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The Role and Significance of Japanese Industrial Policy — Its Estimation and Recent Issue* —

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This paper aims to show the most remarkable features of postwar Japanese industrial policy and the recent change in its purpose and means under changing circumstances of the economic environment in Japan.

I will mention the following three among various features of Japanese industrial policy as the most remarkable. First is the policy to exclude excess competition. Second is the structural policy based on dynamic comparative advantage. And third is the policy which is characterized by a concentrated input of resources into the strategic sectors.¹⁾

There have been some controversies on the effects of these policies, related to such issues as whether the policy could be effective from the viewpoint of resource allocation. I will examine the issue with some theoretical analysis. The purpose and means of industrial policy in Japan has gradually changed since the first oil crisis. Simply stated, the direction of change can be expressed by the word "softening", namely an industrial policy changed from the hard type to the soft type. I will show the characteristics and causes of change in industrial policy.

I must state my viewpoint. Concerning the assessment on the role and effect of Japanese industrial policy for economic development, there are various arguments. We can divide them into two extreme types. One is the so-called "Japan Company" argument which was named by the U.S. Ministry of State criticizing Japanese industrial policy, but it was supported by many Japanese economists. According to this argument, "Japan Company" means that the Government always intervenes in business activities even to the decision making of private firms. On the other hand, business firms are subject to governmental intervention, especially to administrative guidance which has been regarded as the most remarkable governmental control.²⁾ As I will mention later, the administrative guidance has no legal basis.

However, it has been said that governmental intervention in business activ-

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ities brought on the Japan-specific system which was called a Government-Business partnership. Then Government and Business can be regarded as one body. Such an interpretation is the "Japan Company" view. It admits that the Japanese industrial policy was effective for economic growth but it is critical of Japan's economic activities. It asserts that private firms obeyed the government-indicated goal; in other words, government and business went together cooperatively by the national objective. It also asserts that such behavior can be called economic nationalism.

The other view on the effect of Japanese industrial policy is shown by many modern economists whose standpoint is based on traditional neo-classical economics. They assert that Japanese industrial policy has been somewhat effective in a few industrial fields, but that the high and rapid economic growth has been brought about by positive activities of private firms. They have also pointed out that industrial policy has only played a supplemental role, but that it has sometimes also brought about a biased resource allocation in some cases.

My viewpoint is different from both of these. It was in the period from just the end of the war to the end of high economic growth that Japanese industrial policy has been effective. The main means of industrial policy were characterized by direct control in the period of confusion and recovery of Japanese economy just after the end of the war. But they have gradually changed from direct control to indirect orientation. The goal of industrial policy was still clear in the 1970's but the situation has more and more changed after the 1980's and policy has more and more softened. It became difficult to find an apparent goal for industrial policy. Therefore now, it is asked whether or not industrial policy is needed, and if so, what kind of policy it should be.

In this paper, I will explain some views on Japanese industrial policy. In section two, I will show its remarkable features; especially I will examine the issue of excess competition and dynamic comparative advantage in sections 3 and 4. Finally, I will survey the change in goal and means of Japanese industrial policy. I will also indicate the recent issue of the changing industrial structure and the role of industrial policy.

1. Some Views on Japanese Industrial Policy

According to neo-classical economics, governmental intervention in industrial activities is justified only in the case that market failure exists. This includes the existence of externality, the economy of scale, and uncertainty. In the neo-classical view, the central policy of industries should be confined to the policy of holding and promoting competition. It is called antitrust policy or policy for industrial organization and traditional microeconomic policy in other words, policy for resource allocation in western society has been such a policy as antitrust or industrial organization policy.

The majority of Japanese economists whose standpoint is neo-classical economics negatively estimate the effect of Japanese industrial policy. They assert that governmental intervention in industrial activities does not strengthen competitiveness of business firms but rather brings on a harmful influence.

On the other hand, the argument which supports Japanese industrial policy belongs to a minority but it has been persuasively asserted. The representative author of it is Miyohei Shinohara. He has appraised the effect of industrial policy based on the viewpoint of dynamic comparative advantage.³⁾

Among those economists who have supported Japanese industrial policy and the Shinohara doctrine, some economists assert that Japanese industrial policy has already ended the role. According to them, industrial policy has been significant in the developing stage of an economy in the process of catching up with the advanced countries, but Japan is no longer in such a situation.

