

# INVESTMENT IN PUBLIC ENTERPRISE IN JAPAN\*

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The main purpose of this paper is to examine the investment in public enterprise in Japan in connection with those of other sectors of Japanese economy; public enterprise is a part of public sector, which is also a part of a national economy. Therefore public enterprise must be observed in relation to the other parts of it.

As the history of public enterprise in Japan shows, there is only a slight element of the socialization motive in the Japanese public enterprise since 1945. Therefore public enterprise is passive in this sense: there is no political motive like the control of basic industries by people, which is the strong motive in the nationalization policy in the U.K.

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Furthermore, public enterprise is passive not only politically but also economically. This means that the role of public enterprise is almost determined by the movement of other parts of economy—above all, by the interest of big private enterprises. Of course there are some exceptions to this tendency like regional development or housing. This role of public enterprise is closely connected with the pattern of economic development since 1945, which has been repeated more than once. The pattern is: private enterprise develops first, and then public enterprise follows. The prime mover is always private enterprise. This pattern determines the role of public enterprise.

It is also important to understand the relation of public enterprise with another parts of public sector, namely General Account and Non-profit Account. A new phenomenon called "Commercialization of Public Administrative Service" is going on in the public finance in Japan. It is a transfer from General Account to Enterprise Account which is financially self-supporting. Thus the investment of public enterprise must be observed in relation to the sectors—private as well as public.

This paper tries also to make an international comparison of investment between Japan and the U.K. Distribution of investment—industrial as well as of sector—is compared between both countries. The reasons for this comparison are twofold: to know firstly the degree of mixture of two components of a national economy—private and public—and secondly, to know the characteristics of investment of both countries. There are various differences between both countries in the distribution of investment. A typical example is housing investment: investment in industry more than in housing is a feature of Japan in contrast to the United Kingdom.

## 1. SOME DEFINITIONS AND CLASSIFICATIONS

### i) Classification of Public Sector

Japanese classification of public sector in the national income statistics is different from that in the U.K.: there is no distinction between Public Corporation and Government Trading Bodies in Japan. They are grouped into Enterprise Account. Enterprise Account in the national income statistics in Japan is exactly the same as Public Enterprise in this paper.

A comparison of Government Classification between United Nations, the United Kingdom, and Japan is shown in Table 1.

**Table 1.** Comparison of Government Classification between U.N., the United Kingdom, and Japan

United Nations	United Kingdom	Japan
Public Corporation	Public Corporation	Enterprise Account
Government Enterprise	Government Trading Bodies	
General Government	Government Non-trading Bodies	1. Central Finance General Account Non-profit Account 2. Local Finance Common Account Non-enterprise Account

### ii) Definition of Public Enterprise

Public Enterprise can be defined as an undertaking that is owned by a national state (or provincial), or local government, supplies services or goods at a price, and is operated on a more or less self-supporting basis.<sup>(1)</sup>

(1) "Public Enterprise" *Encyclopaedia Britannica*, Vol. XIII, 1968 ed.

Under this definition Public Enterprise includes the following categories in the U.K.

- i) Public Corporation
- ii) Government Trading Bodies
- iii) Mixed Enterprise

Public Enterprise includes the following four categories in Japan:

- i) Special Accounts

The number of Special Accounts is more than fourteen. Some examples are Mint Bureau, Printing Bureau, & Trust Fund Bureau.

- ii) Public Corporation
- iii) Mixed Enterprise

There are more than fourteen mixed enterprises in Japan. The following statistics include only a few of them which are important such as the Electric Power Development Company.

- iv) Local Public Enterprise

Their main industries are water, transport, electricity.

### iii) An International Comparison of the Share of Public Enterprise

An international comparison of the share of public enterprise investment in Gross Domestic Capital Formation is attempted in Table 2. The Public Enterprise section of this table contains Public Corporation and Government Trading Bodies according to the definition mentioned above. Figures are taken from United Nations, *Yearbook of National Accounts Statistics*, 1968.

Table 2 shows that the proportion of Public Enterprise in Japan is far less than in the U.K., France and Sweden. It must be, however, taken into account that the General Account (Government Non-trading Account) in Japan is much bigger than in the U.K. (Cf. Table 13.)

**Table 2.** Public Enterprise Share in Gross Domestic Capital Formation in Selected Countries, 1966.

Country	A. Gross Domestic Capital Formation	B. Public Corporation and Government Enterprise	B/A
The United Kingdom (Million Pound)	6,922	2,329	33.6%
France (Thousand Million Franc)	62.9	15.3	24.2%
Sweden (Million Kroner)	27,782	6,875	25.1%
Japan (Thousand Million Yen)	13,340	1,585	11.8%
U. S. A. (Thousand Million Dollar)	129.8	3.1	.2.4%

Source: United Nations, *Yearbook of National Accounts Statistics*, 1968.

Note: The French figures are taken from the statistics in 1966. The figures of some countries (U.S.A. and Sweden) are those of fixed capital investment only.

## 2. HISTORY OF INVESTMENT IN PUBLIC SECTOR IN JAPAN

In this section I describe the history of the investment in public sector in Japan. Under the public sector I understand not only public enterprise but also other governmental accounts—General Account as well as Non-profit Special Account.

The whole period from 1887 till today will be divided into two stages: 1887–1940 and 1952–1968. Firstly I will discuss the former period. The investment in prewar Japan is analysed by Prof. H. Rosovsky, *Capital Formation in Japan 1868–1940*. According to his analyses the percentage of private and public investment is shown in the following table.

He divides capital formation into two sectors: Private Capital Formation and Public Capital Formation. The components of each sector

**Table 3.** Structure of Gross Domestic Capital Formation  
(Overlapping five years, average for 10 years)

	Including National Defence		Excluding National Defence	
	Private	Public	Private	Public
1887-96	57.5 %	42.5 %	66.5 %	33.5 %
1892-01	44.1	55.9	57.3	42.7
1897-06	42.7	57.3	56.0	44.0
1902-11	42.7	57.3	52.3	47.7
1907-16	46.8	53.2	53.0	47.0
1912-21	53.0	47.0	63.6	36.4
1917-26	50.1	49.9	58.1	41.9
1922-31	45.9	54.1	51.0	49.0
1927-36	46.1	53.9	53.2	46.8
1931-40	48.0	52.0	72.0	28.0

Source: H. Rosovsky, *Capital Formation in Japan 1868-1940* (New York: The Free Press of Glencoe 1961), p. 14 & 15.

The Japan Development Bank, *Facts and Figures on the Japanese Economy*, 1966, p. 6.

Note: The figures of the table do not include agricultural investment which is almost negligible in the whole period.

are as follows:

#### I Private Capital Formation

- A. Residential Construction
- B. Non-residential Construction
- C. Investment in Producers' Durable Equipment

#### II Public Capital Formation

- A. Central Government Construction
  - 1. Building
  - 2. Public Works
  - 3. Agricultural Construction
  - 4. Shrine and Cultural construction
  - 5. Natural Disaster Reconstruction

6. Military Construction
  7. Transportation
- B. Local Government Construction
1. Building
  2. Public Work
  3. Agricultural Construction
  4. Public Utilities
- C. Central Government Investment in Durable Equipment
1. Furniture and Fixtures
  2. Machinery and Tools
  3. Transportation and Communication
  4. Military Equipment
- D. Local Government Investment in Durable Equipment
1. Furniture and Fixtures
  2. Machinery and Tools
  3. Transportation Equipment.

(H. Rosovsky, *op. cit.*, p. 4)

Relying on these figures he points out the biggest feature of investment in pre-war Japan as follows :

“ Perhaps the most noteworthy feature is the near equality of public and private investment. In fact the government has a slight edge over the private sector in most decades.”<sup>(2)</sup>

The percentage of military in the Gross Domestic Capital Formation ranges from 10.0% to 30%. When the military expenditure is excluded from the figures of Government Capital Formation, the proportion of government investment becomes considerably smaller. As Table 3 shows, it shows much lower figures. For example, the proportion

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(2) H. Rosovsky, *op. cit.* p. 13.

between private and public investment 1931-1940 is in Table 3. 48.0% and 52.0%. Excluding military these figures become 72.0% and 28.0% respectively. In the latter the public investment becomes one third of the former figure.

Thus the military expenditure had a big significance in the public investment. H. Rosovsky sees, however, no fundamental change in the pattern of investment in pre-war Japan even when the military is excluded. He says as follows:

“Consideration of the government role when the military is excluded does not alter the essential features of the investment pattern. The average share of government still stands at slightly over 40 per cent. Significant alterations do occur in the composition of government investment. With the military, the public sector exercises its greatest weight through investment in durable equipments; without the military, the emphasis is on construction, primarily in the social overhead categories.<sup>(3)</sup>”

This assertion about the significance of public investment in prewar Japan may be true. But a question arises: why was the percentage of public investment so high after the initial stage of government enterprise 1868-1894? Three reasons can be given:

Firstly, the public utility services, the technique of which Japan had learned quickly from the western countries, were valuable in two ways; in increasing productivity of private sector industry and also in increasing efficiency of military mobilization. As Rosovsky's sentence mentioned above shows, government investment in the pre-war period was composed of two main items: military and public utility service investment. Among public utility services transport services

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(3) *Ibid.* p. 23.



were regarded as of prime importance; Transport had been the minimum pre-requisite for the quick industrialization of Japan; they were also indispensable for the military strength. The most typical case was railway, which had always been regarded mainly for military purposes; the task of meeting the civilian need for transport had been taken as of the tertiary importance next to the industrial one. Therefore railway investment had a big share in the public investment. According to H. Rosovsky railway investment accounted for about 25 per cent of total central government investment in the twentieth century, if military investments were counted. If military expenditure is excluded, the proportion rose to about 50 per cent.<sup>(4)</sup>

Secondly, the significance of a large share of armament industry in the public investment in the pre-war Japan must of course be stressed. With the imperial expansion of Japan more cannons had to be manufactured at the sacrifice of butter.

The economic significance of the military expenditure was considerable. Machine-tool industry, mining, dockyard, and communication industry were all stimulated by the large military order from the government. The Japanese heavy industry owes its rapid development in the nineteen-thirties exclusively to the military order, a fact which H. Rosovsky regards as the most important among the various activities of the government in industrial field.<sup>(5)</sup>

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(4) H. Rosovsky, *op. cit.*, p. 31.

(5) "During the early years of the Restoration, there was also an important period of direct enterprise on the part of the government. Many economists have stressed this phase of official policy. I think that, in the Japanese case at least, the effects of direct enterprise have been exaggerated. For long-term growth, the government as an investor—i.e., as a customer of heavy industry—had much more lasting effects" H. Rosovsky, *op. cit.*, p. 36.

