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Success and Failure of the Bureau-Pluralism"**

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**Government-Firm Relationship in Postwar Japan:
Success and failure of the bureau-pluralism**

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Abstract

In this paper, we identify the common organizational and institutional factor behind the success and failure of the Japanese economy, focusing on the industrial policy and the government-firm relationship. The key concept is the bureau-pluralism. The bureau-pluralism in Japan is an outcome of path dependent evolution of the economic system. Based on the experiences during WWII, the bureau-pluralistic system, including deliberative councils and industrial associations, evolved, which worked efficiently to coordinate economic growth in 1950's and the high growth era.

Its effectiveness was supported by the condition that industries were highly complementary in this period. Consequently, on one hand, there were few serious conflicts among industries and their counterparts in the bureaucracy, which made it possible to avoid the bad influence of the conservative bias, due to the vested interests of the existing industries. On the other hand, this complementarity was sources of numerous coordination failures in the various aspects of the economy. In order to detect and resolve these coordination failures quickly, the decentralized decision making and horizontal coordination of the bureau-pluralism worked efficiently.

However, the same attribute of the bureau-pluralism impeded the Japanese economy to adapt to the change of the global economy since 1980's. First, the newly growing industrial fields as information and telecommunication, were across the border of existing industries and therefore the bureaucratic jurisdiction, which caused serious jurisdiction disputes among ministries. Second, the reforms necessary to adapt to the global change collided with the interests of the existing industries and ministries. Those jurisdiction disputes and the conflicts with the vested interests are difficult for the bureau-pluralism to resolve.

Introduction

The Japanese economy has been attracting attentions of the economists and practitioners since the beginning of 1990's. In early 1990's, its success was regarded as a core of the "East Asian Miracle," and contributed to revising the orthodox neoclassical view on the development policy (World Bank[1993]). The industrial policy was granted citizenship, while the deliberative council was evaluated as a device to facilitate information exchange between the government and the private sector.

On the other hand, in late 1990's, under the prolonged depression and financial crisis, Japan's economic system was faced with severe criticism. Government intervention and regulation have been regarded as sources of inefficiency, and the deliberative council has come to be considered as a hotbed of the notorious "iron triangle," composed of the political, bureaucratic and business societies.

However, the events in 1990's does never throw away the meaning of the long experiences of the high growth the east Asian economies, including the Japanese economy (Stiglitz[1999]). We should have a consistent framework which can explain both of the high growth until 1980's and the stagnation in 1990's. In this paper, we intend to make clear the common organizational and institutional factor behind the success and failure of the Japanese economy, focusing on the industrial policy and the government-firm relationship.

The key concept of this paper is "bureau-pluralism" (Aoki[1988], chapter 7). In the bureau-pluralistic state, private interests are primarily aggregated by each industrial association, and are transmitted to its counterpart in the bureaucracy, namely the "original bureau" (*genkyoku*), which is in charge of the industry. The original bureau bargains one another inside the government, representing the interests of the industry under its jurisdiction. The bargaining is at first carried out within each ministry, then across the ministries. This system is pluralistic in the sense that the people participate in the policy making. At the same time, it is bureaucratic, in the sense that the interests of the people are represented by the bureaucrats. As discussed in the following section, the efficacy of the bureau-pluralism depends upon the environmental condition, and the change of the environmental condition is one of the major explanatory factors of the success and failure of the Japanese economy.

The paper is organized as follows. Section 2 characterizes the organizational

aspect of the Japanese government-firm relationship, focusing on the organization and composition of the deliberative councils, and also summarizes its historical origin. Section 3 describes the function of the bureau-pluralism in early 1950's and high growth era, focusing on the cases of the industrial rationalization and provision of industrial infrastructure. In section 4, we discuss the conditions which enabled the good performance of the bureau-pluralism until the high growth era, and also examine the change of the condition in 1980's, focusing on the case of information and telecommunication industry. Section 5 concludes the paper.

2. Organizational aspect of the bureau-pluralism and its historical origin

The bureau-pluralistic nature of the Japanese political economy is reflected in the organization and composition of the deliberative council. To examine it, let me focus on the case of the Industrial Structure Council, under the Ministry of International Trade and Industry (MITI). The Industrial Structure Council was established in 1964, as a successor of the Council for Industrial Rationalization, which is mentioned in the next section. The Industrial Structure Council is “a permanent organization which investigate and deliberates on basic issues related to Japan's industrial structure” (MITI [1994], p.182).

The organization of the Industrial Structure Council in 1970, a year close to the end of high growth era, is illustrated in Figure 1. There were nineteen branches, seven of which were organized by industry. Table 1 shows the composition of the committee members in 1970. The members are classified according to their positions written in the Council's membership list, which reflected MITI's perception at that time. The Industrial Structure Council was a large deliberative council with five hundred and five members. One hundred and eight of them (21.3%) were the representatives, namely, the chairmen, vice-chairmen, secretaries etc., of the industrial associations. Most of them participated in the branches of the Council which related to their industries. For example, the representatives of the Japan Iron and Steel Association and the Japan Machinery Industry Federation were appointed to be the members of the Heavy Industries Branch.

