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GOVERNMENT AND ECONOMY IN HISTORICAL PERSPECTIVE

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Abstract: It is the purpose of this paper to examine the role of government in the process of industrialization and economic growth, focusing on the Japanese experience. In Great Britain, the first industrial nation, the central institution of economic development was market as described by Adam Smith. In other nations that followed in the process of industrialization, most notably Germany and Japan, government was more important in the initial process of modernization. Although the developmental efforts of government were less needed afterwards, the power of government must have been imprinted on the mind of businessmen, especially in the case of Japan. After WWII, government again played important roles in the recovery and growth of Japanese economy. However, because of the success government has achieved, it became too pervasive and by the 1990s it became a liability rather than an asset for the aging economy.

Government, with its authority and laws, its police enforcement and war-making powers, has influenced the economic activity throughout history. The will and whim of kings, ministers, and bureaucrats have changed the course of national economies. It is the purpose of this paper to examine the role of government from historical and comparative perspectives. It is often suggested that in Great Britain and the United States government was less important in the process of modernization than in Germany, France, and especially Japan. The focus of this paper will be put upon the Japanese experience from the pre-modern period.[1]

"Ah, history! I don't like that!" There are many people who are not interested in the past. However, the present economy is the product or debris of history, and the present structure of industry and the business framework are the consequences of the decisions made in the past. The economic statistics and government reports are also the records of the past. Unless we know the historical background of today's economy, it is

[1] This is a condensed version of my lectures at ESSEC, France, in the Fall Trimester of 2001. The comparative aspects of the subject are mostly omitted from this paper in order not to make it unduly lengthy. I am grateful to Dr. Christian Koenig, Prof. Gilles van Wijk, and Prof. Rene Darmon who gave me the opportunity to teach at ESSEC. I also wish to thank Rose-Marie Thenin for her generous help during my stay in France.

impossible to see it correctly and foresee the future. A good manager of a football team always knows the past records and performance of the opposite team.

At the same time, it is only through comparison that we learn how general or how special a given economic situation is. The study of foreign languages teaches us much about the characteristics of our mother tongue. If you have never been outside Paris, you would not understand why people adore Paris. It seems that government plays a major role in the French economy. The role of government is emphasized especially in the French economic growth after the end of WWII. The state, as the leader and planner, guided the expansion of the French economy, and state-owned firms such as Renaud were acting as leaders in major industries. In spite of the privatization, deregulation and decentralization after the 1980s, the legacy of government control still exists. The huge public sector and heavy tax symbolize the situation. Yet one can get a more balanced view on this picture through international comparison.

The role of government in a standard textbook of economics is usually treated in the context of market failure. Government should provide public goods, intervene where externalities exist, redistribute income, regulate monopoly, and stabilize the economy. If, however, we take a longer view, the role of government is not limited to those mentioned above. Particularly important is the promotional activities by government in the process of industrialization.

In the case of Great Britain, the process was characterized by economic freedom or laissez-faire. In *The Wealth of Nations* Adam Smith declares that the abolition of government restrictions will increase the wealth of England. Corn Laws, Navigation Acts, and other restrictive measures were repealed in the course of industrialization. However, her case was unique. She had a long history of market expansion and capital accumulation. Besides, she was the first industrial nation. All other countries were followers who had to compete with Great Britain.

Follower countries did not have to invent machines, which was a decided advantage. They often had enough labor supply, especially cheap labor, which may have been another advantage. But, it was not always so. What one needs in the course of industrialization is not just abundant labor supply, but the supply of laborers suitable for factory discipline. If they fool around during work hours or take holidays without notice, one cannot keep the factory running. Stable and dependable laborers were quite scarce in the early stage of industrialization. A French woman, Flora Tristan, during her tour in England observed, "In English factories, unlike French factories, you cannot hear the chatters and songs of working girls. It is a dismal place." More knowledgeable observers from continental Europe admired and envied English factory workers.

Under these circumstances, it was essential to obtain the most recent machinery that saved scarce, disciplined labor in order to industrialize and compete with Great Britain. Fortunately, the technological progress moved toward saving labor so that follower countries could substitute labor with new machines. However, these machines were quite expensive. In recent years, the course of innovation has been toward downsizing. In the nineteenth century, it took the opposite direction. Machines became bigger and more costly.

When England began her industrialization, the scale and size of mills and factories were small, and partnership among relatives and friends was sufficient to provide the fund. In follower countries, private fund was not enough to start industrialization. Moreover, social overhead capital was necessary to build infrastructure. In Western Europe, banks such as Societe Generale de Credit Mobilier helped finance the industrialization and promote development. Traditional banks such as Rothschild were commercial banks providing only short-term credit. They were not suitable for financing railroad building or large-scale factories. Credit Mobilier was a bank of new type, which provided long-term credit. This banking development is well illustrated by the history of German banks, where universal banks engaging in both short and long-term credit began to appear in the 1840s.

A certain amount of capital accumulation in private sector was necessary if financial institutions were to play their part in the course of industrialization. In the backward countries like Russia, the rate of capital accumulation in the private sector was too limited. In such a case the role of state or government came to the forefront. This is not an easy task, however. Forced savings via tax was often adopted with the help of non-economic forces, and pressure should be put upon the level of consumption. In order to achieve it, you may need a revolution, new religion, or what have you. Japan is another example of this type of followers.[2]

During the Thatcher–Reagan period of 1980s, everyone was talking about big government and small government. It was then suggested that some countries like France or Japan had a tradition of big government, and others like United States had that of small government. In the case of Japan, this tradition goes back to the beginning of industrialization in the Meiji period. Before going further to describe this, we should pay some attention to the problem of the size of government.

It is needless to say that government has various aspects, not all of which are amenable to quantification. However, we need some quantitative information if we talk about big or small government. The problem we face is how to measure the size of government. In the case of business firms, the size of capital stock, the amount of assets, or the figure of total sales can be used as a proper yardstick. But, these figures are not suitable for measuring the size of government.

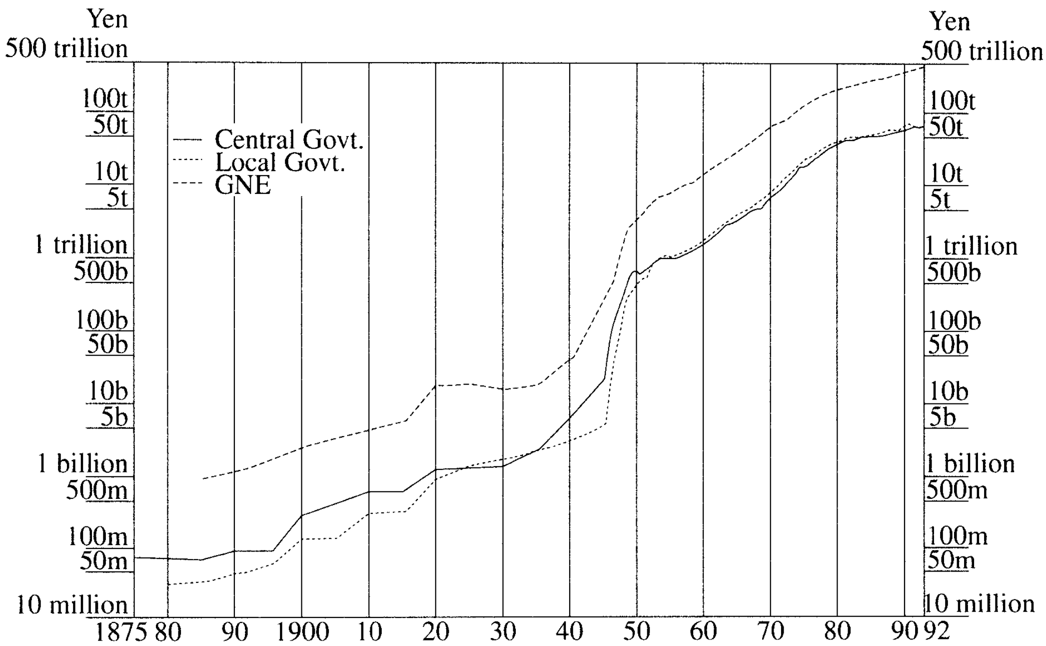
One of the characteristics of big corporations is the large number of employees. Once, General Motors had 750,000 employees (1993), and General Electric 220,000 (1993). It is feasible to use the number of public employees as an index of the bigness of government, since this type of statistics is available over the long span of time in most countries. We may infer the growth of government in the United States by the fact that the number of federal employees grew from 240,000 in 1900 to 2,000,000 in 2000. It is also possible to make international comparison by using the share of public employment in total employment. OECD statistics shows that the share is over 30% in Scandinavian

[2] Gerschenkron (1962) first suggested that the degree of backwardness of followers was an important factor in determining the characteristics of industrialization of these countries.

countries, around 15% in the United States, and less than 10% in Japan in 1998.[3]

It is true that a big government needs a large number of bureaucrats. However, if we are interested in the power and authority of government, the number of government employees can hardly be a good index. For instance, among three branches of the federal government in the United States—executive, legislative, and judicial—the number of employees in judicial branch is quite small compared with others. Nevertheless the decisions made by the Supreme Court have influenced her society and economy to a great extent. As for Japan, in spite of the small share of public employment, no one would deny the power of government.