One of the remarkable features of Japanese industrial policy has been shown by the policy of industrial structure based on the dynamic comparative advantage. It was only seen in developing manufacturing countries, judging from the history of economic policy, that the improvement of industrial structure has become an important issue. Therefore, the assertion which states that the policy of industrial structure is no longer rational for Japan can be said to be reasonable.

However, there is an opposite view. It asserts that it is needed to give future vision and orientation to business under the recent situation that uncertainty is becoming more and more important.⁴⁾

In reality, Japanese industrial policy has changed from a hard type to a soft type, represented by the showing of various "visions".

The "Japan Company" view is different from those mentioned in other arguments. It has a common aspect with the neo-classical economists in the sense that they think the government should not intervene in business activities but it is different from the neo-classical majority in that they admit that the postwar Japanese industrial policy was effective for her economic development.

Now let us examine how Japanese industrial policy is assessed from the neo-classical view. The contents of postwar Japanese industrial policy can be classified as follows:⁵⁾

- (1) Policy concerning interindustrial resource allocation which includes, restructuring of industries and fostering of particular industries.
- (2) Policy concerning industrial organization means policy which intends to change the level of economic activity by the individual firm in order to achieve a desired competitive environment.
- (3) Policy concerning internal organization by each industry.

In this case, I use the word internal organization as the organization of each industry. The policy includes investment adjustment, production adjustment, and

restructuring of industry.

(4) Policy for industrial organization across industries.

For example, policy for medium and small firms.

(5) Policy concerning infrastructure of each industry.

Among these policies, the most remarkable was that of interindustrial and intra-industrial adjustment.

Interindustrial adjustment is characterized as structural policy which includes restructuring of industries. The main purpose of the policy is characterized as concentrative input of resources to particular industries and the improvement of industrial structure.

Intraindustrial adjustment is remarkably found in production adjustment among firms by each industry. The main purpose of the policy is found in the exclusion of excess competition.

Concerning industrial organization, the purpose of the policy is different between MITI (Ministry of International Trade and Industry) and FTC (Fair Trade Commission).

MITI used to promote the restructuring of industry in order to exclude excess competition. MITI has always realized that the size of Japanese firms was too small compared with that of other advanced countries, so that Japanese firms might not compete with those of advanced countries even in a period of high economic growth.

As I will mention later, most neo-classical economists in Japan have given a negative judgement against both the policy of excluding excess competition and the policy of priority allocation of resources to the particular industry. According to the neo-classical standpoint, governmental intervention in business activities under a market economy is justified only when the policy plays the role of supplementing market failure.

Therefore, any priority allocation of resources to a particular industry will not be justified if the market mechanism works perfectly.

In this point, Shinohara's view is different from that of the majority of neo-classical economists. As mentioned before, the most remarkable industrial policy in postwar Japan was the priority allocation of resources to the particular industries and the promotion of concentrative investments to the strategic industries. Those industries were the shipbuilding industry in the 1950's, the iron and steel industry from 1950 to the 1960's, the automobile industry in the 1960's, and the electronic industry in the 1970's. Such a policy can be called the policy of interindustrial resource allocation in the long run. The government indicated a desired industrial structure in future and induced strategically private investments so as to allocate resources for the desired industries.

Shinohara praised such a policy because it brought high economic growth.⁹⁾

Neo-classical economists especially criticized the intraindustrial adjustment. It was characterized by the promotion of mergers, production adjustment, and investment adjustment. The purpose of the policy is to exclude excess competition.

In the next section, I will first examine the feature of Japanese industrial policy and then estimate the effect of two typical policies — the priority allocation of resources to particular industries and the exclusion of excess competition.

2. Main Features of Japanese Industrial Policy

The purpose of this section is to examine Japanese industrial policy from the viewpoint of an ideal market economy.