Thirdly, because of immature economic structure in the pre-war Japan private industry needed less capital than now. The Japanese industrial structure in 1920's was similar to the British one in the 1870's; in the nineteen-twenties the light industries like textile were still dominant in the Japanese industry. In economic terms it means high capital coefficient ratio or low capital-output ratio; less capital and more labour was needed to increase the national income during the pre-war periods. The typical example was the production of bicycles; it needs much less capital and much more labour than car-industry; it was the most popular means of transport until the car-industry started through military need, stimulated by the government, in the nineteen-thirties. Though it is less capital-intensive than car-industry, the income effect as well as productivity effect of the investment of the bicycle industry was no less than that of car-industry.<sup>(6)</sup>

Rosovsky predicted in 1961 in this book that the pattern of investment in the pre-war period, namely high ratio of public investment in comparison with private investment, would continue also after 1945. He expressed his estimate about the future pattern as follows;

“It is noteworthy that the great upheaval of defeat and subsequent American democratization does not seem to have upset the traditional Japanese investment pattern. Government stands high and, according to the latest figures, is rising.”<sup>(7)</sup>

The latest figures which he mentioned here were those of the mid-fifties. Nearly ten years after the defeat the pre-war pattern continued;

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(6) “Although I have not calculated an over-all historical *capital-output* ratio, one can intuitively see that the Japanese ratio is rather low throughout the period of growth. The Japanese succeeded in securing high rates of growth of national product with relatively small inputs of capital” H. Rosovsky, *op. cit.*, p. 55.

(7) H. Rosovsky, *op. cit.*, p. 33.

until 1956 the share of public investment in the fixed capital formation was nearly half, a ratio, which is higher than the pre-war ratio of public investment when excluding the military investment from public investment. With its military burden alleviated the Japanese government could turn more resources to economic as well as social investment with ease in these ten years than in pre-war periods; railway, telephone and telegram, bridge and harbour were reconstructed quickly; great deal of jerry-built public housing was undertaken in these cities damaged by bombing for millions of people returning from former Japanese territories and neighbouring countries. These social investments could be regarded as a sort of first-aid.

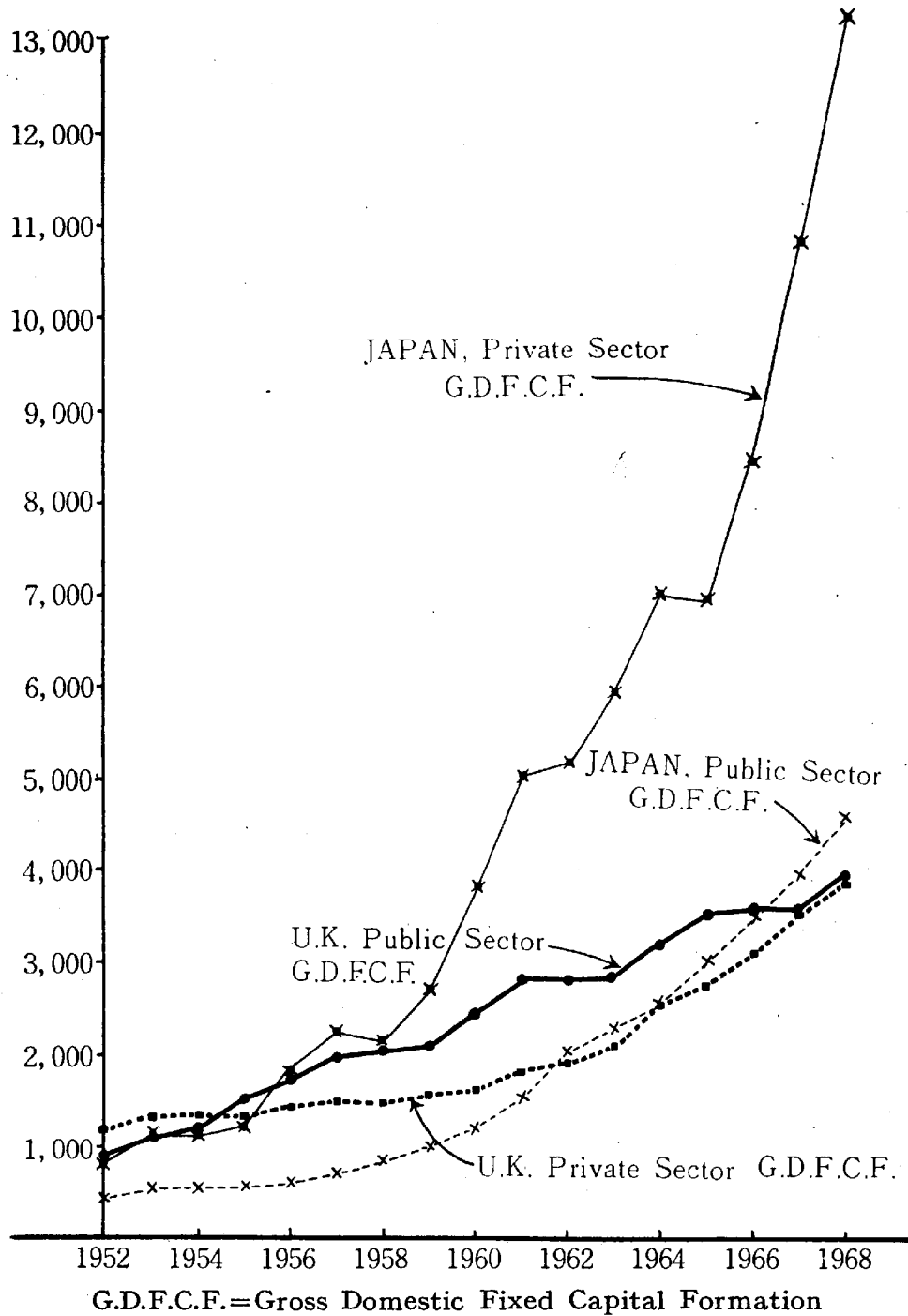
During these ten years 1946–1956 the private sector investment made no remarkable progress; in this sector pessimistic views about the future were dominant; there were no big incentives for large-scale investment. But the Korean War was the turning point. Spurred on by production incentive given by the War the Japanese private sector began to recover confidence in its future and increase investment. After 1956 the investment pattern has changed. His prediction has not been verified since then.

The Gross Domestic Fixed Capital Formation of Japan and United Kingdom during 1952–1968 by private and public sector is shown in Table 4. The unit of these figures is ¥1,000 million in Japan and £ million in United Kingdom.

Before discussing the significance of these investment figures I think it useful to have some ideas about the exchange rate between Sterling and Yen. I am going to compare the Japanese figures with those of United Kingdom; this comparison presupposes a proper standard of the exchange rate between Sterling and Yen. What is the proper standard?

Before the devaluation of Sterling in 1967 the exchange rate between dollar and pound was \$2.80=£1-0-0. Adopting this exchange rate we have the previous rate of exchange between Sterling and Yen, i.e.

**Chart 1.** Gross Domestic Fixed Capital Formation by Sector, Britain and Japan at Current Price, 1952-1968  
 U.K.: £ Million  
 Japan: ¥1,000 million



**Table 4.** Gross Domestic Fixed Capital Formation, Japan and the U.K. at Current Price  
Unit: the U.K.: £ million, Japan: ¥1,000 million

JAPAN																	
	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
Private Sector	908	1,147	1,116	1,220	1,833	2,240	2,141	2,728	3,828	5,046	5,176	5,923	7,035	6,895	8,474	10,798	13,277
Public Sector	399	545	553	558	620	768	865	1,037	1,220	1,641	2,090	2,367	2,576	3,020	3,522	3,968	4,589
Total	1,307	1,692	1,669	1,778	2,453	3,008	3,006	3,765	5,048	6,687	7,266	8,290	9,611	9,915	11,996	14,766	17,866
THE UNITED KINGDOM																	
	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
Private Sector	934	1,042	1,245	1,497	1,725	1,905	2,009	2,144	2,472	2,795	2,769	2,784	3,274	3,527	3,574	3,621	3,981
Public Sector	1,168	1,313	1,297	1,300	1,379	1,474	1,483	1,592	1,648	1,824	1,962	2,132	2,580	2,776	3,133	3,641	3,817
Total	2,102	2,355	2,542	2,797	3,104	3,379	3,492	3,736	4,120	4,619	4,731	4,916	5,854	6,303	6,707	7,272	7,798

Source: Japan; Japan Economic Agency, *National Income Statistics* 1970, pp.242. 243.  
Britain; HMSO, *National Income and Expenditure*, 1961 & 1969, Table 48 and 51.

£1-0-0=¥1,030. Then came the devaluation of Sterling in 1967. Since then £1-0-0=¥864.00.

Which rate of exchange must we take to be able to make a true international comparison of investment between the United Kingdom and Japan? Monetary terms are not a reliable measure for making such a comparison: through inflation and different level of commodity prices between the two countries the rate of exchange does not necessarily express the real power of the currency of a country. Not monetary terms but physical terms (number and scale of newly established plants, powers and number of new motors, number and capacity of new machines etc.) may be true measure of estimating scale of investment. But I cannot use such physical terms because of lack of statistical materials. Accordingly I must rely on monetary terms for comparison.

The present rate of exchange £1-0-0=¥864.00 might serve as a more suitable measure of comparison than the previous rate £1-0-0=¥1,030.00.

In this paper the previous rate, namely £1-0-0=¥1,030.00, is used from various reasons. Above all, the previous rate is simple in calculating and comparing.

It is useful to know about the trend of inflation in both countries. Table 5 shows the price index of consumer goods and wholesale manufactured goods in both countries.

The price of consumer goods is rising faster in Japan than in the U.K., but that of wholesale manufactured goods is very stable in Japan in comparing with the U.K. In Japan this index shows no big change. This stability comes from large scale investments which ensure much greater gains in productivity than comparatively expensive piecemeal rationalisation efforts. Considering this trend of price rise as well as

**Table 5.** Price Index in Japan and the United Kingdom

	The United Kingdom (1963=100)		Japan (1963=100)	
	Consumer Goods	Wholesale Manuf'ed Goods	Consumer Goods	Wohlesale Manuf'ed Goods
1959	90.0	94.1	79.8	101.5
1960	90.9	95.5	82.6	101.6
1961	90.4	98.1	87.0	101.4
1962	98.0	99.3	93.0	101.2
1963	100.0	100.0	100.0	100.0
1964	103.0	101.9	103.9	99.1
1965	108.3	104.6	110.7	98.9
1966	112.4	107.3	116.4	99.5
1967	115.2	108.2	121.0	100.2
1968	120.6	112.4	127.5	101.0
1969	127.2	115.9	134.1	101.5

Source: OECD, *Main Economic Indicators 1959-1969*, p. 112, 113, 456, and 458.

the preference of previous exchange rate there is no great danger of overestimating Japanese side in comparison with the U.K. so far as the figures of investment are concerned.

What can we find out in the figures of Table 4 and the trends of Chart 1?

Firstly, the most remarkable fact about the Japanese figures is the rapid increase of private sector investment during the sixties. This rapid increase started at the end of the fifties; in 1958 the amount of private sector investment in Japan was ¥2,141,000 million and in 1968 ¥13,277,000 million. The latter figure is six and a half time as large as the former figure. Compard with the British figure of private investment in 1968 the Japanese figure is above three times as large as that British figure. The dynamic power of private enterprise in Japan in the sixties is vividly expressed in these two comparisons.