The background of this organizational structure is the characteristics of the Japanese industrial organization that the industrial associations were organized in most

of the industries. MITI [1970b] listed up all of the industrial associations under its jurisdiction. The total number of the industrial associations under MITI was as large as five hundred and twenty eight (Table 2). Those bureaus which were in charge of individual industries, namely the original bureaus (*genkyoku*), controlled large number of industrial associations.

Remarkably, the bureau pluralism is historically not very deep rooted in the Japanese political economy. Although there were also deliberative councils in prewar period, their memberships were substantially different from those of their postwar counterparts. Table 3 shows the memberships of the three major deliberative councils in prewar period (The Economic Council, The Council of the Commerce and Industry, The Temporary Industrial Council).

Not only the number of the members was much smaller than the postwar counterparts, but the composition was also different. First, the members included few representatives of the industrial associations. Second, the ratio of the representatives of the organizations across industries, such as *zaibatsu* and chambers of commerce, was high. Third, the members included many diet members.

The former two characteristics suggest that the mode of aggregating private interests differed in the prewar period from that in the postwar period. The interests were mainly aggregated by the geographical area (the chambers of commerce) or the networks based on ownership (*zaibatsu*). The third characteristics suggests that a large part of the coordination, which has been carried by the bureaucracy in the postwar period, was carried by the diet. In other words, the role of the politicians was larger in prewar Japan.

As other aspects of the Japan's economic system, the government-firm relationship was deeply affected by the experiences during the Second World War (Okazaki[1993a]; Okazaki and Okuno-Fujiwara[1999]). The Sino-Japanese War, which broke out in 1937, forced the Japanese government to mobilize huge resources for the war. The government intended to carry out the mobilization through the mechanism of planning and control. In 1939, a system of the economic plans, composed of the Materials Mobilization Plan, the Foreign Trade Plan, the Fund Control Plan, the Labor Mobilization Plan, and Production Capacity Expansion Plan, was established. Unlike the postwar long-term economic plans in Japan, those wartime

plans were implemented by the economic controls endorsed by such laws as the National Mobilization Law.

In order to manage the planned economy, the government heavily made use of the industrial associations. From 1941 to 1942, twenty two control associations (*toseikai*) were established by industry (Table 4). Okazaki[1988] documented the function of the Iron and Steel Control Association in detail, using the original documents of itself and the government. The Iron and Steel Control Association participated in making the Materials Mobilization Plan, the short-term plan for resource allocation, cooperating with the Planning Board.

In drawing up the Material Mobilization Plan, the Planning Board instructed a single strategic variable, namely total allocation of the bottoms of ships, to the Control Association. Concerning the Japanese war economy at that time, the bottoms of ships were the most binding condition for production level (Hara[1989]). The Planning board controlled this single variable, and the Control Association drew up concrete production plan, given that variable.

In this procedure, local information specific to each industry was exclusively processed by the Control Association, and it was reflected in the governmental plan through the Control Association's draft plans. This is a mechanism similar to the Material Balance Method of the Socialist Soviet Union (Aoki [1970]). The capability and position of the industrial associations rose substantially through the experiences during the war, which came to be a initial condition of the postwar Japanese political economy.

When the war ended in 1945, the Japanese government intended to give a major part of its power to the control associations or their successors. Although this scheme itself was not realized, because of the anti-monopoly policy of the American occupation authority, the successors of the control associations continued to support the planning and control by the government in late 1940's. It is notable that not a few of the executives of the control associations came to be those of the postwar counterparts (Yonekura[1999], pp.195-196). The early stage of the Japan's postwar recovery was achieved through the system of the planning and control, which built in the industrial associations. The well-known priority production policy was also carried out through this system.

In 1948, the Japanese government started to examine the long-term strategy for the transition to a market economy and the economic recovery. For this purpose, the government established the Committee for the Economic Recovery Plan, the first major deliberative council after the war. The organization of the Committee was illustrated in Figure 2. There were four branches organized by industry, namely mining and manufacturing, foods and necessities, international trade, and transportation. The former two branches, in turn, were composed of several subcommittees which were also organized by industry.

In many cases, the chairmen of the relating industrial associations were appointed as the chairmen of those branches and subcommittees. For example, as the chairmen of the Energy, Machinery and Metal, Textile, and Chemical Subcommittees, the chairmen of the Japan Coal Association, the Japan Iron and Steel Association, the Japan Cotton Spinning Association, and the Japan Chemical Industries Association, were appointed respectively.

The ratio of the representatives of the industrial associations to the total members was almost 20%, which was the highest next to that the bureaucrats (Table 5). This characteristics of the Committee's organizational structure was similar to that of the Industrial Structure Council in 1970, described above.

