanwhile, to augment the supply of liquid funds for public and private use, the authorities alse encouraged the spread of joint-stock finance and private banking and note issue. The borrowing powers of the government were first employed on a large scale in the attmpt to resolve the political problem of displaced soldier class (*samurai*) by a mixture of conciliation and force. Over 200 million yen of public bonds were issued in commuting the feudal pensions of 400000 families. Some of these bonds were used by the nobility to found note-issuing banks, which led to a rapid increase in the supply of credit. Others afforded capital directly for small enterprises of all sorts that mushroomed in the inflation that followed.

These early financial expenditure are difficult to assess in their effects on real capital formation. Initially, in all likelihood, the result was not so much to create new wealth as to redistribute spending on consumption from one class to another, and to concentrate the ownership of land and other existing assets. The government managed at any rate to meet its own most urgent political and administrative requirements through a critical period. At the same time, sizable pools of banking capital were created under the control of private financiers who began to seek outlets for their funds in new forms of large-scale enterprise. And a dynamic impulse was given to countless small undertakings in agriculture, commerce, and handcraft industry, some of which survived the deflation and depression of the eighties.

As the result of above-mentioned, we had the need for a system of currency and banking which would be more ample and more stable than the early improvisations. This experience, together with further study of European practice, formed the basis for the far-reaching reforms undertaken by Count Matsukata after 1880 and carried out over next two decades.

The Bank of Japan was developed as a central bank of note issue and fiscal agent of the government. Other semiofficial banks were founded on government initiative to enlarge the credit system. They also served to extend the range of government control over the network of private banks which was growing apace. In a series of steps the currency was unified: the banking system was placed under a greater measure of Treasury supervision: and in 1897 Japan followed the example of most other countries in abandoning bimetallism after a long and unsatisfactory experience. She now adopted the gold standard, with the help of the sterling in deminity

exacted from China as the price of defeat in 1895 (as the reparation of the Sino Japan war) : Germany had used her war indeminity from France a generation earlier for a similar purpose. Western money markets were henceforth open to Japanese public borrowing, and large loans were contracted during the next fifteen years. Although still inadequate in many respects, Japan's own banking system provided a fairly effective instrument for the development of modern industry and trade.

The key role played by the great quasi-public banks formed in the later Meiji years deserves special notice. Besides, the Bank of Japan, they included particularly the Yokohama Specie Bank, the Industrial Bank of Japan, the Hypothec Bank of Japan, and the Bank of Chōsen and the Bank of Taiwan.[1)]

These institutions functioned side by side, and often in close collaboration with the private banks, particularly the traditional Big Five — the First (Daiichi), Mitsui, Mitsubishi, Sumimoto and Yasuda. Together they made for a powerful concentration of banking capital, and one which increased with the passage of time, as hundreds of small banks were gradually absorbed by the big private institutions in a series of financial crises. Besides, the concentration of banks in the Meiji period was the policy of defense against the economic depression, on the other hand the concentration of banks in the early Showa period was the formative policy of *Zaibatsu* (money plutocracy) capital.

Such difference is difinetly necessary to analyse the following study. The process of amalgamation and concentration of bank (especially Big Five) is as followsing table 3-8 : —

1) The necessity of establishment of the long-term financial institution has been emphasized from various fields. Namely ① the leading article of news paper on the establishment of the Industrial bank — Aug. 6. 1885. the Hōchi Shimbun ② the written memorial for the issuing bank-note by the title-deel security or mortgage —the oldest form of this type was "Liberal bank (Osaka Prefecture)" that had been expected to start September, 1876. ③ the same plan had been proposed by Ichiro Fujita (establishment of "Dainihon Kannō Sha" in 1881. ④ the written memorial by Count Matsukata — "Purpose of the Hypothec Bank of Japan" at the same time. ⑤ the plan for the regulation of the industrial Bank of Japan by Dr. Stein. O (an Austrian)in 1886 — this effort has been promoted by Mr. Kawajima (later the Governer of the Hypothec Bank of Japan) ⑥ the advice to money and finance (Zaisei Ikenshō) by finance Minister Matsukata — Aug. 1895 in this plan, he emphasized the establishment of the Hypothec bank and the Industrial bank.

Ⅲ

With the appointment of Count Mutsukatsu as Minister of Finance in 1881 a determined and successful attempt was made to introduce order into the chaotic financial situation. It was decided to abandon the experiment in national banking, to a central banking system on the European model, to balance the budget and to restore parity between the silver yen and the notes. The Matsukata reforming policy was as follows: —

1) Amendment in the system of land taxation
2) Adjustment of paper-money
3) Establishment of the Bank of Japan and the other government banks
4) Starting of the specialized bank —— ① the Hypothec Bank of Japan and the Industrial Bank of Japan —— as the long-term financial institution. ② the Taiwan and the Chōsen bank —— as colonial expanding banks. ③ the Yokahama Specie bank —— as the Foregn exchange specializing bank.

Strictly speaking, we wust analyse the whole financial institutions of this period. But we cannot cover it all in this article, so intend to observe the specialized banks above all.

First of all, we now pick up the Hypothec Bank of Japan, for example.

The establishment of a central bank and a foreign exchange bank appeared after the stabilization of the currency, the next step, in accordance with the principle that Count Matsukata had laid down, was to create financial organs for long-term loans. There was an urgent need for such institutions, for a well-to-do middle class, prepared to invest in industrial securities, scarcely existed. what were required were institutions formed for the purpose of mobilizing the savings of the community through the medium of bank debentures guaranteed by the Government. In this way resources could be collected and directed towards enterprises.

It was not possible to proceed with this plan during eighties, for Government bonds then stood at a considerable discount. By the end of the Sino-Japanese War in 1895 Government credit had improved sufficiently to make the scheme practicable. So, by a law passed in 1896, the Hypothec Bank of Japan was established, modelled on the Crédit Foncier of France, with a capital of 10 million yen. This was empowered to make loans, redeemable by annual instalments within 50 years, on the security of im-

movable property, such as paddy fields, upland fields, salt fields, forests and fishing waters and rights. It was also permitted to make abvances without security to public authorities, co-operative societies and fishery guilds. In order to obtain funds, it was autholized to issue debentures to an amount not exceeding ten times its paid-up capital.

It could also accept deposits which it had to employ in purchase of national bonds and bills of exchange. For the first ten years of its life the government guaranteed its dividends at the rate of 5 per cent. At the same time 46 Agricultural and Industrial Banks were established, one in each prefecture. Their business was similar to that of the Hypothec Bank, to which they acted as local advisory bodies. They were permitted to raise funds to the extent of five times their paid-up capital, and they were accustomed to resort to the Hypothec Bank for other advances. Indeed, the latter acted as a kind of central bank for these local institutions. It supplied them with funds by taking up their debentures, and it employed them as agents in making advances to its clients. The Government exercised close supervision over the business of these banks and granted them financial help. Apart from the guarantee of dividends already mentioned, it advanced a loan of ten million yen to the prefectural authorities to enable them to subscribe to shares in the Agricultural and Industrial Banks, and 1898 it used $3\frac{3}{4}$ million yen of the Chinese Indemnity for the purchase of the Hypothec Bank's debentures.

Japan was at that time —— 1896 —— an agricultural country, and agriculture was the most important economic activity of the people: but so far it had not received proper and adequate attention and assistance from the government or from the banking institutions already established. So large an amount of money was required by the agricultural community that it was wellnigh impossible for either government or banking institutions to provide fully for the need. Though the aggregate amount of funds was large, it was composed of small demands from multiple individual farmers whose personal requirements were too small to attract the attention of a bank or any individual investors, except perhaps some small capitalists who lived on usury.

The funds needed by the farmer can be divided into three classes, viz.:

(1) long-term credit with which to purchase land or to carry out improvement on the land already acquired;

(2) intermediate credit with which to purchase seeds, fertiliser on equipment, or to made minor improvements;

(3) short-term credit with which to meet the expenses incurred in harvesting and marketing the crop.

Credits number 2 and 3 could be met by commercial banks or private money-lenders, however, credit number 1 needs a special institution which deals only in long-term operation.

On accout of these long-term funds, the Hypothec Bank of Japan had many ordinary business transactions except above mentioned. They are principally as follows:

(1) To make unsecured loans to prefectures, cities, towns, villages and other public corporations organised by law.

(2) To make loans without security, redeemable at a fixed time or by annual instalments in the case of the adjustment of arable land under the law of such adjustments.

(3) To make loans without security, redeemable at a fixed time or by annual instalments, to industrial staple export manufacturers, fishery, forestry, stock breeding or building associations (or federations of such associations).

(4) To make loans without security, redeemable at a fixed time within a period not exceeding five years or by annual instalments within a period not exceeding ten years, to a party of at least ten persons combined with joint liablity, who are engaged in agriculture, industry or fishery in any prefecture where no Agricultural and Industrial Bank exists.

(5) To make loans without security, redeemable at a fixed time or by annual instalments, to land rearrangement associations or federations thereof, in case they apply to borrow for the rearrangement of land to be undertaken under city planning law, or to a party of at leàst ten persons combined, with joint liability, in case they apply to borrow for the same purpose.

(6) With money obtained by the issue of Hypothec debentures with premium, to make loans on security of cultivated fields, saltpans, forests, or on pledges of claims secured by these thems (including real estate mortgage certificates).

(7) Hypothec Bank is required to take up debentures issued by the

Agricultural and Industrial Banks, and Hokkaido Colonisation Bank, Central Bank of Co-operative Societies, and Chōsen Industrial Bank.

(8) To make loans, redeemable by annual instalments on security of the claim on loans redeemable by annual instalments that are issued by the Agricultural and Industrial Banks, and of the mortgage in security of such loans.

(9) To make loans on pledges of claims secured by real estate (including real estate mortgage certificates), redeemable at a fixed time within a period not exceeding five years, and to buy and sell real estate mortgage certificates.

(10) To accept deposits and take custody of gold and silver bullion and negotiable paper, provided that the total amount of deposits, other than the deposits of prefectures or cities, shall not exceed the total amount of the paid-up capital.

Further-more, the banks shall employ the deposits and the money lying idle in the course of its business in the following manner only:

(a) To purchase, with a sum not less than one-quarter of the total deposits, the national bonds or negotiable paper approved by the Minister of Finance, or to deposit it in the Deposit Bureau of the Ministry of Finance or in banks approved by the Treasury.

(b) To discount bills or make short term loans on security of the above-mentioned negotiable papers or on agricultural or marine products or on industrial manufacturers.

(c) To discount bills or grant overdrafts to industrial associations, staple export manufacturers' associations, fishery associations or federations thereof.

(d) To make short-term loans to public corporations,

(e) To make short-term loans without security to a party of at least ten persons combined, under joint liability, who are engaged in agriculture, industry or fishery in any prefecture where no Agricultural and Industrial Bank exists.

(f) To receive fixed deposits as funds for an initial payment on security of real estate or fishery rights, or on pledge of claims secured by real estate (including real estate mortgage certificates) of loans, redeemable at a fixed time within a period not exceeding five years.

At first it was strictly required that the proceeds of the loans granted

by the banks had to be employed only in the ways conductive to the improvement and development of agriculture and industry. Such restrictions, however, were found to be too rigid to enable the banks to perform the functions with which they had been charged. The scope of the use of the loans, therefore, was gradually enlarged more and more, until in 1911 such limitations were finally abolished. Under the apprehension, however, that the freedom thus granted might accentuate the tendency to concentrate the operations upon urban mortgage, thus defeating the true purpose of such institutions, the following provisions were instituted:

(1) With the exception of the loan on financial foundations (*Zaidan*) connected with factories or with the sites or buildings thereof, the total amount of mortgage loans on land or buildings situated in places subject to municipal administration or in towns designated by Ordinance, and of loans made to the readjustment of land societies, may not altogether exceed one-half of the total amount of the paid-up capital plus the mortgage bonds issued.

(2) In the case of Agricultural and Industrial Banks, however, the total amount of such loans may not exceed one-fourth of the total amount of paid-up capital and mortgage bonds outstanding, with a special provision that such loans may be increased up to the total amount of the said two items of account with permission of the minister concerned.

Both the Hypothec Bank and the Agricultural and Industrial Bank may receive deposits. In order, nevertheless, that this privilege may not bring pressure to bear upon ordinary (commercial) banks, it is provided that (a) the total amount of fixed deposits and deposits other than those of public bodies shall not exceed the paid-up capital: and that (b) the deposits of money are to be employed to the extent of not less than one-fourth of the amount in purchasing national bonds or othe eligible papers or in depositing with the Deposit Bureau of the Finance Ministry or with other banks. The funds still available after covering the above requirements may be invested in short-term loans on national bonds or eligible papers as above-mentioned, or on agricultural, marine or industrial products, or discounting bills, in granting over-draft credit on current accounts of co-operative societies, or in making short-term advances to public bodies.

It must be remembered, however, that it is only after the principal business has been carried out and when there are funds to spare that they

are allowed to make short-term advances. Such transactions are to be considered as side issues.

In view of the relation of the Hypothec Bank and Agricultural and Industrial Bank, when the Hypothec Bank was created the ordinary corporations were allowed to issue their debentures only within the limit of their paid-up capital and provided that one-half or more of their registered capital had been paid up. The Hypothec Bank, however, was authorised, when at least one-quarter of its nominal capital had been paid up, to issue mortgage debentures to the amount not exceeding fifteen times its paid-up capital, provided that the amount of such debentures shall not exceed the total amount of outstanding loans, redeemable by annual instalments or at a fixed time, plus the debentures in the hands of the Agricultural and Industrial Banks, Hokkaido Colonisation Bank, Central Bank for Co-operative Societies, and the Chōsen Industrial Bank. These mortgage debentures must be redeemed by means of drawings taking place at least twice a year in amounts proportionate to redeemable by annual instalments plus the debentures in hand of the abovementioned banks. In case any loans redeemable by annual instalments are before maturity, the bank may, with the amount so paid, purchase and redeem its mortgage debentures.

The Agricultural and Industrial Banks were first permitted to issue their debentures to an amount not exceeding five times (later increased to fifteen times) their paid up capital, without any such restrictions as were imposed on the Hypothec Bank. With a view to securing funds of long period and law interest rate to finance agricultural and industrial enterprises, the Hypothec Bank has been authorised to pay bonuses or premiums on its debentures at their maturity. The maximum of such bonuses was at first fixed at 500 yen, but later increased to 5000 yen.

It has further been provided that the Hypothec Bank cannot use the funds acquired from the bonusbearing deventures for other purposes than loans on mortgage of farm land, forests and pastures, unsecured loans to prefectures, cities, towns, villages and other public corporations organised by law, and underwriting the debentures of the Agricultural and Industrial Banks and the central treasury of industrial associations. The law thus prohibits the employment of such funds for any purpose other than the primary business of the Hypothec Bank as an institution for the mortgage loan business.

The Agricultural and Industrial Banks are not allowed to pay bonuses or premiums on their debentures, but it is provided that the Hypothec Bank may underwrite their debetures to enable them to obtain necessary funds. However, the capacity of the Hypothec Bank to absorb the debentures of the former banks is limited, moreover, it is not easy for the Agricultural and Industrial Banks to float their debentures, owing to the fact that all of these banks, except a few in large cities, are situated in provincial localties. Naturally, therefore, they have to depend for their resources chiefly on deposits, especially time deposits. But deposits in such localties are few and small, consequently the primary cost of money is exceedingly high. The supply of funds for agriculture and industry is thus limited.

In order to remedy this drawback the Government, in 1900, allowed the banks to act as agents for loans made by the Hypothec Bank. In 1902 an arrangement was made under which the Agricultural and Industrial Banks are allowed to borrow from the Hypothec Bank on the security of claims to loans redeemable by annual instalments or on the security of mortgage righst. However, this remedy proved to be nothing more than a mild measure, inadequate to relieve the banks of the difficulty in acquiring operating funds. Finally, the Governmant arrived at the conclusion that it would be better to amalgamate all the Agricultural and Industrial Banks with the Hypothec Bank and made the former the latter's branch offices. The law of Consolidation of Agricultural and Industrial Banks was accordingly passed in February 1921. Since then twenty-nine of the Agricaltural and Industrial Banks have been merged with the Hypothec Bank, only was seventeen remaining independent in 1937, but subsequently all the Agricultural and Industrial Banks were absorbed by the Hypothec Bank in 1944.

The debentures issued by the Hypothec Bank are of five kinds:

(1) Small Hypothec certificates at the face value of 50 yen. In order to render this class of debentures popular they have been converted into premium-bearing bonds, and they have for a long time constituted the chief source of funds for Hypothec Bank.