Secondly, about the behaviour of public sector investment in Japan two facts must be mentioned. In 1952 public sector inv estment in

Japan was less than half the private sector investment. Of course, this ratio is less than the ratio of investment between public and private sector in the United Kingdom where public sector investment in 1952 was far bigger than private one (in the U.K. in 1952 public sector investment was £1,168 million and private sector £934 million). But in comparison with the past Japanese ratio, this ratio in 1952 is bigger: as explained in the previous section the ratio between public and private sector investment excluding military during 1931-1940 was nearly one third, which is less than the half, the ratio in 1952. This comparatively large proportion of public investment in the early fifties is the first fact which I want to point out. The second fact is concerned with the rapidly increasing trend of public investment in Japan in comparison with the United Kingdom: since 1965 the Japanese figure of public sector investment is bigger than the figure of the United Kingdom. The Japanese figures of public sector investment in 1967 and 1968 are ¥3,968,000 million and ¥4,589,000 million; the corresponding figures of the United Kingdom are £3,641 million and £3,817 million. The figure of the Japanese public investment in 1952 was nearly one third of the British one in the same year. Starting with this small amount in 1952 the Japanese public investment also increased rapidly. But it must be emphasized that the public sector has lagged behind the private sector since the beginning of the sixties.

Thirdly, there are no salient trends concerning the investment of two sectors in the United Kingdom for the past sixteen years. But the fact that the public sector investment has been increasing steadily with the same pace as that of the private sector is important. At the beginning of this period the U.K. started with more public investment and with less private investment. On the way this trend changed and



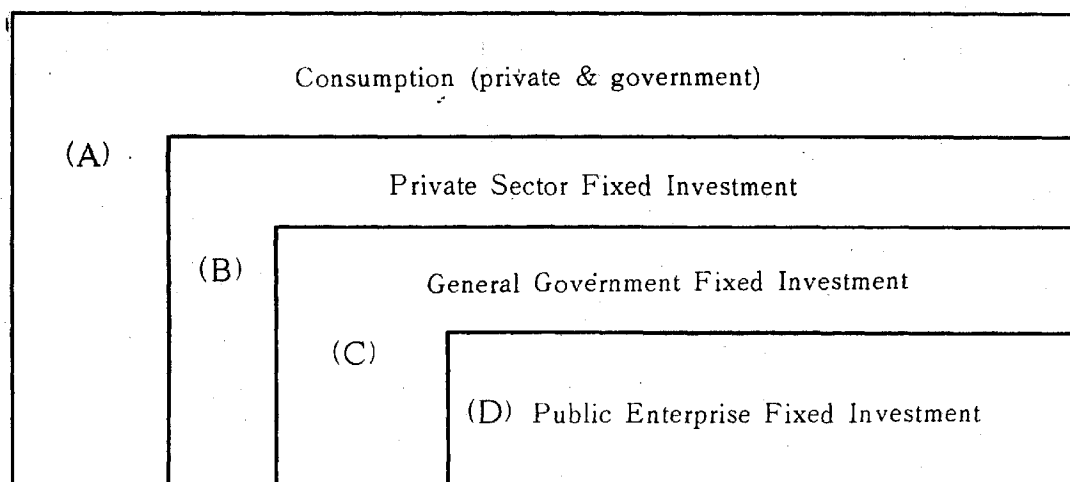
since 1955 the private investment has been bigger than the public investment. In 1968 both sectors invested nearly equally. Thus there is no big difference between these sector figures.

### 3. ANALYSIS OF INVESTMENT OF PUBLIC ENTERPRISE IN JAPAN

Now I shall try to analyse the investment of public enterprise in Japan in recent years. Whereas I made the historical approach to this theme in the previous section, I will now approach the same theme in this section through examining economic structure, or in other economic terms, the national income analysis. Comparison has been made between the United Kingdom and Japan also in this section.

As Chart 2 shows, the public enterprise is one portion of some other larger sections of a national economy. Public enterprise has various relations with these sections. Four parts of Chart 2, (A), (B), (C) and (D), are connected with each other so closely that no analyses of each of these four sections can be complete without considering the relations with other three sections.

**Chart 2.** Fixed Investment in Public Enterprise  
in Relation to Other Sectors of National Economy



Relying on the National Income Statistics of Japan and U.K. I shall analyse these relations mainly statistically in the following order;

- i) Proportion of Gross Domestic Fixed Capital Formation to Gross Domestic Product.
- ii) Private Investment versus Public Investment
- iii) General Government versus Public Enterprise
- iv) Public Enterprise Fixed Investment.

- i) Proportion of Gross Domestic Fixed Capital Formation to Gross Domestic Product.

As a preliminary inquiry it may be useful to know roughly the comparative scale and composition of national product of the U.K. and Japan.

From Table 6 we can find some important facts which are useful in understanding the public enterprise in Japan. Table 6 shows clearly that the composition of national income between Japan and the United

**Table 6.** Expenditure on Gross National Product 1966  
(Japan: 1,000 million yen, U.K.: million Pound)

	United Kingdom	Japan
1. Private Consumption Expenditure	24,236(63.7%)	20,948(55.0%)
2. General Government Consumption Expenditure	6,572(17.2%)	3,414( 8.9%)
3. Gross Domestic Fixed Capital Formation	6,707(17.7%)	11,997(31.5%)
4. Increase in stocks	253( 0.6%)	1,343( 3.4%)
5. Exports of Goods and Service	8,749(23.0%)	4,247(11.2%)
6. Less Import of Goods and Service	-8,456(22.2%)	-3,831(11.0%)
Expenditure on Gross Domestic Product	38,061(100 %)	38,118(100 %)

Source: HMSO, *National Income and Expenditure*, 1969, Table 1.

Economic Planning Agency, *Annual Report on National Income Statistics*, 1970, pp. 34-35.

Kingdom is considerably different, even though it happened that the total amount of national income of both countries is, under the previous exchange rate, nearly equal.

The first difference is concerned with the proportion of Gross Domestic Fixed Capital Formation; Japan has far bigger proportion in this item than the United Kingdom, the composition of which will be analysed in later sections of this paper. The proportion of Gross Domestic Fixed Capital Formation in the Gross Domestic Expenditure is in the late sixties in Japan 31-37% and in the U.K. 17-18<sup>(8)</sup>%.

The second difference is concerned with the Government Consumption Expenditure; for the U.K. this item is nearly double the figure for Japan. This problem will be analysed in ii) Private investment versus Public investment.

The third is concerned with the proportion of import and export; the British figure is much bigger than the Japanese. Notably the degree of the British dependence on import was nearly double that of the Japanese in 1966.

Table 7 shows the composition of both countries in 1968. Comparing Table 7 with Table 6 we can find some changes in the composition of each country in two years; the first big change may be the fast growth

(8) The percentage of Gross Domestic Fixed Capital Formation to the Gross Domestic Expenditure is as follows:

	(%)				
	1964	1965	1966	1967	1968
Japan	37.6	30.3	31.4	33.0	34.0
U. K.	17.4	17.4	17.5	18.1	18.8

Source: HMSO, *National Income and Expenditure*, 1969, Table 1.

Economic Planning Agency, *Annual Report on National Income Statistics*, 1970, p. 34-35.

**Table 7.** Expenditure on Gross National Product 1968  
(Japan: ¥1,000 million, United Kingdom: £ million)

	U. K.	JAPAN
1. Private Consumption Expenditure	27,065( 63.2%)	27,478( 51.9%)
2. General Government Consumption Expenditure	7,702( 18.0%)	4,403( 8.3%)
3. Gross Domestic Fixed Capital Formation	7,798( 18.3%)	17,866( 34.1%)
4. Increase in Stocks	204( 0.5%)	2,418( 4.3%)
5. Exports of Goods and Service	10,670( 24.8%)	5,829( 11.0%)
6. less Imports of Goods and Service	-10,679(-24.8%)	-5,221( -9.7%)
Expenditure on Gross National Product	42,760( 100.0%)	52,780( 100.0%)

Source: *National Income and Expenditure*, 1969, Table 1.

Economic Planning Agency, *Annual Report on National Income Statistics*, 1970, pp. 34-35.

rate of the Japanese economy. The nominal growth rate of Gross National Product between 1966 and 1968 is in Britain 14.1% and in Japan 50%. The increase of Japanese Gross National Product is ¥14,662,000 million. Nearly half of this increase, ¥6,530,000 million, is spent in Private Consumption Expenditure and nearly another half, ¥5,869,000 million, is spent in Gross Domestic Fixed Capital Formation. These two items count for 87% of the total increase of Gross National Product.

The increase of the British Gross National Product is £4,699 million. About half of this increase, £2,829 million, is spent in Private Consumption Expenditure, but only 24% of the increase, £1,091 million, is spent in Gross Domestic Fixed Capital Formation. These two items count for 83% of the total increase of Gross National Product. But when we calculate how much General Government Consumption Expenditure increased in these two years in each country, we can find an important difference between the two countries; this item increased £1,130 million

in the U.K. whereas in Japan in two years only ¥990,000 million. Government Consumption Expenditure in Japan increased less than in the United Kingdom in absolute amounts. The increase of international trade share in Britain is also big; the exports of Goods and Service increased by £1,921 million between 1966 & 1968, 1.8% increase in the composition of Gross National Product.

Observing these two tables we can find three important facts about the Japanese economy in recent years:

- i) Large share of Gross Domestic Fixed Capital Formation in the composition of Expenditure on Gross National Product in Japan.
- ii) Fast growth rate of Gross Domestic Fixed Capital Formation.
- iii) Relative decrease of General Government Consumption Expenditure in Japan.

Another datum may be useful to prove the three facts above mentioned; historical trends of each component of Expenditure on Gross National Product in several countries are shown in Table 8. The figures of this table show the average annual rate of growth of main components.

The outstanding feature is the size of growth rate of Gross Domestic Fixed Capital Formation in Japan as well as its continuity: 15%, the biggest figure in the table except the German Import and Export growth rate, continued from 1950 to 1964. From this it becomes clear that the large share of Gross Domestic Fixed Capital Formation in the composition of Expenditure in G.N.P. in Japan has been a continuing feature from the fifties till the present.

The second feature is concerned with the proportion of the Central Government Expenditure in Gross National Expenditure; Table 8 shows that the growth rate of Central Government Expenditure in Japan is

**Table 8.** Growth of Gross Domestic Product; Average Annual Rate of Growth.

	GDP at Market Prices		Private Consum- tion	Central Govern- ment Expen- diture	Gross Domestic Fixed Capital Formation	Exports	Imports	
		Total						Per Capita
France	1950-60	4.5	3.6	4.5	3.6	5.6	5.7	6.2
	1960-64	5.4	3.8	5.9	3.3	8.9	6.0	10.4
Germany	1950-60	7.9	6.7	7.5	5.8	10.1	16.8	16.9
	1960-64	4.9	3.5	5.2	6.9	7.4	7.1	9.6
United Kingdom	1950-60	2.8	2.4	2.5	1.6	5.4	2.6	4.2
	1960-64	3.4	2.6	3.1	2.6	6.7	3.0	3.4
U.S.A.	1950-60	3.2	1.5	3.2	6.0	1.8	5.2	5.3
	1960-64	4.3	2.7	4.2	4.2	4.4	6.7	4.9
Japan	1950-60	9.1	8.0	6.7	6.6	15.4	11.5	12.0
	1960-64	10.8	9.7	8.4	10.6	15.0	14.7	13.6

Source, D.I. Trotman-Dickenson, *Economic Workbook and Data* (Pergamon Press, 1969), p. 55. Original data are United Nations, *Yearbook of National Accounts Statistics*, 1965.

bigger than in the U.K. Japanese figures are 6.6% in 1950-1960 and 10.6% in 1960-64. But this does not mean that it increased in proportion to the increase of the Gross Domestic Product. As the growth rate of Gross Domestic Product was 9.1% in 1950-60 and 10.8% in 1960-64, the Government Expenditure in the G.D.P. became less in the fifties and nearly equal in the sixties in Japan. The British figures of the growth rate of Central Government Expenditure is on the other hand 1.6% in 1950-60 and 2.6% in 1960-64. It is a low rate which can misleads us easily: we might take this low rate as an evidence of economic unimportance of this item. But the facts are that the relative share of the Central Government Expenditure in the G.D.P. in the U.K. is far bigger than in Japan, and that the absolute amount of increase of this item during 1966-68 is also bigger in the U.K. than in Japan. The increase of this item in Japan is not in proportion with the increase of

the G.D.P.