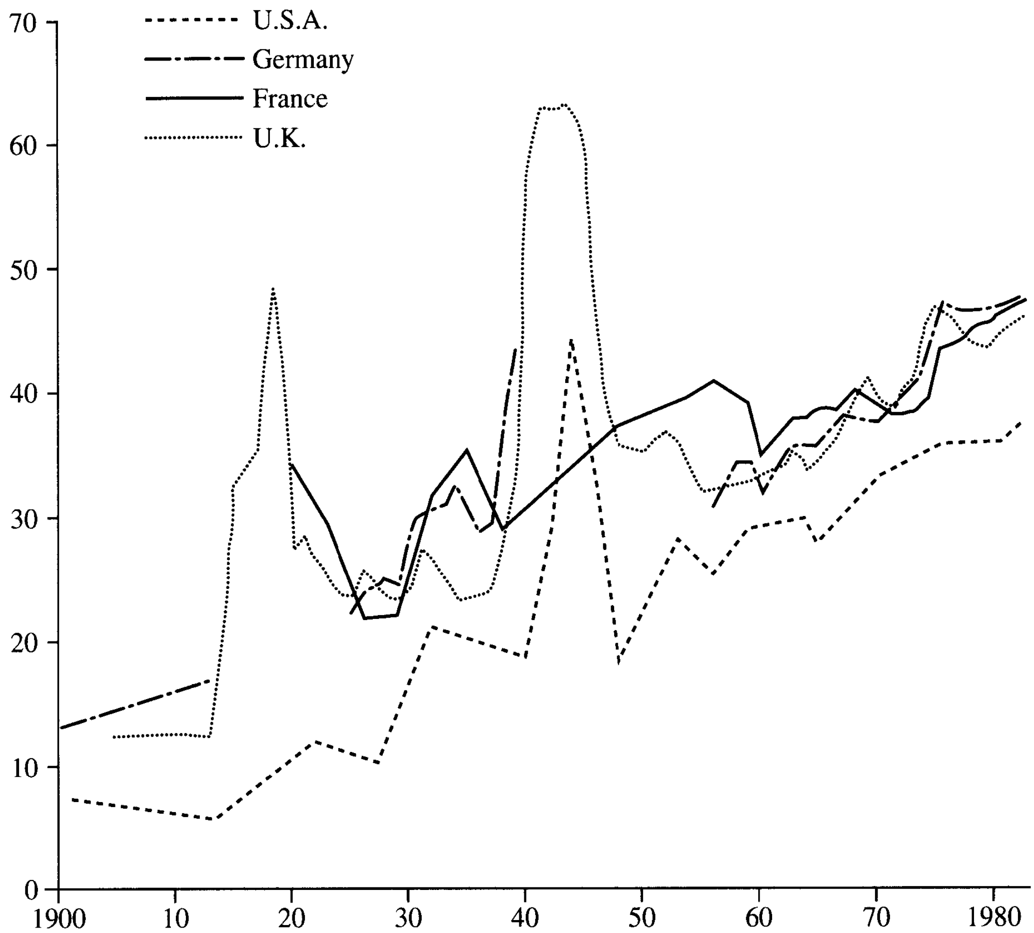
A more widely used measure by economists is the government expenditure as a percentage of GNP. This is probably more meaningful index of the size of government relative to the private sector in a country. Since the statistics on the government spending are available for most of the countries over the long period of time, this measure is useful for historians who naturally focus on changes over time. When we take a look at the historical trend of government spending, we usually find that the growth of government went hand in hand with the growth of GNP. Figure 1 shows the Japanese experience. However, the relative size of government changed considerably over time that requires historical explanation. In general, government grew in the time of wars as a result of expanding military expenditure. Sino-Japanese War (1894–95),



Source: Nihon Zaisei Yoran, 5th ed.

Figure 1. Gross national expenditure (GNE) and government expenditure, Japan 1875–1992.

[3] *Historical Statistics of the United States*; OECD, *Economic Surveys*.



Source: Peter Flora, *State, Economy and Society in Western Europe 1815–1975. A Data Handbook*, Volume I: *The Growth of Mass Democracies and Welfare States*, Frankfurt 1983, S. 345ff.; OECD *Economic Outlook 1982*, Paris 1982.

Figure 2. Government expenditure as percentage of GNP.

Russo-Japanese War (1904–1905), WWI and WWII were the periods when government increased its size. After WWII the growth of transfer payment contributed to the expansion of government.[4] The Japanese experience is not particularly unique. Figure 2 shows the percentage of government expenditure in GNP in the western European countries and the United States. The percentage grew over time, but it rose particularly during two world wars. Although the proportion of government expenditure shrank just after the war, it can be seen that the growth of government resumed in every country after WWII.

Quantitative measures have a number of merits, but they do not provide complete description of historical development. The growth of the size of government does not always mean the increasing influence on the economy. Compared with the later period,

[4] Emi and Shionoya, (1966). Also see *Historical Statistics of Japan.*

government spending may have been small in the early years of industrialization. But a small amount of money to buy a spinning machine or to invite a foreign engineer could have had a great impact on economic development. A small government may have been a big government from qualitative viewpoint.

We must begin with a short description of pre-modern heritage to provide a necessary perspective on the industrialization of modern Japan. Historians usually equate the beginning of the Meiji period (1868) with the start of modern era, and the preceding one is called the Tokugawa period stretching from 1600 to 1868. The Tokugawa era was an extraordinary period when peace was kept for nearly three hundred years without internal wars among feudal lords. Moreover, the country was closed to the outside world and foreign trade was forbidden. In a sense, Japan offers a perfect model of an island economy to observe the growth of market and economy in a closed system.[5]

Although Japan is a small island nation, it has a long coastline and a considerable geographical diversity. Because of this diversity, economic regions with particular production capability were created: the Northeast for rice production, the humid Mid-Mountain area for silk production, and the Inland-Sea area for cotton production. Regional specialization will induce inter-regional trade and market economy will flourish if institutional framework is favorable for such a development. How did the government in Tokugawa Japan influence the growth and performance of the economy?

We have discussed the role of government in backward nations for promoting industrialization. It is also necessary to consider the role of government in the evolution of market, especially the formation of national market. Government is a means of minimizing transactions costs by providing law and order, protection of property and contracts, and means of exchange. The Tokugawa government not only provided the basic peace but also helped the growth of national market.

The Tokugawa shogunate, which resided in Tokyo (called Edo at that time), was not the absolute monarchy like that of France or England, but we may say that it was fairly close to that. The military and economic strength of the Tokugawa family and immediate vassals were far greater than other feudal lords. Tokugawa government owned about one-fourth of the land in Japan, while other feudal lords held the rest. However, Tokugawa government, as the ruler of the country, could forfeit the land or change the location of feudal domain. At the same time, feudal lords had to live in Edo every other year and keep their wives there. This sophisticate method of hostage and the fact that Edo was the political center of Japan made it a big consumer city and commercial center.

Until the Tokugawa period, Edo was in a backward area with low agricultural productivity. The population of Edo increased rapidly, which was already close to a million by the 18th century. In order to feed the metropolitan city, food and other products had to be imported from other areas. This necessity induced the development of coastal as well as inland trade, which was favorable for regional specialization. Feudal lords, who also

[5] There are numerous textbooks on Japanese history. For the pre-modern period, the most recent and reliable one is Jansen (1989). In Japanese, see Hayami (1988–1989).

lived in castle cities throughout Japan, were eager to develop special products in order to pay for the expensive city life, especially in Edo. Their policy to promote special products in each region was similar to mercantile policy in Europe. The strong, stable central government and its effort to keep the internal peace contributed to the formation and growth of a national market.

Tokugawa government monopolized coinage, and the weight and measures were standardized. Together with the improvement of transportation and communication, these developments lowered the transaction costs and promoted the growth of market. However, the policy target of Tokugawa government was not the growth of market and economy. The major target was to maintain political and economic stability with stable agricultural production centering on rice, which was the basis of tax system. The growth of specialization and promotion of industry by feudal lords were not always in harmony with the Tokugawa policy, since they would disturb the political balance and bring about the decline of relative importance of rice production.

Tokugawa government tried to "reform" the economy intending to return to the old order several times, but they were not successful. Agricultural changes made village economy unstable, and the increasing economic power of merchant class disrupted the stability of class stratification. Traditional society was undermined by the transformation. Inadvertently the Tokugawa period prepared the way for its own demise. Then came Commodore Perry, a U.S. naval commander, in 1853 with a demand to open the country. It brought about the dissolution of Tokugawa system and the birth of modern Japan under Meiji government.