3. Coordination of the economic growth

Industrial rationalization

In 1949, the Japanese economy was transformed into a market economy, in accordance with the instruction of the American occupation authority. Most of the economic controls and subsidies were abolished. On the other hand, the role of government continued to be substantial (Okazaki[1996]).

The Japanese economy, just after the transformation, was faced with serious coordination failure. In those days, a wide consensus had been already formed concerning the long-term prospect of the Japanese economy, through the discussion at the Committee for the Economic Recovery Plan etc.. That is, the major driving force of the Japanese economy should be the growth of the machinery industry based on export. It was because newly developing Asian countries would catch up in the textile industry, which had been the Japan's leading industry in prewar period. The

machinery industry was expected to absorb redundant labor forces and to earn foreign currencies.

However, the Japanese machinery industry at that time, did not have enough competitiveness in the international market. The major reason was the high price of the iron and steel. The high price of the iron and steel, in turn, resulted partly from the high prices of the coal and iron ore, and partly from the small scale of the iron and steel production. Furthermore, the high price of the iron ore resulted from the high freight cost, which, in turn, was caused by the high price of the ship, a kind of machinery. Also, the small scale of the iron and steel production was due to the condition that the machinery industry had not developed.

In short, the machinery industry, the future leading industry, was uncompetitive, because of the multiple factors across several industries. Therefore, the machinery industry could not become competitive only by the efforts of itself, not to speak of, by the efforts of each machinery company. Also, uncompetitiveness of the machinery industry, in turn, checked the development of the iron and steel industry. This vicious cycle can be interpreted as a coordination failure.

The central role of the Council for Industrial Rationalization, established under MITI in 1949, the second major deliberative council after the war, was to resolve this coordination failure. The Council was composed of twenty nine branches by industry, the Coordination Branch, and the General Branch. The results of the branches by industry were reported to the Coordination Branch to be coordinated. Like the Committee for Economic Recovery Plan, the representatives of the industrial associations occupied a large part of the Council members. Thirty of the total one hundred and eighteen members (25%) were the chairmen, secretary etc. of the industrial associations (Table 5).

In 1949 and 1950, the Council concentrated into the discussion at the Iron and Steel Branch and the Coal Branch, in order to cope with the above mentioned coordination failure. The Iron and Steel branch examined the level of the coal price which was necessary to make the iron and steel industry competitive, on the condition that the iron and steel industry itself carried out the new investment to enhance efficiency. It thought that the coking coal price should be lower than 2,800 yen/ton. At the same time, the Coal Branch examined the prospect of the coal price decrease,

which would be achieved by the new investment in the coal mines. It thought that the coal mining cost could be cut by 18%. However, the coking coal price would be still 3,700 yen/ton. The interim conclusions were pessimistic.

The interim conclusions of the two branches were reported to the Coordination Branch, which reexamined them. Consequently it found that the upper limit of the coking coal price could be raised to 3,200-3,300 yen/ton, if such conditions as the iron and steel production was concentrated into the relatively efficient plants and the crude oil was used together as a fuel. Also, it found that the coking coal price would be 3,200-3,300 yen, in case the coal production was concentrated into the relatively efficient mines and decrease of the interest rate of the loan of the Reconversion Finance Bank, a public financial institution for the economic recovery. The Coordination Branch wrote down this conclusion in its final report to the Minister of International Trade and Industry, which was determined by the Cabinet in August 1950.

Meanwhile, the Ministry of Transportation (MOT), which was in charge of the shipbuilding industry, organized the Research Committee on Steel for Shipbuilding, with the Economic Stabilization Board. It specified that in order for the Japanese ships to be competitive with the European ships, the price of the steel for shipbuilding would have to fall to below 27,000 yen/ton. According to the Committee, this condition could be met, if the price of steel plates became 24,090 yen/ton. On the other hand, thorough the examination at the Iron and Steel Branch of the Industrial Rationalization Council, it was made clear that the price of steel plates would fall approximately to that level. In other words, along with the rationalization of the steel and coal industry, rationalization of the shipbuilding industry would create the prospect of the industry becoming internationally competitive.

The story described above, implies that a path to get out of the vicious cycle, namely a certain amount of simultaneous new investment supported by some government policies, was found out, and the government committed to that policy through the determination of the Cabinet. This induced the aggressive investment plans of the iron and steel companies in 1950 and 1951. These plans were compiled by MITI as the First Iron and Steel Rationalization Plan. Table 6 shows the movement of the investment by industry. It is remarkable that the total investment increased in 1950, and that the ratio of the mining, metal and machinery industries rose sharply. It

is true that the increase in 1950 partly reflected the effect of the Korean War, but the level of investment continued to be high after the armistice in 1951.

Supply of the basic materials and industrial infrastructure

The industrial rationalization in early 1950's boosted the Japanese economy into the high economic growth. However, soon after the high economic growth started in 1955, the basic materials and services, such as the steel, electricity and transportation, came to be bottlenecks. Especially, shortage of the steel impeded export of the machinery. This problem was resolved through the cooperation of MITI and the related industrial associations. Deliberating with the related industrial associations, MITI determined the "Measures to Secure Steel for Machinery for Export" at the end of 1956 (MITI[1956]). It aimed at "securing steel for exporting machinery at the stable price, through the voluntary organization, based on the cooperation between the steel industry and the machinery industry."