(2) Large Hypothec certificates of 100 yen denomination. These certificates were first issued in 1910 while old 4 per cent national bonds of the Government were still in circulation. The aim was to give liquidity to idle funds in various sources, so that the "tightness of money" in rural districts might be overcome. It appears that this class of certificates

Table 3 (A) Sumitomo Bank

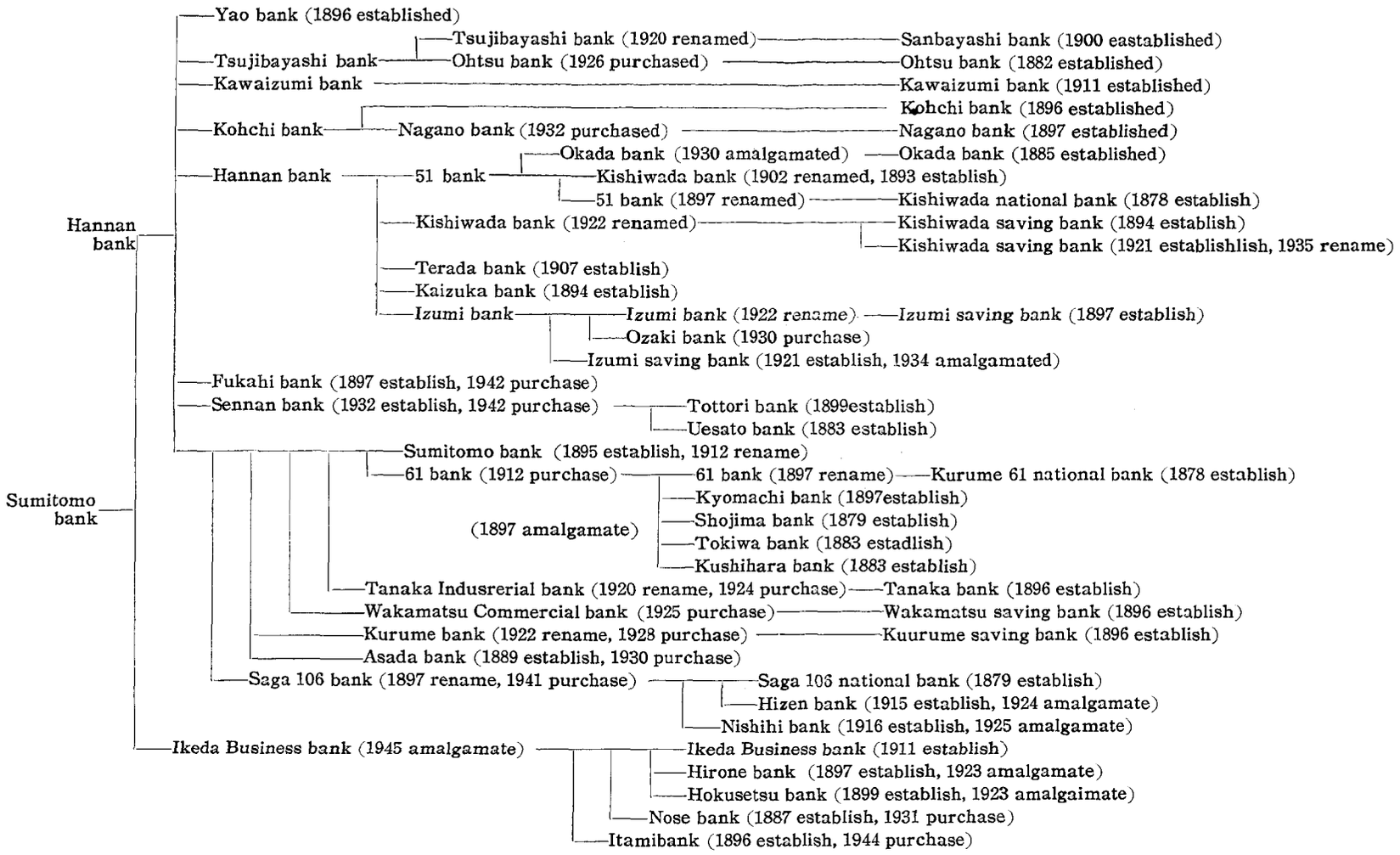


Table 4 (B) Mitsui bank and Daiichi bank

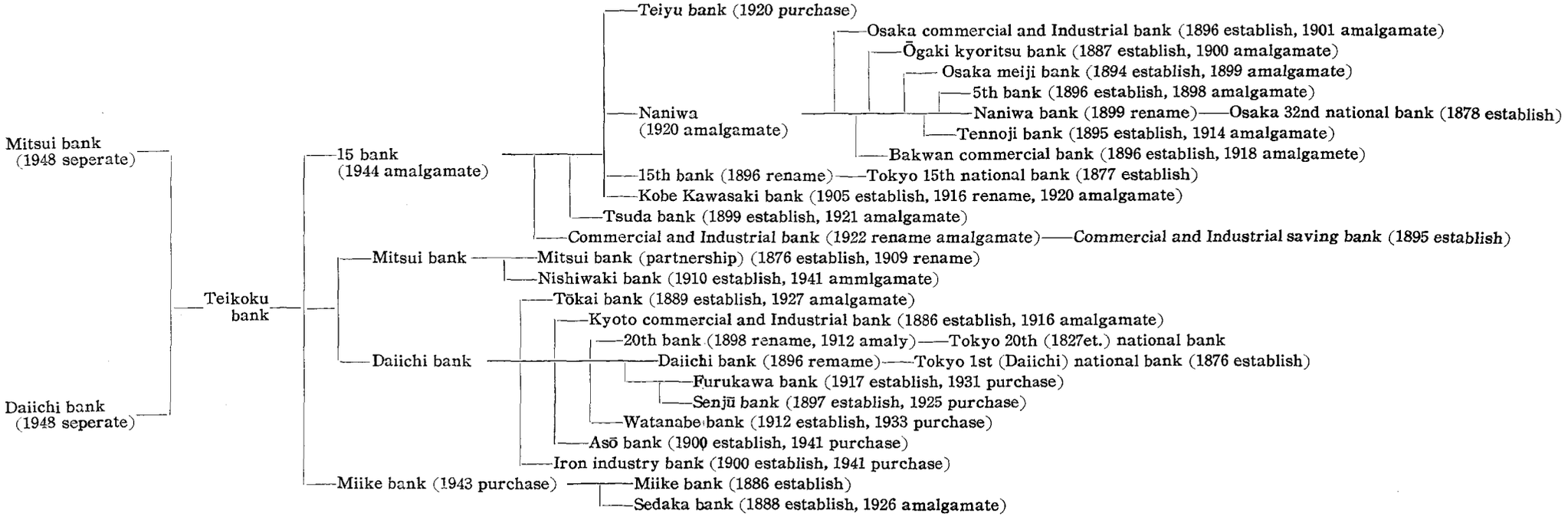


Table 5 (C) Fuji bank (Yasuda bank)

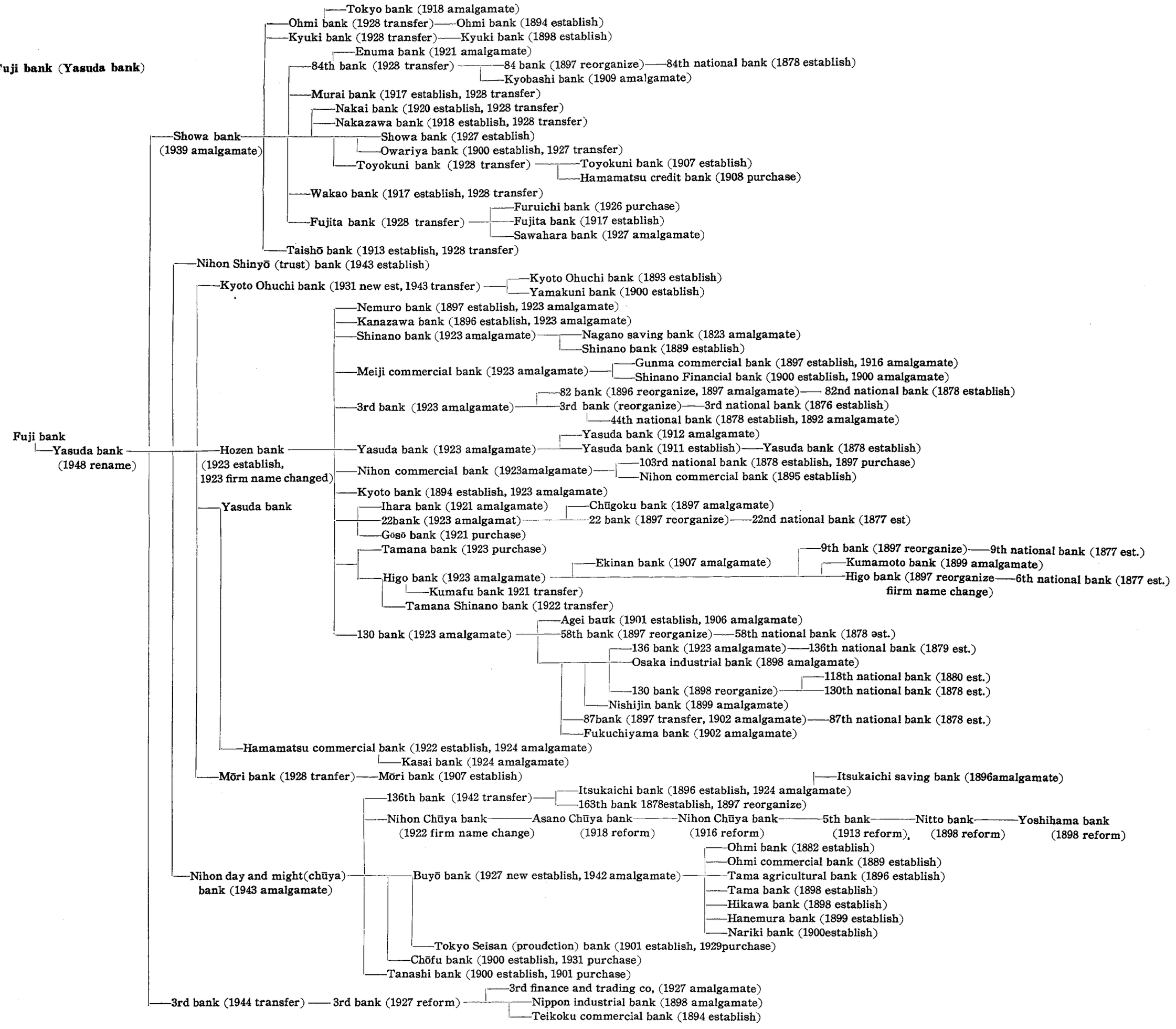
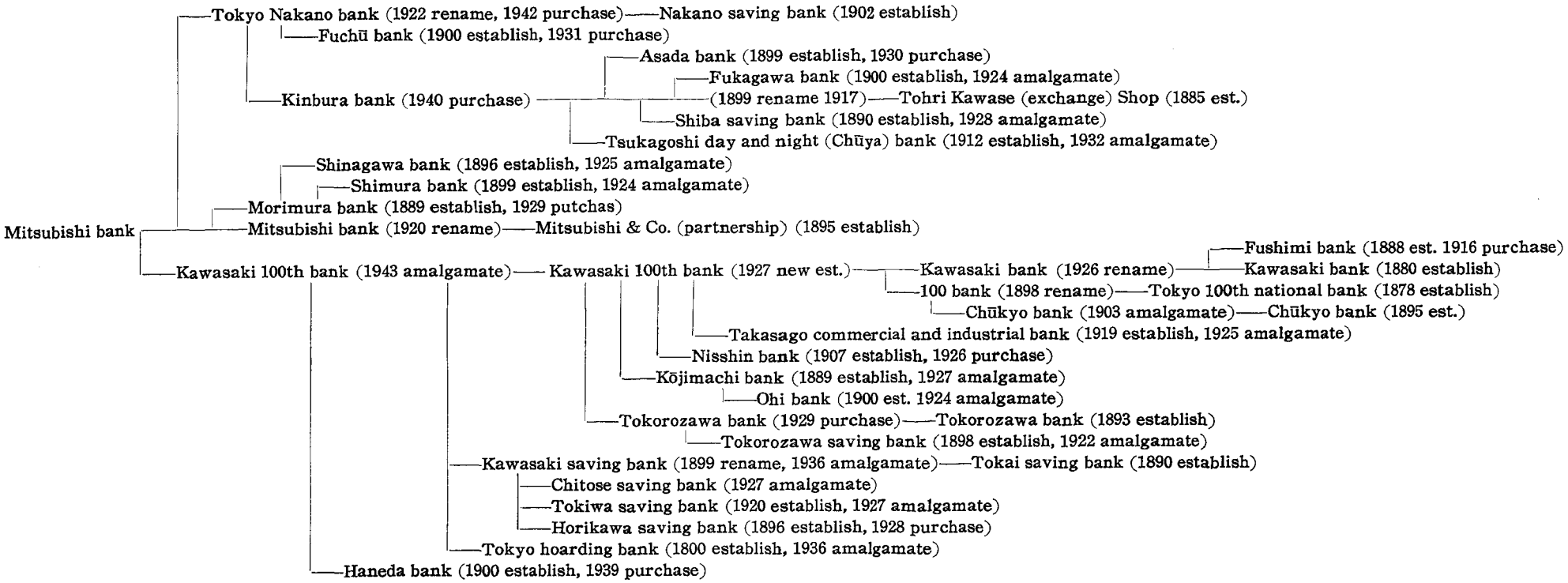


Table 6 (D) Mitsubishi bank



will be the basis of future debentureissuing operations of the Hypothec Bank. They are issued in two forms, i. e. either offered direct to the investing public or underwritten by the Deposit Bureau of the Finance Ministry. In the latter case the issue in called Special Debentures.

(3) Savings certificates, which were created during the Russo-Japanese War to absorb the small sums of money scattered among the people.

(4) Reconstruction premium savings certificates which were created after the earthquake of 1923, in similar manner, to absorb the funds scattered among the people, for the reconstruction of the devasted areas.

The last two kinds of debentures are issued at a denomination of 5 yen, and the bank only acts as issuing agent of the Deposit Bureau of the Treasury; the funds obtained therefrom being transferred to the Treasury.

Table 7 Principal Account of the Hypothec Bank of Japan and the Agricultural and Industrial Banks (In thousand Yen)

The Hypothec Bank of Japan

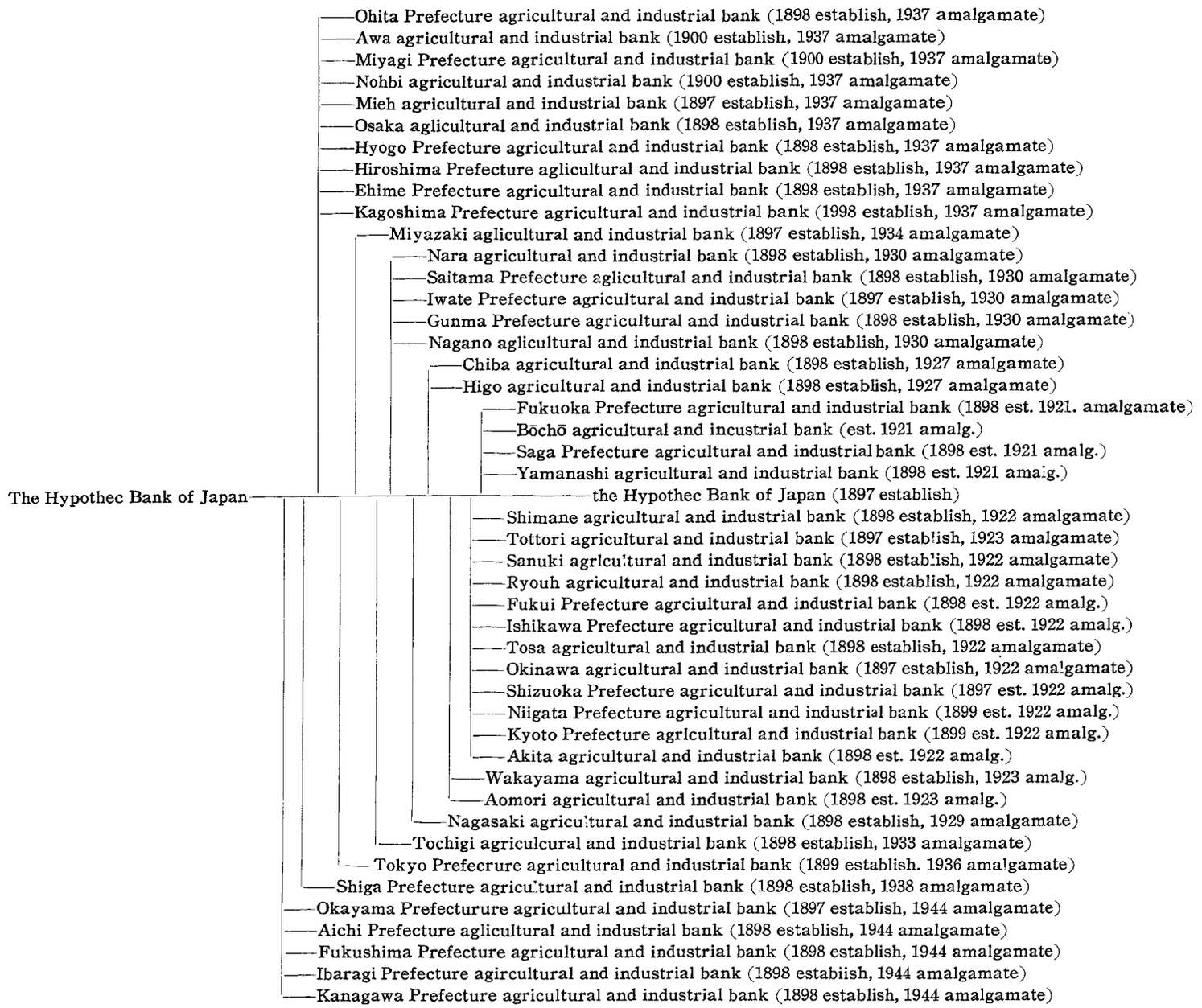
Years	Paid-up Capital	Reserves	Debentures issued	Loans	Underwriting of Debentures	Short Loans	Balance with Banks, etc.
1897	2500			1376			171
1898	2500	7	4997	6706			892
1999	2500	34	7417	8774	137		1179
1900	2500	70	9753	11650	170		816
1901	2500	135	13520	14048	228		1349
1902	3250	210	14409	17320	407		782
1903	3250	460	19547	21795	471		1102
1904	3250	574	25046	23808	453		4808
1905	3250	900	34185	25633	461		11756
1906	3250	1199	48102	29588	545		19115
1907	4250	1503	54184	36793	412		20951
1908	5000	1712	60021	45762	413		22158
1909	6250	1992	68968	59350	438		20503
1910	8750	2333	93929	88423	165	165	19925
1911	12500	2748	134943	132776	202	797	21845

The Agricultural and Industrial Banks

Year	Number of banks	Paid-up capital	Debentures outstanding	Deposits	Loans	Balance with Banks, etc.
1897	46	575				
1898	46	8740		300	4221	5030
1899	46	15980	530	1222	12063	5895
1900	46	22923	630	2147	19200	7020
1901	46	26050	1023	3421	23086	8805
1902	46	27657	2019	4004	25114	10142
1903	46	27770	2602	4760	27881	9503
1904	46	27807	2590	5502	29627	8711
1905	46	28257	2535	5976	30398	9121
1906	46	28294	2818	6967	32102	10134
1907	46	28620	3002	8219	34488	11041
1908	46	29004	3151	8656	36462	10535
1909	46	29369	4125	12141	40339	10252
1910	46	30619	11697	18004	51551	10692
1911	46	32370	30981	23050	77098	1330

Especially, the process of the amalgamation or merger between the Hypothec Bank of Japan and the Agricultural and Industrial Banks is as follows: —