It is natural that there can be governmental intervention to some degree even in a market economy, but it should be different from a planned economy. Market economy means such an economic system that the freedom of business activity can be allowed so long as both firms and individuals are subject to the minimum legal rule which is general and fixed, namely, not discretionary; that is to say, everybody should be equally obeyed. A planned economy is an economic system where economic activities are subject to governmental control which has particular and discretionary character in accordance with the governmental goal. Then, let us examine governmental intervention in business activities according to this point. We may examine it on the basis of the following three criteria.⁷⁾

- (1) Is governmental intervention general or particular; in other words, does governmental intervention have a common approach to all industries, or does the government intervene by different means and with different content?
- (2) Is the rule of governmental intervention fixed or discretionary?
- (3) Is the intervention enforceable or indicative?

Concerning the first criterion, the government should intervene in all industries in the same way, and the rule of intervention should be fixed under a market economy. It is the ideal figure in a free market economy. Governmental intervention in Japanese industries could be said to be particular. The Japanese government intervened in particular industries and there has not been a common rule in the intervention.

Concerning the third criterion, governmental intervention in Japan cannot be said to be enforceable. Even if the business firms were not subject to direction or guidance by the government, they were not necessarily punished. Governmental intervention was rather indicative than enforceable.

It was indicative but it was not accompanied with enforcement. Concerning the second criterion, it is somewhat complicated. The Japanese government has adopted a policy of promoting particular strategic industries, supplying funds concentratively to them. In this sense, intervention in business activities may appear discretionary. However, it must be noticed that business has voluntarily obeyed the

intervention without enforcement by the government. One of the reasons why voluntary cooperation of the business firms with governmental intervention has been possible can be found in the fact that the intervention was not discretionary but based on a fixed or stable rule.

While the way of governmental intervention has not been general but special, it has been based on a fixed rule without discretion, and also it was not enforceable but indicative.

In this sense, the characteristic of Japanese industrial policy is different from that of a controlled economy. However, it might appear as if business has obeyed the enforcement of government in the eyes of other countries.

If we see the result of the response of the firms to the governmental policy, we may feel the way of Japanese industrial policy is powerful. However, the most important issue is to be found in the reason why business firms could voluntarily cooperate with governmental intervention without enforcement by the government. It is just this Japan-specific characteristic of the business world that business firms voluntarily cooperate with governmental policy, and it is just the point which I would like to emphasize. I think the reason can be found in the fact that as there was no difference between the purpose of industrial policy and the goal of the business world, it was easy to make common consent and have a common goal in business.

So long as we see the most typical Japanese industrial policy, we can say the purpose of the policy has been consistent with the requirement of business society as a whole. Typically it was the exclusion of excess competition and the regulation of entry.

Let us estimate the typical industrial policies in Japan, production and investment adjustment where purpose is the exclusion of excess competition, the priority allocation of resources which was represented by the promotion of strategic industries, and improvement of the industrial structure based on a dynamic comparative advantage, according to the above mentioned criteria.

Concerning production and investment adjustment, the rule, namely, the manner of intervention by MITI can be said to be fixed. Needless to say, the priority allocation of resources was the government's intervention in particular industries. In this sense, intervention has a particular characteristic. The structural policy has been indicative.

The priority allocation of resources is one means to improving the industrial structure. Then, we will examine the two typical policies — exclusion of excess competition and improvement of the industrial structure from the viewpoint of economic welfare.

3. Excess Competition

There have been controversies on excess competition at the time when the

Japanese economy was facing liberalization of trade about 1960. MITI thought that violent competition among firms was apt to bring excess capacity and weaken the competitive power as Japanese firms. While competition is the precondition to effective resource allocation, excess and violent competition may rather bring bias.

Y. Morozumi, a representative opinion leader of MITI, showed the concept on excess competition in his book. He says, "We can call it excess competition in such a case that welfare loss of national economy brought by competition exceeds welfare gain of national economy brought by competition."⁸⁾

Many economists criticized the definition saying, "What is inefficiency by competition?" They also said, "If there can be a concept of excess competition, there would be a concept of optimum competition and if the degree of competition exceeds the optimum level, it may be said to be excess competition. But if there could be the concept of optimum competition, it would be just the same as the concept of perfect competition. And the most competitive situation will be shown under perfect competition."