It prescribed that the steel industry should supply 25,000 tons of steel preferentially to the exporting machinery every quarter. This steel should be allocated to each machinery company, based on the decision of the Screening Committees of the Steel for Exporting Machinery, which was composed of the MITI bureaucrats and persons of related industrial associations.

Meanwhile, the iron and steel companies drew up the plans for expanding equipment, referring to the Five Years Plan for Economic Independence, which was determined by the Cabinet in December 1955. These companies' plans were compiled by MITI as the Second Iron and Steel Rationalization Plan. The focus of the Second Iron and Steel Rationalization Plan was introducing basic oxygen furnaces (BOF) and renovating blast furnaces (Lynn[1982]). It implied that the Japanese steel industry would substitute iron ore for scrap, on which it had heavily depended since prewar period. Therefore, in order to make the Plan effective, it was necessary to provide simultaneously such infrastructure as the ore carriers and the port facilities for unloading the iron ore.

This coordination was also achieved in the bureau-pluralistic manner. In early 1956, MITI drew up a document, "On the Direction of the Future Investment of the Iron and Steel Industry," which stressed the necessity of investing in the overseas iron ore mines, the ore carriers and the port facilities (Heavy Industry Bureau, MITI [1963],

pp.60-61). Responding to the MITI's proposal, the Committee of the Overseas Iron Raw Materials, a private committee of the major iron and steel companies, requested the Ministry of Transportation to construct fifteen ore carriers of 15,000 GT class within five years.

However, by the fact that the ore carrier was specialized in the iron ore, a typical hold-up problem took place. Once the ore carriers were built, the iron and steel companies could hold up the shipping companies, and the shipping companies, expecting the hold up, were not ready to built the ore carriers. This problem was resolved thorough the negotiation by the industrial associations of the steel and the shipping industries, MITI, and MOT. The iron and steel companies established the Japan Ore Transportation Co., which shared the ore carriers with shipping companies (Tekko Shinbunsha[1957], pp.84-85; Tekko Shinbunsha [1959], p.8, p.69; Heavy Industry Bureau, MITI [1963], p.323).

Meanwhile, the Japan Iron and Steel Association established the Committee for Port Preparation, and petitioned the government authorities and the parties to set up the Special Account for Emergent Preparation of the Ports for the Specific Industries (Japan Iron and Steel Association[1957]). MOT came to share the idea. The MOT's Bureau of Port considered that the port capacity restricted the economic growth, and that it was necessary to prepare the ports for such industries as iron and steel, petroleum, coal etc. (Japan Iron and Steel Association[1957]). In August 1958, the Cabinet determined "On Preparation of the Major Ports to Cope with the Growth of International Trade," which aimed to set up a special account for preparing the ports for the iron and steel and the petroleum (Tekko Shinbunsha [1959], pp.178-180; Heavy Industry Bureau, MITI [1963], pp.324-325).

Owing to the Second Iron and Steel Rationalization Plan supported by those infrastructure, the production cost of the Japan's iron and steel industry decreased to be lower than that of the US iron and steel industry in late 1950's (Yamawaki[1984], p.263), which, in turn, came to be the basis of competitiveness of Japan's machinery industry. The bureau-pluralistic coordination resolved the bottlenecks in the basic materials and the infrastructure, which sustained the high economic growth.

4. Transition of the environmental conditions and policy mismanagement

As described in the previous section, the bureau-pluralistic system worked to coordinate the Japanese economic growth since 1950's. What conditions enabled the high performance of the bureau-pluralism? And, how did those conditions come to be after that? These questions are fundamental to understand the success and failure of the Japanese economy from 1950's to 1990's.

The bureau-pluralism is a highly decentralized system. First, the power of decision making is distributed to each original bureau, which is in charge of each industry, and its counterpart in the business society. Second, the substantial part of the coordination among the original bureaus are executed horizontally. In other words, it lacks powerful central unit (headquarters), which coordinates the activities of the units on the lower level of the hierarchy.

These characteristics are the source of both the advantage and disadvantage of the bureau-pluralism. The advantage is that it can quickly incorporate rich local information scattered around the industries into the government policy (Aoki[1988], pp.284-285). In early 1950's, existence of the coordination failure in the coal, steel and machinery industries, was precisely recognized, and the appropriate coordination measures were taken to resolve it. In the high growth era, various bottlenecks were quickly detected and resolved.

On the other hand, the bureau-pluralism tends to be conservative. Because decision making is decentralized to each original bureau, it is difficult for a radical policy against the interest of the original bureau and the industry under its jurisdiction to be drawn up and implemented. In other words, the bureau-pluralism is a system, which is inclined to protect the vested interests of the existing industries and bureaucrats.