Table 8


The Hypothec Bank of Japan
Ohita Prefecture agricultural and industrial bank (1898 establish, 1937 amalgamate)
Awa agricultural and industrial bank (1900 establish, 1937 amalgamate)
Miyagi Prefecture agricultural and industrial bank (1900 establish, 1937 amalgamate)
Nohbi agricultural and industrial bank (1900 establish, 1937 amalgamate)
Mieh agricultural and industrial bank (1897 establish, 1937 amalgamate)
Osaka aglicultural and industrial bank (1898 establish, 1937 amalgamate)
Hyogo Prefecture agricultural and industrial bank (1898 establish, 1937 amalgamate)
Hiroshima Prefecture aglicultural and industrial bank (1898 establish, 1937 amalgamate)
Ehime Prefecture agricultural and industrial bank (1898 establish, 1937 amalgamate)
Kagoshima Prefecture agricultural and industrial bank (1998 establish, 1937 amalgamate)
Miyazaki aglicultural and industrial bank (1897 establish, 1934 amalgamate)
Nara agricultural and industrial bank (1898 establish, 1930 amalgamate)
Saitama Prefecture aglicultural and industrial bank (1898 establish, 1930 amalgamate)
Iwate Prefecture agricultural and industrial bank (1897 establish, 1930 amalgamate)
Gunma Prefecture agricultural and industrial bank (1898 establish, 1930 amalgamate)
Nagano aglicultural and industrial bank (1898 establish, 1930 amalgamate)
Chiba agricultural and industrial bank (1898 establish, 1927 amalgamate)
Higo agricultural and industrial bank (1898 establish, 1927 amalgamate)
Fukuoka Prefecture agricultural and industrial bank (1898 est. 1921. amalgamate)
Bōchō agricultural and incustrial bank (est. 1921 amalg.)
Saga Prefecture agricultural and industrial bank (1898 est. 1921 amalg.)
Yamanashi agricultural and industrial bank (1898 est. 1921 amalg.)
the Hypothec Bank of Japan (1897 establish)
Shimane agricultural and industrial bank (1898 establish, 1922 amalgamate)
Tottori agricultural and industrial bank (1897 establish, 1923 amalgamate)
Sanuki agrlcu!tural and industrial bank (1898 establish, 1922 amalgamate)
Ryouh agricultural and industrial bank (1898 establish, 1922 amalgamate)
Fukui Prefecture agrciultural and industrial bank (1898 est. 1922 amalg.)
Ishikawa Prefecture agricultural and industrial bank (1898 est. 1922 amalg.)
Tosa agricultural and industrial bank (1898 establish, 1922 amalgamate)
Okinawa agricultural and industrial bank (1897 establish, 1922 amalgamate)
Shizuoka Prefecture agricultural and industrial bank (1897 est. 1922 amalg.)
Niigata Prefecture agricultural and industrial bank (1899 est. 1922 amalg.)
Kyoto Prefecture agrlcultural and industrial bank (1899 est. 1922 amalg.)
Akita agricultural and industrial bank (1898 est. 1922 amalg.)
Wakayama agricultural and industrial bank (1898 establish, 1923 amalg.)
Aomori agricultural and industrial bank (1898 est. 1923 amalg.)
Nagasaki agricu!tural and industrial bank (1898 establish, 1929 amalgamate)
Tochigi agriculcural and industrial bank (1898 establish, 1933 amalgamate)
Tokyo Prefecrure agricultural and industrial bank (1899 establish. 1936 amalgamate)
Shiga Prefecture agricu!tural and industrial bank (1898 establish, 1938 amalgamate)
Okayama Prefecturure agricultural and industrial bank (1897 establish, 1944 amalgamate)
Aichi Prefecture aglicultural and industrial bank (1898 establish, 1944 amalgamate)
Fukushima Prefecture agricultural and industrial bank (1898 establish, 1944 amalgamate)
Ibaragi Prefecture agircultural and industrial bank (1898 estabiish, 1944 amalgamate)
Kanagawa Prefecture agricultural and industrial bank (1898 establish, 1944 amalgamate)

IV

As above-mentioned, the Hypothec Bank of Japan played as an important promoter of our capitalism (especially, industrial capitalism) in the Meiji Era. Then, we try to examine the detail in loan of this bank by statistics.

Table 9 Year after loan (yen)

year	loan by yeartly instalments		time loan		total	
	number	amount	number	amount	number	amount
1897	28	1,376,011	——	——	28	1,376,011
1898	136	5,400,597	——	——	136	5,400,597
1899	83	2,356,081	——	——	83	2,356,081
1900	113	3,370,416	2	76,000	115	3,446,416
1901	246	3,002,109	2	110,000	248	3,112,109
1902	808	4,490,495	——	——	808	4,490,495
1903	1,376	5,921,594	6	99,000	1,382	6,020,594
1904	869	3,728,672	4	43,139	873	3,771,811
1905	1,250	3,985,176	5	40,800	1,255	4,025,976
1906	1,915	7,287,048	15	247,123	1,930	7,525,171
1907	1,673	9,987,276	23	659,230	1,696	10,646,506
1908	2,158	11,846,751	5	63,600	2,163	11,910,351
1909	4,055	17,622,884	22	183,500	4,077	17,806,384
1910	10,444	35,575,322	144	2,149,050	10,588	37,724,373
1911	20,005	58,472,463	446	4,675,601	20,451	63,148,065

So, the early business period in the Hypothec Bank of Japan largely loan by yearly instalments, but the total amount of loan shows as in the following Tables: —

Table 10 The Total amount of loan by borrower (thousand yen)

year	total	items in percentage		
		farmer	manufacturer	public body
1897	1376	24.9%	59.3%	15.8%
1898	6707	21.3	66.7	12.0
1899	8775	26.5	55.7	17.8
1900	11651	29.9	50.4	19.7
1901	14049	32.5	45.9	21.6

Table 11 Public body loan in the early days of the Kangyo Bank (the Hypothec Bank of Japan) 1897—1901 (thousand yen)

the Kind of enterprise	number	amount	%
agriculture	73	3143	90.6
industry (manufacture)	4	259	7.4
reforestation	4	70	2.0
Total	81	3471	100.0

In Table, 11 the contribution of this bank is clear, aspects as the promoter of agricultural development in Japanese capitalism (namely as the only supplying source of fund).

The use of these funds were invested as follows: —

Table 12 Industrial loan (1897—1901) (thousand yen)

use	amount	%
spinning cotton, twisted industry	3790	47%
textile manufacturing	923	11
cement industry	632	8
paper industry	615	8
raw silk industry	464	6
engineering industry	407	5
other industry	1293	15
total	8124	100

In the early Meiji, our export was mostly textile fabries. Moreover, the raw silk was large weight in export (volume). And, this was an important agricultural product.

Table 13 Agricultural loan (one thousand yen)

use	new planned (enterprise) investment	redemption of old loan	total
land clearing	1439	667	2106
reforestation	942	190	1132
readjustment of arable land, and other	1696	289	1985
total	4077	1146	5223
%	78.1 %	21.9 %	100%

Table 14 Year after year loan (non-mortgage loan) (yen)

year	public body		readjustment of arable land		industrial guild		important export goods industrial association		fishery guild		forest guild		live-stock breeding guild		building and association loan		land-read-justment		total	
	number	amount	n.	a.	n.	a.	n.	a.	n.	a.	n.	a.	n.	a.	n.	a.	n.	a.	n.	a.
1897	6	216,703	—	——	—	——	—	——	—	——	—	——	—	——	—	——	—	——	6	216,703
1898	24	595,605	—	——	—	——	—	——	—	——	—	——	—	——	—	——	—	——	24	595,605
1899	22	780,068	—	——	—	——	—	——	—	——	—	——	—	——	—	——	—	——	22	780,068
1900	17	784,930	—	——	—	——	—	——	—	——	—	——	—	——	—	——	—	——	17	784,930
1901	26	840,100	—	——	—	——	—	——	—	——	—	——	—	——	—	——	—	——	26	840,100
1902	21	489,688	—	——	—	——	—	——	—	——	—	——	—	——	—	——	—	——	21	489,688
1903	30	1,722,331	5	16,796	—	——	—	——	—	——	—	——	—	——	—	——	—	——	35	1,730,127
1904	19	1,385,427	40	240,464	—	——	—	——	—	——	—	——	—	——	—	——	—	——	59	1,625,891
1905	21	584,636	58	329,969	—	——	—	——	—	——	—	——	—	——	—	——	—	——	79	977,605
1906	98	2,449,160	258	1,205,891	—	——	—	——	—	——	—	——	—	——	—	——	—	——	356	3,655,051
1907	39	3,539,943	232	1,397,884	—	——	—	——	—	——	—	——	—	——	—	——	—	——	271	4,937,827
1908	56	3,225,563	201	1,577,774	—	——	—	——	—	——	—	——	—	——	—	——	—	——	257	4,803,337
1909	77	2,722,642	154	1,260,661	1	9,000	—	——	—	——	—	——	—	——	—	——	—	——	232	3,992,303
1910	382	5,771,649	219	1,887,009	5	48,500	—	——	—	——	—	——	—	——	—	——	—	——	606	7,707,158
1911	343	13,386,078	772	4,717,771	619	1,507,685	—	——	1	3,000	—	——	—	——	—	——	—	——	1735	19.614,534

Table 15 Year after year loan (yen)

year	direct loan		assured loan		special collateral loan		total		acceptance of bond		total	
	number	amount	n.	a.	n,	a.	n.	a.	n.	a.	n.	a.
1897	28	1,376,011	—	—	—	—	28	1,376,011	—	—	28	1,376,011
1898	136	5,400,597	—	—	—	—	136	5,400,597	—	—	136	5,400,597
1899	83	2,356,081	—	—	—	—	83	2,356,081	5	142,280	88	2,498,361
1900	115	3,446,416	—	—	—	—	115	3,446,416	1	33,300	116	3,479,716
1901	109	2,813,200	139	289,909	—	—	248	2,112,109	3	63,810	251	3,175,919
1902	147	3,306,282	661	1,184,213	4	21,100	812	4,511,595	6	209,300	818	4,720,895
1903	135	4,026,113	1,247	1,994,481	58	263,560	1,440	6,284,154	4	158,160	1,444	6,442,314
1904	90	2,300,024	783	1,471,787	22	82,140	895	3,853,951	—	—	895	3,853,951
1905	95	1,814,442	1,160	2,211,534	47	211,680	1,302	4,237,656	1	33,300	1,303	4,270,956
1906	119	3,751,384	1,811	3,773,787	42	178,740	1,972	7,703,911	2	133,000	1,974	7,836,911
1907	131	5,781,420	1,565	4,865,086	131	566,920	1,827	11,213,426	—	—	1,827	11,213,426
1908	129	5,926,699	2,034	5,983,651	20	95,500	2,183	12,005,851	1	47,400	2,184	12,053,251
1909	217	6,776,271	3,860	11,030,113	6	49,700	4,083	17,856,084	2	71.000	4,085	17,927,084
1910	563	11,531,390	10,025	26,192,983	—	—	10,588	37,724,373	—	—	10,588	37,724,373
1911	1,116	22,164,646	19,335	4,983,419	2	250,000	20,453	63,398,065	1	120,000	20,454	63,518,065

Above table 12-14 shows loans classified by the kind of business enterprise, but table 15 shows classification by the kind of loan (loan procedure).

However, the redemption of such loan was not going well for its cause might be the economic crisis (financial bankruptcy) at the end of Meiji. We can study the economic situations of these days by the next table:—

Table 16 The Amount of redemption (yen)

year	Amount of loan		Total of loan		Amount of redemption		Total of redemption		Total to the end of year (rewainder)	
	number	amount	n.	a.	n.	a.	n.	a.	n.	a.
1897	28	1,376.011	28	1,376,011	0	0	0	0	28	1,376,011
1898	136	5,400,597	164	6,776,608	0	69,874	0	69,874	164	6,706,734
1899	83	2,356,081	247	9,132,690	3	287,973	3	357,848	244	8,774,842
1900	115	3,446,416	362	12,579,106	3	570,627	6	928,475	356	11,650,631
1901	248	3,112,109	610	15,691,215	1	714,161	7	1,642,637	603	14,048,578
1902	812	4,511,595	1,422	20,202,811	11	1,240,072	18	2,882,709	1,404	17,320,101
1903	1,440	6,284,154	2,862	25,486,965	29	1,808,861	47	4,691,570	2,815	21,795,394
1904	895	3,853,951	3,757	30,340,917	32	1,840,948	79	6,532,519	3,678	23,808,397
1905	1,302	4,237,656	5,059	34,578,573	61	2,412,749	140	8,945,268	4,919	25,633,305
1906	1,972	7,703,911	7,031	42,282,485	131	3,748,564	271	12,693,833	6,760	29,588,651
1907	1,827	11,213,426	8,858	53,495,911	262	4,008,324	533	16,702,157	8,325	36,793,753
1908	2,183	12,005,851	11,041	65,501,762	196	3,037,187	702	19,739,345	10,339	45,762,417
1909	4,083	17,856,084	15,124	83,357,847	279	4,267,648	981	24,006,993	14,143	59,350,853
1910	10,588	37,724,373	25,712	121,082,221	633	8,652,080	1,614	32,659,074	24,098	88,423,147
1911	20,453	63,398,065	46,165	184,480,286	1,456	19,044,327	3,070	51,703,401	43,095	132,776,884

The stock of of the Hypothec Bank of Japan, its price (par value) was 500 yen per stock and, number of stocks issued was 50 thousands. As prosperity of after the Ruso-Japanese war was very large propensity to invest, promising stock was generally welcomed.

When this bank closed the list of applications on May 11st 1897, the total suscription (number of stock) was 730495, and 14.6 times, total margin (or deposit) —— 25 yen per one stock —— was 18262 thousand yen.

The cause of was this condition ① speculation to promoter's stocks and

② the stock of Bank of Japan showed three times for paid-up price in its current prices, so similar possibilities were remarkable to the stock of this bank (this bank was semi-government bank), ③ loan safety as mortgage bank, ④ no danger of conversion by low interest (as government bond) and ⑤ the user of the Agricultural and Industrial Bank was about to hold the stock of the Hypothec Bank of Japan as the central bank of the agricultural and Industrial Bank. The name and profession of the stock holder with more than 50 shares of the stock at the end of 1897, as follows:—

Table 17

holding number	name	Profession	dwelling place
986	Nakaemon Nishida	land-lord	Hyogo Prefecture
400	Uhei Kaizuka	President of Spinning Co., Ltd.	Mieh Prefecture
383	Seizo Ishisaki	pawn shop	Tokyo
327	Tokujiro Ichijima	land-lord	Niigata Prefecture
169	Chojiro Ito	land-lord	Hyogo Prefecture
138	Heikichi Kishi	land-lord	Niigata Prefecture
137	Michihisa Baba	land-lord	Toyama Prefecture
273	Chosei Kuroda	old feudal lord	Kyushu
150	Toshitsugu Maeda	old feudal lord	Ishikawa Prefecture
205	Bank of 15		Osaka Prefecture
137	Bank of Senshu		Osaka Prefecture
136	Bank of Ohwada		
80	Bank of Kamezaki		
205	Nihon Life Insurance Co.,		
136	Nippon Fire Insurance Co.,		
176	Hanyomon Tatsuma	sake-distilling industry	Hyogo Prefecture
54	Yozaemon Wakabayashi	sake-distilling industry	Hyogo Prefecture

In foundation days, the most important business of this bank was the relief finance to our cotton and spinning industry, because Minister of Finance directed to give an extraordinary credit to these industries facing serious depression all over the country in 1897. And the relief industries were as table 20:—

above all, trade industry —— exporting or importing industry (firms) ① spinning industry (including silk industry), ② textile industry, ③ wollen-

yarn industry, ④ cement and chemical industry.

The standard of loan was decided by the board of directors.[2] The extraodinary loan was chiefly given to Osaka and Kyoto districts, but the amount and condition of credit is shown in the table 20.

This relief loan, during May 1898-Aug. 1898, granted to Osaka 124.1 (ten thousand yen), 24 Kyoto, 15 Hyogo, 17 Okayama, 22.4 Fukuoka, 6.5 Tokyo. To assure dividend, for the first several years, the Hypothec Bank of Japan has been given to subsidy from government. However, it composed of the Reparation Special Fund (a/c) —— the Reparation of the Sino-Japanese War 931000 (ten thousand yen),—— became gradually unnecessary after 1899.

Table 18 The plan for subsidy (10 thousands yen)

	1897	1898	1899	1900	1901	1902	1903	1904	1905
subsidy to the Agricultural and Industrial Bank	2000	2000	2000	2000	2000	——	——	——	——
subsidy to the Hypothec Bank of Japan	125	250	357	500	500	500	500	500	500

In reality, the subsidy to the Hypothec Bank of Japan, 5.5 was in 1897, 6 in 1898. As the results, net Profit increased by and by.

Table 19 (one teousand yen)

	net profit (amount)	ratio of dividend %
1897 Ⅱ	7503	50
1898 Ⅰ	3600	2.5
1898 Ⅱ	35141	2.5
1899 Ⅰ	115634	2.5
1899 Ⅱ	126718	3.3
1902 Ⅰ	251976	5.0
1902 Ⅱ	508328	5.0

2) The standard of credit 1) the highest necessity on national economic policy from the aim of commencement of business. 2) the possibility of high dividend (more than 6%). 3)the most safety and assured enterprise in net profit. 4) the excellent productivity. 5) between the fixed capital and liquid capital balanced. 6) the excellent managerial groups.

Besides, in this paper, we omitted other national Banks, colonial Banks, Special Banks and Private Banks, we intend to study them at another chance.

V

In short, our analysis can be summarized as follows :—

(1) In the middle Meiji days, Japanese people's accumulation of capital was extremely poor, private capital formation, national economy met difficulty aggregately and seriously due to capital shortage for a long time.

(2) The majority of our people had lttle economic knowledge, and understanding of modern economic organizattion.

At the start, our capitalism on account of our under-developed economy experienced shortage both of industrial and commercial fund in deposits and savings. Therefore, the commercial bank depended exclusively upon the creation of credit by means of the central bank.

Such conditions disappeared since the middle of Meiji, because our financial institution (or banking system) had been established and seperated into the deposit bank and the long-term bond issued bank, the former taken charge of the economic finance, the latter national policy finance.