The concept of excess competition may seem to be trivial for neoclassical economists. They believe that only perfect competition can secure optimum resource allocation and that perfect competition is held under the condition of free entry and exit. But the argument of excess competition does not explain the reason why such a situation arises. Let us examine the conditions giving rise to excess competition. Arguments on excess competition arose by the 1960's when the Japanese economy was facing liberalization of international trade.

MITI and business emphasized that Japanese firms were too small to withstand international competition and that it was necessary not only to regulate new entry but also to promote mergers in order to strengthen the international competitiveness of Japanese firms. It can be said that there was the concept of an optimum number of firms in the background of their thinking. The concept of excess competition means that the total number of firms exceeds the optimum number of firms; the optimum number of firms is explained by the ratio of optimum production to market size.

Traditional economics teaches that the price of a product becomes equal to marginal cost under perfect competition and the price deviates from marginal cost where the firm has a monopoly of power. It teaches that the rate of deviation between price and marginal cost shows inefficient resource allocation, that is to say, welfare loss. It does not necessarily mean that in the most efficient situation the size of firms in the industry is small or that the market share of the firms is small. Even if the market share of a firm in the industry is 100 per cent, the most efficient resource allocation may be achieved provided there exist potential competitive pressures without any costs of entry or exit. This is shown by the theory of contestability.

It is required that we analyse not only allocative efficiency but also other factors when we examine excess competition through economic analysis namely, efficiency of production and dynamic competition.

Japanese economy in the period of high economic growth has been characterized by expansion in the size of firms. Then it is important for analysing excess competition to focus on the economy of scale.⁹⁾

We can divide the concept of efficiency into two, the efficiency of resource allocation in a narrow sense and the efficiency of production. The former is represented by the degree of deviation between price and marginal costs. On the other hand, marginal cost is indifferent to the size of fixed costs.

Let k_i be the fixed cost in firm i .

$$K = \sum_{i=1}^n k_i$$

K shows the total amount of fixed cost in an industry and n shows the number of firms in the industry. Let us think of oligopolistic industry where the number of firms is limited. It is probable that if n increase, K may become larger under a given output in the industry. This character is represented by the average cost. If the output per firm increases by a decrease in the number of firms in the industry, the average cost in each firm will decrease. This is efficiency of production. If there exists an economy of scale in the industry, an increase in output per firm will bring efficiency of production.

Figure 1 shows just such a case.

If the demand curve DD intersects the downward portion of the average cost curve AC , a decrease in the number of firms will bring a decline in the price of products and average cost because the demand curve shifts to the right. Excess competition

Figure 1. Excess Competition

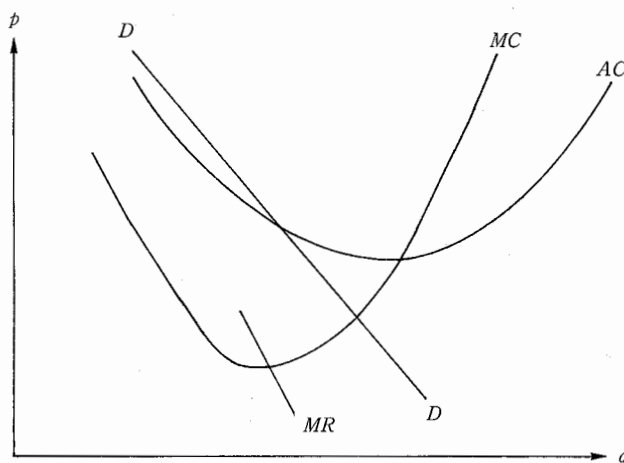
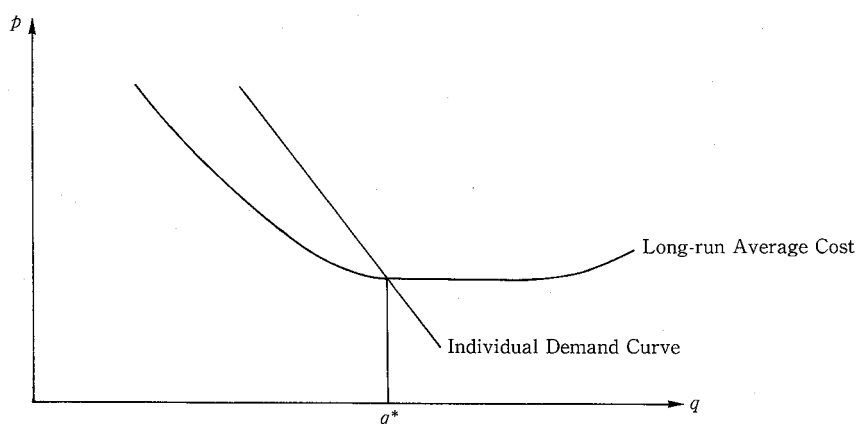