Efficacy of the bureau-pluralism depends upon relative importance of these advantage and disadvantage, which, in turn, depends upon the environmental conditions. The environmental conditions in 1950's and 1960's Japan were favorable for the bureau-pluralism. Those cases in the previous section suggest that complementarity among industries was pervasive in this period. In early 1950's, the coal, steel and machinery industries were highly complementary one another. Also, in late 1950's, steel, machinery and transportation were complementary.

In this situation, one industry's interests were also the other industries' interests.

Therefore, there were few serious conflicts among industries, and the vested interests were not so harmful to the economic growth. It is true that such declining industry as coal mining and agriculture (rice) were protected by the government, but the protection could be easily bypassed by import of substitutive goods, namely petroleum and wheat. In fact, the share of coal in the total energy supply and that of rice in the total food supply declined sharply in 1950's and 1960's.

At the same time, in the process of economic growth, numerous small problems, namely coordination failures and bottlenecks etc., continuously took place in various aspects of the economy. In order to cope with those problems quickly, the bureau-pluralism, in which the decision making was decentralized, was more efficient.

However, the conditions has come to be substantially different since 1980's. The environmental change is well illustrated by the case of the information and telecommunication industry. It is widely recognized that the major driving force of the high growth of the US. economy in 1990's, is the advanced utilization of information technology (IT) in wide-ranging areas of the economy. Japan has been far behind US. in this aspect, as shown in Table 7 (Oniki[1996], p.18; Kokuryo[1998], p.353; Japan Federation of Economic Organizations[2000]).

The information and telecommunication industry is a new industry, which emerged in 1980's, fusing the computer, telecommunication and broadcasting industries (Higashi [1999], pp.31-32). In Japan, the computer has been under the jurisdiction of MITI, and the telecommunication and broadcasting have been under the jurisdiction of the Ministry of Postal Services (MPS). When information and telecommunication industry started to develop, the two ministries struggled severely concerning its jurisdiction. This struggle is one of the reasons why the provision of the institutional and physical infrastructure of information and telecommunication has been retarded in Japan.

In 1984, MITI drew up a draft of the Law for Facilitating Information Processing, which aimed at advanced utilization of the computer, security of the computer, standardization of the information apparatus, protection of privacy. At the same time, MPS drew up a draft of the Law for Providing Infrastructure of Advanced Telecommunication, the contents of which was almost the same as MITI's draft. MITI and MPS made efforts to adjust the two drafts, but eventually neither of them was

realized (Kawakita[1985], pp.123-126). In general, the jurisdiction struggle between MITI and MPS, made it difficult for the Japanese government to implement consistent policies regarding the information and telecommunication industry (Itami[1996], p.210).

The bureau-pluralistic coordination assumes the clear industry demarcation and jurisdiction. If this condition is not met, ministries tend to struggle for the jurisdiction,

as in the case of the information and telecommunication industry, because expansion of the jurisdiction is directly connected to the interests of the bureaucrats, thorough allocation of budget and opportunity of dispatching ex-bureaucrats to the industries (*amakudari*). The industry demarcation problem is serious, because present growing fields, such as biotechnology and environmental protection, are more or less across the border of existing industries (Aoki[1999], p.24).

Besides the jurisdiction struggle between MITI and MPS, another disadvantage of the bureau-pluralism mattered concerning the retard of the Japanese information and telecommunication industry. As a result of the telecommunication reform in 1985, the Telecommunication and Telephone Corporation was privatized to be NTT, and three new common carriers were established. This reform itself was epoch making, but the problem is that the pace of the subsequent reform was terribly slow (Suzumura[1997], p.31; Takigawa[1999], pp.178-181).

After the reform in 1985, the discussion on telecommunication reform was focused on the reorganization of NTT. More than ten years had passed, when MPS determined to divide NTT into two local companies and a company for long distance telecommunication, in 1996. Until then, the telecommunication reform hardly progressed, and MPS continued the discretionary control over various aspects of the telecommunication industry, namely, fee, new entry, and competition among NTT and new common carriers .

The bad influence of the retard of the reform was substantial. According to the MPS's survey in 1997, communication fee for the exclusive circuit (1.5Mbps) in Tokyo was 4.7 times as high as that in New York (Table 8). The high telecommunication fee checked the utilization of information technology by the Japanese companies. Higashi [1999] mentions the case of Kao Co., which is a major chemical company and famous

for its progressive strategy to utilize information technology. In 1998, Kao Co. announced that it gave up a plan of remote control over all the plants scattered in Japan, because of the high telecommunication cost (p.69). Higashi[1999] discussed that if the telecommunication cost in Japan had been the same as in US., Kao's plan would have been feasible.

The reason why the telecommunication reform retarded, lies in the bureau-pluralistic decision making. The basic telecommunication policy was deliberated at the Telecommunication Council under MPS. The deliberation concerning the telecommunication reform was very time consuming, because the reform would directly affect on the vested interests of the existing telecommunication companies and MPS itself. In this sense, the nature of the policy issues was different from that in 1950's and 1960's, which made the conservative bias of the bureau-pluralism harmful.