In spite of the development of market economy in the Tokugawa period, Japan could not start industrialization before the Meiji era. Isolation from the rest of the world cut off the flow of information. It should be remembered that England benefited greatly from the international flow of ideas and technology before industrialization. The level of agricultural productivity in Japan was low, and handcraft shops with skilled artisans dominated manufacturing. Although some scholars maintain that there is evidence of proto-industrialization in Tokugawa Japan, it is hardly comparable to the situation in Western Europe because Japan lacked foreign markets. Besides, the cultural model of Japan had long been China, which was virtually stagnant in terms of industrial development. Soseki Natsume, a famous Japanese novelist of the Meiji period, mentioned that Japanese modernization was exogenous, not endogenous. His remarks also apply to Japanese industrialization.

In the beginning of the 19^{th} century, there were two options open to various countries against the challenge of English Industrial Revolution. The first course was to imitate England and industrialize its economy, and the second one was to export primary products to industrial countries. The former was taken by most of western European countries, United States, Russia and Japan. The latter was the course taken or forced upon the countries in Asia, Africa, and Latin-America. It should be noted that those in the second group were not always colonized countries. Even if she were politically independent, the lack of pre-conditions would make it difficult to take the course of industrialization. It will be recalled that after WWII many of the newly independent nations failed to industrialize, even with the aid of developed countries, because of the lack of necessary conditions. In addition, the landlords, the traditional ruling class, usually preferred the second course since it would not endanger their position in the society.

Japan holds a special position in the history of industrialization. In Volume 6 of *Cambridge Economic History of Europe*, it is pointed out, "Were it not for Japan, it could be said that Industrial Revolution was a European phenomenon—But Japan was the spectacular exception to the rule." Volume 7 of the same series went so far as to include Japan as a part of Europe, since the editor chose to interpret the adjective "European" in the sense of "modern" or "developed".[6]

Industrialization did not start in the Tokugawa period. However, more favorable preconditions for development than other Asian nations existed in Japan. In terms of human capital, Japan was endowed with high rate of literacy because of the spread of rural, private schools. As for entrepreneur, the warrior class was not anti-business, since they lived in urban environment and had a sense for market economy. The growth of trade had produced a sophisticated credit system, and merchants were engaged in various money transactions. The commercialization of agriculture in the advanced area was also noticeable. They provided a basis for an active response to the challenge and opportunity.

If one follows the classical economics of Smith and Ricardo, the best policy would be free trade, and each country should take advantage of its comparative advantage. When Japan opened its port to foreign countries, its pattern of trade was naturally that of underdeveloped countries. Japan exported raw silk and tea, and imported manufactured goods. It is true that Japan had a comparative advantage in agricultural products at that time. However, Japan faced the inflow of foreign goods and outflow of species after opening the ports, which posed a threat to handicraft industries and the stability of national currency. The unfavorable trends in trade continued in the early Meiji period. In order to attain a favorable balance of trade, Japan could have followed the second course of development mentioned above focusing on the export of staple produce. If Japan had opted for it and remain as an agricultural nation, it would have been impossible to attain the growth. It is well known that the demand for industrial goods increases with the rise of income, while that for agricultural produce dose not. Besides, the progress of agricultural technology depends on industrial development, and a purely agricultural nation can hardly hope for the rise of productivity in agriculture. One may recall that in the post-WWII period Asia-African countries had to depend on the technical aid from developed countries to improve their agriculture.

Meiji Japan was lucky and clever enough to choose the road to industrialization. It was, however, not feasible to follow European countries with private resources alone, since there was a difference in relative factor costs. In spite of commercial development in the Tokugawa period, capital was scarce and labor comparatively abundant.

[6] Habakkuk and Postan (1965); Mathaias and Postan (1978).

The manufacturers could be prodigal in their use of labor, but not in capital. As a result, labor-intensive method was utilized at the onset of Japanese industrialization. In contrast to English industrialization with capital-intensive method in textile industry, Japanese spinning industry set out with labor-intensive technology. However, Meiji government could not control the quantity and types of foreign imports, since the new government inherited the unfavorable treaty between Japan and foreign nations signed in the final years of the Tokugawa era. In other words, Japan could not take the protectionist policy advocated by List and Hamilton.[7]

Although Japanese export was helped by the decline of its silver-based currency and the troubled situation of other major silk producing countries of the world in the 1860s, fortunate circumstances would not last forever. The labor-intensive technology means nothing but low labor productivity, and countries with low productivity can hardly compete in the international market under normal conditions. But, how could Japan adopt capital- intensive technology? So long as capital was scarce and labor abundant, interest rates remained high and wages low. Given these situations, it was not possible for private firms to employ capital-intensive method. Only government enterprises were able to employ capital-intensive method, as they did not have to pay much attention to profit. From the viewpoint of national economy, it was not desirable to cling to labor-intensive method with low productivity. Japan would not only lose in the world market, but should be content with low level of income. Meiji government therefore opened a model factory in silk spinning at Tomioka, a silk producing region, and introduced capital-intensive technology.

Meiji government then built shipyards, railroads, an iron foundry, iron mines, and armories, and invited foreign technical experts. National banks were also established to provide easy credit. In a sense, these efforts were the continuation of policies taken in the last years of the Tokugawa period. As a matter of fact, Meiji government inherited a large proportion of various establishments built by Tokugawa and other feudal lords. It is pointed out that the direct investment by the new government was not extensive. In the period from 1868 to 1879, it is estimated that the total amount of government expenditure for the promotion of industry was around 62 million yen. Compared with the expenditure for the Satsuma Rebellion (Seinan Sensou) in 1877 that alone amounted to 42 million yen, this is certainly not impressive. Nevertheless, quantitative effects should be distinguished from qualitative ones. A relatively small amount of money invested in a pilot plant or the purchase of new machines could yield large crops in the long run. These pilot factories and foreign technicians trained skilled workers and future entrepreneurs.

It has been mentioned that supply of laborers suitable for factory discipline was not sufficient in the early period of industrialization. In Japan, skilled artisans and industrious farmers were available in the beginning of the Meiji period. However, they were not skilled workers or factory laborers in the modern sense of the words. When Meiji

[7] The best collection of articles on Japanese industrialization is Macpherson (1994). It has a full bibliography.

government introduced factory system from Europe, it was necessary to create modern labor force. It took time to transform pre-modern artisans and farmers' children into factory workers with working discipline. The immaturity of laborers must have been another reason for government participation in modernization.

The similar situation could be noticed on the managers' side. Although merchants and a certain portion of warrior class were familiar with market transactions, they were not modern entrepreneur or factory managers. They also had to learn factory management and adjust themselves to the new order of things. A sarcastic saying, "Samurai business won't succeed," shows the difficulty of this transformation. In addition to the scarcity of capital, the lack of preparation in the private sector, both in labor and management, made the participation of government necessary. Nascent entrepreneur, far from opposing the state intervention in the market, followed the visible hand of government.

Furthermore, it is unconceivable that new, factory-made products could sell easily. A certain amount of consumer education was necessary before one can create a market for factory products. During this period, it was naturally difficult for management to obtain profit. Needless to say, private enterprises cannot continue to operate factories without profit, and only government could disregard profit and keep factories running. In time, a market for factory products will be created, and private companies will be able to embark upon factory production. Government was indispensable for overcoming these initial difficulties.

One may argue that government effort was futile because public enterprises did not succeed economically. It is true that the early government enterprises were unsuccessful as business undertaking. Besides, government sometimes made mistakes in importing wrong technology. But, it would be wrong to deny the contribution of government. The role of government in industrialization is to bear the cost of establishing modern industry. If factories had been able to produce profit from the beginning, government participation would have been unnecessary. Christian von Rother, the promoter of German industrialization, maintained that profit and loss were not his criteria of success. The task of Meiji government was to provide a nursery for infant industries, which had not been protected by tariff barriers. Toshimichi Okubo, one of the political leaders of the Meiji period, visited the United Sates and European countries and understood the importance of industrialization. Although his intention was not immediately realized because of political and fiscal conditions and his untimely death prevented the fulfillment of his aim, he saw the need of government promotion of industry.

It is important to note, however, that Japanese industrialization was not designed like those pursued in the centrally planned economies in the twentieth century. The emphasis was on the promotion of private industries with government backing during the infant period. Once a venture was sufficiently developed, it was expected that private enterprises would take it over from government. It was the vacuum created by the lack of private capital and business experience that drew government into service. When the profitability was assured, it was more efficient to hand over the business to private companies. In reality, the accumulating deficit forced government to dispose of government enterprises. But, it was not contrary to the basic idea of the promotion of modern industry.

By the 1880s, the disposal of government enterprises began to take place. For instance, Nagasaki Shipyards, in which government had invested 1,130,000 yen was sold to Mitsbishi at 527,000 yen in 1885. In the case of Ani Copper sold to Furukawa, the investment amounted to 1,673,000 yen but the selling price was 337,000 yen. The buyers of government properties were business people who had close connection with Meiji government, and they became "zaibatsu" companies later. It is undeniable that these private enterprises obtained considerable advantages over others because of the close connection with government. Afterwards, Zaibatsu companies took the responsibility of managing modern industry with government support.