Figure 2. Optimum Output Level



can be explained only in this case where the economy of scale exists and the market is oligopolistic.¹⁰⁾

Excess competition can be defined in such a manner. On the contrary, we can define optimum competition in an oligopolistic industry as follows: Let us make the optimum output q^* which the firm produces under minimum average cost. If the long-run average cost curve has a horizontal range in minimum cost, q^* is the minimum level of output in the range.

If the number of firms in this industry is m , the competition in this industry is optimum competition. And when the number of firms exceeds m by a new entry, q decrease below q^* , then competition in this industry becomes excess competition.¹¹⁾

$$Q/q^* = m.$$

These explanations are based on static analysis. Many Japanese firms have expanded their capacity. This means that economy of scale exists in many industries. However, the number of large firms have not so decreased as MITI expected in reality, although there have been remarkable large scale mergers encouraged by MITI.

The above-mentioned analysis is based on the assumption of a given output. However, the market size has increased. If $\Delta Q/Q > \Delta q/q$, the number of firms can increase. The expansion of Q will be brought about by the expansion of domestic demand and exports. If we consider an increase in exports, regulation to new entry will become irrational.

4. Dynamic Comparative Advantage

Another remarkable industrial policy in Japan was conversion of the industrial structure. MITI showed a desirable industrial structure for the future. Two

criteria which represent the desirability were chosen. One was the income elasticity criterion and the other was the rising rate of productivity criterion. MITI intended to achieve two purposes, namely, to increase the growth rate and to increase exports, through meeting these two criteria. Income elasticity e is shown as follows:

$$e = \frac{\Delta D_i}{D} \bigg/ \frac{\Delta Y}{Y}$$

Y : National Income

D_i : Demand for Products in Industry i

If e is larger than 1, demand for products in Industry i increases faster than the growth rate of income. In the same way, productivity criterion is defined as follows:

$$\frac{\Delta q_i}{q} \bigg/ \frac{\Delta q}{q}$$

q : Average Productivity of Total Industries

q_i : Average Productivity of Industry i

Income elasticity represents the growth rate of expected demand in industry, and then it represents the demand aspect of industrial growth. The growth rate of productivity represents the supply aspect of industrial growth. The Japanese government aimed to make the industrial structure specialize for the desired structure. If we regard Y as world income and D_i as world demand for goods in industry i , these two criteria become a criterion to increase exports and improve the balance of payments. While the income elasticity criterion is a required condition, the productivity criterion is a sufficient condition for increase in exports.

Miyazawa, who is one of the representative economists in this field, criticized such policy that the government promotes conversion of industrial structure according to those mentioned criteria. His argument is as follows: Such policy intends to alter the industrial structure through dynamic comparative advantage. In other words, these criteria are no more than principles of dynamic comparative advantage. He says the industrial structure would change by itself according to the principle of comparative advantage, if the price mechanism appropriately works under a given institutional framework.¹²⁾ The role of government should be confined to provide a competitive environment for the market. Intervention by the government is undesirable, even if it intended to promote industrial activities. This is Miyazawa's criticism of the above-mentioned industrial policy and such opinion is common among the majority of modern economists, whose standpoint is mainly based on

neoclassical economics.

We must examine what kind of industries have been comparatively advantageous in order to judge the effect of such an indicative industrial policy.