5. Concluding Remarks

We can identify the common institutional and organizational factor, namely the bureau-pluralism, behind the success and failure of the Japanese economy from 1950's to 1990's. The bureau-pluralism in Japan is an outcome of path dependent evolution of the economic system. Based on the experiences during WWII, the bureau-pluralistic system, including deliberative councils and industrial associations, evolved. This system worked efficiently to coordinate economic growth in 1950's and the high growth era.

Its effectiveness was supported by the condition that industries were highly complementary in this period. Consequently, on one hand, there were few serious conflicts among industries and their counterparts in the bureaucracy, which made it possible to avoid the bad influence of the conservative bias, due to the vested interests of the existing industries. On the other hand, this complementarity was sources of numerous coordination failures in the various aspects of the economy. In order to detect and resolve these coordination failures quickly, the decentralized decision making and horizontal coordination of the bureau-pluralism worked efficiently.

However, the same attribute of the bureau-pluralism impeded the Japanese economy to adapt to the change of the global economy since 1980's. First, the newly growing industrial fields as information and telecommunication, were across the border

of existing industries and therefore the bureaucratic jurisdiction, which caused serious jurisdiction disputes among ministries. Second, the reforms necessary to adapt to the global change collided with the interests of the existing industries and ministries. Those jurisdiction disputes and the conflicts with the vested interests are difficult for the bureau-pluralism to resolve. In this sense, the success and the failure of the Japanese economy resulted from the same source.