It should be remembered, however, that government continued to promote industry and stimulate development directly and indirectly. In the field of shipping and shipbuilding industries, government support was quite noticeable. Nippon Yusen Kaisha (Japan Mail Steamship Company), which started operation in 1885, was a semi government agency and its ships were to be at government's disposal in time of war. Another shipping company, Osaka Shosen Kaisha, also obtained large government subsidies. At the same time, government gave sizeable subsidies for shipping on the ground of national security, and Japan's merchant steamship tonnage increased from 45,000 tons in 1883 to 1.5 million tons in 1913. A plan to establish government iron works was materialized in 1901 as the Yawata Ironworks, which later grew to a giant steel company. Government also helped industrial development through monetary policy. Bank of Japan was established in 1882 as the central bank to stabilize currency and provide capital at low interest rate. In the last decade of the nineteenth century, private banks supplied fund to railroads and mining companies as well as to firms in silk production and cotton spinning. The ultimate source of capital was Bank of Japan. Special banks such as the Hypothec Bank and the Industrial Bank were also created to provide capital for industrialization. The power of government must have been imprinted on the mind of businessmen from the beginning of industrialization. Even organized business groups, such as Chamber of Commerce, were created with the encouragement of government.

In quantitative terms, the contribution of government can be seen in Table 1, which shows the proportion of government in domestic capital formation from 1878 to 1915. In this table, military capital formation is excluded. Since military portion is solely governmental, the share of government will become larger if we include it. By the way, the proportion of military portion in domestic capital formation was from 9.1% (1878–1880) to 19.6% (1896–1900). Table 1 shows that government contributed more than 30% except during the period from 1886 to 1895. It was around 40% in 1881–1885 and 1901–1915. The important role played by government can be gleaned from this table.

Recent scholarship tends to emphasize the importance of private sector in the early stage of industrialization in Japan, and the development of traditional trades rather than modern industry promoted by government has become the focus of attention. As the popular slogan of the period "wealthy nation and strong army" suggests, one of the

Table 1. Proportion of government in domestic capital formation.

Year	Proportion of government in gross domestic capital formation
1878–1880	34.1%
1881–1885	40.0
1886–1890	24.0
1891–1895	25.0
1896–1900	29.4
1901–1905	38.4
1906–1910	41.7
1911–1915	37.7

Source: Koichi Emi, *Capital Formation*, p. 7.

major purpose of government-led growth was to build a strong army. Germany and Russia are examples that tried to build a well-equipped, strong army by developing heavy industry, and Japan should have followed the same path. From political and military viewpoint, it was certainly desirable to put emphasis on heavy industry, and the list of factories built by Meiji government seems to confirm it. However, the actual pattern of Japanese industrialization was different.

Industrialization starting from heavy or producer-good industry is quite difficult. In order to have a strong producer-good industry that can compete in the world market, a domestic market for the products is a sine qua non. Unless there is a domestic market, new products cannot experience the selection process and hardly obtain the competitive power. In Japan, the domestic market for consumer goods did exist from the Tokugawa period, but one for producer goods grew only after the beginning of industrialization. Of course, government can give birth to heavy industry. But, the infant industry that does not experience domestic competition and selection process can hardly survive without government protection or subsidies.

Although Meiji government did hope to develop heavy industry and build model factories, Japan actually did not put emphasis on coal and iron in the beginning. Like English Industrial Revolution that started from cotton industry, Japanese industrialization set out with textile and other light industries which had their roots in the traditional trades. Meiji Japan started as the exporter of primary products, and then became the exporter of consumer goods such as cotton yarn and cotton goods. Machines were imported from abroad for a considerable length of time, and heavy industry began to grow only after WWI. It was a less strained and easier course to follow for a resource-poor, underdeveloped country. However, market force rather than government guidance seems to have dictated the type of industrialization. As a result, the emphasis on the contribution of government is qualified in resent scholarly arguments.[8]

[8] Lockwood (1965) is an early attempt to evaluate the role of government in Japanese growth. For recent studies, see Duus (1988), Hayami (1988–1989) and Konichi (1998).

Yet, compared with other industrialized countries, the role of government in Japan is quite prominent. For instance, Moses Brown, who first introduced modern spinning machinery to the United States in 1789, mentioned, "No encouragement has been given by any Laws of the State nor by any donation of any society, but wholly began carried on and thus far perfected at private expense."[9] It is also well known that the United States was lacking the central bank during the period of industrialization, and the government agency to oversee business interests was not created until 1903. It is true that the federal government provided social overhead capital and institutional framework, but industrialization in the United States proceeded with private initiative.

In the case of Europe, most continental countries had traditions of state paternalism, but they had to modify their traditions in the course of industrialization. In Germany, the Prussian officials unified German economy through Zollverein (tariff union), and various states contributed to the construction of railroads which led to the growth of market and economy. However, the Prussian government was more interested in social control than economic development, and government conservatism sometimes became a hindrance to growth. For instance, the growth of Ruhr coal industry that was crucial to German industrialization had been hampered under the direction of Prussian state mining administration. The development of coal industry required greater capital, new techniques, and freedom of enterprise. Only after the withdrawal of government intervention, with the help from foreign companies, coal production in the Ruhr rose rapidly.

In France, the state owned mines and forests and not only produced military equipment but also porcelain, tapestries, and crystal. However, in the 1760s and 70s, the Physiocrats advanced the merits of economic freedom and gave birth to the idea of laissez faire. Although France was a rich country, it was caught up in the political revolution in the period of industrial revolution in Great Britain. In the process of industrialization in the nineteenth century, government did not play an important role. Even in the case of railroads, which were often built and operated by government as was in Belgium, private corporations had the upper hand in France. The Bank of France, created by Napoleon in 1800, was conservative and could not greatly contribute to the growth of economy. Not until WWI, did government return to the policy of economic control which expanded afterwards.

These few examples are not sufficient to show the comparatively dominant role played by government in Japanese industrialization, but they do indicate that governments were less pervasive in other countries.

From quantitative viewpoint, the size of Japanese government in the Meiji period was not very big. In 1880, the share of government expenditure in GDP was only 8.8% compared to 30.0% a hundred years later. Meiji government did provide infrastructure as well as education and administrative services which were traditionally the area of government activity. It should be noticed, however, that even in the Tokugawa period, there were toll bridges built by private capital. In the Meiji era, the central government bore only one-third of the cost of road building, and remaining two-third was local

[9] Moses Brown to John Dexter, 22 July 1791, in Cole (1928).

expense. The labor for the construction of roads and bridges was supplied locally. Even in the area of education, the country people contributed money to build schoolhouses.

In the early 1880s, Japanese government took a "small government" policy. Although "strong army" was a part of national agenda, the military was miniscule compared with foreign countries. The Sino-Japanese War (1984–95) changed the picture. Before the war, government expenditure was about 8 million yen, but it rose to 200 million during the war. The victory, however, brought indemnity of 365 million yen that gave Japan a chance to change from the silver standard to the gold standard. Then came Russo-Japanese War (1904–5), which was more expensive than the former war. It cost 2,200 million yen, more than one-sixth of GNP, and half of the cost was financed by foreign loan.

In spite of the incredible victory over Russia, it gave Japan neither indemnity nor new territory to speak of. A substantial foreign loan remained, and the government had to resign in the face of popular upheaval. However, luck was with Japan, and WWI saved the financial crisis. Since Japan had no material interest in what was going on in Europe, it could stay out of the war. By taking a part in the war, Japan could obtain a foothold in China with the seizure of German territory, and the Russian Revolution helped Japan to move freely in China. Japan not only benefited from Allied order for munitions but also from the removal of European competition in the world market. It was during this period that Zaibatsu companies made a handsome profit and established their position. Revenues from export and shipping rose sharply, producing a surplus of 3,000 million yen between 1915 and 1919. Japan suddenly found itself a creditor nation.

It may be necessary to consider the problem of foreign capital at this point. Backward nations like Russia were supplied with not only foreign technology but capital. It is well known that Russian railroads were built by French capital. In the case of Japan, however, capital was not imported at the beginning of industrialization. Japanese historians usually maintain that it was a deliberate policy of Meiji government not to borrow money from abroad, because foreign capital would bring foreign dominance. It is a plausible argument, but the fact is that Japan could not import foreign capital since it was an unknown country far away from Europe. Foreign investment is not a charity, and it was too risky to invest in such a place. Russia had a close connection with Europe geographically and historically, and nobody anticipated a revolution at that time.

By the time of WWI, Japan had won both Sino-Japanese and Russo-Japanese Wars, and it was no more a risky far-western island nation. Japanese industry, which had been mainly concentrated in light industry, now moved toward heavy industry. The development of manufacturing sector brought about the rise of demand for producer goods, and Japanese firms were eagerly seeking after foreign capital. Then, American and European companies tried to capture Japanese market by providing both capital and technology. General Electric and Toshiba, Westinghouse and Mitsubishi, and Siemens and Fiji were important examples of collaboration. To put it differently, foreign capital was introduced only after the initial growth of Japanese industry.