H. Ueno classified Japanese industries into the following three types: efficient industry, inefficient industry, and average industry, using an analytical method as follows:¹³⁾

V : Value added W : Nominal wage
 L : Labor input P : Price (value added deflator)
 K : Capital input
 r : Capital price
 suffix i means industry i

$$P_i V_i = W_i L_i + r_i K_i \quad i = 1, 2, \dots, n \quad (1)$$

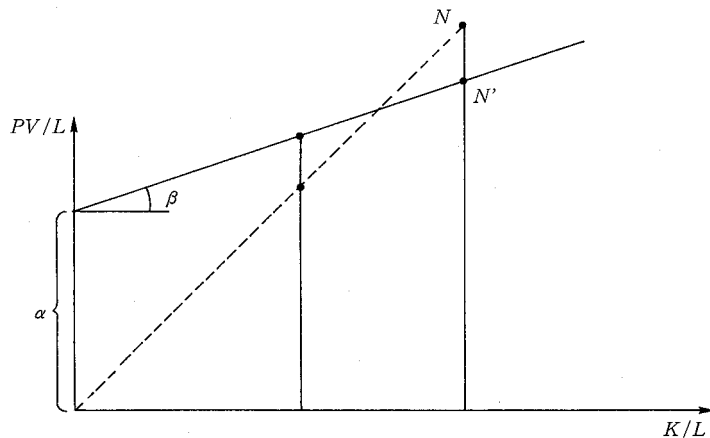
$$P_i V_i / L_i = W_i + r_i (K_i / L_i) \quad (2)$$

Ueno estimated the equation $PV/L = \alpha + \beta (K/L)$, using cross section data. This equation of a straight line can be called the efficiency criterion line.

α and β show average wage rate and average profit rate respectively. If a combination of wage rate and profit rate in an industry is plotted above the efficiency criterion line, the industry can be called an efficient industry. On the other hand, if a combination of wage rate and profit rate is plotted below the line, the industry is an inefficient industry. If the combination can be found on the line or near the line, the industry is an average industry.

The improvement of industrial structure means that capital and labor shift from a low productivity sector to a high productivity sector, so that productivity of the national economy as a whole may go up.

Figure 3. Efficiency Criterion



Ueno estimated the efficiency criterion line in 1961, 1970, 1975, and 1982 using cross section data, and found changes in industries of each type, namely, efficient industry, inefficient industry, and average industry. Then he estimated the percentage of value added in each type industry to the total value added in all industries. We can find industries which have a dynamic comparative advantage and also find improvement of the industrial structure. Industries in which the government intended to promote development by 1960 are mostly found in the efficient industry group in 1970. Ueno concluded that the policy to improve industrial structure was successful at least until 1970. However, the effect of industrial policy has gradually weakened.¹⁴⁾

Table 1 shows a change in the industrial structure.

The share of value added in efficient industries increased from 35.7% to 45.3% in the period of high rapid economic growth, from the starting point in 1956 to the peak in 1970. The share gradually decreased after the first oil crisis and it showed 27.0 per cent in 1982.

It seems to us that the structural policy was apparently successful in the high growth period and it may be said that the policy was relatively successful even after the first oil crisis. The reason for this is that new types of efficient industries in which the government intended to promote development appeared after the first oil crisis.

However, there can be a counterargument which asserts that structural change was brought by the effort of private firms. The comparative advantage is based on various factors, that is to say, traditional technology of the country, the organizational factor, etc. Industries included among the above-defined efficient industries might have had such factors.

It can be said that structural policy was usually shown going ahead of structural change. In prewar days, light industry such as textiles, had been comparatively advantageous. As the wage level in Japan has been low under the labor

Table 1. The Situation of Industrial Structure

	1956		1970		1975		1982	
	Share of Sectors	Share of Value added	Share of Sectors	Share of Value added	Share of Sectors	Share of Value added	Share of Sectors	Share of Value added
Efficient Industry	24.5	35.7	24.5	45.3	24.3	40.0	20.1	27.0
Inefficient Industry	25.9	28.5	25.9	18.4	27.9	16.1	35.7	18.0
Average Industry	49.6	35.8	49.6	36.3	47.8	43.9	44.2	55.0
Total	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	100.0	100.0

Source: Ueno, H., *Kyoso to Kisei (Competition and Regulation)*, pp.200-201.

surplus, the labor intensive production method was advantageous. But we must notice the following point, namely, it was just this feature of Japanese industrial policy by which the government intended to promote heavy industry, which had capital intensive production, in the situation of labor surplus and a low wage level. Heavy industry was strategic industry at least until 1970.