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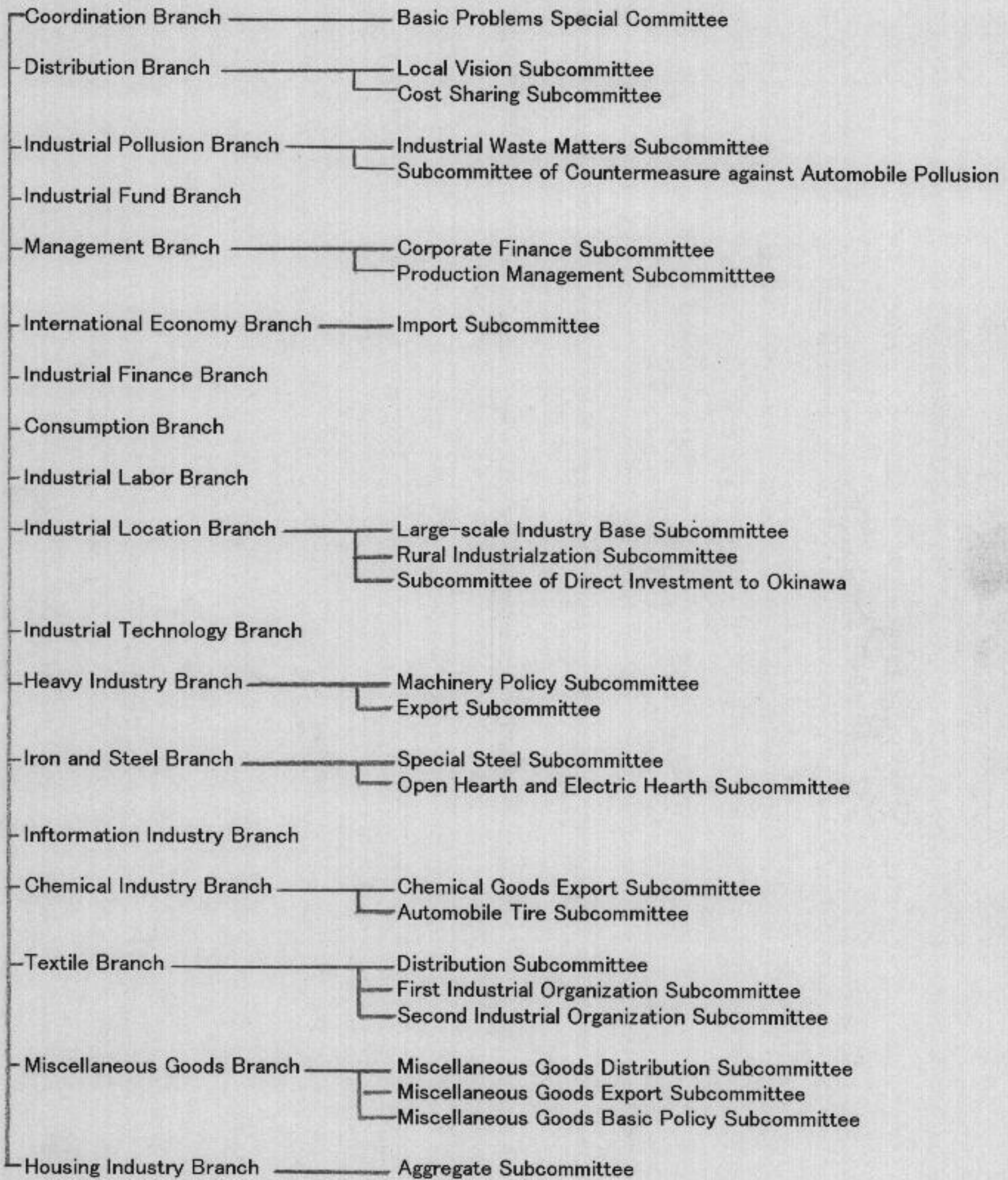
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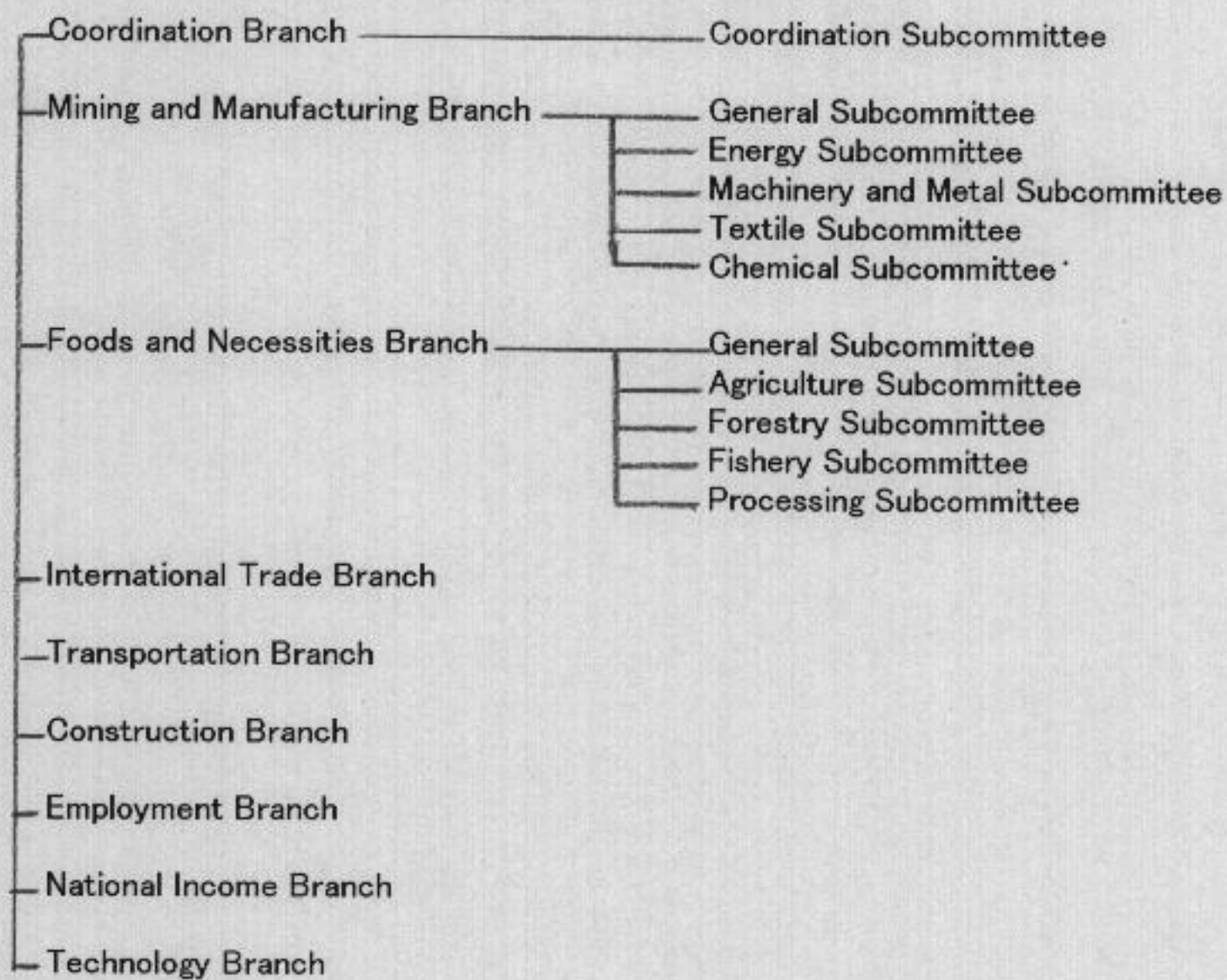
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Figure 1 Organization of the Industrial Structure Council



Source: MITI[1970a].

Figure 2 Organization of the Economic Recovery Committee



Source: Secretary Office of the Economic Recovery Committee[1948].

Table 1 Membership of the Industrial Structure Council (1970)

Total	505
General Association	13
Industrial Association	108
Financial Institution	24
Industrial Company	179
Public Company	39
Journalist	19
Labor Union	0
Academic	53
Diet Member	0
Bureaucrat	4
Others	66

Source: MITI[1970a].