As for tariff, which could have protected infant industry, Meiji government could not adopt it until the amendment of the so-called unequal treaty in 1899. The average tariff rates on imported goods rose from 3.7% in 1898 to 15.5% in 1910, and 21% by 1933. Especially high tariffs were imposed on ships (37.5%) and iron and steel (24.1%). It is however difficult to evaluate the economic effect of the tariff, since the main reason for protecting shipping and iron industry was not commercial but military. As we mentioned before, Japanese industrialization started from light industries without tariff walls, and most of the major exports in 1930 were still products of light consumer industry such as cotton fabrics, silk yarn and fabrics, and pottery.

It is tempting to assert that Japan had passed the first phase of industrialization by the end of WWI. However, the Japanese economy was characterized by the dual structure peculiar to backward nations. When a country introduces machinery from abroad, the productivity is bound to rise. Of course, in the initial period when workers are unfamiliar with the new machine, it will not operate at full capacity. But time will improve the situation, and labor productivity should certainly increase. If the machine is made in England, the productivity of labor will be the same as England wherever it is installed. Thus, in theory, the wages of Japanese laborers could have risen to the English level. It is well known that even in England the wages of factory workers did not rise as fast as the productivity, and the condition of Japanese laborers was pitiful with very low wages. A government report, Shokkou Jijou (the condition of workers), published in 1903 admitted this fact.

A reason for the low wage level of factory labor in Japan was the existence of traditional sectors, agriculture and craft industries, with low productivity. As long as traditional sectors, from which factory workers were recruited, occupied a large share of labor market, factory managers could obtain laborers at relatively low cost. It is true that the distributive share of capital should be larger than that of labor when capital-intensive technology is utilized, but the wages of Japanese laborers were unreasonably low and not in accord with the rising productivity. Yet the wages of factory workers were considerably higher than those of traditional workers, and there was a wide difference of income between them. In the 1930s, the average annual income of factory workers was 741 yen, while the comparable figure for those in agriculture was only 195 yen. This fact shows the existence of dual structure of labor market in the Japanese economy, which was profitable for factory managers. Although government collected wage statistics, it did not intervene in the labor market. The Marxist interpretation that capitalists exploit labor became popular at that time, since the theory probably seems to have fit the situation mentioned above.

The dual structure also existed in the manufacturing sector, in which wage difference between workers in big firms and small ones, those in heavy industry and light industry was quite noticeable. In heavy industry, large-scale companies controlled by Zaibatsu were dominant. Among Zaibatsu groups, Mitsui and Sumitimo had their origin in the Tokugawa period, but Mitsubishi, Yasuda, and Furukawa surged ahead with the patronage of Meiji government. Although Zaibatsu companies adopted corporate form, the members of the founding families owned the majority of the stock. Zaibatsu groups enjoyed monopolistic positions not only in heavy industry but also in trade and finance. Since they could use their financial power and tie with government, their advantage was cumulative. In the dual structure of Japanese economy, Zaibatsu firms occupied the top level, and medium and small companies the lower places.

It is interesting to compare Japan with Germany, since both countries were characterized by the existence of dual economy. In spite of the dominance of monopoly and big enterprises, small and medium-sized firms were quite numerous in Germany. The traditional sector was quite strong in Germany around the period of WWI, and craft industries survived considerably in the shade of rapid industrialization. Both countries did industrialize successfully, but the elements of backwardness lingered on, and unfortunate by-products were fascism and militarism.[10]

The memory of failure fades away, but the memory of success lingers on, especially when education and media try to keep it. Sino-Japanese War, Russo-Japanese War, and WWI were fought on foreign lands, and Japanese people did not know the misery of war. The successive victories promoted nationalism and gave the military a chance to expand its power. Although "strong army" was a part of national slogan, it was not easy to materialize before WWI. Since the income level was low, the gain from growth went into consumption during the early phase of industrialization as shown in the following tables. To put it differently, Japan had to endure the lack of capital for a considerable length of time. The proportion of capital formation in GNP was less than 10% before 1900. In this regard, the part played by government, as was shown in Table 1, was significant in the initial period of economic growth.

The rate of growth and consumption were almost the same in the period, 1885-1900, and similar in 1900-1915. Only after WWI, the growth of GNP surpassed that of consumption, which made it possible to build a strong army with the increase of saving.

Table 2. Growth rate of GNP and consumption.

	GNP	Consumption
1885–1900	3.27	3.20
1900–1915	2.11	1.72
1915–1940	4.20	2.74

Source: *Historical Statistics of Japan, vol. 3.*

Table 3. Proportion of consumption in GNP.

	C/GNP
1885	85.3
1900	84.5
1915	79.9
1940	58.6

Source: *Historical Statistics of Japan*, vol. 3.

[10] Landes (1965) is still suggestive. See Tipton (1981).

This situation can also be seen in Table 3. Although not shown in the table, the proportion of capital formation in GNP continually exceeded 10% after 1915. However, the increase of military portion followed as unpleasant reality, especially after 1930.

In addition to the rise of nationalism, there were several factors that favored the growth of militarism. Since the opening of the country, government laid particular stress on the danger of European expansion. It was said that Japan would follow the fate of other Asian countries and become a colony of European nations, unless it build a strong army. Besides, the army was a kind of safety-valve for the society, since it provided employment and a chance to rise for the sons of poor farmers. However, the most important factor was the so-called "economic necessity". It was often mentioned that population growth and shortage of natural resources compelled Japanese military expansion to Asia. However, this argument is not warranted.

It is true that population grew from 38 million in 1885 to 69 million in 1935, but this growth did not make it necessary for Japan to send people overseas. The number of emigrants before 1930 was negligible, and even in the period from 1930 to 1935 the number of net emigration was 172,000. It was the depression period and push factor should have been in existence, especially in the rural area. It was only after 1935 when government promoted emigration to China and Korea that the number increased considerably. From 1935 to 1940, it was over one million, and more than three million in the period from 1940 to 1945.

As for raw materials, the course of industrialization that primarily depended on light industry did not put a great strain on natural resources, and furthermore Japanese industry tried to conserve it by introducing hydraulic electric power. The proportion of factories using electric motors increased from 13% in 1909 to 87% in 1930. The shift from coal burning engines to electric motors brought about a big saving of natural resources. Nevertheless, government encouraged heavy industry in order to supply military goods by domestic production. The expansion of heavy industry and military buildup increased the import of coal and iron, and the shortage of raw materials became real after 1930.[11]

Japan enjoyed export-led growth after WWI and became "the factory of Asia" without much assistance from government. But the situation changed in the 1930s. The world depression cast a shadow over Japan, and the terms of trade deteriorated. The severity of the depression of 1931 was unprecedented, and the growth of social unrest threatened the government. The crisis was saved by the famed Takahashi policy with easy money and expansive fiscal spending, and economy recovered quickly. Although the fiscal side of the Takahashi policy attracts attention because it anticipated Keynes, it is worth noticing that it also contained a feature of an industrial policy. The aim of the policy was to stimulate the growth of chemical and heavy industries and promote export. In order to foster target industries such as oil and automobile, special laws were formulated in the 1930s. They were precedents of the industrial policy of the post WWII period. At the same time, government intervention in economy increased as a

[11] Yasuba (1996).

result of the multiplication of cartels during the depression. Government, on the one hand, supported self-regulation of industries and their effort to strengthen cartels, but tried to protect the public against the harm of monopoly. A law to control cartels in important industries was also passed in the same period.

The depression and the growth of monopolies influenced the public opinion. The criticism against capitalism and laissez-faire economy grew stronger, and growth of government intervention seemed necessary in the time of crisis. The New Deal in the United States, the five-year plan of Soviet Russia, and the planned economy in Nazis Germany gave the impression that government planning and control were feasible and desirable. The war with China that began in 1937 gave the government and military an opportunity to expand its power.

The National Mobilization Law of 1937 and the New Economic Order Plan of 1940 gave government a strong power to control the economy, and Japan was gradually driven into command economy. The war with United States began in 1941. Government not only controlled wages and prices, but also supervised resource allocation. Since these measures tried to put an end to market economy business people opposed to the government plan in the beginning, but they succumbed under social and political pressure. In order to expand military production, government tried to reduce domestic consumption. In Germany, Nazis government did not reduce the production of consumer goods because they did not want to lose the support of the general public. Japanese government did not pay much attention to such an aspect, and the ration of consumer goods was instituted.

The ultimate aim of government policy was to win the war by mobilizing all the resources available. But the efforts were futile, and the military operations were largely unsuccessful. When Bretton-Woods Conference was held in 1944 making plans for the post-WWII world, the fate of Japan was already clear to many of the Japanese leaders. Yet the military was still fighting, and the delay in ending the war brought about the suffering of Hiroshima and Nagasaki.