Table 20

Debtor	Enterprise Business	Capital (Stock) (ten thousands yen)	Appraisal Price (yen)	Loan (ten thousands yen)	Borrowing Purpose	The term of annual instalment (year)
Osaka Spinning Co., Ltd	Spinning industry	120	339223	12.5	extension of factory purchasing of machine	10
Osaka Twisted (yoriito) Co., Ltd.	Twisted industry	15	70130	4.5	extension of factory purchasing of machine	10
Meiji Spinning Co., Ltd,	Spinning industry	85	209700	12.5	redemption of old loan	9
Osaka wollen yarn Co., Ltd,	Wollen yarn industry	50	145118	9.0	redemption of old loan	9
Sakai Spinning Co., Ltd.	Spinning industry	40	17011	10.0	redemption of old loan	9
Hirono Spinning Co., Ltd.	Spinning industry	50	227760	12.5	redemption of old loan	9
Kinchaku Spinning C., Ltd.	Spinning industry	200	252382	9.6	redemption of old loan	10
Fukushima Spinning Co., Ltd,	Spinning industry	50	129920	8.0	redemption of old loan	9
Temma Textile Co., Ltd.	Textile industry	35	132488	8.3	redemption of old loan	9
Kōriyama Spinning Co., Ltd.	Spinning industry	70	88004	5.8	extension of enterprise	9
Nihon Spinning Co., Ltd.	Spinning industry	200	282588	12.5	redemption of old loan	9
Murasakino Textile Co., Ltd.	Textile industry	15	53742	3.5	extension of factory purchasing of machine	8
Kyoritsu Silk Spinning Co., Ltd.	Spinning industry	100	160265	10.0	fixed fund	8
Nishijin Twisted Readjusting Co., Ltd,	Twisted industry	40	50485	2.0	redemption of old loan purchasing of raw materials	8
Nihon Silk Fabric Spinning Co., Ltd.	Spinning industry	100	159529	7.0	redemption of old loan	8
Heian Spinning Co., Ltd.	Spinning industry	50	85194	4.5	redemption of old loan	8
Hokkaido Cement Co., Ltd.	Cement industry	36	116778	7.0	redemption of old loan	9
Osaka Sulphate of Soda Manufacturing Co., Ltd.	Chemical industry	50	135928	8.0	extension of factory	8
Kyoto Spinning Co., Ltd.	Spinning industry	60	166302	7.0	redemption of old loan	8
Osaka Cement Manufacturing Co., Ltd.	Cement industry	30	155000	8.0	redemption of old loan	9
Osaka Cotton industry Co., Ltd.	Cotton industry	20	39180	2.5	purchasing of raw materials and machine	7
Ohmi Hemp thread Spinning Co., Ltd.	Spinning industry	60	131261	7.0	redemption of old loan	8
Nagoya Spinning Co., Ltd.	Spinning industry	100	129423	8.0	extension of factory purchasing of machine	9
Kashū Spinning Co., Ltd.	Spinning industry	80	109362	6.5	redemption of old loan	9
Nihon Sugar Producing Co., Ltd.	Sugar industry	60	180538	6.5	redemption of old loan	4
Hakata Silk spinning Co., Ltd.	Spinning industry	60	155342	7.5	redemption of old loan	8
Harima Spinning Co., Ltd.	Spinning industry	35	92216	5.5	redemption of old loan	8
Awaji Spinning Co., Ltd.	Spinning industry	40	84167	8.0	redemption of old loan	9
Takaoka Spinning Co., Ltd.	Spinning industry	35	95337	4.5	extension of factory	8
Kurume Spinning Co.. Ltd.	Spinning industry	36	173453	9.5	redemption of factory	9
Shimomura Spinning Co., Ltd.	Spinning industry	30	25208	1.5	redemption of factory	8
Nihon Cement Manufucturing Co., Ltd.	Cement industry	45	91586	5.4	extension of enterprise	9
Bizen Spinning Co., Ltd.	Spinning industry	25	91517	5.5	extension of enterprise	8
Total		1992	4528986	237.1		

DISPOSITION OF COST VARIANCES IN JAPANESE TAX LAW

Susumu WATANABE

PROBLEMS TO BE CONSIDERED

It is provided in Japanese tax law that inventories shall be valued at acquisition cost (or actual cost) when the cost basis is adopted.[1] Since, in that case, tax law expects the valuation of closing inventories as the basis of the profit and loss account to be made at actual cost, it follows that corporations are not complying with the requirement of tax law if they value their inventories otherwise than at actual cost. For instance, suppose we have ¥1,000,000 to the debit of the goods in process account (the amount being entered at actual cost), and ¥800,000 to its credit (indicating the issues priced at predetermined cost). The balance of this account, ¥200,000, does not necessarily show the actual cost of the goods in process on hand, because the requisitions were priced at predetermined cost instead of at actual cost. If we find closing inventories amount to ¥400,000 if valued at actual cost in this case, the total of this amount and the amount of the issues exceeds the amount on the debit side, ¥1,000,000 by ¥200,000. This excess indicates the overpricing of the issues by ¥200,000. This means a cost variance on the credit side, and at the same time means the overpricing of the debit entries of the finished goods account by that amount. It is obvious that this will result in its turn in the overpricing of the issues of finished goods (the issuing price here forms the cost of sales) and the closing stock if they are calculated on the basis of receipt entries. If we are to meet the

1) Besides the "cost" basis, the "market" basis and the "cost or market, whichever is lower" basis are recognized by Japanese tax law.

requirement of tax law, we have to distribute the cost variance of ¥200,000 in the goods in process account between the finished goods on hand and the cost of sales. We have supposed in the preceding example that the debit entries of the work in process account were made at actual cost. Now we suppose instead the same entries were made at the predetermined cost of cost elements such as materials, labor, etc. Then the cost variances of cost elements should be distributed between the issuing price of goods in process and the goods in process on hand. Cost variances also arise when the standard cost accounting is adopted or when departmental transfer is made at prices other than actual cost. The sources of cost variances vary with the cost accounting systems adopted by business enterprises. It should be noted that here in this article I mean by the term cost variance not only the difference between the standard cost and the actual cost, but the difference between the actual cost and any cost that may result from the cost accounting in practice in a given enterprise. "The Notification Relating to the Disposition of Cost Variances" (May 18, 1953) defines the term cost variance as the difference between the cost that may result from the calculation of a corporation and the actual cost that forms the basis of acquisition cost in conformity with Sec. 20 of the Corporation Tax Law Enforcement Regulations, and includes within the meaning of the term materials cost variances, labor cost variances, manufacturing expense variances, and profits or losses arising from internal transfer. It is only natural that law should require the disposition of such cost variances so long as it stands on the actual cost basis.

The Internal Revenue Code of the United States also requires valuation at actual cost (except that valuation is made at market when it is below cost). But as the standard cost accounting is prevailing in practice in business circles, it might be reasonably expected that a method should be established of disposing of cost variances for the purpose of calculating taxable income. Few articles and textbooks treating this problem, however, are to be found. Reitell and Harris, Cost Accounting (pp. 544-5) is one which discusses the problem. It shows the method of apportioning the total manufacturing variance where the standard cost system is adopted. It is, however, open to question whether their method is applicable where the elective method of inventory valuation is adopted for tax purposes, while the standard cost system is adopted for business purposes. The reasons for this questioning follow. The effect of cost variances on the cost of sales of

the period varies with the valuation methods adopted. Under Lifo, for example, where the closing inventory is equal to the opening inventory in quantity, the same value should be given to the closing inventory as to the opening inventory, and all the cost variances arising during the period should not be apportioned to the closing inventory, but be closed to the profit and loss account. Under Fifo, on the other hand, the case is otherwise. So far as the closing inventory consists of goods manufactured during the period, part of the cost variances arising during the period should be apportioned to the closing inventory valued at other than actual cost. It follows that the methods of apportioning cost variances should vary with the methods of valuation.

There is group of accountants who support valuation at standard cost by distinguishing cost from loss, and maintain that cost variances should be closed to the cost of sales or profit and loss accounts. But since the standard cost is not the actual cost, valuation at standard cost is, it must be admitted, inappropriate from the point of view of financial accounting that makes a point of matching costs with revenues. Where cost variances are slight, that is, where valuation at standard cost approximates valuation at actual cost, the cost variances may be closed to the profit and loss account of the period from the standpoint of the principle of materiality. The A I A Committee on Accounting Procedure says in the Accounting Research Bulletin No. 43 at p. 30 fn. "Standard costs are acceptable if adjusted at reasonable intervals to reflect current conditions so that at the balance-sheet date standard costs reasonably approximate costs computed under one of the recognized bases."

Now we proceed to make a brief account of the Japanese tax regulations governing the acquisition cost of inventories and the method of disposing of cost variances.

THE ACQUISITION COST OF INVENTORIES

Japanese tax law classifies the acquisition cost of inventories into (A) that of purchased goods, (B) that of manufactured goods and (C) that of goods brought forward from the preceding period.

(A) The Acquisition Cost of Purchased Goods. This includes the purchase price of purchased goods and the following incidental expenses:

(1) All expenses paid to obtain possession of purchased goods, such as brokerage, freight inward, loading charges, transportation insurance, customs duties, etc.

(2) All expenses not listed under head (1), such as those relating to purchasing procedure, inspection, arrangement, assortment, care-taking, transportation, relocation, etc. As regards expenses under head (2), however, it is not required to include them in the acquisition cost where they have not clearly contributed to the enhancement of the value of the goods and do not come up to a substantial amount.

(B) The Acquisition Cost of Manufactured Goods (including Processed Goods), i. e. Manufacturing Cost. It means all expenses incurred for production and incidental to production, and includes direct material cost, direct labor cost, direct expense and also manufacturing overhead. (Such small corporations as find difficulty in distributing overhead, are permitted to leave manfacturing overhead unapportioned to goods in process and partly finished goods. It is understood in this case that all manufacturing overhead should be absorbed into finished goods.)

As regards expenses, such as listed under head (A-2), which are incurred for production and incidental to production, it is required to include them in the manufacturing cost even though they have not clearly contributed to the enhancement of the value of the goods and do not come up to a substantial amount.

With regard to items which are not quite clear as to whether they should be included in the manufacturing cost, " the Notification Relating to the Treatment of Corporation Tax " makes proper provisions as follows:

(1) The following expenses should be included in the manufacturing cost where they are incurred for production or incidental to production:

(a) the amount credited to the retirement allowance reserve and the amount of retirement allowance treated as deduction, except those amounts coming under heads (2, a-c) below.

(b) employees' bonuses.

(c) such portion of the deficiency in depreciation brought forward from preceding periods by corporations filing their returns on the blue form as is recognized as a deduction for the period. It is permissible, however, not to include it in the manufacturing cost where all other expenses to be included in the manufaturing cost are properly calculated.

(d) additional depreciation.

(e) amortization of good-will, patents and other intangible fixed assets.

(f) amortization of mining land, telephone rights, right to the utilization of port facilities, key money paid for houses, etc.

(g) expenses for experiments and researches ordinarily made for the execution of business.

(h) the amount credited to the special repair reserve.

(i) contributions paid, and ordinarily to be borne, by factories, etc.

(j) taxes such as property tax, automobile tax, mining tax, mining product tax, etc.

(2) The following expenses need not be included in the manufacturing cost:

(a) the excess, if there is, of the amount credited to the retirement allowance reserve in the period when the retirement allowance rules are amended, over the maximum amount to be credited to the said account for the same period on the assumption that the amended retirement allowance rules were in force at the close of the preceding period. This is permissible only where all other expenses to be included in the manufacturing cost are properly calculated.

(b) the excess of the amount of retirement allowances paid by a corporation that has a retirement allowance reserve, over the portion of it which corresponds to the accruals of the period. This is permissible only where all other expenses to be included in the manufacturing cost are properly calculated.

(c) retirement allowances paid to dismissed employees in cases of large-scale dismissal by reason of closing, reorganization, curtailment or the like of the business.

(d) the excess over the amount of ordinary depreciation of the amount of extra depreciation made in accordance with the Tax Special Treatment Act or the Business Rationalization Act.

(e) business tax.

(f) excess depreciation or any other amount not recognized as a deduction for tax purposes.

(g) expenses corresponding to the period of suspended production where production is suspended for a considerable time by contingencies.

Proper cost accounting standards should apply to items which are not

expressly specified in the tax law as to whether they should be included in the manufacturing cost or to which of direct material cost, direct labor cost, direct expense, and manufacturing overhead they should belong if they should be included in it.

(C) The Acquisition Cost of Goods Brought Forward from the Preceding Period. It is required to value the closing inventory at actual cost instead of at the figure of the preceding period, where the cost or market basis is adopted and where the value of the goods was written down to market, because market was below cost. This applies with necessary modifications to cases where the value of inventories is written down in accordance with Sec. 17-2 of the Corporation Tax Enforcement Regulations.

DISPOSITION OF COST VARIANCES

Since tax law requires valuation of inventories to be made at actual cost as stated in the preceding section, a corporation which makes valuation at other than actual cost has to apportion cost variances and adjust its valuation.

Tax law, however, does not require such apportionment in all cases. Where the amount of cost variances does not exceed one per cent of the total manufacturing cost, the law permits such cost variances to be closed to the profit and loss account instead of being apportioned. The determination of whether the amount of variances is within one per cent or not is made as a rule by each factory or line of business. But where the amount of cost variances in each factory or line of business does not exceed three per cent of its total manufacturing cost, the law permits such cost variances to be closed to the profit and loss account instead of being apportioned, provided that such cost variances, taken altogether, do not exceed one per cent of the total manufacturing cost of the whole corporation. In case of any difficulty in calculating exact total manufacturing cost, it is allowable to resort to the following formula if approximate total manufacturing cost is obtainable:

receipt entries of finished goods + goods in process at the close of the period − goods in process at the beginning of the period

Although the Notification Relating to the Disposition of Cost Variances above referred to provides for the standard method of such disposition, it does not prevent corporations from adopting other methods if the methods

are recognized as more adapted to their methods of cost accounting and the practical needs of their kinds and forms of business and therefore more rational. Where, on the other hand, the value of inventories is unreasonably reduced by their methods of calculation, the superintendent of a tax office is authorized to calculate the value of their inventories by a more exact method in order to approximate valuation at actual cost.

Where a corporation with more than two factories applies cost accounting separately, cost variances are to be disposed of for the respective factories. Furthermore, where a factory engaged in more than two lines of business applies cost accounting separately, cost variances are to be disposed of for the respective lines of business.

(A) The following is a description of the standard method of apportionment. Cost variances to be apportioned to goods in process account should be disposed of by applying the following formula to adjust the closing inventory of goods in process. And then cost variances to be apportioned to finished goods (including that portion of variances to be apportioned to goods in process account which were not apportioned to the closing inventory of goods in process) are to be disposed of in a similar manner to adjust the closing inventory of finished goods. Where cost variances are to be apportioned to materials because, for instance, incidental expenses paid on materials cannot be conveniently apportioned to individual materials and therefore are not included in the acquisition cost of the materials, apportionment should begin with materials before proceeding to goods in process and finished goods.

(1) Where Fifo is adopted:

$$\text{cost variances} \times \frac{\text{closing inventories}}{\text{total receipts of the period}}$$

Note: Where the total receipts of the period are below the closing inventories, the total amount of cost variances is apportioned to the closing inventories minus the opening inventories included in the closing inventories.

(2) Where Lifo is adopted:

$$\text{cost variances} \times \frac{\text{closing inventories} - \text{opening inventories}}{\text{total receipts of the period}}$$

Note: Where the closing inventories are below the opening inventories, there is no need to make any apportionment. Where the closing inventories are above the opening inventories, approtionment must be made to the excess.

(3) Where the weighted average method, moving average method or straight average method is adopted:

$$\text{cost variances} \times \frac{\text{closing inventories}}{\text{the total receipts of the period} + \text{opening inventories}}$$

(4) The formula for the specific cost method is omitted here.

(a) The aforesaid term "opening inventories" means inventories of materials, goods in process or finished goods standing at the close of the preceding period after disposition of cost variances if necessary. Where, however, cost variances to have been apportioned at the close of the preceding period are disposed of by the method mentioned under (B) below, the term means closing inventories of the proceding period before adjustment.

(b) The said term "closing inventories" means those closing inventories which have been computed by the corporation by applying the valuation method it adopts, on the assumption that opening inventories and debit entries of materials, goods in process or finished goods represent their respective acquisition cost.

(c) The term "total receipts of the period" means the total of receipts of materials, goods in process or finished goods calculated by the corporation.

(B) How to dispose of the adjusted amount in the following period where adjustment was made in a lump sum. Where cost variances to be apportioned to the value of closing inventories of the preceding period are disposed of in a lump sum instead of being distributed among individual items, the amount so treated (hereinafter called adjusted amount) is to be disposed of by applying one of the following formulas to adjust the closing inventories of materials, goods in process or finished goods, to say nothing of cost variances that have arisen during the period. In this case, the rest of the adjusted amount which did not go to the closing inventories of materials is to be included in the cost variances of the period for goods in process and to be disposed of by applying one of the formulas listed under (A) above; and the rest of the adjusted amount which did not go to the closing inventories of goods in process is to be included in the cost variances of the period for finished goods and to be similarly disposed of.

(1) Where Fifo is adopted:

$$\text{adjusted amount} \times \frac{\text{opening inventories} - \text{total issues of the period}}{\text{opening inventories}}$$

Note: The term "total issues of the period" means opening inventories + total receipts of the period − closing inventories. Where the opening inventories are below the total issues of the period, there is no need to adjust the closing inventories.

(2) Where Lifo is adopted:

$$\text{adjusted amount} \times \frac{\text{inventories of the portion of closing inventories that correspond to opening inventories}}{\text{opening inventories}}$$

(3) Where the weighted average method, moving average method or straight average method is adopted:

The adjusted amount is to be included in the cost variances that have arisen during the period and to be disposed of by applying the formula (A-3) above.

With regard to cost variances attention is called to the following points:

(1) Disposition of cost variances must be made in the financial statements approved at the shareholder's general meeting. Otherwise the difference between the value of the closing inventories (not adjusted) and their actual cost is deemed to have been written up or down by the corporation as the case be.

(2) Writing up or down of adjusted inventories must be made according to the groups in which disposition of cost variances was made.

STRUCTURE OF INDUSTRIAL DISTRICTS IN JAPAN

——THE CASES OF TOKYO, OSAKA AND NAGOYA——

Minoru BEIKA

(1)

It is difficult to select the plant location by the general theory that determines the most favorable location. Actually, the marginal adaptability of the location to the requirements is of more importance to the plant. The evaluation of the latter starts chiefly with the investigation of the locational patterns for each industry. But it can not necessarily be characterized by the type, as each industrial firm is managed by many different requirements.

The spatialness (that is spatial exclusiveness) of location gives rise to the land use competition. Consequently, the location of a certain plant is relatively limited by the location of other plants. It is necessary, therefore, to carry on the research of the structure of the industrial districts together with the investigation of the location factors of the industries.

This article is the regional research, as above defined, in the urban and suburban ditricts of the three chief industrial cities in Japan; Tokyo, Osaka and Nagoya.

These three cities have occupied 20.5% of our industrial workers in 1949;

29.7% in the metal and engineering industries, 8.2% in the textile industry, 20.3% in the chemical industry, 12.7% in the food and drink industry, 54.1% in the printing and publishing industries, 20.6% in the clay, pottery and glass industries, and 17.5% in the other industries.

The structure of these industrial districts is shown as below; of the metal and engineering industry, textile industry, chemical industry and others. The tables show, (A) how much percentage of the whole industrial workers is employed in each industry in the coastal region or the hinter zone of the three cities, and (B) how much percentage of each industry is located in each zone of the cities. The writer thinks, the result of this research could have a significant effect on the patterns of land use in our manufacturing industries.

(2)

(1) The Metal and Engineering Industires.

The transportation is one of several important location factors for every industrial establishment, but, above all, the heavy industries such as metal and engineering industries are remarkably dependent upon the location factor. Since these industries in our country must import a considerable part of materials abroad, such as iron ores, some kind of coal, scrap iron, etc., they have inevitably had to concentrate not only in a few large coastal cities, but also in the coastal regions of these cities, due to the convenience of the transportation, especially that by sea.

The metal and engineering industries are the representative of such industries, so that the three cities have occupied about 30% of the workers of the whole industries in our country, and then half of the industrial workers in each of the three cities are employed in this industry.