A question arises: why is the composition of national income so much different between the U.K. and Japan? A bigger proportion of capital formation as well as a smaller one of general government consumption is Japanese feature. It is a quite difficult but interesting question which requires many-sided analyses.

Though I cannot develop these analyses here in detail, I want to point out only one factor which is closely connected with the composition of Japanese national income: military defence expenditure. For more than half a century Japanese economy had the heaviest burden of military expenditure in the world. In the 1930's military expenditure accounted for sixty-six percent of the central government's spending. Defence and Railways were two big items in pre-war expenditure of central government. Now the defence burden is no more big item in public expenditure. In the financial year 1965-66 defence expenditure came to only eight percent of it. In the same year U.K. spent 6.5% of gross national product in defence, while Japan only 1.3%. As a result public expenditure can be spent more in productive kinds. It can also be spent in social kinds. This problem is discussed more in detail at the last section of this paper 'Change of the Role of Public Finance in Japan'. (Cf. p. 93).

## ii) Private Fixed Investment versus Public Fixed Investment

The trends of Public Fixed Capital Formation as well as Private Fixed Capital Formation in Japan during 1952-1968 have been described in page 59-60. Here I want to discuss two new points:

### 1. Industrial components of the Government Fixed Capital Forma-

tion as well as of Private Fixed Capital Formation in 1966 and 1968. Comparisons are made between Japan and the U.K. and also between these two years.

## 2. Government consumption in relation to government investment.

While analysing the first problem I met a statistical difficulty in handling the British figures of the National Income and Expenditure. In the Japanese National Income Statistics there are series of tables which show figures of domestic fixed capital formation by double classification—by two sectors (private and public) as well as by industrial classification. I cannot find the British figures corresponding to these Japanese series in the NIS except the 1970 edition; I find a table of Gross Domestic Fixed Capital Formation by Standard Industrial Classification and a table of Domestic Fixed Capital Formation by sector separately, but find no table of double classification. The Central Statistical Office was, however, kind enough to give me useful informations about the industrial breakdown of these investment figures of both sectors in the U.K. in 1966 and 1968 through which I could solve the statistical difficulty. Table 9 & 11 are based on the information.

As I have made tables of two years—1966 & 1968—of both countries, four tables are composed. Comparison and analyses of these four tables could be made in the following order:

- i) Table 9 and Table 10. Comparison of Japan and the United Kingdom *in 1966.*
- ii) Table 11 and Table 12. Comparison of Japan and the U.K. *in 1968.*
- iii) Table 9 and Table 11. Comparison of 1966 and 1968 *in the U.K.*
- iv) Table 10 and Table 12. Comparison of 1966 and 1968 *in Japan.*



**Table 9.** Composition of Gross Domestic Fixed Capital Formation  
By Industrial Classification, *The United Kingdom* 1966, at Current Price  
(£ million)

	Total	Private	Public
a. Agriculture, forestry and fishing	180	174	6
b. Mining	126	50	76
c. Construction	132	132	0
d. Manufacturing	1,504	1,464	40
e. Gas, electricity, and water	979	12	967
f. Distributive trades	340	340	0
g. Transport and communication	568	134	434
h. Other service industries	624	553	71
i. Dwelling	1,327	673	654
j. Social service	427	142	285
k. Other public service	442	0	442
l. Transfer costs of lands, and buildings	58	-100	+158
<b>Total</b>	<b>6,707</b>	<b>3,574</b>	<b>3,133</b>

Source: HMSO, *National Income and Expenditure*, 1969. Tab. 55. 51. 50 and 57.  
Note. This breakdown is partly due to the information from the Central Statistical Office.

**Table 10.** Composition of Gross Domestic Fixed Capital Formation  
by Industrial Classification, *JAPAN* 1966, at Current Price  
(¥ 1,000 million)

	Sub-total	Private	Public
a. Agriculture, forestry and fishing	634.2	617.3	16.9
b. Mining	143.8	143.2	0.6
c. Construction	509.8	257.6	252.2
d. Manufacturing	2,310.7	2,290.0	20.7
e. Electricity, gas and water supply	751.7	516.7	235.0
f. Wholesale and retail trade	621.4	620.9	0.5
g. Transport and communication	1,480.1	631.6	848.5
h. Banking and insurance	158.2	156.6	1.6
i. Real estate	161.8	161.8	—
j. Ownership of dwelling	2,295.4	2,141.0	154.4
k. Public administration	1,961.3	—	1,961.3
l. Service	624.4	593.5	30.9
m. Balancing items	344.2	344.2	—
i) Ownership of dwellings	47.8	47.8	—
ii) Other industries	296.4	296.4	—
<b>Total</b>	<b>11,997.1</b>	<b>8,474.4</b>	<b>3,522.6</b>

Source: Japan Economic Agency, *National Income and Expenditure*, 1970. p. 247.

**Table 11.** Composition of Gross Domestic Fixed Capital Formation  
By Industrial Classification, *United Kingdom* 1968, at Current Price  
(£ million)

	Total	Private	Public
a. Agriculture, forestry, and fishing	221	212	9
b. Mining	137	79	58
c. Construction	161	161	0
d. Manufacturing	1,565	1,450	115
e. Gas, electricity, and water	902	13	889
f. Distributive trades	387	387	0
g. Transport and Communication	887	263	624
h. Other service industries	697	610	87
i. Dwelling	1,585	755	830
j. Social service	573	160	413
k. Other public service	617	0	617
l. Transfer costs of lands, and buildings	66	-109	175
<b>Total</b>	<b>7,798</b>	<b>3,981</b>	<b>3,817</b>

HMSO, *National Income and Expenditure*, 1969. Table 55, 51, 50, 57.

Note: This breakdown is partly due to the information of the Central Statistical Office.

**Table 12.** Composition of Gross Domestic Fixed Capital Formation  
by Industrial Classification, *Japan* 1968, at Current Price  
(¥ 1,000 million)

	Sub-total	Private	Public
a. Agriculture, forestry and fishing	1,052.4	1,038.2	14.2
b. Mining	219.7	218.0	1.7
c. Construction	785.2	393.2	392.0
d. Manufacturing	4,507.5	4,483.8	23.7
e. Electricity, gas and water supply	883.9	620.0	263.9
f. Wholesale and retail trade	980.8	980.2	0.6
g. Transport and communication	1,941.8	906.2	1,035.6
h. Banking and insurance	193.3	191.0	2.3
i. Real estate	277.1	277.1	—
j. Ownership of dwellings	3,439.3	3,217.6	221.7
k. Public Administration	2,591.8	—	2,591.8
l. Service	741.6	700.2	41.4
m. Balancing items	251.8	251.8	251.8
i) Ownership of dwellings	357.3	357.3	—
ii) Other industries	-105.5	-105.5	—
<b>Total</b>	<b>17,866.3</b>	<b>13,277.4</b>	<b>4,588.9</b>

Source: Japan Economic Agency, *National Income and Expenditure*, 1970. p. 247.

i) Table 9 and Table 10. Comparison of Japan and the U.K. in 1966.

Comparing Table 9 with Table 10 we can find some important facts about the type of investments in both countries. The most important fact is the difference in the proportion of private sector and public sector between the two countries: in Britain the proportion of private sector and public sector is 53.3% and 46.7% whereas in Japan 70.0% and 30% respectively. This proportion may serve as the first-hand evidence that the Japanese economy tends more to laissez-faire principle than the British one. But it must be noticed that though the proportion of public investment in Japan is smaller than in Britain, the absolute amount of this investment, 3,522,600 million Yen, is bigger than the British corresponding figure, 3,133 million Pound. Big items in the British public sector are: b. Mining, g. Transport & Communication and e. Gas, electricity and water. In Japanese public sector: K. Public Administration and g. Transport and Communication. Dwelling is in Britain important in public sector, but in Japan this item is in private sector important.

The second important fact is concerned with the private investment in the following industries; the total of b. *Mining*, c. *Construction*, d. *Manufacturing* and e. *Gas, Electricity and Water* is divided into private and public sector in both countries as follows.

Total Gross Fixed Capital Formation of Mining, Construction,  
Manufacturing and Gas, Electricity and Water in 1966.  
(U.K.: £ million, Japan: ¥1,000 million)

	Total	Private	Public
United Kingdom	2,741	1,704	1,037
Japan	3,716.0	3,207.5	508.5

It is clear from these figures that these Japanese industries are mainly composed of private industries. Even in the field of dwelling the private industry is taking the initiative.

ii) Table 11 and Table 12. Comparison of Japan and the U.K. in 1968.

This is a comparison between Japan and the U.K. after two years. How has the composition in each country changed in these two years? In this comparison I can find a clearer evidence about the private initiative in the Japanese investment pattern. Manufacturing is, above all, dominant factor.

The proposition of private sector and public sector investment is in Britain 51.1% and 48.9%. This ratio is in Japan 74.3% and 25.7% in 1968. Comparing this ratio with that in 1966, I find that in these two years private sector investment in Japan increased its share by 3.7%. (In 1966 the ratio was 70.6% and 29.4% respectively.)

The same comparison as in the previous page is made also here concerning the fixed capital investment of the following industries; the total of b. *Mining*, c. *Construction*, d. *Manufacturing*, and e. *Gas, Electricity and Water* is divided into private and public sector as follows:

Total Fixed Capital Formation of Mining, Construction,  
Manufacturing and Gas, Electricity and Water in 1968.  
(U.K: £ million, Japan: ¥1,000 million)

	Total	Private	Public
United Kingdom	2,765	1,762	1,003
Japan	6,396	5,715	681

In two years the Fixed Capital Formation of *Mining, Construction, Manufacturing, and Gas, Electricity and Water* in Japan increased by 78.1% (¥2,507,500 million). Among these industry groups *Manufactur-*

ing is above all dominant: almost 85% of this increase of investment of this group, namely ¥2,193,800 million, is due solely to *Manufacturing*.

iii) Table 9 and Table 11. Comparison of 1966 and 1968 in the U.K.

A comparison of Table 9 and 11 shows that in the U.K. the gross domestic fixed capital formation increased by £1,091 million, 16.2% at the current price, in two years after 1966. At the 1963 price the gross domestic fixed capital formation was in 1966 £6,102 million and in 1968 £6,791 million. It is 11.2% increase in real terms.

But at the same time in the group of *Mining, Construction, Manufacturing* and *Gas, Electricity, and Water*, the level of fixed investment is slightly lower in 1968 than in 1966 at the 1963 price<sup>(2)</sup>. The items which have much bigger fixed investment in 1968 than in 1966 at the current price as well as 1963 price are *Transport and Communication* (+£319 million at the current price) and *Other Public Service* (+£175 million at the current price) and *Dwelling* (+£258 million at the current price).