It is not necessary to assess the government management of war economy that could not fulfill its purposes. However, we should pay attention to the legacy of the war that created the foundations for the postwar economy. There are two schools of thoughts on the continuity and discontinuity of Japanese economy before and after WWII. Although the course of postwar growth was mainly determined by the reforms under the occupation forces, the legacy of the war can be found in the various fields of the Japanese economy. For instance, the forced development of heavy industry during the war formed the basis of postwar growth. Skilled laborers who had engaged in military production helped to provide export items like cameras and sawing machines after the end of the war. The wartime shortage of labor caused rearrangement of labor management and wage system, which left influence on the postwar practices in labor market.

Some scholars also point out the legacy in institutional aspects. Several agencies that had been created during the war survived the defeat, and continued to exist under different names in the postwar period. Kikakuin (Cabinet Planning Board), whose role had been to mobilize the resources for the war under government control, revived as Economic Stabilization Board. Bureaucratic controls over economy practiced by Ministry of Commerce and Industry or Ministry of Military Supplies during the war were also revived as control by the Ministry of Trade and Industry after the war. In spite of the radical reform of the prewar system by the occupation army, bureaucracy remained mostly intact, and the relation between government and business continued without fundamental change. In the wartime, bureaucrats prepared various economic plans, and business leaders and associations carried out the projects. This scheme continued to work after the war in a new guise.

Even in the so-called "Japanese management", we can find the remains of wartime practices. The important features of the "Japanese management" are the dominant position of managers, the presence of "keiretsu" groups, the Toyota system production, company unions, and the close relation of government and business. Many of these characteristics were actually created during the war. As for the management, the separation of ownership and management proceeded under the direction of government. The power of founders declined with the increase of capital assets to expand military production, and the rate of stock dividend was restricted by government regulation. As a result, the power of stock owners dwindled and the management passed into the hands of paid managers.

The keiretsu is a group of related companies with a core bank. During the war, as a part of financial control a particular bank was assigned to finance a group of companies in military industry. It was intended to reduce competition among lenders and borrowers of capital. Zaibatsu groups did exist before the war, but non-zaibatsu banks such as Sanwa and Nihon-Kogyo also became the core of enterprise groups. This system formed the basis of keiretsu group after the war.

The Toyota system of production is known as a zero-inventory system. The need to reduce inventory is always acute in Japan where space cost and interest rate are quite high. The Toyota system is an answer to that need, but it is not possible unless there is a strong relation between parent and subcontracting firms. Since Japan had many small-scale producers, the subcontract system was widely employed during the war to increase production. After the war, these subcontractors grew to be specialized producers of machine parts, which formed the basis of the Toyota system.

In the dual structure of Japanese economy, the workers in big corporations enjoyed various benefits that were denied to those in small-scale companies. Company health insurance system was among those benefits, which was limited to large firms with more than 300 employees. During the war government extended health insurance system to smaller firms, and instituted pension plan for laborers so that they could work without fear for the future. This is the basis of postwar social security system. Company unions, with the help of management, supplemented health insurance by educational programs, recreational facilities, and so on.

Because of the strong control during the war, the relation between government and business became closer, and business people were conditioned to act under bureaucratic guidance. As was mentioned above, this continued after the war. It was also pointed out that Bank of Japan, which was established in 1882 as the central bank, provided money to private banks and companies in the industrializing process. Although private banks reduced the degree of dependence on Bank of Japan after 1900, the dominance of the central bank was indisputable. The power of the central bank toward commercial banks was strengthened during the war through financial control organization created by government. These legacies were important elements of postwar growth.[12]

After the defeat of the war, Japan was placed under the U.S. occupation forces. Unlike Germany, Japan was occupied by the United States alone, and the country was not divided into pieces. It was a fortunate situation, which made the reform and recovery of Japanese economy easier and faster. The American occupation provides an example of strong, small government under unusual situation. It is true that Japanese government during the war was quite strong, but the occupation forces were given a completely free hand to change the structure of Japanese economy. The most important changes were land, labor, and monopoly reforms.

Before the end of the war, 45.5% of agricultural land was held by landlords and operated by tenants. Although traditional landlordism had been weakened during the war, it was regarded as a symbol of old, feudalistic Japan. Under Land Reform Law of 1946, land held by absentee landlords was bought by government and resold to tenants. Since land price remained low during the postwar inflation, it was close to confiscation. Around 40% of agricultural land changed hand, and tenancy rate dropped to 10%. Japan became the land of small holders, and farmers' incentive for production was on the rise. It is quite understandable that farm areas became the stronghold of conservative political parties.

It should be mentioned that the success of land reform was assured by the changing position of landlords during the war. As a part of government policies to bolster rice production and curve inflation, rent was frozen and rice had to be forwarded to government warehouse instead of delivering to landlords. Government purchased rice at official price from landlords and distributed it by public agencies. At the same time, government paid bonuses to actual rice producers. These wartime measures had weakened the position of landlords, which paved the way for postwar land reform.

Labor unions did exist before the war, but they were not strong enough. Labor Reform gave laborers the power of collective bargaining, eight-hour labor, and minimum wage law. As a result, the rate of unionization rose to 55% in 1949. However, Japanese labor unions were mainly company unions, and workers felt themselves as members of their company, not as members of the labor class. Life employment was established to retain skilled workers and secure workers' loyalty to companies. Wages were not based on the skill and performance but on the length of service. Since young labor force was growing after the war, this wage system was quite profitable to companies.

Another important reform was the dissolution of Zaibatsu which dominated the Japanese economy before the end of the war. Many of the economic advisers of the U.S.

[12] See Banno (1997). Papers in Part II are especially relevant. Vol. 7 of Hayami (1988–1989) is also an important source of information.

forces were former New Dealers and supporters of anti-monopoly law and fair competition. Zaibatsu holding companies were regarded as giant monopolistic corporations, and their role in military expansion was undeniable. The demise of Zaibatsu and the expulsion of former corporate leaders opened a new field for young managers and new, non-zaibatsu companies like Toyota, Honda, Sony, and Matsushita. However, the danger of take-over by foreign companies and desire for stable stock owners brought about a formation of corporate groups called "keiretsu." As we have mentioned before, it was a part of wartime legacy.

Although the damages of war crippled the Japanese economy, a considerable portion of the remaining capital stock could be used for reconstruction. Besides, there was an abundant supply of labor swelled by the former military personnel and returnees from China. In the U.S. occupation forces, there were two groups: hard-liners and soft-liners. The former wanted to weaken Japan completely to remove the risk of return of militarism, and the latter wanted the recovery of Japanese economy. Cold War favored the soft-liners, who envisioned Japanese role as an ally in Asian stability.

Under these circumstances, Japanese government tried to recover the economy by a policy focused on priority production scheme. During the war, the priority was given to shipping industry. Priority was now given to iron and coal industries which were deemed essential for economic recovery. Government provided capital and gave price subsidies. Foreign trade was under government control, and special permit was given to import iron ore and crude oil. Reconstruction Finance Bank was also created to finance the plan, and Bank of Japan bought a large portion of the RFB bonds. Together with the shortage of materials, this policy resulted in runaway inflation.

Then, there was a change in the reconstruction policy of the U.S. occupation forces. Joseph Dodge, a Detroit banker, was nominated as a key person to solve the difficulties. His major policies were: balanced budget, fixed foreign exchange rate, and the reduction of government intervention. The philosophy behind his policy was classical economics, and he tried to return the Japanese economy to market economy after decades of command economy controlled by government. Dodge policy taught Japanese firms the hardship of free competition. Under command economy, firms were allowed to continue non-efficient management, but they had to reduce cost to survive in market competition. In order to stop inflation, a tight money policy was taken. The result was deflation and recession, which threw the Japanese economy into trouble.

Korean War, started in June 1950, was a big help for Japan under recession. The geographical position of Japan made it a major supplier of war-related goods, and special demand of the war brought about expanding production. During the period of Korean War, government and private firms tried to use the opportunity to modernize Japanese industry. Since Japan could not import new technology during WWII, there was a technological lag, and Japanese industry after the war was characterized by low productivity and the quality of its products was inferior. It was necessary to catch up with the United States and European countries by importing new technology.

Japanese government helped this modernization process by various measures. In order to finance the new investment, Japan Export-Import Bank and Japan Development

Bank were created. Tax was reduced for new machinery, and protection was put into effect through foreign trade regulation. Since foreign currency was under government control, it was not allocated for the import of foreign cars and electric equipment to protect domestic automobile and electric industries. For the promotion of export, tax cut and subsidies were employed. Japan also enjoyed favorable conditions for modernization of industry. During the war, engineers and skilled workers were mostly employed in the military facilities, but they came back to civilian industries after the war. At the same time, Japan had a tradition of importing foreign machinery since the Meiji period. The emphasis had been put upon how to introduce foreign technology and fit it for Japanese conditions. In this process, application, not basic research, was important. Although this characteristic is not always favorable for industrial development, it was effective in importing foreign technology after WWII. Finally, we should not forget the beneficial effect of the U.S. occupation policy. Since the new constitution denied military power, Japan did not have to spend much money on defense and labor could

Table 4. Record of postwar growth (1945–1970's).