As is tabulated in the table I, 70 or 80% of all the industrial workers in the coastal region in the three cities, are employed in the metal and engineering industries, and this is common to the three cities. Moreover, the industries in the coastal regions in Tokyo and Osaka, occupy about 40% of the whole metal and engineering industries in each city. In the hinter zone of the coastal region, these industries have about 40–50% of the workers of all industries, and then the inner zones of the cities have less workers engaged in this industry. Exceptionally, in the hinter zone of Nagoya, 60–80% of the

industrial workers belong to the metal and engineering industries. This phenomena was caused by the earlier industrial development in the inner zone than in the coastal region, and on the other, by the industrial structure that larger part of this industry in Nagoya belongs to the machine industry (textile machinery and transportation equipment), which depends on the rail transportion in great deal.

The metal and engineering industries consist of the primary metal industry, metal processing, machine industry, and precise machine industry. The lower stages of these industries are located chiefly in the coastal region, and the higher stages are located in the hinter zones because the processes have relatively more transportability for material or products.

(1) The primary metal industry chiefly consists of large sized factories belonging to the iron and steel industry, which is without exception, concentrated in the coastal region, about 50% or more of the industry.

(2) The metal processing industry consists of a number of middle and small sized factories, and is chiefly located in the inner zone adjoining to the coastal regions, or in the hinter districts. These localities of the cities occupy about 50% of the workers engaged in the industry.

(3) The machine industry is considerably located in the coastal region as well as the primary metal industry, but the extent of the concentration of the former is lower than that of the latter. Some portions of the higher stage factories of the machine industry have encroached not only into the inner zone of these cities, but also considerably into the suburban districts.

(4) Especially, the precision machine industry consists of middle and small sized factories, and is located chiefly in the inner and hinter zone districts.

As a whole, the factories in the coastal region are very large or moderately large in size, and ones in the inner zones are middle or small sized. The former is relatively more material-oriented or transportation-oriented, while the latter is relatively more market-oriented, rather due to the location factor of mutual connection by regional concentration. The data of the location of each metal and engineering industries is shown in the tables, II, III, IV and V.

(1) The Regional Structure of the Metal and Engineering Industries

Tokyo-to				City of Osaka				City of Nagoya			
Sections(ku)	A	B		Sections(ku)	A	B		Sections(ku)	A	B	
Total	49.0	100.0	100.0	Total	55.3	100.0	100.0	Total	52.8	100.0	
① Koto	75.9	12.8	41.4	Nishiyodogawa	78.1	12.7	41.3	① Minami	73.7	9.1	22.7
① Minato	69.6	5.4		Konohana	78.2	12.1		① Minato	61.3	13.6	
① Shinagawa	69.6	10.1		① Minato	81.5	2.4		② Atsuta	81.8	17.5	45.8
① Ota	82.7	13.1		Taisho	74.1	9.8		② Mizuho	69.9	9.8	
② Edogawa	46.2	3.6	30.9	Sumiyoshi	72.3	4.3		② Nakagawa	58.8	10.3	
② Katsushika	41.3	4.2		Higashi-yodogawa	46.0	9.4	28.0	② Nakamura	60.1	8.2	
② Adachi	45.9	4.6		Oyodo	48.0	4.6		③ Nishi	23.3	5.7	23.0
② Sumida	40.2	6.7		② Fukushima	36.9	4.6		③ Kita	31.2	5.9	
② Arakawa	34.6	4.0		Nishi	63.9	1.4		③ Higashi	51.5	10.2	
② Kita	27.2	3.0		Naniwa	49.8	1.6		③ Chikusa	31.5	1.2	
② Itabashi	47.3	4.8		Nishinari	58.5	6.4					

③	Meguro	59.8	2.8	9.1
	Setagaya	58.9	2.0	
	Suginami	52.4	1.2	
	Shibuya	39.0	0.8	
	Nakano	33.7	0.6	
	Toshima	36.3	1.1	
	Nerima	37.6	0.6	
④	Shinjuku	31.3	1.5	6.3
	Taito	26.2	1.4	
	Chuo	36.2	2.6	
	Chiyoda	6.6	0.3	
	Bunkyo	11.9	0.5	
Other districts		48.4	10.9	

③	Miyakojima	17.4	1.1	27.9
	Asahi	43.5	1.8	
	Joto	62.9	9.9	
	Higashinari	62.2	7.6	
	Ikuno	51.7	3.9	
	Higashi-sumiyoshi	36.2	1.5	
	Abeno	45.6	1.3	
	Tennoji	45.5	0.8	
④	Kita	18.0	1.7	2.5
	Higashi	30.4	0.4	
	Minami	27.6	0.4	

④	Showa	42.2	3.6	8.0
	Naka	40.0	4.4	

①=Coastal region,

②, ③ =Hinter zone,

④=Central zone of the city.

Tokyo-to & City of Nagoya=1949

City of Osaka=1948

(II) The Regional Structure of the Primary Metal Industry

Tokyo-to				City of Osaka				City of Nagoya			
Sections(ku)	A	B		Sections(ku)	A	B		Cections(ku)	A	B	
Total	10.7	100.0	100.0	Total	14.6	100.0	100.0	Total	15.4	100.0	100.0
① Koto	29.7	35.7	50.9	Nishiyodogawa	23.1	20.2	51.9	① Minami	47.2	27.9	56.2
① Minato	1.0	0.5		Konohana	1.6	1.4		① Minato	32.0	28.3	
① Shinagawa	1.9	1.8		① Minato	17.1	2.9		② Atsuta	12.5	14.2	33.1
① Ota	10.5	12.9		Taisho	33.6	22.6		② Mizuho	3.5	2.2	
② Edogawa	15.1	5.2	41.0	Sumiyoshi	16.5	4.8		② Nakagawa	22.6	15.2	
② Katsushika	9.0	3.5		Higashi-yodogawa	14.0	9.7	26.2	② Nakamura	2.8	1.5	
② Adachi	15.5	6.7		Oyodo	8.6	2.7		③ Nishi	3.4	1.3	7.3
② Sumida	10.2	6.4		② Fukushima	12.1	3.3		③ Kita	11.5	4.4	
② Arakawa	2.3	0.8		② Nishi	7.4	0.7		③ Higashi	1.6	1.1	
② Kita	18.6	5.2		Naniwa	4.5	0.5		③ Chikusa	6.1	0.5	
② Itabashi	29.0	13.2		Nishinari	21.0	9.3					

③	Meguro	2.6	0.7	3.4
	Setagaya	10.0	1.8	
	Suginami	0.2	—	
	Shibuya	—	—	
	Nakano	11.1	0.6	
	Toshima	2.1	0.2	
	Nerima	1.8	0.1	
④	Shinjuku	—	—	0.5
	Taito	1.7	0.2	
	Chuo	1.3	0.3	
	Chiyoda	1.1	—	
	Bunkyo	—	—	
	Other districts	3.1	3.2	

③	Miyakojima	11.8	0.9	20.6
	Asahi	2.4	0.3	
	Joto	17.8	12.1	
	Higashinari	9.4	4.6	
	Ikuno	7.0	1.8	
	Higashi sumiyoshi	3.6	0.3	
	Abeno	0.9	—	
	Tennoji	7.9	0.4	
④	Kita	7.9	0.9	1.0
	Higashi	—	—	
	Minami	3.5	0.1	

④	Showa	1.6	0.4	3.4
	Naka	10.2	3.0	

①=Coastal region

②, ③=Hinter zone

④=Central zone of the city

Tokyo-to & City of Nagoya=1949

City of Osaka=1948

(III) The Regional Structure of the Metal Products Industry

Tokyo-to				City of Osaka				City of Nagoya			
Sections(ku)	A	B		Sections(ku)	A	B		Sections(ku)	A	B	
Total	19.7	100.0	100.0	Total	21.9	100.0	100.0	Total	9.6	100.0	100.0
① Koto	10.1	6.6	29.6	Nishiyodogawa	13.9	8.1	19.9	① Minami	6.2	5.9	8.7
① Minato	13.6	3.6		① Konohana	1.8	1.0		① Minato	2.0	2.8	
① Shinagawa	17.3	8.9		① Minato	31.4	3.4		② Atsuta	7.2	13.0	51.9
① Ota	15.7	10.5		① Taisho	14.1	6.5		② Mizuho	10.3	10.3	
② Edogawa	41.5	7.7	50.3	① Sumiyoshi	4.9	0.9		② Nakagawa	15.9	17.2	
② Katsushika	50.3	10.8		② Higashi-yodogawa	23.2	10.0	32.1	② Nakamura	13.4	11.4	
② Adachi	25.4	5.9		② Oyodo	19.9	4.2		③ Nishi	7.8	4.7	25.9
② Sumida	40.1	13.7		② Fukushima	28.0	5.1		③ Kita	14.7	9.0	
② Arakawa	33.5	6.8		② Nishi	59.1	3.9		③ Higashi	5.3	5.7	
② Kita	20.3	3.1		② Naniwa	30.5	2.2		③ Chikusa	49.5	6.5	
② Itabashi	9.3	2.3		② Nishinari	22.9	6.7					

③	Meguro	14.6	2.1	8.2
	Setagaya	20.0	2.0	
	Suginami	11.0	0.7	
	Shibuya	18.5	0.7	
	Nakano	22.0	0.7	
	Toshima	23.4	1.3	
	Nerima	22.3	0.7	
④	Shinjuku	18.2	1.4	8.6
	Taito	44.7	3.3	
	Chuo	24.8	3.2	
	Chiyoda	18.9	0.3	
	Bunkyo	16.2	0.4	
	Other districts	4.2	2.3	

③	Miyakojima	8.0	0.4	44.8
	Asahi	35.4	3.0	
	Joto	34.6	15.6	
	Higashinari	36.5	12.6	
	Ikuno	44.5	7.9	
	Higashi-sumiyoshi	46.2	3.2	
	Abeno	21.1	1.3	
	Tennoji	21.9	0.8	
④	Kita	18.6	1.4	2.2
	Higashi	7.5	0.1	
	Minami	37.4	0.7	

④	Showa	17.2	6.4	13.5
	Naka	15.2	7.1	

①=Coastal region

②, ③=Hinter zone

④=central zone

Tokyo-to & City of Nagoya=1949

City of Osaka=1948

(IV) The Regional Structure of the Machine Industry

Tokyo-to				City of Osaka				City of Nagoya			
Sections(ku)	A	B		Sections(ku)	A	B		Sections(ku)	A	B	
Total	60.4	100.0	100.0	Total	62.1	100.0	100.0	Total	68.4	100.0	100.0
① Koto	55.7	11.8	46.8	① Nishiyodogawa	62.3	12.8	42.0	① Minami	46.2	6.1	19.2
① Minato	85.4	7.7		① Konohana	95.5	18.8		① Minato	65.9	13.1	
① Shinagawa	75.7	12.7		① Minato	50.5	1.9		② Atsuta	73.1	18.5	47.4
① Ota	67.1	14.6		① Taisho	51.3	8.1		② Mizuho	69.6	10.0	
② Edogawa	37.0	2.2	22.2	① Sumiyoshi	78.4	5.4		② Nakagawa	59.6	9.0	
② Katsushika	36.3	2.5		② Higashi-yodogawa	60.0	9.1	26.1	② Nakamura	82.9	9.9	
② Adachi	53.7	4.1		② Oyodo	70.0	5.2		③ Nishi	63.0	5.3	24.6
② Sumida	35.5	3.9		② Fukushima	59.6	3.8		③ Kita	71.2	6.1	
② Arakawa	59.2	3.9		② Nishi	33.1	0.7		③ Higashi	83.7	12.5	
② Kita	56.0	2.7		② Naniwa	61.8	1.6		③ Chikusa	38.5	0.7	
② Itabashi	36.1	2.9		② Nishinari	54.9	5.7					

③	Meguro	71.3	3.4	9.8
	Setagaya	51.2	1.6	
	Suginami	71.6	1.5	
	Shibuya	59.6	0.8	
	Nakano	56.7	0.6	
	Toshima	61.3	1.1	
	Nerima	70.9	0.8	
④	Shinjuku	14.2	0.3	5.0
	Taito	40.9	1.0	
	Chuo	72.2	3.1	
	Chiyoda	61.8	0.3	
	Bunkyo	37.0	0.3	
	Other districts	83.2	15.1	

③	Miyakojima	79.5	1.5	23.4
	Asahi	59.9	1.8	
	Joto	45.6	7.2	
	Higashinari	53.1	6.5	
	Ikuno	44.6	2.8	
	Higashi-sumiyoshi	49.4	1.2	
	Abeno	74.0	1.6	
	Tennoji	65.9	0.8	
④	Kita	72.5	2.0	2.6
	Higashi	47.9	0.3	
	Minami	53.2	0.3	
④	Showa	74.9	3.9	8.1
	Naka	64.8	4.2	

①=Coastal region

②, ③=Hinter zone

④=Central zone

Tokyo-to & City of Nagoya=1949

City of Osaka=1948

(V) The Regional Structure of the Precision Machine Industry

Tokyo-to				City of Osaka				City of Nagoya			
Sections(ku)	A	B		Sections(ku)	A	B		Sections(ku)	A	B	
Total	9.0	100.0	100.0	Total	1.3	100.0	100.0	Total	6.4	100.0	100.0
① Koto	4.3	6.1	21.4	Nishiyodogawa	0.5	5.0	8.1	① Minami	0.1	0.2	0.2
① Minato	0.4	0.2		Konohana	—	—		① Minato	—	—	
① Shinagawa	4.9	5.6		① Minato	—	—		② Atsuta	7.0	19.1	48.5
① Ota	6.5	9.5		Taisho	0.4	3.0		② Mizuho	16.7	25.6	
② Edogawa	6.3	2.5	34.8	Sumiyoshi	—	0.1		② Nakagawa	1.7	2.8	
② Katsushika	4.2	2.0		Higashi-yodogawa	2.6	19.2	33.5	② Nakamura	0.8	1.0	
② Adachi	5.2	2.6		Oyodo	1.4	4.9		③ Nishi	25.6	22.9	42.1
② Sumida	14.0	10.4		② Fukushima	0.1	0.4		③ Kita	2.5	3.3	
② Arakawa	4.8	2.1		② Nishi	0.2	0.2		③ Higashi	9.2	14.8	
② Kita	4.9	1.6		Naniwa	2.9	3.6		③ Chikusa	5.6	1.1	
② Itabashi	25.4	13.6		Nishinari	1.0	5.2					

③	Meguro	11.3	3.5	14.6
	Setagaya	18.6	4.1	
	Suginami	17.1	2.4	
	Shibuya	21.8	2.0	
	Nakano	9.9	0.7	
	Toshima	13.1	1.6	
	Nerima	4.9	0.3	
④	Shinjuku	67.5	11.4	16.8
	Taito	10.8	1.7	
	Chuo	1.5	0.4	
	Chiyoda	18.1	0.6	
	Bunkyo	46.7	2.7	
Other districts		9.3	11.2	

③	Miyakojima	0.5	0.4	40.5
	Asahi	2.1	3.0	
	Joto	1.8	13.8	
	Higashinari	0.8	5.0	
	Ikuno	3.6	11.0	
	Higashi-sumiyoshi	0.6	0.7	
	Abeno	3.8	4.0	
	Tennoji	4.1	2.6	
④	Kita	0.7	1.0	17.0
	Higashi	44.4	14.2	
	Minami	5.7	1.8	

④	Showa	6.2	3.5	10.2
	Naka	9.6	6.7	

①=Coastal region

②, ③ =Hinter zone

④=Central zone

Tokyo-to & City of Nagoya=1949

City of Osaka=1948

(VI) The Regional Structure of the Textile Industry

Tokyo-to				City of Osaka				City of Nagoya			
Sections(ku)	A	B		Sections(ku)	A	B		Sections(ku)	A	B	
Total	9.3	100.0	100.0	Total	10.0	100.0	100.0	Total	0.7	100.0	100.0
① Koto	1.7	1.5	6.0	Nishiyodogawa	2.8	2.5	6.7	① Minami	1.2	0.8	0.8
① Minato	0.1	0.7		Konohana	0.2	0.2		① Minato	—	—	
① Shinagawa	3.7	2.8		① Minato	0.1	—		② Atsuta	2.1	2.5	21.3
① Ota	1.2	1.0		Taisho	0.5	0.4		② Mizuho	2.9	2.2	
② Edogawa	6.2	2.6	48.8	Sumiyoshi	11.0	3.6		② Nakagawa	9.4	9.0	
② Katsushika	8.7	4.7		Higashi-yodogawa	15.3	17.4	32.7	② Nakamura	10.3	7.6	
② Adachi	11.1	5.8		Oyodo	14.2	7.6		③ Nishi	18.5	24.8	69.0
② Sumida	13.8	12.1		② Fukushima	9.9	6.0		③ Kita	33.5	34.6	
② Arakawa	23.9	14.7		② Nishi	4.2	0.5		③ Higashi	6.5	7.0	
② Kita	12.2	7.7		Naniwa	1.5	0.2		③ Chikusa	12.1	2.6	
② Itabashi	2.2	1.2		Nishinari	1.7	1.0					

③	Meguro	4.8	1.2	7.9
	Setagaya	5.0	0.9	
	Suginami	4.0	0.5	
	Shibuya	7.8	0.8	
	Nakano	9.0	0.9	
	Toshima	12.1	1.9	
	Nerima	18.6	1.7	
④	Shinjuku	3.2	0.8	5.3
	Taito	8.3	2.4	
	Chuo	3.6	1.3	
	Chiyoda	0.8	0.2	
	Bunkyo	2.5	0.6	
Other districts		26.4	31.3	

③	Miyakojima	54.2	20.2	52.9
	Asahi	27.6	6.6	
	Joto	8.3	7.3	
	Higashinari	8.4	5.7	
	Ikuno	7.9	3.3	
	Higashi-sumiyoshi	26.2	6.2	
	Abeno	16.9	2.8	
	Tennoji	8.2	0.8	
④	Kita	9.4	5.0	6.8
	Higashi	7.8	0.6	
	Minami	15.1	1.2	

④	Showa	12.4	5.7	8.2
	Naka	4.2	2.5	

①=Coastal region

②, ③ =Hinter zone

④=Central zone

Tokyo-to & City of Nagoya=1949

City of Osaka=1948

The above statistics include the clothing industry.

(3)

(2) The Textile Industry (including the clothing industry)

The three cities have only under 10% of our textile industry workers, and then this industry workers also only 10% of all industrial workers in each city, because this industry has relatively more transportability of materials and products than the metal and engineering industries. This industry is located commonly in the hinter zone in the cities, especially in the river-side regions, i. e. the north-east in Tokyo, north and north-east in Osaka, and north in Nagaya. The coastal region of each city has few plants of this industry. Especially, it is a noteworthy fact, that higher and final stages (hosiery, clothing, finishing and dying processes etc.) are main parts of this industry in the cities. These stages of this industry are market-oriented, and the three cities are the centers of internal and external markets. The spinning factories, mostly accompanied by the weaving processes, are large-sized, and are located in the country districts, and the specialized weaving factories, consisting of small or middle sized factories, are localized swarmingly in a considerable number in the country districts.