During 1966–1968 some industries in public sector had smaller proportion of capital formation in nominal terms; *Gas, Electricity and Water* as well as *Mining* are examples. The year 1968 was for the United Kingdom the second year after devaluation of £ in which a stern restraint policy was adopted. The greater decrease of the fixed capital investment in the public sector than in the private sector may be a piece of evidence that the public sector served as an instrument of this restraint policy. The main cutback was in *Electricity* and *Mining*. Some industries of public sector, however, made larger fixed investment in 1968 than in 1966 at 1963 price. They are *Dwelling, Social service, and Other Public Service*. This makes a clear contrast with the Japanese

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(9) HMSO, *National Income and Expenditure*, 1969, Table. 56.

pattern of investment in 1968 when *Manufacturing* was the decisive factor in the investment field. The next comparison shows this.

iv) Table 10 and Table 12. Comparison of 1966 and 1968 in *Japan*.

The Gross Domestic Fixed Capital Formation increased from ¥11,997,100 million to ¥17,866,300 million at current price. It is 48.9% increase in nominal terms. The figure of the increase in real terms is nearly the same with this figure because the price of manufactured goods is extremely stable. The industry which showed biggest increase is *Manufacturing*: it increased from ¥2,310,700 million in 1966 to ¥4,507,500 million at current price, 95.0% increase. The British corresponding figure is only 4.0%. In Japan manufacturing is predominantly private. The investment of this private part nearly doubled in these two years. Doubling investment in Manufacturing in two years happened often in Japan in the sixties. For example the private fixed capital formation of Manufacturing increased from ¥1,011,200 million in 1959 to ¥2,184,600 million in 1961.

Next to Manufacturing the item 'Ownership of dwellings' had bigger investment in 1968 than in 1966, nearly 50% increase. But here also private sector is dominant. The important items in the public sector in Japan are c) *Construction*, e) *Gas, electricity and water supply*, g) *Transport and communication*, and h) *Public administration*. Among them the increase was remarkable in the following items: *Construction* (¥140,200 million increase), *Transport and communication* (¥187,100 million) and *Public administration* (¥630,500 million).

Next I want to discuss government consumption in relation to government investment. Table 13 shows government consumption, gross domestic fixed capital formation of public sector as percentage

**Table 13.** Government (Consumption & Capital) Expenditures as Percentage of G.D.P. in United Kingdom and Japan.

		1966		1968	
		The United Kingdom	Japan	The United Kingdom	Japan
<i>Government Consumption</i> .....		17.2	8.7	18.0	8.3
<i>Gross Domestic Fixed Capital Formation</i> .....		17.7	31.5	18.3	34.2
of which	{ Private sector .....	9.9	22.2	9.3	25.2
	{ Public sector .....	7.8	9.3	9.0	9.0
of which	{ Public corporation .....	4.0	3.9	3.8	3.9
	{ Government enterprise .....	2.3		2.4	
	{ General government .....	2.7	5.4	2.8	5.1
		(Trading account)		(Non-trading account)	
		(Non-trading account)		(Non-trading account)	

Source; Table 6, 7 and 17 of this paper.

of Gross Domestic Production in United Kingdom and Japan in 1966 as well as 1968.

It has been already mentioned that the percentage of Government Consumption of G.D.P. in Japan is just half that in U.K. Comparing 1966 and 1968 in Table 13 we can find an interesting fact about the government activities of both countries. The percentages of *Government Consumption* and *Gross Domestic Capital Formation of Public Sector* in Japan are both diminishing in 1968 in comparison with in 1966 whereas the percentages of the same items in the United Kingdom are both increasing in 1968 in comparison with the position in 1966. Two countries are now going in entirely opposite direction. This fact might serve as a useful suggestion about the future economic structure of

both countries. But the key problem is the question how long the dynamic development of Private Sector in Japan can continue. I take this opposite tendency as temporary.

In Table 13 Gross Domestic Fixed Capital Formation of Public sector is divided into three categories: Public Corporation, Government Enterprise and General Government. Comparing the British proportion of these three with the Japanese ones, we find a difference between these two countries; bigger proportion of General Government in Japan (5.4% in 1966) than in Britain (2.7% in 1966). This is the second feature of Japanese public finance which has been continuing since 1945. This feature will be discussed in the next section.

To repeat the two features about the public finance in Japan, the first is the low percentage of Government Consumption of G.D.P. and the second is the big percentage of Gross Domestic Fixed Capital Formation in General Government of G.D.P. What does this mean? This means that Japanese Government has spent much more money in investment than in consumption in its small scale of public finance in comparison with the scale of G.D.P. Prof. U. Hicks pointed out that the proportion of public finance of G.D.P. has increased after each World War.<sup>(10)</sup> We can recognize this tendency in almost Western countries. These countries have experienced remarkable increase of the proportion not only after 1945 but also after 1918. The same thing can be seen also in Japan today. Excluding military expenditure the proportion of public finance of G.D.P. has increased also in Japan after 1945, but there is a delay in comparison with the Western countries. Japan stands now not at the level of the Western countries after the

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(10) U.K. Hicks, *British Public Finance* (London: Oxford Univ. Press, 1963), pp. 10-12.



Second World War but at the level of these countries after the First World War. In comparison with the present level of these countries the scale of her public finance is small and its contents are insufficient. In comparison with the level of the pre-war Japan, however, it made remarkable progress. For example, social security has become national system for the first time in 1945-1948. This progress is no less significant than the progress which Asquith, George and Churchill facilitated in the field of social insurance in the first ten years of this century in the United Kingdom.<sup>(11)</sup>

There are in Japan three elements in deciding the scale as well as contents of public finance none of which can be found in the U.K. after the Second World War : firstly, the military burden has reduced remarkably after 1945, secondly, balanced budget was maintained till 1966, thirdly, there arose urgent, large needs of social overhead capital formation proportionate to the unexpected increase of capital formation in the private sector.

In the Western countries the increases of government income which accrue from the increase of gross national product have been used for government expenditure without making any large tax-reduction, thus keeping or increasing the share of public finance in the gross national product.

In contrast to this present tendency of these countries, the share of public finance in the gross national product in Japan has been reduced by tax-reduction and also the principle of balanced budget which had been maintained until 1966. Tax has been reduced several times in the past twenty years.

As the result of these policies the amount of expenditure which the

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(11) *Ibid.* p. 5.

Japanese Government could dispose of has shown no big increases. Within this limitation the Government had to accept one of two alternatives: either to give the social overhead capital formation the highest priority at the sacrifice of government consumption or to give the first consideration to the welfare policy by increasing the government consumption. The Government preferred the first to the second. In the middle of fifties bottlenecks in the transport—above all, harbours and roads—began to appear here and there in industrial districts, and they inflicted immediate increase of cost in production as well as in transport. Abolition of these bottlenecks became the first task for the Government. Priority was given to road investment. Even in the investment in road these motor-roads which exercised direct influence on the industrial efficiency were built up first; by the side of fine motor-way we find all over Japan rough, stony path for pedestrian. This is a typical contrast between priority for industry and neglect of welfare for inhabitants.

An explanation of the lack of social overhead capital in the fifties in Japan is necessary to understand the postwar pattern of public sector investment. Road construction may be taken as an example.

Table 14 shows an international comparison of paved road in 1965. The ratio of paved road to total road is 6.2% in Japan and 100% in the U.K. Paved road length per 1,000 population is 0.66 km in Japan and 6.06 km in the U.K. There was a great difference between both countries in 1966 and there is still. In pre-war time when railways were the main transport means and, as the result, there was no great social need for road pavement, there was no "true road" by the European standard. The ratio of paved road to total road was only 0.9% in 1936,<sup>(12)</sup>

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(12) The Japan Development Bank, *Facts and Figures on the Japanese Economy*, p. 67.

**Table 14.** International Comparison of Road Pavement in 1965

	Paved Road 1,000 km	Ratio of Paved Road to Total Road (%)	Paved Road Length per 1,000 population
Japan	61	6.2	0.66
U.S.A.	2,200	37.8	12.27
U.K.	819	100.0	6.06
France	500	35.0	1.08
Germany	218	57.0	4.04

Source: Ministry of Transport, *Auto-car in Figures*, 1966. p. 67.

three years before the beginning of the Second World War. It was only at the beginning of the thirties that the automobile industry started on a small scale to meet the military demand. The ratio improved to the degree of 2.0% in 1957.

In such bad road condition the private capital accumulation proceeded several times faster in Japan than in the U.K. in the sixties. Cf. Chart. 1.

In 1964 Japan's highway investment is nearly double that in the U.K. as the following table shows. Even this amount of road investment is not enough to comply with the increased demand for traffic.<sup>(13)</sup>

A huge economic loss which was due to the traffic congestion was

**Table 15.** Highway Investment in Selected Countries  
1963

	Annual Amount (thous. Dollars)
U.S.A.	13,250,000
Canada	1,118,275
Germany, F.R.	2,523,000
France	816,400
United Kingdom	950,030
Japan	1,873,000

Source: IRF Staff Report 1964, quoted in The Japan Development Bank, *Facts and Figures on the Japanese Economy*, 1966. p. 67.

(13) Sempei Sawa, *Gendai Nihon no Kōtsūkeizai*, (Transport Economics in Contemporary Japan) (Tokyo: Toyo Keizai. 1966) p. 134.

quoted in 1966.

“The number of cars which run National Road No. 1. (Tokyo-Osaka, 636.1 km.) is 40,000 per day. If there is no congestion, it takes usually eight hours for a lorry to run through the road. Because of the congestion it has recently taken more than ten hours. This is two hours delay. The worst time recorded was twenty-seven hours. The loss which is due to such a delay is enormous. Above all, the goods which a lorry carries are normally vegetables, fruits, fishes, dairy produce, and frozen food which easily become bad. The loss is enormous.”

Expenditure on roads increased rapidly during sixties: the ratio of road expenditure to Gross National Expenditure was 0.7% in 1955, 1.3% in 1960, 2.3% in 1965, 2.2% in 1966.<sup>(14)</sup>

This resulted in an improvement mainly in National Road, but not Prefectural or Local Road. Table 16 shows this delay in the latter, and the record in 1965 is still far from satisfactory. Massive investment is required still in future.

Table 16. Improvement in Roads

	National Roads		Prefectural Roads		Local Roads	
	Total Length of Road km	Ratio of Paved section %	Total Length of Road km	Ratio of Paved section %	Total Length of Road km	Ratio of Paved section %
1955	24,092	15.7	120,536	4.5	793,083	0.9
1960	24,918	28.5	122,124	7.5	814,872	1.3
1965	27,858	51.1	120,512	13.5	836,382	3.7

Source: Senpei Sawa, *Gendai Nihon no Kōtsūkeizai*, p. 132.