Growth rate (GNP)		
1945–55	9.2%	
1955–70	11.0%	
Foreign trade Balance		
1945–55	Deficit	
1955–70	Surplus after1965	
Demand		
1945–55	Recovery to prewar level	
1955–70	New durable goods	
Rate of savings		
1945–50	6.5%	
1952–60	15.5	
1960–70	19.2	
Employment	Primary sector	Manufacturing and service sectors
1955	41.0%	59.0
1975	13.9	86.1
Population	Rural	Urban
1945	72.2%	27.8
1955	56.1	43.9
1975	75.9	24.1

Source: *Historical Statistics of Japan, vols. 1,3.*

be allocated to more productive fields. Postwar growth was made possible under the protective umbrella of the American military forces.[13]

The outline of postwar growth is shown in Table 4.

After 1955, the Japanese economy entered a new phase of rapid economic growth. During this period, the size of government was rather small from fiscal viewpoint, and the prime mover of growth was the private sector. However, government did play an important role through regulation and control. First we will take a look at the process of rapid growth.[14]

As is shown in Table 4 the Japanese economy grew rapidly from 1955 to 1975, although the rate of growth did not change greatly from the recovery period. This was because GNP was very low in 1945 (base year). In the beginning, the engine of growth was foreign trade. Since the Meiji period, growth through foreign trade was the national consensus and this tradition continued after WWII. Fortunately, international environment was quite favorable at that time. The American economy, the major partner of Japanese trade, was growing vigorously and the world trade was also growing after the wartime stagnation. Trade deficits had been the rule for the Japanese economy, but the tide turned around the middle of the 1960s and a favorable balance of trade became the normal situation.

Then the growth of investment and the increase of new capital sock followed. The proportion of investment in GNP reached 20%, which naturally had multiplier and acceleration effects. It is needless to say that high rate of savings helped this process. The reasons for the high rate of savings are said to have been the low level of social security, high cost of housing and education, and nationality. In addition, bonus system or deferred payment of a considerable portion of wages made it easier for workers to save. The result of new investment was the growth of productivity. In the case of heavy industry, the productivity increased tenfold between 1955 and 1975, and that of light industry fivefold. As the increase of wages was similar in both industries, the labor cost of heavy industry was relatively low. The low price of producer goods made Japanese products competitive in the world market and contributed to the growth of export.

We have pointed out the existence of dual structure of the economy. It continued to exist after the end of the war, but the difference of wages became smaller and the income distribution was made more equitable because of various reforms. The growth of consumption for new durable goods such as TV, vacuum cleaners, and refrigerator can be regarded as the fruits of this development.

During this period, there were considerable structural changes in employment and population. As is shown in Table 4, there was a movement from agriculture to manufacture and services, and from rural area to urban area. The declining labor force in agriculture meant rising productivity, since inverted law of diminishing returns was at work. At the same time changes in energy from coal to oil increased productivity in manufacturing and supported growth.

[13] For the occupation period, see Duus (1988).

[14] The postwar growth is discussed in Yamamura and Yasuba (1978).

The major objective of government policy during the growth period was maintaining favorable balance of trade and foreign exchange rate. In order to achieve it, government took tight money policy when there was a deficit in the balance of payment. It would slacken economic activity, cut down import and reduce the deficit. The fiscal size of government was small because of the tax reform that lowered the tax ratio. In addition the fiscal law of 1947 prohibited the issue of government bonds and no government bonds were issued until 1965. This was formulated under Dodge policy heretofore mentioned.

Although government was not big from fiscal viewpoint, it had the power to control foreign trade, currency and capital movement. Moreover, government employed industrial policy to promote Japanese industries. The postwar industrial policy started from the priority production plan just after the war and the modernization plan during the Korean War. Then the Ministry of International Trade and Industry (MITI) tried to promote "target industries" for export such as iron and steel, machinery, electric, chemical and automobile industries. Since foreign firms were willing to sell patents to Japanese companies at that time, government helped technology import through currency control. At the same time MITI wanted to give monopoly power to a limited number of companies in target area in order to achieve economy of scale in export industries. This was made possible by the low-cost finance by Japan Development Bank. The Bank gave special lending to aspiring companies only after thorough inspection, and the loan had beneficial side effects. The fact that they had obtained the loan gave them respectability, and these companies were highly regarded by private banks. Therefore it was easy for these companies to get additional funds from private sources. Although these procedures reduced the information cost, the ability of private banks to inspect and examine potential borrowers was diminished. It is obvious that the success of this policy contributed to the growth of oligopolistic structure of industry.[15]

Although the policies of MITI is well-known, it is not correct to focus on this facet alone. As we have pointed out repeatedly, it was a government custom to promote industry and intervene in economy since the Meiji period. The legacy of wartime control remained in the relationship between business and government. It is necessary to pay attention to the policies and practices of Ministry of Finance, Ministry of Agriculture, Ministry of Transportation, Ministry of Construction, Ministry of Welfare, and so on. Ministry of Finance held firm control over banks, insurance companies and security firms, and Ministry of Agriculture exercised vast power on agriculture. The relation between Ministry of Transportation and shipbuilders, private railroads, and airlines are well known, and that of Ministry of Construction and construction firms and real estate companies is notorious. The close connection between Ministry of Welfare and hospitals and pharmaceutical companies resulted in a scandal. The policies of Ministry of Education concerning school textbooks even triggered diplomatic troubles, with influence on overseas business.

[15] See Johnson (1982). Also see Aoki (1997).

While the MITI industrial policy can be called an achievement, there are other areas in which government policy can hardly be called successful. The biggest failure was the protection of weak industries such as agriculture, coal and textile. In the case of agriculture, government control continued after the war because of the acute shortage of food in urban areas. Government bought rice at official price, which was politically determined in order to increase production and protect farmers. Although food shortage disappeared fairly soon, the protection of agriculture continued and rice production became no risk agriculture. It is inevitable that Japanese agriculture centering on rice production lost competitive edge in the international market. Coal and textile industries were old industries which could survive only with the government protection. The fear of unemployment in these industries prompted government help, but it was detrimental to the Japanese economy in the long run.

We should also add that the policies concerning financial institutions were glaring errors. In the case of banking and insurance, the Ministry of Finance made the entry wall quite high and controlled the industry with despotic power. The competition among financial institutions was severally limited, and banks adopted the same interest rate. The new products of banks and insurance companies were strictly reviewed, and consumers were given little choice. As a result, the market price of most of the bank stocks remained almost the same for a considerable period of time. It is true that these measures were taken to give stability to the financial sector, but the lack of competition protected weak firms, and even strong firms did not make efforts to increase efficiency.

Compared with banks and insurance companies, the control of security firms was not very strict. Following the U.S. policy, banking and security business were separated, and most of Japanese people regarded stock investment as a dangerous game. The stock market was immature, and corporations usually obtained money from banks. Indirect finance became a characteristic of Japanese financial market, and the dominance of banks in keiretsu groups was quite noticeable. When Yamaichi Securities was on the brink of bankruptcy as a result of loose management, Bank of Japan relieved the difficulty. This gave an impression that financial institutions would be helped in an emergency, and the quality of management in the financial sector deteriorated under the shield of government protection.

Although the Japanese economy enjoyed rapid growth until the beginning of the 1970s, the changes in the international economy put an end to the golden era. In the latter part of the 1960s, the balance-of-payment problem of the United States became serious and President Nixon suspended the convertibility of dollar into gold in 1971. So far, Japanese government was able to keep the exchange rate of the yen unchanged, but the so-called "Nixon Shock" caused the appreciation of the yen. Since Japan expanded its export by the weak yen, it was feared that the loss of trade and resulting unemployment in export industry were inevitable. Then the oil crisis assaulted Japan when OPEC took the policy to raise oil prices. The price of crude oil per barrel went up from $2.6 in 1972 to $11.5 in 1974. Needless to say, Japan depended wholly on petroleum from abroad and the oil crisis brought about another difficulty.

It was not by government policy that the Japanese economy succeeded to overcome these difficulties. First, the efforts were paid to conserve energy in industry, and the energy-saving technology was adopted in various fields. Second, there was a shift from heavy industry to service industry. This structural change meant the shift from resource-intensive industry to knowledge-intensive, energy-saving industry, and the share of service sector in GDP went up to 60 percent. At the same time, trade pattern was changing. Until the middle of 1970s, iron and shipping industries were major exporters. However, the share of automobile, machine tools, and electronic machinery increased after the oil crisis, which mirrored the changes of industrial structure.

The main objective of government policy concerning foreign trade was to attain favorable balance of trade by keeping the weak yen. Of course, Japan could have taken the strong yen policy, which would lower the prices of import goods and profit the consumer. Yet government and business people feared the loss of trade by the strong yen. Growth through trade was the national consensus, and people were satisfied with the growing trade surplus as a result of the weak yen. Actually, trade surplus is not favorable to the consumer even if it seems to show the success of export economy. Trade deficit, contrary to the popular perception, means more foreign goods that will raise the standard of living. This point is recognized by classical economists, but has been forgotten for a long time.