As shown in the table VI, about 50% of the workers of this industry work in the inner zone of each city, and the ② zone in Tokyo and Osaka, the ③ zone in Nagoya are river-side regions. Though the subdivision of this industry is not shown in this table, the hosiery industry and clothing industry are the representatives of the localized industries in Tokyo and Osaka, and these industries are of small factories, and have concentrated severally in some inner parts of each city.

(4)

(3) The Chemical Industry

The three cities have about 20% of our chemical industry workers, and this industry has about 10% of all the industrial workers in Tokyo and Osaka, and about 5% in Nagoya. Since the chemical industry comprise many kinds of industries which have different business features, large-sized or middle-sized, material-oriented or market-oriented, producer's goods or consumer's goods, etc., it is very difficult to generalize, what are the main location factors of this industry. But the factories of this industry in such central industrial

districts as these three cities, are, relatively speaking, market-oriented kinds, while a large part of the factories of this industry in the country districts, belong chiefly to the material-oriented kinds. Therefore, the former are generally middle sized factories and consist of chiefly consumer's goods ones, and most of the latter are large-sized and consists of producer's goods ones.

These chemical factories in the three cities are mostly located in the riverside regions of the hinter zone in each city, but a few kinds have been found in the coastal regions. As shown in the table VII, about 50% of this industry in Tokyo and Osaka is located in the inner zone adjoining the coastal region, and only exceptionally, the coastal region in Nagoya occupies 64% of her chemical industry. But in Nagoya, there are relatively few chemical factories, and such statistical result as above stated, has been produced by one large chemical fertilizer factory, which is located in the coastal region.

(5)

(4) The Printing and Publishing Industries
——Mural or Central District Industries

The printing and publishing industries have occupied 9.8% of all the industrial workers in Tokyo, 5.7% in Osaka, and 3.6% in Nagoya. But the three cities occupy 54% of the whole country in this industry, and then this industry is characteristically one of the representatives in the city-centre located industries.

As shown in the table VIII, the factories of this industry are not only concentratedly located in the central district in each of the three cities, but also are the most important of the industries in the central district. Moreover, the central district is the office and shopping zone, and has few industrial factories, and then the printing and publishing industries may be the only representative industry in this zone. Especially, in Tokyo and Osaka, these districts, (④ zones), have 60% or over of this industry, and yet in some sections of these districts, the workers in this industry have reached in number to one half or more of all the industrial workers in these sections. Even in Nagoya, where this industry has less importance, it has reached to 34% in the central section. It is quite apparent, that this industry is market-oriented, and the best markets are found in the office and shopping center in the large cities.

(VII) The Regional Structure of the Chemical Industry

Tokyo-to				City of Osaka				City of Nagoya			
Sections(ku)	A	B		Sections(ku)	A	B		Sections(ku)	A	B	
Total	8.1	100.0	100.0	Total	10.2	100.0	100.0	Total	4.7	100.0	
① Koto	5.6	5.7	18.7	Nishiyodogawa	10.7	9.5	26.6	① Minami	—	—	64.0
① Minato	4.0	1.8		Konohana	12.8	10.8		① Minato	25.8	64.0	
① Shinagawa	8.0	7.0		① Minato	5.6	0.9		② Atsuta	0.3	0.7	6.4
① Ota	4.4	4.2		Taisho	6.3	4.5		② Mizuho	0.2	0.4	
② Edogawa	19.4	9.3	53.8	Sumiyoshi	2.9	0.9		② Nakagawa	1.6	3.3	
② Katsushika	7.7	4.7		Higashi-sumiyoshi	27.9	31.0	52.8	② Nakamura	1.3	2.0	
② Adachi	6.2	3.8		Oyodo	10.3	5.4		③ Nishi	5.7	15.8	24.3
② Sumida	8.9	9.0		② Fukushima	17.4	10.3		③ Kita	2.4	5.1	
② Arakawa	5.3	3.7		② Nishi	2.7	0.3		③ Higashi	0.9	2.1	
② Kita	22.0	14.6		Naniwa	8.7	1.5		③ Chikusa	2.8	1.3	
② Itabashi	14.1	8.7		Nishinari	7.2	4.3					

③	Meguro	9.2	2.6	13.6
	Setagaya	13.8	2.8	
	Sumida	11.0	1.6	
	Shibuya	5.8	0.7	
	Nakano	9.9	1.1	
	Toshima	20.2	3.7	
	Nerima	10.7	1.1	
④	Shinjuku	4.9	1.4	6.8
	Taito	7.1	2.4	
	Chuo	1.7	0.7	
	Chiyoda	2.4	0.7	
	Bunkyo	5.9	1.6	
Other districts		4.3	5.8	

③	Miyakojima	1.0	0.3	16.3
	Asahi	6.0	1.4	
	Joto	8.0	6.9	
	Higashinari	5.1	3.4	
	Ikuno	3.1	1.3	
	Higashi-sumiyoshi	6.7	1.5	
	Abeno	4.7	0.7	
	Tennoji	8.5	0.8	
④	Kita	3.1	1.6	3.3
	Higashi	18.2	1.3	
	Minami	5.9	0.4	

④	Showa	4.5	4.4	5.3
	Naka	0.7	0.9	

①=Coastal region

②, ③=Hinter zone

④=Central zone

Tokyo-to & City of Nagoya=1949

City of Osaka =1948

(VIII) The Regional Structure of the Printing and Publishing industries

Tokyo-to				City of Osaka				City of Nagoya			
Sections(ku)	A	B		Sections(ku)	A	B		Sections(ku)	A	B	
Total	9.8	100.0		Total	5.1	100.0		Total	3.6	100.0	
① Koto, Minato, Shinagawa, Ota	3.2	9.0		① Nishiyodogawa, Konohana, Minato, Taisho, Sumiyoshi	0.3	1.8		① Minami, Minato	1.4	7.5	
② Edogawa, Katsushika, Adachi, Sumida, Arakawa, Kita, Itabashi	4.3	17.0		② Higashi-yodogawa, Oyodo, Fukushima, Nishi, Naniwa, Nishinari	3.7	23.5		② Atsuta, Mizuho, Nakagawa, Nakamura	2.3	23.2	
								③ Nishi, Kita, Higashi, Chikusa	3.2	32.1	

③	Meguro	4.5	4.5	
	Setagaya			
	Suginami			
	Shibuya			
	Nakano			
	Toshima			
	Nerima			
④	Shinjuku	43.9	10.8	66.8
	Taito	15.2	4.3	
	Chuo	42.0	15.1	
	Chiyoda	85.3	21.1	
	Bunkyo	66.1	15.1	
	Other districts	2.0	2.3	

③	Miyakojima	2.1	13.1	
	Asahi			
	Joto			
	Higashinari			
	Ikuno			
	Higashi-sumiyoshi			
	Abeno			
	Tennoji			
④	Kita	52.0	54.1	61.4
	Higashi	25.3	3.8	
	Minami	22.0	3.5	

④	Showa	2.4	3.0	37.0
	Naka	20.7	34.0	

①=Coastal region

②, ③=Hinter zone

④=Central zone

Tokyo & City of Nagoya=1949

City of Osaka=1948

(6)

Industrial districts in each of the three cities have been respectively characterized by several particular industries, due to the locational speciality of each industry as above stated. In the summary, the coastal region has been highly characterized by the metal and engineering industry, especially the larger factories of the primary metal industry, without exception. The inner zone adjoining to the coastal region, i. e. the east in Tokyo, the west and the eastern region bordering the central zone in Osaka, and the north and the south outside of the central zone in Nagoya, has not only a considerable part of the metal and engineering industries, especially the middle or small-sized factories of the relatively higher stages of this industry, but also this zone is the principal district of the textile industry and the chemical industry in the large cities; in other words, many kinds of industries have concentrated accumulatively in this zone. The central zone of each city is characterized by being office and business and shopping centers and then the printing and publishing industries are the representative industries in this zone.

Thus, a large part of the other industries than those above stated, have also concentrated in the inner part bordering the central zone of the three cities. The rubber, paper, glass, and food and drink industries belong to the ones above stated. The inner part in Tokyo (especially the ② zone), has 71% of the workers of the rubber industry, 72% of the paper industry, 41% of the glass industry, and 34.7% of the food and drink industry, and, the ② and ③ zone in Osaka has 81.8% of rubber industry, 87.9% of paper industry, 71.2% of glass industry, and 71.2% food and drink industry. These industries in both city consist of, relatively, middle and small sized factories.

(7)

With the industrial growth of the urban districts of the large cities, the suburban districts have gradually developed into industrial activity. Therefore, it is necessarily indispensable, that the suburban and adjoining districts of the large cities are included in the research of the structure of the industrial districts. Now the writer analysed only about the suburban

districts of Osaka, (the so-called Han-shin industrial districts). It may be summarized as follows: ——

In the metal and engineering industries, the suburban districts have chiefly the factories belonging to the intermediate or final processes, some of which are large sized machine or electric machine factory, some of which are very small sized and have localized in several localities, while, in the urban districts, the lower-stages and higher stages of large factories are located in the coastal region, as before stated.

In the textile industry, the suburban districts have been somewhat characterized in the same way as in the urban districts; that is, this industry has less importance, and consists of the higher and final stage factories in these districts.

The chemical industry has no distingished characteristics in the suburban districts, because there are relatively more cases, that the factories of this industry are large-sized in general and located scatteredly in particular sites often by their natural and technical requirements and then these factors have not produced their particular regional features.

The suburban districts have relatively less factories of the other industries than the above stated, but the food and drink industry has been considerably found in these districts too. Accordingly, the metal and engineering industries are the representatives in the suburban industrial districts.

(8)

The location theory is said, in some cases, to be an assumption that the industrial factory may be dealt with as "point" existence, while agriculture must be regarded as extensive existence in itself. But the industrial enterprise is also a real existence, and its economic activities are to have some spatial problems in itself, and then it is to be also an extensive existence. The present industrial factories, and enterprises have developed to large-sized, and very large-sized ones, and then they have had to face some of the spatial problems more or less in the two dimensions.

In the first, the present industrial enterprise has often its head office in one place, and its selling offices and several factories in other places; in other words, the economic activities of the industrial enterprise have diversified in

(IX) The Industrial Structure of the Hanshin Districts

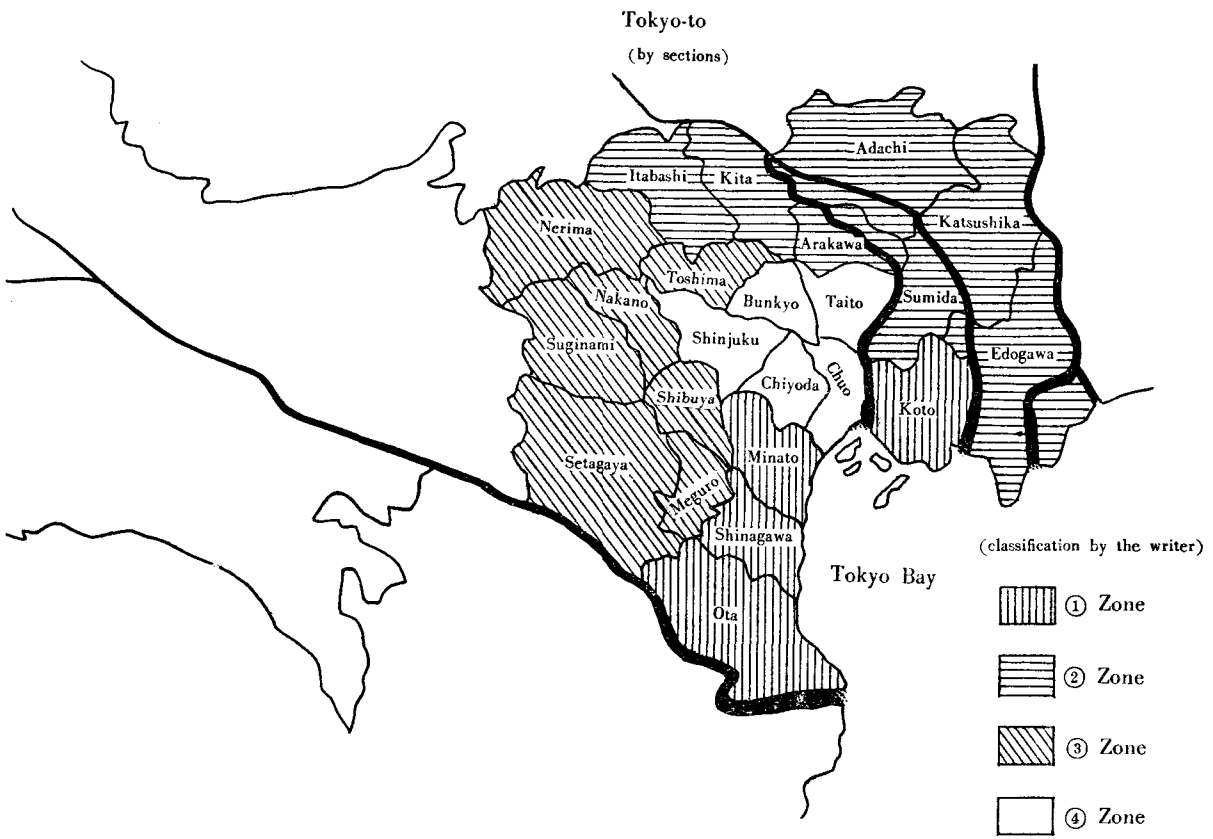
(The Suburban of Osaka) (Dec. 1949)

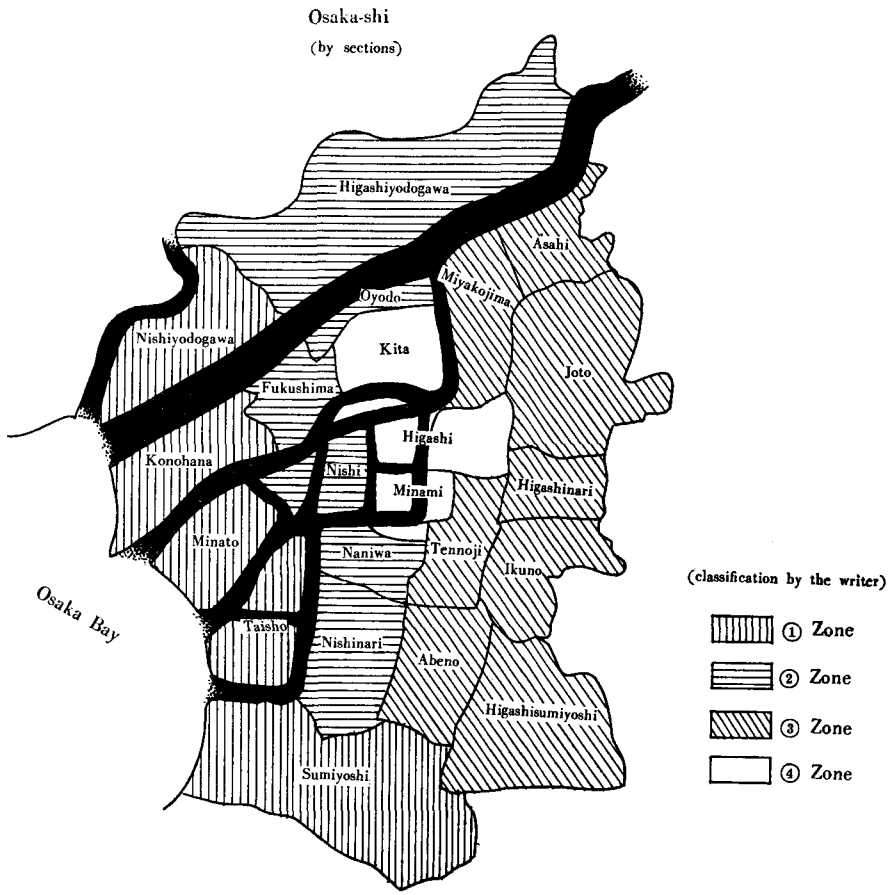
City and county	All industrial workers	Metal and engineering industry		Textile industry		Chemical industry	
Osaka-shi	170,445	88,251	51.7%	19,313	11.3%	16,783	9.8%
*1 Sakai-shi	20,139	11,006	54.6	4,560	22.6	1,269	6.3
Fuse-shi	12,117	7,635	63.0	1,280	10.5	548	4.5
Nakakawachi-gun	11,311	5,634	49.8	2,247	19.8	652	5.7
Yao-shi	3,412	907	26.5	1,356	39.7	241	7.0
Kitakawachi-gun	7,354	3,979	54.1	2,047	27.8	698	9.4
Moriguchi-shi	1,504	1,083	71.8	302	20.0	—	—
Toyonaka-shi	660	293	44.3	180	27.2	24	3.6
Ikeda-shi	1,632	1,249	76.5	139	8.5	—	—
Toyono-gun	2,910	1,716	58.8	222	7.6	300	10.3
*2 Amagasaki-shi	26,218	18,552	70.7	2,364	9.2	1,615	6.1
Itami-shi	6,174	3,462	56.0	1,726	27.9	447	7.2
Muko-gun	4,840	2,403	49.6	312	6.4	353	7.2
Nishinomiya-shi	5,036	1,302	25.8	58	1.1	450	8.9
Ashiya-shi	172	—	—	—	—	45	26.1
Kobe-shi	51,276	27,154	72.4	2,257	4.4	1,190	2.3
Akashi-shi	2,601	1,699	65.3	70	2.6	49	1.8
Akashi-gun	2,727	1,496	54.8	124	4.5	—	—
Total	330,531	187,817	56.8	38,557	11.6	24,664	7.4

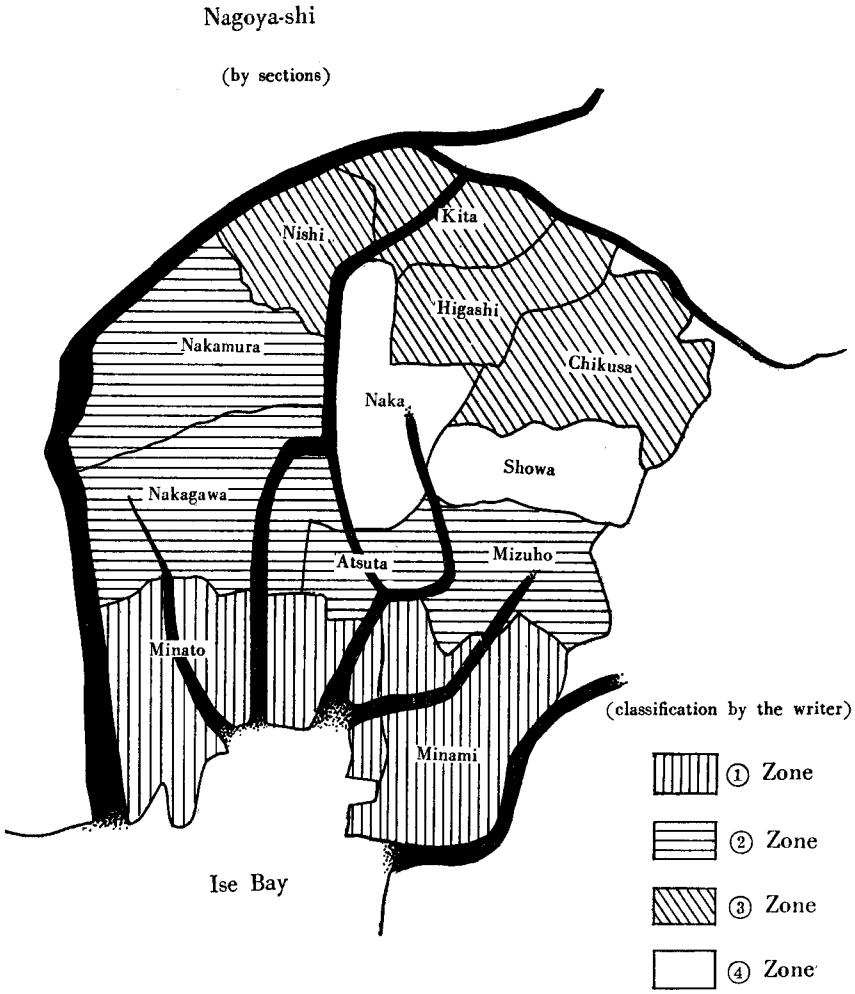
*1 Belong to Osaka Prefecture (include Osaka City), *2 Belong to Hyogo Prefecture

its location. The problem of these regional or physical diversification in themselves is to be the other than the organization problem in the function of the enterprise, but both problems are interrelated not a little. The spatialness of the economic activities in the enterprise is not to be set aside in the study of business administration. But the writer will study this point in another chance.