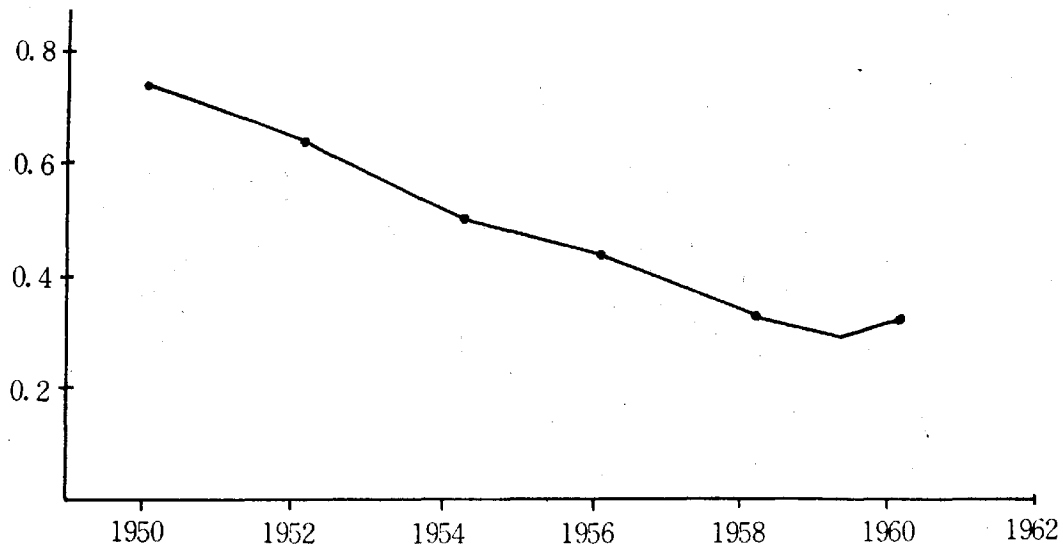
Even this large degree of expenditure cannot, however, catch up with the increase of cars. The total number of owned cars reached 12

(14) Sempei Sawa, *Gendai Nihon no Kōtsūkeizai*, p. 131.

million by the end of March 1968, about 28 times over the 1950 figures. In spite of this increase there are fewer cars in Japan than in other countries; in 1966 population per one passenger car was thirty-five in Japan as compared with three in the United States or seven in the U.K. With the rise of standard of living as well as the price decrease of cars which is due to the mass production the number of cars will increase in future also.

Road is one of many examples which illustrate the imbalance between social overhead capital and private one. The same point can be made about harbour, railways, postal service, industrial water, and so on. The following chart shows the degree of the imbalance.

**Chart 3.** Ratio of Social Overhead Capital Stock to Gross National Product



Source: Kanō & Uchino, *Shakai Shihon no Chishiki*, (Tokyo: Nihonkeizai, 1964) p. 31. (An Introduction to Social Overhead Capital)

Note: This social overhead capital includes Roads, Harbours, and Railways.

The ratio of social overhead capital to Gross National Product was 0.5% in 1934-36. In 1945 when production decreased heavily, the ratio became 1.0. Since 1955 this ratio is decreasing. In 1962 it was below 0.4, less than in prewar time. In 1971 it may be less than in 1962.

So long as this imbalance continues, a large part of public expenditure will have to be allocated to investment in roads, harbours, railways, bridges, industrial water and other services which contribute to mitigate the imbalance. Other kinds of public services which do not contribute to this objective must be of secondary importance for a while.

The most rapid industrialization in the world through the development of heavy industries which requires a lot of social investment is going on in Japan where the accumulation of social overhead capital was and still is the smallest among the industrialized countries. This combination of two characteristics—most rapid industrialization and smallest accumulation of social overhead capital—is the principal economic factor which determines the role and pattern of public sector and, accordingly, public enterprise in Japan. It was so in the sixties and will be so in the seventies because these two characteristics will not vanish easily in the near future.

### iii) General Government versus Public Enterprise

The composition of fixed capital formation of public sector in 1966 and 1968 is shown in Table 17. Here I want to analyse General Government.

It has been pointed out that the amount of fixed capital formation of General Government has bigger proportion in Japan than in U.K.

The composition of General Government fixed capital formation as well as consumption in the U.K. and Japan is shown in Table 18.

It has been already pointed out that 1) *the consumption expenditure* of general government is smaller in Japan than in the U.K., and 2) *the fixed investment* of general government is much larger in Japan than

**Table 17.** Composition of Fixed Capital Formation of Public Sector in 1966 and 1968.

(Japan: ¥1,000 million, U.K.: £ million)

1966

		United Kingdom	Japan
(D)	Public Corporation	1,455	1,461 { Central 1,015 Local 365
	Government Enterprise	817 { Central 31 Local 786	
(C)	General Government	861 { Central 302 Local 559	2,062 { Central 1,008 Local 1,054

1968

		United Kingdom	Japan
(D)	Public Corporation	1,639	1,855 { Central 1,375 Local 480
	Government Enterprise	963 { Central 42 Local 921	
(C)	General Government	1,215 { Central 414 Local 801	2,734 { Central 1,257 Local 1,477

Coruce: HMSO, *National Income and Expenditure*, 1969.Japan Economic Agency, *National Income Statistics*, 1970.

in the U.K. Table 18 shows detail of general government expenditure of Japan and the U.K. Figures in the table will be examined.

The total consumption expenditure of general government in Japan is half that in the U.K. A reason for this difference is defence burden: calculating on the exchange-rate  $\text{£}1-0-0 = \text{¥}1,030$  the burden in the U.K. is seven times bigger than that in Japan (the U.K.:  $\text{£}2,150$  million. Japan:  $\text{¥}327,000$  million). Deducting defence burden from central government expenditure we get civil expenditure  $\text{£}1,979$  million for the U.K. and  $\text{¥}990,000$  million for Japan. The civil expenditure of the central government in Japan is just half that in the U.K. This is an evidence that the general government service is far more meagre in Japan than in the United Kingdom. A compensatory factor to this

**Table 18.** General Government Expenditure in the U.K. and Japan  
1966 Financial Year  
(Japan: ¥1,000 million, The U.K.: £ million)

<i>The U.K.</i>		<i>Japan</i>	
<b>(I) CONSUMPTION EXPENDITURE</b>			
1) Central Government	4,129	1) Central Government	1,317
a) Defence	2,150	a) Defence	327
b) Civil	1,979	b) Civil	990
2) Local Government	2,443	2) Local Government	2,096
(I) =	6,572	(I) =	3,413
<b>(II) FIXED INVESTMENT EXPENDITURE</b>			
1) Central Government	302	1) Central Government	1,008
Road	123	a) Central Govern't executed project	457
Social Service	90	i) Dwelling	10
Others	89	ii) Others	447
		b) Capital Trnsfer to Local Govern't	551
		i) Dwelling	36
		ii) Others	515
2) Local Government	559	2) Local Government	1,054
Socail Service	215	i) Dwelling	55
Environmental Service	112	ii) Others	999
Others	232		
(II) = 1) + 2)	861	(II) = 1) + 2)	2,062
Grand Total: The United Kingdom (I) + (II) ..... 7,433		Grand Total: Japan (I) + (II) ..... 5,475	

Source: HMSO, *National Income and Expenditure 1969*, pp. 45-50, p. 43, 47, & 51.  
Japan Economic Agency, *National Income Statistics*, p. 257.

is local government consumption expenditure in Japan. Local government consumption expenditure is £2,443 million in the U.K. and ¥2,096,000 million in Japan. As far as local government expenditure is concerned there is no big differene either in the amount or in the pattern between both countries.

Remarkable difference between both countries, however, can be seen



in investment expenditure of general government: the expenditure in Japan is two and half times as big as that in the U.K. (the U.K.: £861 million, Japan: ¥2,062,000 million). Why is the difference so great? An answer is the difference in investment in road between both countries. The U.K. spent on road £235 million (central government £123 million and local government £112 million); but Japan spent more than double. This road investment concentrates itself mainly in National Road the economic significance of which is bigger than Local Roads. Even in 1965 the ratio of paved section is 51.1%, 3.7% for National Road, Local Road respectively; there is a big difference between these two ratios. Therefore, it will take more than several years in future that Local roads can reach at the level which National Roads have reached today.

Another answer is the existence of the item "Water, Land-Levelling and Recovery from Disasters" in Japan. Japan often suffer from natural disasters as a result of its mountainous geography as well as rainy climate accompanying occasional typhoons in autumn. In the U.K. where natural disasters seldom occur this item is nearly naught.

Comparing the U.K. statistics between 1966 and 1968 in Table 17 I notice a considerable increase of fixed capital formation of *Local Government Non-trading Account*; it increases from £559 million in 1966 to £801 million. The amount of increase, £242 million, consists mainly of the following two items: "Road and Public Lighting" (increase, £83 million) and "Education" (increase, £81 million). In other words, "road" and "education" have bigger expenditure in the fixed capital formation of local government in 1968 than in 1966. Also in Japan the increase of fixed capital formation of local government non-trading account is big: it increased by ¥4,228,000 million during 1966-1968.

(namely from ¥1,054,300 million to ¥1,377,100 million). This big increase is due to road and education in Japan as well.

In short, three characteristics of general government in Japan are: firstly, light burden of defence, secondly, importance of investment in road, harbour, water, etc, and thirdly, meagre consumption expenditure of central government.

#### iv) Public Enterprise Fixed Capital Formation

Table 19 shows the gross domestic fixed capital formation of public enterprise in Japan and the U.K. The figures for the U.K. include public corporation and trading accounts.

An important difference between public enterprise and general government is that the former is financially self-supporting and the latter is not.

There are many interesting differences between Japan and the U.K. in industrial distribution of public enterprise. I want to develop three points.

- 1) The first point is that *Construction, Transport and Communication* are three important industrial fields of public enterprise in Japan. Two giant public corporations, Japan National Railways & Nippon Telephone and Telegram Public Corporation belong to these fields. Besides, Kōdan, a sort of national public corporation which is engaged mainly in construction belongs to these industries. The examples are: The Japan Road Corporation, the Aichi Water Corporation, the Internal Passenger Ship Corporation, the Metropolitan Highway Corporation, the Railway Construction Corporation etc.

**Table 19.** Gross Domestic Fixed Capital Formation of Public Enterprise in the U.K. and Japan. Sector Split at Current Price  
1966 (Japan: ¥ 1,000 million, The U.K.: £ million)

	JAPAN	THE UNITED KINGDOM
Agriculture	16.9	0
Mining	0.6	76(Coal)
Manufacturing	20.7	5(Iron & Steel)
Construction	252.2(Local 68.9) (Central 183.3)	0
Transport	402.2(Local 64.4) (Central 337.8)	153(Harbour 35) (Railways 109) (Road 9)
Communication	446.3	229(Post, Telephone 229)
Public Utility	235.0(Local 204.8) (Central 30.2)	941(Electricity 720) (Gas 187) (Water 31) (Gas & Elect. 3)
Wholesale & Retail Trade	0.5	0
Banking	1.6	0
Ownership of Dwelling	53.6	725(Central 70) (Local 655)
Service & Others	30.9(Local 26.6) (Central 4.3)	57(Central 31) (Other 23) (Other 3)
Total	1,460.6(Central 1,015) (Local 365)	2,272(Central & Public Corporation 1,486) (Local 786)

Source: HMSO, *NIE*, 1970. & Japan Economic Agency, *NIE*.

Note: United Kingdom statistics include 1) public corporation & 2) trading account.

It is strange that in the U.K. there is no public enterprise in the field of construction while in Japan there are many such enterprises mentioned above. This difference is due mainly to the different stage in the social capital formation between the U.K. and Japan: there are still many social needs for land levelling, regional development, roads, harbours and forest in Japan because Japan has the smallest accumulation of social overhead capital.