During the 1970s, the American economy lost its dominant position in the international economy, and the dollar plunged in the exchange market as a result of Nixon's policy. The Japanese economy regained its strength by the energy-conservative technology and factory automation, which increased productivity. The export of automobile to the United States grew at a tremendous rate in the late 1970s, and the friction with the United States was unavoidable. The Japanese auto industry had to reduce export by "self-regulation" under the pressure from government. The growth and strong yen, which could have been the token of success, brought problems to the Japanese economy.

The strong yen lowered the cost of resource import, which mainly benefited producers. In theory it should have benefited consumers, but the profit mostly went into the coffer of shrewd producers through maneuvers and subterfuge. The rise of stock prices was a natural consequence. At the same time, the interest rate was lowered to protect export industries hit by the strong yen. The easy money policy also contributed to rising stock prices.

The 1980s was the decade of deregulation in the United States and the United Kingdom. Small government, instead of big government, was the vogue, and Japan went with the stream. As was mentioned before, the financial sector in Japan had been under the tight control of government, and deregulation was a pressing necessity in this area. The control of banking business was relaxed, and the competition among banks surged following the liberalization. Indirect finance, which had characterized the Japanese financial market for decades, was on the wane. The growth of economy and business finally made it possible for firms to go into direct finance by issuing stocks and bonds. Meanwhile, security market was growing since people wanted to profit from rising stock

Table 5. Rise of stock and land prices.

Year	Stock (Dow index)	Land price index 6 major cities
1983	8800	100
1986	16400	130
1989	34000	260

Source: *A Hundred Years of Japan through Statistics.*

prices. It became imperative for banks to find new customers, and they tended to lend money without much scrutiny.

The rise of stock price was accompanied by the rise of land price. There was the myth that investment in land was always safe and profitable because of the scarcity of land. It was commonly believed that land price would continue to rise so long as the demand for houses and offices existed. Asset price is usually given as, $P=(r/i)+X$, where P=price, r=rate of return, i=interest rate, X=expectation of capital gains. During the bubble period in the 1980s, stock and land prices skyrocketed since X in the above formula became very high. The above table shows the situation.

The effort of banks to expand their loans was a cause of the stock and land bubbles. Boom psychology induced other firms to go into stock and land markets, where most of them had little expertise. Unfortunately, there was almost no warning from the economists. On the contrary, many economists predicted new economy and continuing growth without much contemplation. Government policy was also mistaken. Tight money policy could have prevented bubble economy, and the new issue of government bonds in sufficient amount could have absorbed money from the market. However, government continued easy money policy to protect export industry. Since government bond issue would raise interest rates and make the yen stronger, this option was eliminated from the beginning.

On the surface the rising stock price hurt nobody, and conspicuous consumption by the sudden rich fueled the economy. However, the steep rise of land price was detrimental to business needing office and factory space. Most people gave up their wish to buy their own house and the gap between the haves and have-nots became wider. Government finally took steps against bubble economy, tightening monetary policy and ordering banks to reduce loans for speculative land purchase. Land tax was also raised to cool down speculative boom in land business. These measures had chilling effects and the bubble burst overnight. Stock price (Dow index) went down from 34000 yen in 1989 to 28000 yen in April 1990, and land prices in large cities also dropped from 15% to 25% in one year.

In the day of reckoning, people realized how the bubble injured the health of Japanese economy. Firm management became risky through speculation in land and stock investment, and few companies could avoid this pitfall. Banks accumulated bad loans, and people lost confidence in financial institutions. Because of the easy gains during the bubble period, the industrious spirit so dear to the growth of economy in the past decades vanished into thin air. Government and bureaucrats lost confidence in their ability to control the economy, and they simply wanted to protect their own interest. As a result, economy and business were in a muddle during the 1990s, and bankruptcy of firms including banks, security companies, and insurance companies continued. Although government put taxpayers' money to save banks and Bank of Japan took easy money policy to bolster economy, the depression continued throughout the decade. In spite of the dire need for government action, no effective policy emerged. Business leaders should realize that dawn never comes to those who only wait.[16]

The size and power of government are decided by various factors. From economic viewpoint, they are basically determined by demand and supply. On the demand side, there is a preference of people or voters for big government. The demand for public goods, national defense, social security, and income redistribution increases the scope of government activity. In underdeveloped countries, the desire for growth often demands government action. On the supply side, the decisions made by government, especially bureaucracy, are important. Government is not a non-human organization. It is an organization made up of real people with their own interests, often related to the wish of politicians and business people. Government officials have a tendency to favor the expansion of government with big budget and strong influence.

The sociological explanation is also necessary to examine the power of government. Ideology and beliefs of people are crucial factors determining the dimensions of government activity, and historical experience is quite important in this regard. In other words, the growth or decline of government is a path dependent process. In the case of Japan, the pre-modern heritage fostered ideological atmosphere favoring the growth of government. In the Meiji period, the promotion of industry by government was widely accepted as sine qua non for economic growth, and the economic dominance of government was established. It is true that the private sector fully developed afterwards, but government continued to cast its shadow on the Japanese economy. It is no wonder that business people abandoned free-market ideology and accepted government control without much resistance during WWII. In the postwar decades, business leaders readily followed government guidance and benefited from government protection.

The trouble with the growth of government is that it has a ratchet effect. Once begun, government programs are hard to terminate and the number of government regulations swells without end. Interests become vested, and bureaucracy tries to diminish resistance to big government by various institutional arrangements. As was shown in the case of the military-industrial complex in the United States, private firms often engage in lucrative business with big government and become their defenders. The time will arrive when reforms are imperative, but the one who dares to change the status quo always bangs his head against a brick wall. It is undeniable that poor performance of the Japanese economy after the bubble period is partly due to the failure of reforms in government and business. The inertia and the fear of changes prolong the stagnation and aggravate the already serious conditions.

[16] For the recent situation of the Japanese economy, see OECD (1999–2000).

Among economists, economic growth has been a popular topic in the post-WWII period, but economic stagnation or economic decline has never attracted much attention. At best, it was treated as a downward phase of business cycle that would be followed by an upturn. However, the English Disease and the decline of the United States in the 1970s urged scholars to treat economic decline and stagnation more seriously, and the present situation of Japan certainly demands the theory of decline. The role of government in the downfall of economy should also be examined.

There were various types of economic decline in the world history. The simplest case is the one that was caused by sudden external forces such as the eruption of a volcano or big earthquake. This can be called Pompeii type. Although the role of government is not clear in this type, the lack of preparation on their part may be blamed. The second type can be best illustrated by the fate of the Hapsburg Empire, which disintegrated as a result of over expansion. In this case, the failure of government to curb its enormous cost is unmistakable.

The third type may be called "Success brings failure". In usual situation failure turned out to be the cause of ultimate success, because people leaned from hard experience. However, Joseph Schumpeter predicted the failure of capitalism because of its success, and Keynes also blamed the decay of English entrepreneurs as a result of their success. The present day Japan is facing this situation, since government policies seems to have been mostly successful in promoting growth after WWII.

The fourth type should be named the Buddenbrooks type, after the famous novel by Thomas Mann. In his novel, the first generation worked hard to accumulate money, and the second generation wanted to obtain political and social status. Though the second generation remembered the hardship of the first, the third generation only knew the prosperity and loved arts and music neglecting his duty to keep the family fortune. The decline of the merchant house bears resemblance to the sad conditions of the Japanese economy after several decades of prosperity. Among today's politicians, bureaucrats, and corporate managers, we can easily find those who belong to the affluent third generation.

The fifth type of decline is caused by the group of people who hold to their own interests without regard to the fate of the whole society. These egoistic groups only want to get a larger portion of a pie, rather than try to increase the size of the pie. They often hinder the efficient allocation of resources and lower the growth rate of the economy. When the growth rate is declining, the conflict among egoist groups become intense and cooperation is hard to attain. Needless to say, politicians and bureaucrats form egoist groups who try to protect their own vested interests and oppose to the changes and reforms. In spite of the great urgency, reforms have been stalled and stagnation deepened in the 1990s.

This paper starts with the discussion of the role of government in economic development. The historical experience of Japan shows that the activities of government promoted growth in the early period of industrialization. There was a possibility that government might compete with private enterprise and obstruct its normal development. Meiji government, however, did not block the way of private entrepreneurs. On the contrary, government helped several groups of private enterprises to become Zaibatsu which dominated the Japanese economy in the later period. Although government receded from the active participation in the economy after the initial bouts, the power of government remained unchanged. The growth of nationalism and militarism went hand in hand, and the regulatory functions of government became important after WWI. The purpose of government control during WWII was not always related to economic stability or growth, and political ambition of military leaders jeopardized the economy. Yet the legacy of wartime control was apparent in the postwar period, which contributed to the reconstruction of the economy. The government policy to rebuild the Japanese economy was helped by the fortunate international circumstances, and government could boast success. However, success and growth produced a state of euphoria, and after the burst of bubble economy in the 1990s government became a liability rather than an asset for the Japanese economy.

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