In the second, the present industrial factories have built up the industrial districts, and yet the industrial structure in their districts has been characteristically formed by several kinds of the industries, due to the land use competition among them. These characteristic structure of the industries depends on the positive and negative location factors of each factory in their industrial districts. In this article, the writer aimed to study these problems of the leading industrial districts in Japan.


Tokyo-to
(by sections)
Adachi
Itabashi
Kita
Katsushika
Nerima
Arakawa
Toshima
Nakano
Bunkyo
Taito
Sumida
Suginami
Shinjuku
Edogawa
Chiyoda
Chuo
Shibuya
Koto
Minato
Setagaya
Meguro
Shinagawa
Tokyo Bay
Ota
(classification by the writer)
① Zone
② Zone
③ Zone
④ Zone


Osaka-shi
(by sections)
Higashiyodogawa
Asahi
Miyakojima
Oyodo
Nishiyodogawa
Kita
Joto
Fukushima
Higashi
Konohana
Nishi
Minami
Higashinari
Minato
Naniwa
Tennoji
Ikuno
Osaka Bay
Taisho
Nishinari
Abeno
Higashisumiyoshi
Sumiyoshi
(classification by the writer)
① Zone
② Zone
③ Zone
④ Zone


Nagoya-shi
(by sections)
Nishi
Kita
Higashi
Nakamura
Chikusa
Naka
Showa
Nakagawa
Atsuta
Mizuho
Minato
Minami
Ise Bay
(classification by the writer)
① Zone
② Zone
③ Zone
④ Zone

NOTE ON THE ZAIBATSU COMBINES

Tadakatsu INOUE

1

The dominating combinations in Japanese business before and during the war were popularly known as the Zaibatsu. Of these, four were especially outstanding, namely, Mitsui, Mitsubishi, Sumitomo, and Yasuda. The economic spread of the four biggest combines may be estimated from the following summaries about the range of their investments in 1946, just before their dissolution.[1)]

A. The Mitsui combine

The basic structure of the Mitsui combine had several levels: the Mitsui families; the top holding company named Mitsui Honsha; the principal subsidiaries of Mitsui Honsha: the ordinary subsidiaries of Mitsui Honsha; and the underlying corporate network of lesser subsidiaries. This structural form was also common to three others.

I. The Mitsui families owned 63.8 per cent of the capital stock of Mitsui Honsha.

II. Mitsui Honsha had investments of more than 10 per cent in 75 companies engaged in banking, importing and exporting, shipping, manufacture, mining, and so on (the Mitsui families sharing in the investments). The total paid up capital of these subsidiaries amounted to ¥2,652,234,000.

1) The information has been obtained mainly from Holding Company Liquidation Commission, *Zaibatsu and its dissolution*, Tokyo, 1951.

III. These subsidiaries of Mitsui Honsha were traditionally classified into two groups, that is, the principal and ordinary groups. The principal group consisted of 22 companies which were capitalized wholly or mainly by the Mitsui families or Mitsui Honsha and which were often holding companies themselves. Of these, Mitsui Trading, Mitsui Mining, Mitsui Chemical Industry, and Mitsui Steamship (which were all designated as the holding companies by the Holding Company Liquidation Commission Ordinance) together had imvestments of more than 10 per cent in 87 companies having total paid up capital of ¥538,722,000 (excluding 14 companies in which they shared their investments with the Mitsui families or Mitsui Honsha).

IV. Of the ordinary subsidiaries of the top holding company, Hokkaido Colliery & Shipping and Tokyo Shibaura Electric (which were designated as the holding companies in the dissolution proceedings) together had investments of more than 10 per cent in 112 companies having total paid up capital of ¥307,665,000 (excluding 7 companies in which Hokkaido Colliery & Shipping shared its investment with the Mitsui Honsha or above mentioned principal subsidiaries).

V. In all, the Mitsui families, the top holding company, and six subholding companies together had investments of more than 10 per cent in 213 companies which accounted for 9.5 per cent of all the paid up capital in Japan (excluding 61 foreign resident companies).

B. The Mitsubishi combine

I. The Iwasaki families owned 47.8 per cent of the capital stock of Mitsubishi Honsha, the top holding company of the combine.

II. Mitsubishi Honsha had investments of more than 10 per cent in 41 companies engaged in the major industries, finance, and commerce of Japan (the Iwasaki families sharing in the investments). The total paid up capital of these subsidiaries amounted to ¥2,150,670,000.

III. Of these subsidiaries of Mitsubishi Honsha, there were 27 principal subsidiaries including five designated holding companies—Mitsubishi Heavy Industries, Mitsubishi Trading, Mitsubishi Mining, Mitsubishi Electric Mfg., and Mitsubishi Chemical Industry. These five companies together had investments of more than 10 per cent in 134 companies having total paid up capital of ¥696,841,000 (excluding 17 companies in which they shared their

investments with the Iwasaki families or Mitsubishi Honsha).

IV. Of the ordinary subsidiaries of the top holding company, Mitsubishi Steamship (which was designated as the holding company by HCLC Ordinance) had investments of more than per cent in 34 companies having total paid up capital of ¥269,219,000.

V. In all, the Iwasaki families, the top holding company, and six sub-holding companies together had investments of more than 10 per cent in 152 companies which accounted for 8.3 per cent of all the paid up capital in Japan (excluding 52 foreign resident companies).

C. The Sumitomo combine

I. The Sumitomo families owned 83.3 per cent of the capital stock of Sumitomo Honsha, the top holding company of the combine.

II. Sumitomo Honsha had investments of more than 10 per cent in 29 companies chiefly engaged in the heavy industries of Japan (the Sumitomo families sharing in the investments). The total paid up capital of these subsidiaries amounted to ¥1,247,340,000.

III. Of these subsidiaries of Sumitomo Honsha, there were 25 principal subsidiaries including five designated holding companies —— Seika Mining, Fusō Metal Industries, Sumitomo Electric Industries, Nippon Electric, and Nippon Chemical Industrial. These five companies together had investments of more than 10 per cent in 106 companies having total paid up capital of ¥674,492,000 (excluding 31 companies in which they shared their investments with the Sumitomo families or Sumitomo Honsha).

IV. In all, the Sumitomo families, the top holding company, and five sub-holding companies together had investments of more than 10 per cent in 119 companies which accounted for 5.1 per cent of all the paid up capital in Japan (excluding 16 foreign resident companies).

D. The Yasuda combine

I. The Yasuda families owned nine-tenth interest in Yasuda Hozensha, the top holding company of the combine.

II. Yasuda Hozensha had investments of more than 10 per cent in 30 companies chiefly engaged in banking (the Yasuda families sharing in the investments). The total paid up capital of these subsidiaries amounted to ¥480,846,000.

Intercorporate Stock Ownership in the Mitsui combine, 1946

(Unit : One share)

Company / Stock	Mitsui Honsha	Mitsui Mining	Mitsui Life Insurance	Mitsui Chemical Industry	Mitsui Steamship	Mitsui Ship Building	Nippon Flour Mill	Taisho Marine & Fire Insurance	Oriental Cotton Trading	Mitsui Families	Total (A)	A/B	Total Isssued Stock (B)
Mitsui Honsha			81,500				4,000	1,540		6,357,000	6,440,040	64.4	10,000,000
Mitsui Trading	828,215		29,500				1,500	1,020		200,000	1,060,235	53.0	2,000,000
Mitsui Mining	4,786,640		48,790				2,000	21,540		193,320	5,052,290	63.2	8,000,000
Mitsui Trust	46,230		1,800							50,000	98,030	16.3	600,000
Mitsui Life Insurance	10,000									20,000	30,000	75.0	40,000
Mitsui Chemical Industry	491,501	1,440,000								480,000	2,411,501	99.2	2,430,000
Mitsui Real Estate										100,000	100,000	100.0	100,000
Mitsui Steamship	1,019,500										1,019,500	72.8	1,400,000
Mitsui Agriculture & Forestry	126,032	19,800								63,000	208,832	99.9	209,000
Mitsui Ship Building	594,000				20,000					400,000	1,014,000	84.5	1,200,000
Mitsui Precision Machine & Engineering	1,792,562									200,000	1,992,562	99.6	2,000,000
Nippon Flour Mill	198,333		14,150								212,483	53.1	400,000
Mitsui Warehouse	300,000										300,000	100.0	300,000

Taisho Marine & Fire Insurance	222,190		8,403		400					230,994	50.2	460,000
Tropical Produce	51,000									51,000	39.2	130,000
Oriental Cotton Trading	617,890									617,890	88.3	700,000
Sanki Engineering	329,700									329,700	96.9	340,000
Toyo Rayon	251,730		14,000				1,000	50,000		316,730	44.8	705,500
Toyo Kōatsu			22,000	450,000			26,600			498,600	38.3	1,300,000
Mitsui Oil & Fat Chemical Industry	400,000									400,000	100.0	400,000
Mitsui Light Metal	21,300	325,480	3,000							349,780	38.9	900,000
Mitsui Wooden Ship-Building	60,000				135,000	4,000				199,000	99.5	200,000
Mitsui Lumber	600,000									600,000	100.0	600,000

Holding Company Liquidation Commission, *Zaibatsu and its dissolution* (Tokyo, 1951), pp.98–99.

III. Of these subsidiaries of Yasuda Hozensha, there were two designated holding companies. These two companies —— Oki Electric and Oki Electric Securities —— together had investments of more than 10 per cent in 29 companies having total paid up capital of ¥36,943,000 (excluding one company in which Oki Electric Securities shared its investments with the Yasuda families and Yasuda Hozensha).

IV. In all, the Yasuda families, Yasuda Hozensha, and two sub-holding companies together had investments of more than 10 per cent in 57 companies which accounted for 1.6 per cent of all the paid up capital in Japan (excluding 2 foreign resident companies).

2

The most important device by which the sphere of the Zaibatsu's influence was extended was through the investments of the Zaibatsu families, the top holding company, and certain subsidiaries. The tables on pages 84–85 and 87 are intended to indicate how the intercorporate ownership in the Mitsui and Mitsubishi combines served to create and hold their combine power. Of twenty-two principal subsidiaries of the Mitsui combine, three were under the complete control of the Mitsui famliles or Mitsui Honsha. In fourteen of them, combine ownership, including intersubsidiary stock holdings, ranged from 50.2 to 99.9 per cent. In only five others it fell to 44.8, 39.2, 38.9, 38.3, and 16.3 per cent. In Mitsubishi's eleven big subsidiaries, the comparable figures ranged from 25.3 to 76 per cent. It should be noted that the ownership of 15 or 20 per cent of the voting stock of a company is generally assumed to carry with it working control.

3

The power of the Zaibatsu combines was not, however, limited to the control which they secured through the device of holding companies and sub-holding companies. That power was also brought about by other methods. First, through their control over the financial organs of the country, the Zaibatsu combines could possess a certain degree of influence in the affairs of their debtors. However, banks in Japan, it should be noted, did not carry on investment banking business. In the Zaibatsu combines, therefore, control

Intercorporate Stock Ownership in the Mitsubishi Combine, 1946

(Unit: One share)

Company / Stock	Mitsubishi Honsha	Mitsubishi Heavy Industries	Mitsubishi Electric Mfg.	Mitsubishi Mining	Mitsubishi Trading	Mitsubishi Warehouse	Mitsubishi Bank	Mitsubishi Steel Mfg.	Mitsubishi Chemical Ind.	Iwasaki Families	Total (A)	A/B	Total Issued Stock (B)
Mitsubishi Honsha			2,000				31,680		520	2,294,600	2,328,800	48.5	4,800,000
Mitsubishi Heavy Industries	4,524,366		343,000		66,944		340,000		780	91,420	5,366,510	26.8	20,000,000
Mitsubishi Electric Mfg,	1,063,950									8,000	1,071,950	44.6	2,400,000
Mitsubishi Mining	3,474,524	22,400			12,000	8,000				40,200	3,557,124	43.9	8,145,000
Mitsubishi Trading	807,350	26,666	13,332	14,999		6,666		3,332	3,332	20,000	895,677	44.7	2,000,000
Mitsubishi Warehouse	187,300									2,000	189,300	47.3	400,000
Mitsubishi Estate	241,000									6,000	247,000	66.7	370,000
Mitsubishi Bank	817,698			3,000	2,000	210				54,254	877,162	32.4	2,700,000
Mitsubishi Trust	114,320						1,200			36,400	151,920	25.3	600,000
Mitsubishi Oil	180,000			60,000	60,000						300,000	75.0	400,000
Mitsubishi Steel Mfg.	1,020,940	500,000								309,539	1,520,940	76.0	2,000,000
Mitsubishi Chemical Ind.	265,000			297,905							872,444	38.7	2,251,580

Ibid., pp. 114–115

through investment banking had no place. Secondly, through the operations of their trading companies, the Zaibatsu combines were able to control not only the larger concerns who sold through these cannels, but also the multitude of small producers and merchants who depended on those trading companies for working capital as well as for the means of reaching the market. Lastly, through appointment of officials, interlocks, or dispatch of special representatives, the Zaibatsu combines could bind the disparate combine elements into unified instruments of business power. The following tables show the interlocking directorates between the top holding company and the major subsidiaries in the Mitsui and Mitsubishi combines.

Interlocking Directorates between Mitsui Honsha and the Major Subsidiaries, 1945

Mitsui Honsha	Major Subsidiaries															
	Mitsui Trading	Mitsui Mining	Mitsui Trust	Mitsui Life Insurance	Mitsui Chemical Industry	Mitsui Real Estate	Mitsui Steamship	Mitsui Agriculture & Forestry	Mitsui Ship Building	Mitsui Precision Machine & Engineering	Mitsui Warehouse	Taisho Marine & Fire Insurance	Oriental Cotton Trading	Mitsui Wooden Ship-Building	Mitsui Lumber	Showa Aircraft Mfg.	Hokkaido Colliery & Shipping
President																	
Managing Director	Director																
Managing Director		Director								Director	President		Director			Director	
Managing Director					Director		Managing Director		Director					Director			
Managing Director				Director		Director						Auditor					
Director			Director					President									
Director		President															Director
Director				President													
Director		Director			President												
Director	President											Director	Director				
Director						President									Auditor		
Director									President								
Director										President						Director	
Director																Director	
Auditor																	
Auditor			President														

Holding Company Liquidation Commission, *op. cit.* pp. 102–103.

Interlocking Directorates between Mitsubishi Honsha and the Major Subsidiaries, 1945

Mitsubishi Honsha	Major Subsidiaries																		
	Mitsubishi Heavy Industries	Mitsubishi Electric Mfg.	Mitsubishi Mining	Mitsubishi Trading	Mitsubishi Warehouse	Mitsubishi Bank	Mitsubishi Steel Mfg.	Mitsubishi Chemical Ind.	Mitsubishi Estate	Mitsubishi Trust	Mitsubishi Oil	Mitsubishi Steamship	Nippon Alumi-num	Mitsubishi Chemical Ind. Machinery	Nippon Architectural Steel	Tokyo Marine & Fire Insurance	Meiji Life Insurance	Japan Optical	Mitsubishi Paper Mfg
President	Director	Director	Director	Director	Director		Director	Director		Director						Director			
Vice-President	Director	Director	Director	Director		Director				Director									
Managing Director	Director	Director	Director	Director	Director	Director							Director			Director	Director		
Managing Director							Director	Director	Director		Director			Director				Director	
Managing Director	Auditor	Auditor	Auditor	Auditor			Auditor	Auditor		Auditor		Auditor			Director				
Director	Auditor		Auditor	Auditor		President	Director	Auditor		Director						Director	Director		Auditor
Director	Auditor	Auditor	Auditor			Director		Auditor	President	President						Auditor			
Director				Auditor															
Director																		Chairman	
Director			Director					President			Director		Director	Director					
Director	President	Director		Director			President								Director			Director	
Director		Director	President	Director			Director	Director			Director		President						
Director	Auditor	President					Director							President	Director			Director	
Director	Auditor	Director	Auditor	President	Auditor							Director							
Auditor										Auditor						Director	Director		
Auditor																Director	Director		
Auditor		Director																President	

Ibid., pp. 116–117

ON THE MODEL-BUILDING FOR SOCIAL ACCOUNTING DESIGN

Nobuko NOSÉ

INTRODUCTION

Since the first publication of the working system of the social accounts by R. Stone,[1] model building for economic circulation and social accounting design to realize the model have been developed successively in the social accounting theory. In these works, much attention has been paid to the role of the set of sector accounts to represent the Keynesian National Income circulation. Contrary to these works, the present paper will be occupied with building the Marxian model for income structure and its social accounting design against the Keynesian model. Recently, in pure economics, we find some devices which try to study the relations of effective demand (in Keynes' sense) to productive power (in Marx's sense), i. e. the devices by J. Robinson, L. R. Klein, S. Tsuru and others. What is devised in pure theory should be carried out in applied economics. Thus, constructing the Marxian model for national income circulation, we have measured the national income in Japanese economy in 'Kobe Economics and Business Review', No. 2, 1954. Our intention, however, has not developed as the social accounting approach, being limited to represent only the income structure by Marxian model. So,

1) R. Stone. Measurement of National Incom & The Construction of Social Accounts, United Nations 1947.