Transport is an important item in Japan. The investment of

central government in transport, ¥337,800 million belongs all to Japan National Railways. Comparing this figure with that in the U.K. JNR invested three times as much as British Railways in 1966. In 1968 JNR invested four times as much as BR. (BR £99 million and JNR ¥399,600 million in 1968)

Communication run by N.T.T. is also a big item. As the amount of investment in Japan was ¥446,300 million and in the U.K. £229 million in 1966, Japanese investment in communication was double that in the U.K. in 1966.

2) Next the investment in dwelling is a big item in U.K. local authority investment. But this item has far less importance in Japanese public sector than in U.K. Local authority trading account in the U.K. invested £655 million for dwelling in 1966. In the same year Public Enterprise in Japan invested only ¥53.600 million for dwelling as Table 19 shows. If we take the previous exchange-rate, £1-0-0=¥1,030, the Japanese amount is well under one-tenth of the British one. But this is not all of Public Dwelling in Japan: investment in dwelling is also made in General Account in Japan. The total expenditure on public dwelling is shown in Table 20.

It has been mentioned that the dwelling investment is made in Japan primarily in private sector. Table 10 shows that private

**Table 20.** Public Dwelling Fixed Capital Formation in Japan in 1966.  
(¥1,000 million)

Central Government Non-trading Account	9.7
Capital transfer from Central to Local Government	36.3
Local Government Non-trading Account	54.8
Public Enterprise Dwelling Investment	53.6
Total	154.4

Source, Japan Economic Agency, *National Income Statistics*, 1970, Table 12.

investment in dwelling is ¥2,141,000 million and public sector investment is only ¥154,400 million. The percentage is 93.2% in private, 6.8% in public. In the same year U.K. investment in dwelling amounts to £616 million in private and £711 million in public. The percentage is in private 46.4%, in public 53.6%. It is true that because of this inadequate public policy for housing in Japan poorer people suffer from housing shortage and bad housing conditions. But there are two mitigating elements in this respect. In the first place, dwellings are provided by companies for their employees. So long as a labourer is employed in a company, he can enjoy this sort of company-dwelling with cheap rent. Companies in Japan try to establish such dwelling to make themselves more attractive to employees. Companies play some roles in Japan which local authority in the U.K. plays. There is a paternalism in this policy. Secondly, Japan Housing Public Corporation makes loan at cheap interest rate allowing thirty years repayment. Nearly 6-8% of the total housing is constructed through this cheap loan. Nevertheless the difference between Japan and the U.K. in connection with dwelling construction is considerable. Local government plays only a minor role in Japan.

- 3) There are some differences in public utility services not only in the amount of investment but also in the form of management between the U.K. and Japan. There is no national public utility service on a large scale in Japan; electricity is managed by nine private companies; gas is produced by many local scale enterprises as well as private ones; water is managed by a great many local public enterprises. These industries are managed by larger scale enterprises in the U.K. than in Japan. In general the scale of local

public utility enterprise is small, and its number is huge, in Japan.

**Table 21.** Public Enterprise Fixed Capital Formation as Percentage of Total Public Fixed Capital Formation in Japan  
(¥1,000 million)

	(C) Public Fixed Capital Formation	(D) Public Enterprise	(D)/(C) %
1952	399	124	31.1
1954	553	167	30.3
1956	619	252	40.6
1958	865	347	40.1
1960	1,220	463	38.0
1962	2,089	856	41.0
1964	2,576	1,007	39.1
1966	3,522	1,460	41.4
1968	4,589	1,855	40.4

Source: Japan Economic Agency, *National Income Statistics, 1970*.

**Table 22.** Public Enterprise Fixed Capital Formation as Percentage of Total Public Fixed Capital Formation in U.K.

	(C) Public Fixed Capital Formation £ million	(D) Public Enterprise £ million	(D)/(C) %
1952	1,168	954	80.0
1954	1,297	1,068	82.3
1956	1,379	1,084	78.6
1958	1,483	1,137	76.6
1960	1,648	1,239	75.2
1962	1,962	1,369	69.7
1964	2,580	1,806	70.0
1966	3,133	2,272	72.4
1968	3,817	2,602	68.1

Source: HMSO, *National Income and Expenditure, 1961 & 1969*, table 48 & 52.

Note: Public enterprise has three components; public corporation, trading account of central government and trading account of local government. Figures till 1957 are from table 48 of 1961 edition, those after 1958 are from Table 52 of 1969 edition.

Next I want to approach the problem of historical trend of public enterprise fixed capital formation. Public enterprise has two components in the U.K.: public corporation, trading account of central as well as local government. This problem is, therefore, concerned with the proportion between non-trading account (i.e. general government in U.N.'s terms) and public enterprise.

Table 21 shows the percentage of public enterprise fixed capital formation in the public total fixed capital formation in Japan. A clear trend can be found in it; at the beginning of the fifties the percentage was 30-31% and in the sixties it is 40-42%. In Japan the trend is increasing. The proportion in the U.K. is shown in Table 22. It shows that the ratio is decreasing: at the beginning of fifties it was more than 80%, but in the sixties 70%. So far as these percentages of the U.K. and Japan show, the two countries are going in opposite directions.

A question arises. The percentage in the U.K. is 70-80%, in Japan 30-40%. Why is the Japanese percentage nearly half the British one? The answer is perhaps that the fixed investment of general government in the U.K. is far less than that in Japan on the one hand (as Table 18 shows the figures of the U.K. was £861 million, that of Japan was ¥2,062,000 million), but the fixed investment of public enterprise of the U.K. is far bigger than that of Japan on the other hand (as Table 19 shows the figure of Japan was ¥146,000 million and that of the U.K. £2,272 million in 1966).

Why do these opposing tendencies exist between these countries? On the Japanese side there are three reasons for the increase. The first reason is the effect of balanced budget which was kept until 1966. The balanced budget did not allow the increase of general government investment. The Government had to rely more and more on public

enterprise the capital of which can be lent from National Loan Fund. The second answer is the tendency of “commercialization of public administrative service”. This tendency is recognized not only in central government but also in local government. Professor Takeo Fujita, expert on Japanese local public finance, expressed this tendency as follows:

“Since 1954 central government has been treating bonds for local public enterprise more favourably than bonds for public administrative services. Under this policy many local services such as drainage, harbour, industrial water which had been managed as public administrative services must now be managed as public enterprise service. Many public administrative services are changed into enterprise account so that “pay its own way” principle can be established in each service. This tendency is now spreading over other public administrative services which should be supplied free to inhabitants. This tendency of commercialization inevitably becomes strong when the capital is financed through bond-borrowing, and, as a result, the burden of interest payment becomes heavy. In this way many services which were supplied free now require some charge, and, in extreme cases, even aim at profit-making.”<sup>(15)</sup>

The third answer is the increased importance of two giant public corporations, JNR and NTT. In the sixties the proportion of their investments increased considerably. This is also the result of high economic growth in the sixties.

On the side of the U.K. one reason for decrease can be found in the nationalization policy in the late forties: nationalized industries had been treated more favourably than general government in the fifties.

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(15) Takeo Fujita, *Gendai Chihōzaisei Nyumon* (An Introduction to Local Public Finance) (Tokyo: Nihon Hyoron, 1969) p. 232.



Electricity and coal are good examples. This policy lost its importance in the sixties and general government has assumed bigger importance in the sixties.

#### 4. CHANGE IN THE ROLE OF PUBLIC FINANCE IN JAPAN

The purpose of this section is to answer the following three questions which have close relations with public enterprise :

- i) How much and in which directions did the decrease of defence burden bring changes in public finance since 1945 in Japan?
- ii) Is there any constant pattern in public finance in Japan during the past one century?
- iii) How much has the importance of National Loan Fund increased in public finance in Japan?

For these inquiries Koichi Emi, *Government Fiscal Activity and Economic Growth in Japan 1868-1960* (Tokyo: Kinokuniya Bookstore Co. Ltd., 1963) is extremely valuable. He analysed the government expenditure of the U.K. and Japan not only historically but also according to economic and functional categories: we can compare the proportion of these categories of each country in 1900 with that in 1960; we can also compare the proportion in the U.K. in 1900 with that in Japan in the same year; thus we can not only make an international comparison between these two countries but also arrive at an understanding about the historical trend of the proportion of both countries.

In comparing these four tables we must notice two qualifications :

- 1) The Nationalized Industries are excluded in the U.K. statistics.
- 2) Figures for Japan are limited to central government. Local government is excluded from the Japanese statistics.

**Table 23.** Government Expenditure by Economic and Functional Category in Terms of Percentage Distribution

## THE UNITED KINGDOM

	Economic Functional	Goods & Service		Transfer	Total
		Current	Capital		
1900	1. General	50.5	6.5	7.7	64.7
	2. Social	12.8	4.4	5.1	22.3
	3. Economic	5.8	7.1	0.1	13.0
	4. Total	69.1	18.0	12.9	100.0
1960	1. General	29.4	1.4	13.0	43.8
	2. Social	19.0	7.5	21.0	47.5
	3. Economic	3.6	1.1	4.0	8.7
	4. Total	52.0	10.0	38.0	100.0

Source: A.T. Peacock & J. Wiseman, *The Growth of Public Expenditure in the U.K.* p. 80-82, quoted in Koichi Emi, *Government Fiscal Activity and Economic Growth*, p. 70.

Note: Government expenditure includes central government, national insurance, and the local authorities of the United Kingdom, but excludes nationalized industries.

**Table 24.** Government Expenditure by Economic and Functional Category in Terms of Percentage Distribution

## JAPAN

	Economic Functional	Goods & Service		Transfer	Total
		Current	Capital		
1900	1. General	69.3	1.0	1.0	71.3
	2. Social	3.1	0.6	0.3	4.0
	3. Economic	8.3	16.2	0.2	24.7
	4. Total	80.7	17.8	1.5	100.0
1960	1. General	8.9	1.7	8.1	18.7
	2. Social	6.0	26.4	21.9	54.3
	3. Economic	4.4	20.2	2.4	27.0
	4. Total	19.3	48.3	32.4	100.0

Source: Koichi Emi, *op. cit.*, p. 71.

Mr. Emi reclassified the figures given by function in Peacock's book into three categories as follows:<sup>(16)</sup>

1. General Service :

- 1) Administrative & others
- 2) National debt
- 3) Law and order
- 4) Overseas services
- 5) Military and defence

2. Social Service :

- 1) Social services
- 2) Environmental services  
(roads, public lighting, water, sweage, refuge, disposal etc.)

3. Economic Service :

- 1) Services to agriculture, forestry and fishing
- 2) Industry & Commerce
- 3) Transport
- 4) Employment

Because of the two qualifications mentioned above exact comparison is impossible. Mr Emi remarks :

“Although a direct comparison of four tables is not altogether possible, we may note their contrasting features in order to gain a general understanding of the characteristic features of the two governments represented.”<sup>(17)</sup>

The author of this book explains the public expenditure of both countries by comparing these four tables of Table 23 & 24 as follows :

“Some similar tendencies are observed in both countries—that is the relative importance of general services (i.e. administration, national

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(16) Koichi Emi, *op. cit.* p. 68.