Table2 Number of Industrial Associations under MITI's Jurisdiction (1970)

Total	528
Minister's Secretariat	1
International Trade Bureau	14
Trade and Development Bureau	76
Enterprise Bureau	20
Heavy Industry Bureau	137
Chemical Industry Bureau	74
Textile and Miscellaneous Industries Bureau	123
Mine and Coal Bureau	40
Mine Safety Bureau	2
Public Utilities Bureau	20
Patent Office	5
Smaller Enterprise Agency	9
Agency of Industrial Science and Technology	7

Source: MITI[1970b].

Table 3 Membership of the Prewar Deliberative Councils

	Economic Council		Commerce and Industry Council		Temporary Industrial Council	
Total	72	20	25	9	16	5
General Association	13	1	4	1	5	1
Industrial Association	1	1	0	0	2	0
Zaibatsu	6	0	3	1	2	1
Financial Institution	3	1	1	1	2	1
Industrial Company	16	6	3	1	3	0
Public Company	3	1	1	1	0	0
Journalist	2	0	5	0	0	0
Labor Union	0	0	0	0	0	0
Academic	7	0	3	1	2	2
Diet Member	10	10	3	3	0	0
Bureaucrat	9	0	0	0	0	0
Others	2	0	2	0	0	0

Source: MITI[1961]; Jinji Koshinjo[1928], [1937].

Note: The numbers in the second column of each council denote the persons who were the diet members at the same time.

Table 4 Control Associations and their Successors

Name of Control Association	Month Established	Successor	Month Established
Iron and Steel Control Association	11/1941	Japan Iron and Steel Council	12/1945
Coal Control Association	11/1941	Japan Coal Association	5/1946
Mine Control Association	12/1941	National Mine Association	3/1946
Cement Control Association	12/1941	Cement Industry Association	n.a.
Rolling Stock Control Association	12/1941	Rolling Stock Industry Association	11/1945
Automobile Control Association	12/1941	Automobile Council	11/1945
Precision Machine Control Association	1/1942	Japan Machine Tool Association	1/1946
Electric Machinery Control Association	1/1942	Japan Electric Machinery Association	2/1946
Industrial Machine Control Association	1/1942	Industrial Machinery Association	3/1946
Metal Industry Control Association	1/1942	Japan Cable Association	11/1945
International Trade Control Association	1/1942	Japan International Trade Association	n.a.
Shipbuilding Control Association	1/1942	Federation of Shipbuilding Associations	10/1945
Railways Control Association	5/1942	Japan Railways Association	12/1945
Light Metal Control Association	9/1942	Light Metal Council	10/1946
Wool Control Association	9/1942	Japan Textile Association	12/1945
Leather Control Association	9/1942	Leather Association	12/1945
Hemp Control Association	9/1942	Japan Textile Association	12/1945
Silk and Rayon Control Association	10/1942	Japan Textile Association	12/1945
Cotton and Staple Fiber Control Association	10/1942	Japan Textile Association	12/1945
Oils and Fats Control Association	10/1942	Oils and Fats Processing Association	1/1946
Chemical Industry Control Association	10/1942	Chemical Industry Federation	3/1946
Rubber Control Association	1/1943	Rubber Association	12/1945

Source: Okazaki[1993b].

Table 5 Membership of the Economic Recovery Committee and the Council for Industrial Rationalization

	Economic Recovery Committee	Council for Industrial Rationalization
Total	377	118
General Association	8	3
Industrial Association	77	30
Financial Institution	2	0
Industrial Company	46	48
Public Company	28	8
Journalist	0	0
Labor Union	3	0
Academic	39	4
Diet Member	10	0
Bureaucrat	141	18
Others	23	7

Source: Secretary Office of the Economic Recovery Committee[1948]; MITI[1949].

Table 6 Investment by Industry

	One million yen				%			
	Total	Mining	Metal	Machinery	Total	Mining	Metal	Machinery
1949	44,150	-2,720	1,930	-2,071	100.0	-6.2	4.4	-4.7
1950	544,358	4,470	61,470	27,251	100.0	0.8	11.3	5.0
1951	637,933	58,638	39,563	42,097	100.0	9.2	6.2	6.6
1952	485,280	25,429	48,591	34,072	100.0	5.2	10.0	7.0
1953	601,269	29,094	57,108	43,061	100.0	4.8	9.5	7.2
1954	1,002,384	46,229	72,652	94,940	100.0	4.6	7.2	9.5
1955	523,662	9,544	41,787	56,899	100.0	1.8	8.0	10.9

Source: Ministry of Finance, Hojin Kigyo Tokei Nenpo (Year Book of Company Statistics), various issues.

Table 7 Comparison of the Utilization of Information Technology
for Industry between Japan and US. (1993/1994)

	Magnification(US/Japan)
Equipment ratio of personal computer	4.7
Networking ratio of personal computer	3.9
Subscription ratio of computer telecommunication	1.3
Number of internet hosts	12.5
Equipment ratio of data base	1.4

Source: Ministry of Postal Services, Tsushin Hakusho (Telecommunication
White Paper), 1996, p.264