2) Nobuko Nosé, On the Structure of the National Income Distribution in Japan. Kobe Economic & Business Review, No. 2.

this paper will apply the same idea to social accounting model, in comparison with two models and their social accounting systems. And, in the analysis of the characters of two schools in social accounting field as the applied economics, we shall contribute to the progress of pure economics and the improvement of economic design for national income research.

The procedure by which this paper is described is as follows:

i The Keynesian model versus Marxian model in pure theory
ii The Stone system versus Marxian system in social accounting
iii Comparison of two systems by setting the examples
iv Conclusions

§ 1. The Keynesian Model versus Marxian Model in Pure Theory

In macroeconomic analysis, it is the main problem of the model building to find out how to set the circulation of national income in the main articulated systems; and so in social accounting as the macro accounting. Founded on the abstract value theory, the division of national income to these aggregates is the definitional problem. Now, following the Keynesian approach, the national aggregates as the main variables are national income Y, investment I, consumption C and saving S, called Keynesian aggregates. It is the national income Y, one of these aggregates, that have significant meaning compared with Marxian system, because the definition of Keynesian national income stimulates the other Keynesian aggregates, I and C.

These aggregates are defined in Ch. 6 and Ch. 7 in his ' General Theory '[1] and in many articles by his followers. The Keynesian National Income is defined in three dimensions, i. e. production, appropriation and outlay. From the view of production, the national income is the sale of products and services minus user cost, that is equal to the consumption and Investment, while the national income is the sum of the income of population in the society as a whole which are engaged in the production of products and services, and is equal to the sum of the consumption from the income and saving. To define the national income as the equivalent in the three dimensions on this way, which is no more than the production in Keynesian sense, then the word " production " would include the production of physical products and production of services. Therefore, consumption includes the outlay of consumption goods and services indifferently, so far as they are

1) J. M. Keynes, ' The General Theory of Employment, Interest and Money ' 1936.

purchased for consumption purpose by final consumers. And it is irrespective of the final consumer's richness or social conditions around him. On the other hand, Keynesian Investment is necessarily equal to the productive power, which is defined as net increment of the capital equipment (fixed asset and inventory), so this definition is irrespective of the investment outlay for production of physical products and for production of services. Also, saving, which is defined as residual income, is one of national aggregates like consumption and irrespective of saver's social condition and his behavior.

The equations which represent the relations between these aggregates are Keynesian Identities. Keynesian Identities consist of $Y \equiv C+I$, $Y \equiv C+S$ and $S \equiv I$, and are the economic models, with which the national income circulation might be grasped in details. So, we are immediately able to set the Keynesian *tableau* for national income circulation from these identities. Keynesian *tableau*, not only gives the prototype of Stone's system in present Social Accounting, but tells us the economic design in national income statistics and econometrics.

Next, let us examine the other side——Marxian theory. How are the Marxian aggregate defined and what is the Maxian *tableau* by this definition?

We shall try to find Marxian definition about national aggregates in vol. I. 'Mehrwert' as its classical use.[2] In other works, we find Marx's definition on productive labor in his 'Das Kapital'[3] and in recent Marxian theory of national income i. e. by Koziolek,[4] Пальцев,[5] which are informative for our task to set the model.

According to their idea, the national income circulation forms a contrast against the Keynesian system: the former distinguishes (1) physical national income by productive laborers from gross monetary income (this is equivallent to Keynesian Y), (2) capitalists' income from laborers', besides we may add, (3) Investment for productive use and the latter is irrespective of these three points. Namely, national income is the sum of the value products which are annually created by productive laborers and is equal to the value

2) K. Marx, 'Theorien über den Mehrwert.' Bd. I.
3) K. Marx, 'Das Kapital.' Bd. I.
4) H. Koziolek, 'Zur marxistisch-Lenistischen Theorie der Nationaleinkommens'.
5) А. Пальчев, 'Вопросы теории национального дохода капиталистического общества', « Вопросы экономики No. 11, 1953 г.

($V+M$) which deduct the consumption value of constant capital C from the whole value of social products (V and M are wage and profit respectively). Then, productive labor is defined as the labor which creates the value in use, and we may call the sectors, which employ the productive laborers and produc eth evalue in use, the productive sectors: agriculture, forestry, mining, construction, manufacturing, and transportation, communication and warehousing (in so far as they have direct relation to production).

The creation of national income is carried out only in the productive sectors. From the view of appropriation, for the first place, national income is divided among the capitalists and laborers in productive sectors as profit and wages respectively. This stage is the original distribution of National Income.

According to Marx, after the original distribution, the re-distributive process which is the metamorphasis of the first phase and then the rearrangement of the social demand structure would be taken into consideration. This process is brought out by introduction of unproductive sectors (i. e. circulating cost sector and consumption cost sector).

The circulating-cost sector, that consists of commercial sector and financial sector, recieves a part of productive capitalists' profit as circulating cost. The consumption cost sector is so called service sector, which consists of institutes for health, study and living, cultural association, and transportation, communication and warehousing in so far as not any direct relation to production. All the services by this sector are purchased by the household of productive laborers and capitalists. These unproductive sectors receive a part of national income in compensation for the services they offer and then the value product are allotted to the laborers and capitalists in these sectors. Moreover, wage and profit in the productive sectors and unproductive sectors V_1 M_1, V_2 M_2 respectively, components of the gross monetary income Y (correspond to Keynesian Y), are paid for consumption by laborers and capitalists C_v, K and investment for productive and unproductive use I_1 I_2 respectively.

Let us put the ideas, to see the relation between these aggregates, into the following identities.

$$X=V_1+M_1+V_{21}+M_{21}$$
$$Y=V_1+V_{21}+V_{22}+M_1+M_{21}+M_{22}$$
$$Y=C_v+K+I_1+I_2$$

So, we can understand that the Marxian *tableau* for national income structure have dual phase in the circular flow of X and Y, including the process by the function of public finance.

The social demand, being sum of the expenditure by capitalists' and laborers' earning after the redistribution, consists of the consumption by laborers and capitalists, investment for productive use and for unproductive use by capitalists. So, the conception of Marxian national income, is far from the Keynesian concept which takes the national income as equivalent value on three dimensions, and then the components of his national aggregates are as follows: national income in physical sense X, capitalist's profit in productive sector and in unproductive sector M_1 M_2 respectively, laborers' wage income V_1 V_2.

Next, let us now turn to the problem whether the above Marxian *tableau* is operational tool for our objects or not.

The Keynesian *tableau* is very useful in applied enonomics, notwithstanding the defects of its super macro-scopic and one-sided character. On the other hand, as the statistical data is not founded on Marxian real categories, so we must first from Y flow and then arrive at X flow. And then it should be the second process to start at supeficical circulating structure for our obiect to apply the model to social accounting design.

Moreover, if we need to compare two systems, we must set the objects on the samed imension. For these three reasons, we must construct the another model which can be comparable with Keynesian one formally and be usable as social accounting design.

The model then runs in the following form: (W_1, W_2, R_1, R_2, C_w correspond to V_1, V_2, M_1, M_2, C_v in above identities respectively and S is capitalist' saving)

$$Y=W_1+W_2+R_1+R_2$$
$$Y=C_w+K+I_1+I_2$$
$$C_w=W_1+W_2$$
$$K+S=R_1+R_2$$
$$S=I_1+I_2$$

Having the less consolidation than Keynesian Identities, our Identities are characteristic of:

1. Production of physical products only as main substance of productive power, distinguished from production of services as sub element for pro-

ductivity, 2. Difference between wage income and profit, being divided by the different behavior on the stage of expenditure.

Allotting the investment to I_1 and I_2 and the consumption to C_w and K, our model seems positive on the point that it suggests explicitly the fundamental relation between final demand and productive power.

These Identities, based on the Marxian idea, would be comparable with Keynesian Identities.

§ 2. Stone System versus Marxian System in Social Accounting

To make the Identities in above section to be the Social Accounting model, two arrangements are necessary:

1. to make Identities to be accounting Identities,
2. to set the sector to represent the Identities in articulated system.

The reason is that the set of accounts and sectors are necessary in social accounting of which object is to research the national income structure by sector accounts.

First, we take the the social accounting model founded on Keynesian Identities. In Stone's system as representatives, both design —— design of account and of sector —— are realized concretely.[1] As for the design of account, three Identities of Keynes give the principle to construct the operating a 'c, appropriating a 'c and resting a 'c, respecting three economic activities —— production, appropriation and adding to wealth.

All the transactions are classified to three accounts, according to the kind of economic activity. In Stone's social accounting system, having intension to represent the production, appropriation and saving-investment in Keynesian sense by accounting structure, Keynesian conception for aggregates, above mentioned, are also adequate here.

Next, we turn to the definion of sectors. In Keynese's theory, there is no explicit explanation about economic unit which is included in social framework, and at most, represents the household and business enterprise implicitly. In the consolidation process of individual economic unit to sector which organize the national economy, the explicit sector division would be indispensable. So, in Stone's system, being founded on Keynesian notion, sector division is cannot but institutional division, not functional. In Stone's system, the fundamental sectors are Business, Government and Household.

1) Stone, ibid. and see. Stone, The Standardized System of Social Accounts, 1952

Then, the working system in Stone's model, represents the Keynesian national income circulation by the set of above three sectors with three accounts.

On the other hand, we inspect the social accounting design by Marxian notion. Our Marxian model, already stated in previous section, have had dual purposes: (1), to start at Y to be comparable with Keynesian model and (2), to scrutinize the Marxian national income structure. In our Marxian social accounting design, this intention being taken over, formally it is similar to and comparable with Stone system, but the essential principle of the former is fundamentally different from the latter. The social accounting design, founded on Marxian idea, is intended to represent the circular flow of physical national income —— creation by productive sectors, it's transfer to circulating-cost sectors, division to capitailst's household and laborer's in productive sectors, transfer to service sectors which sell the services to household, redistribution by Government, the accumulation (investment) in productive business sector, in unproductive business sector and in capitalist'st's household ——, restoring the transaction structure caused by over simplification in Keynes-Stone system.

Comparing our model with Stone's, we notice that the basic differenciable point between them is sector division. In our system, productive sectors, unproductive sectors, government, capitalist's household and laborer's household are necessary at least. So, our system has five sectors with three accounts, while Stone system has three sectors with three accounts.

§ 3. Comparison of Two Systems by Setting the Examples

To make clear the essential difference between two systems, we shall try to compare two systems (1) in mathematical transaction matrix form and (2) in the hypothetically constructed table.

Now, we premise the following condition;

i same scale of circulation in two systems,

ii the value of all transaction is represented in terms of money,

iii the same form of account,

iv as for the sector, Stone system has three sectors and our five sectors, and in the former sector, 1, 2, 3 represent the business, government and household, while in the latter 1, 2,…… 5 are the productive business, unproductive business, government, capitalist's household and laborer's

household

v closed system

vi black ink in public finance

vii the service which is supplied by government is neglected.

〔Ⅰ〕 The comparison of two system in Transaction Matrix.[1]

Now we take the matrix W and set $W=W^{\nu}_{i\alpha,j\beta}$. The elements of W consist of ν; i, j; α, β and ν is the kind of trasaction, i j are the activity that are the object of transaction and represent the accounts in which the trans actions, are classified and α β is the sector and $W_{i\alpha,j\beta}$ is the transaction of which incoming is $W_{i\alpha}$–and outgoing is $W_{-j\beta}$.

The incomings in two systems are

$$y_{i\alpha}=\sum a^{\nu}_{i\alpha,j\beta} \quad (\nu=a, b, \cdots, k, l),$$

where, $i, j=1, 2, 3$ and α, β are 1, 2, 3 in Stone system and 1, 2,⋯, 4, 5 in our system.

This is arrangeable into matrix form

$$Y=AY$$

Then, $$Y=y_{i\alpha}=\begin{pmatrix} y_{1\alpha} \\ y_{2\alpha} \\ y_{3\alpha} \end{pmatrix}$$

$$A=\begin{pmatrix} a^{\nu}_{11,1\beta} \cdots\cdots a^{\nu}_{11,3\beta} \\ \cdots\cdots\cdots\cdots \\ a^{\nu}_{31,1\beta} \cdots\cdots a^{\nu}_{33,3\beta} \end{pmatrix}$$

If we define $\hat{Y}$ is diagonal matrix of Y, and I is column vector of 1, then

$$AY=(A\hat{Y})I=WI, \quad \text{and}$$

$$WI=Y$$

So we are able to derive the transaction matrix of W:

$$W=A\hat{Y}.$$

As the difference between two systems, is derived only from the definition on the element α, β, so 'formally' we have the social accounting system in the same form.

Then, it would be noticed that, in its monetary form, our system is not distinguished from the stone system, except the definition on the element α, β.

〔Ⅱ〕 Next, we compare two systems under the hypothetical table, so that we may contrast their real meaning of the systems.[2]

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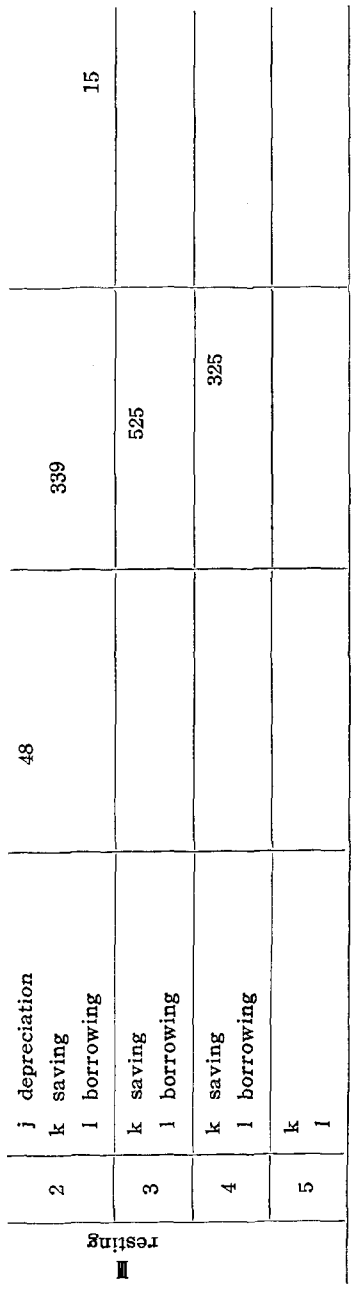
1) As for Stone's theory of transaction matrix, See. 'Simple Transaction Models, Information & Computing,' The Review of Economic Studies, vol. XIV, No.49. 1951~52.

2) As for Stone system, see. 'The Relationship between Input-output analysis and National Accounting.' p.211-14.

Stone System

			I operating			II appropriating			III resting		
			1	2	3	1	2	3	1	2	3
I operating	1	a goods & services b subsidies	7787				2915 1040	10482	1420	500	110
	2										
	3										
II appropriating	1	c operating profit	2437								
	2	d direct tax e indirect tax	3220			802		1402			
	3	f dividend and interest g wages and salaries h transfer payment	10360			905	320 620				
III resting	1	i depreciation j saving k borrowing	450			730				25	215
	2	j saving					525				
	3	g saving						325			

			I operating					II apperopriating					III resting				
			1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
I operating	1	a goods	5684	1750						1845	470	6810	1018	402	500	110	
		b subsidies								528							
	2	a															
		b subsidies								512							
		c services	250	103						1070	320	2882					
	3																
	4																
	5																
II appropriating	1	d operating surplus	1327														
	2	d operating surplus		1110													
	3	e direct tax						431	371		134	1268					
		f indirect tax	2520	760													
	4	g dividend & interest						505	400	324							
		h transfer paymant								20							
	5	h transfer payment								600							
		i wages and salaries	8934	1426													
	1	j depreciation	402														
		k saving						391									
		l borrowing													25	200	


resting
III
2
j depreciation
k saving
l borrowing
15
339
48
3
k saving
l borrowing
525
4
k saving
l borrowing
325
5
k
l

The preceding examples to compare two systems would explicitly show us that the sale of products and services 7784 in operating a/c of business secter in Stone system is divided to 5684 as sale of products to operating a/c in productive business sector, 1750 as sale of products to operating a/c in unproductive business sector, 350 as sale of commercial service to operating a/c in productive sector, 103 as sale of consumption service to operating a/c in unproductive business sector, in our system. On the other hand, gross investment 1420 in resting a/c of business sector in Stone system, is divided in to resting a/c of prductive business by 1018, and a/c of unproductive business by 402, while gross investment in household sector in Stonesystem is restated as gross investment in capitalst's household in our system.

From these considerations, our model gives the clear explanation for stage and direction of national income circulation, that is not possible enough to be indicated by Stone's system, and bring a view which tells us the relation of the productive power and the effective pemand.

Now we have started at monetary circulation. This premise is technically needed to make our system to be compared with Stone—Keynesian system and to Marxian *tableau* into the operational form.

Our model is necessary reform of original Marxian *tableau*, so we must prove that our system is reduceable to original model. We should do this by an application of transaction matrix to the ' real ' transaction.

We start at matrix $Y=AY$ which denotes our transaction model with five sectors. By row vector $X=\begin{pmatrix} X_{1\alpha} \\ X_{2\alpha} \\ X_{3\alpha} \end{pmatrix}$, we denote the physical national products X, by k_i we denote the ratio of the value of physical products to gross monetary income and put $k=\begin{pmatrix} k_1 & 0 & 0 \\ 0 & k_2 & 0 \\ 0 & 0 & k_3 \end{pmatrix}$, and by k'_α, we denote the ratio of the value of physical products to the earning in each sector and put $k'=\begin{pmatrix} k_1 & 0 & 0 & 0 & 0 \\ 0 & \ddots & & & 0 \\ 0 & & \ddots & & 0 \\ 0 & & & \ddots & 0 \\ 0 & 0 & 0 & 0 & k_5 \end{pmatrix}$. Then, the circulation of X derived from circulation of Y, being equal to $X=kY=kAY$, and $X=kX$, so we denote $X=kk'AY$. Here $V=(v_{i\alpha,j\beta})$, and we might say that k is a matrix to deflate the monetary

income to the physical national income, and k' is a matrix to apportion the physical national income among each sectors. And, response matrix is $W=kk'AY$. From above, it is proved that our model is superior than Stone's in so far as it exibits the national income circulation in details and is proper reform of original Marxian model. Our model, by further dividing the productive sector to capital goods sector and to consumption goods sector, could represent the Marxian *tableau* of whole social products circulation (reproduction-schema), and explain the cubic relation between the productive power and the effective demand.

§ 4. Conclusion

Founded on Marxian idea, we have constructed a social accounting design. Of course, these models cannot be realized without the aid from the practical field, i. e. the aid of the income statistics which gives the statistical design. So, the approachment in two school is not only necessary in the economics, but in the statistics. And the real use of our social accounting design is pending on it.

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