(17) Koichi Emi, *op. cit.* p. 70.

debt, military defence, overseas services, etc) decreased while that of social services greatly increased. But the rate of decrease of general services and the rate of growth of social services were larger in the case of Japan. As for the relative decrease of general services, we must remember that the share of defence and national debts in the total government expenditure in the U.K. was a surprising 37.6% in 1955 while it was 5.0% of the total expenditure of the central government of Japan in 1960. The very large share of social welfare for Japan in 1960 may be considerably overstated, since it excludes government loans and subscriptions. On the other hand, the share of social services in the U.K., nearly 50%, illustrates that that country is highly advanced in the development of social services with a substantial scheme of social insurance, despite the heavy burden of defence and national debt which amounts to 37.6%. Interestingly enough, the important economic components of social welfare in the U.K. is transfers, while in Japan, capital formation for social services is a little larger than transfers.

This reflects the different stages of development of social welfare in the two countries. The most conspicuous difference between both countries, lies in the area of economic services, the share of which appeared to be larger in Japan, in the present day as well as in 1900. This phenomenon is chiefly attributed to the large share of fixed capital formation in Japan, which amounts to 48.3% in 1960.

We cannot come to hasty conclusion about the character of both governments on the basis of these charts, as they are the products of different historical conditions. However, in the case of Japan, we might broadly conclude that a drastic reduction of military expense has significantly stimulated government activity in the area of social and economic services<sup>(18)</sup>”

The characteristics of public expenditure in Japan are expressed clearly in the last paragraph. There are, however, three points which

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(18) Koichi Emi, *op. cit.*, pp. 71-72.

I want to emphasize by comparing these tables.

Firstly, the proportion of capital expenditure in Japan in 1960 is extremely high. It is 48.3%. That proportion in the U.K. in the same year is 10.0%. This figure of the U.K. does not at all express true proportion of capital expenditure of public sector as a whole because the nationalized industries are excluded. This percentage must be recalculated by including this sector; in 1960 the gross fixed capital formation of public corporation was £788 million and that of central and local government was £860 million. The percentage of the former may be under 10%. Even when this percentage is added, the total percentage cannot be more than 20% in the U.K. If we assume the figure 20% to be accurate, it makes no big difference: the Japanese figure is still far bigger than the British one. This fact is connected with the following facts: the ratio of consolidated fund to Gross National Product is smaller in Japan than the U.K. and the ratio of national loan fund to GNP is, in the opposite way, bigger in Japan than in the U.K. As the national loan fund is a governmental borrowing from private sector, the governmental investment depends much more on borrowing in Japan than in the U.K.

Secondly, social service in Japan showed remarkable progress in 1960 in every aspect in comparison with 1900. Of course it is insufficient in comparison with the figures in the U.K. in 1960. As Mr Emi remarked, the proportion of social service in 1960, namely 54.2%, is considerably overstated: the proportion is due partly to the large expenditure of some items, such as roads, which are not directly related to the social welfare. We must be, therefore, cautious in regarding these figures concerning social services as indexes of social welfare services to inhabitants. Nevertheless, there is no doubt that in social service there has

been considerable progress since 1945. The big increase in transfer item of social service, from 0.3% in 1900 to 21.9% in 1960, is enough evidence for this tendency.

Thirdly, the proportion of economic function in the total expenditure did not change greatly between 1900 and 1960. Here we can find a deep-seated characteristic of the public expenditure in Japan. The economic role of public expenditure was already as important in 1900 as in 1960. It must be, however, remembered that the year 1900 in Japan was comparable to 1840's in the U.K. when the railway boom was kept at an extraordinarily high level. As the year 1900 was also between the Sino-Japanese and Russo-Japanese Wars, it can be characterized by high military expenditure as well as investment boom. The exceptional character of the year in the economic history in Japan must be taken into account. Nevertheless, a high proportion of economic category can be regarded as an unchangeable feature of public expenditure in Japan.

These three points can be affirmed by another statistical table which Mr. Emi calculated: comparison of percentage distribution of central government expenditure by function, 1900 and 1960. Table 25 shows this.

Mr. Emi remarks:

“At a glance, the most remarkable difference between the two stages appears as a large reduction in defence expenditure, i. e., from 43.8% to 5.2%. This drastic change necessarily influenced the percentage share of other functional components. Above all, the share of social welfare jumped from 1.2% to 16.2%. Transfer to local government, and preservation and development of national resources showed great increases, from 1.3% to 12.8%, and from 1.6% to 12.2% respectively. The former is due to the programme of “equalization grants” to local governments initiated in the postwar period, which

**Table 25.** Comparison of Percentage Distribution of Government Expenditure by Function, 1900 and 1960. Japan

	1900 (%)	1960 (%)
1. Business and Industry	23.2	29.6
a. Agriculture, Forestry and Fishery	3.2	5.0
b. Commerce, Mining, Manufacture	3.0	14.5
c. Transport & Communication	17.1	10.1
2. Social Welfare	1.2	16.2
3. Education and Other Cultural Affairs	3.7	7.5
4. Preservation & Development of Natural Resources	1.6	12.2
5. Defence	43.8	5.2
6. Reparations	—	1.0
7. Transfer to Local Government	1.3	12.8
8. General Administration	25.1	9.1
9. Other Unallocable Items	0	6.5
Total	100.0	100.0

Source: Koichi Emi, *op. cit.*, p. 61.

is mainly intended as an aid to local educational system in poor prefectures.<sup>(19)</sup>

From these various comparisons and analyses two conclusions seem to be drawn concerning the pattern of public expenditure in Japan.

The first conclusion is connected with the influences which the drastic decrease of military expenditure since 1945 had upon other items of public expenditure. Three items could increase their importance owing to the decrease: social welfare, capital investment, and national loan fund.

The second conclusion is concerned with the stability of pattern of public expenditure. Though the decrease of defence burden brought big changes, the general pattern of public expenditure is as a whole stable: low proportion of current expenditure as well as the same

(19) Koichi Emi, *op. cit.*, pp. 63-64.

importance of the expenditure for economic services.

It is an interesting question whether this stability will continue in future. A hint for this question is found in the historical stage of social security in Japan. Social security of today corresponds still to the British 1900's in which the famous work of the Poor Law Commission was published, and also main social insurance systems could be established by the Liberal government of 1906. It has not, however, reached the stage of the late nineteen forties when the (Beveridge) Report of the Interdepartmental Committee on Social Insurance and Allied Services was published. The principle of lesser eligibility as well as paternalistic benevolence of Meiji-Absolutism to paupers belongs already to the past. Social security system is yet underdeveloped in Japan. It was in the late 1940's that Japan could reach at last the line where the Minority Report of the Poor Law Commission in 1906 had reached. Japan has not reached yet the stage where the Beveridge Report reached in 1943. In fact, there is *social insurance* in Japan, but not *social security* in Beveridgean sense. Among these social insurance systems old age insurance is extremely underdeveloped. Underdeveloped social security system combined with the high economic growth in the sixties is deeply connected with this stable pattern of public expenditure.

## 5. SUMMARY

In this paper I have several times attempted to make comparison between the U.K. and Japan in connection with the investment of public enterprise. There is, however, one presupposition in this comparison: the previous exchange-rate  $\text{£}1-0-0 = \text{¥}1,030$ , which was valid until 1967, is the adequate rate for this comparison. Considering the tempo of inflation of both countries since 1967 as well as the devaluation of the



pound in 1967 there is little danger of overvaluation of the Japanese figures in this paper.

With this presupposition we can find some important facts about the investment behaviour of public sector as well as private sector.

(1) Two decisive factors in determining the role of public enterprise.

The private sector investment in Japan, which was far less than that of the U.K. in the fifties, has increased so rapidly that in 1968 the fixed investment of this sector is nearly three and half times as large as that of the U.K. Scarcely anybody has expected this rapid increase in Japan. This is the foremost which determines the public enterprise in Japan today as a whole.

The second factor is the accumulation of social overhead capital in Japan. The accumulation of this sort of capital was and is still today partly the most meagre among main industrialized countries. For example, the ratio of paved section to total road was only 0.9% in 1936 and remained 2.0% even in 1957 when the ratio was 100% in the U.K. The same point can be made about harbour, railways, telephone, industrial water and postal service. Public sector investment as a whole, coming later than private sector, must concentrate its activities, first of all, on providing social overhead capital which is closely related with the industrial efficiency and the cost of production.

(2) Public sector investment.

The Japanese public sector investment which had been nearly one third of that of the U.K. in 1952, has been also bigger in its amount than that of the U.K. since 1965. (Table 4). The public sector investment as a whole is expected to increase in the seventies more rapidly than in the sixties so that the imbalance between private

and public sector can be abolished.

(3) Industrial composition of public enterprise.

Comparison of the industrial composition of public enterprise between both countries (Table 19, p. 87.) shows that major fields of public enterprise in Japan are *Transport, Construction and Communication*. In the U.K. they are *Public Utilities and Dwelling*. Japan National Railways invested three times in 1966 and four times in 1968 as large as the British Railways. Communication in Japan invested in 1966 double that in the U.K. Investment in road which does not belong to public enterprise but to non-trading account is three times as large as that in the U.K.

(4) Public Investment in Dwelling.

The role of public enterprise in the establishment of dwelling in Japan is far less than that in the U.K. as well as other European countries. Percentage of dwelling construction in Japan between private and public sector is 93.2% and 6.8%. Dwellings are constructed overwhelmingly by private enterprises. This percentage is in the U.K. 46.4% and 53.6% respectively. In the U.K. slightly more than half are built by public enterprise (mostly by local government).

(5) Non-trading account and public enterprise.

Public sector is divided into non-trading account and public enterprise account (i.e. public corporation and trading account) in this paper. The percentage of non-trading account investment of total public sector investment is bigger in Japan than in the U.K. Table 13 shows that the percentage of non-trading account investment in total domestic fixed investment was in 1966 5.4% in Japan and 2.7% in the U.K. The bigger ratio in Japan comes from bigger investment in road, land levelling and recovery from disasters than in the U.K.

The proportion of non-trading account investment in comparison with public enterprises investment is increasing in the U.K. and decreasing in Japan in the past twenty years. *Cf.* Table 21 & 22. In other word, the importance of public enterprise is decreasing in the U.K. and increasing in Japan. On the Japanese side there are three reasons for this increased importance of public enterprise: firstly the balanced budget kept until 1966 in Japanese public finance prevented increase of non-tading account; secondly, "commercialization of public administrative services" becomes a strong tendency in public sector; thirdly, increased importance of two giant public enterprises: J.N.R. and N.T.T.

(6) Defence burden.

In 1966 the defence burden in the U.K. is seven times as large as that in Japan. *Cf.* p. 83. Alleviated from the military burden since 1945 public finance has been able to spent more in the following three items than in prewar time: 1) capital investment in social as well as economic field, 2) expenditure in social services, 3) national loan funds. The decrease of defence burden is a reason why the consumption expenditure of general government (non-trading account) could be half that in the U.K. in 1966. *Cf.* Table 18.

(7) Prospect of public enterprise investment.

Rapid expansion of private sector is expected to continue also in the seventies. An expert on the economic growth in Japan estimates that 10% growth will continue at least five years in the first half of the seventies. The accumulation of social overhead capital will be facilitated in accordance with this economic growth. Considering these factors the role of public enterprise in Japan will remain the same in the seventies as in the sixties.