In 1971, the Committee of Industrial Structure published a report entitled "The Improvement of Industrial Structure". The report indicated a designed industrial structure for the future, and the real figure became almost the same as the indicated figure after 1975. A radical change in the composition of exported goods after 1975 reflects a basic change in the structure of comparative advantage in Japanese industries. Industries which came to have a comparative advantage in world markets have the characteristics that follow.¹⁵⁾

- i) The processing industry, especially the processing, and assembling industry, which includes both production of parts and assembling.
- ii) Industry which has mass production techniques: It reflects the fact that Japan has large domestic markets.
- iii) Industry which produces goods of homogeneous quality; in other words, such industry where quality control is especially important.
- iv) Industry where products are differentiated and the network of sales and services is important.
- v) Accumulation of small improvements in production processes and products.
- vi) Cooperation and adjustment among related firms.

The most typical industries which have the above-mentioned characteristics are as follows: motor vehicle, electronics, electronic home appliances, auto-bicycle, camera, piano, sound facilities, and machine tools. These industries in Japan have a strong comparative advantage. On the other hand, we can show comparatively disadvantageous industries in Japan as follows:

- a) Industries where research and development play an important role.
- b) Industry which requires large-scale equipment, besides the iron and steel industry.
- c) Industry which is closely related to natural resources.
- d) The machine industry, which is not a mass production type but is based on special techniques.
- e) Energy-using types of industry
- f) Industry which requires large amounts of unskilled labor. Examples follow: airplane, chemicals, medicine, fine chemical, petrochemical, paper and pulp, and non-ferrous metals. The characteristics (i)~(vi) and (a)~(f) are closely related to Japanese traditional technology, culture resource endowments, and organizational features.

Comparative advantage or disadvantage might be formed by these character-

istics even if the government did not intervene in industry. Nevertheless, I dare say Japanese industrial policy brought on the effect to some extent.

Japanese economy has had a basic goal which was prior to all purposes at least until 1973 when the first oil crisis occurred. The goal was shown by such a catching phrase as "Catch up with and get ahead of western countries". If it is justified that developing countries have such a goal, strategic industrial policy would be adopted. Such a purpose for the developing country cannot be realized if the policy-making authority entrusts economic activities with the market mechanism. Generally speaking, developing countries have a comparative advantage in a low productivity sector. If these countries specialize in the comparatively advantageous sector, the industrial structure will not change and the productivity difference between industrialized countries and less advanced countries may expand more and more. The issue is whether the principle of dynamic comparative advantage works automatically through the market mechanism. In my view, such a radical change in industrial structure that the Japanese economy has shown would not be brought without governmental intervention; that is to say, such an improvement of industrial structure might be impossible without strategic industrial policy.

The strategy of industrial policy has the characteristic of protectionism, and it is an important issue whether such a protectionist policy can be justified or not.

5. Change in Goal and Means of Japanese Industrial Policy

Industrial policy in the period of rapid economic growth can be characterized by heavy industrialization and strengthening of international competitiveness. It is shown through an active policy as represented by the alliance with GATT and OECD. Compared with it, the industrial policy after the first oil crisis is characterized by a passive policy such as regulation of environmental pollution, dealing with the international monetary and oil crises and with the domestic adjustment accompanied by them. However, as the structural policy has continued, we can classify the policy means into two types, hard and soft. Hard means are represented by such measures as subsidy, financing by low interest rates, and tax credit. Soft means are such as the government giving out information so as to induce private firms to their desired goal. Industrial policy in the period of rapid economic growth was characterized as hard, but it changed from hard to soft after the first oil crisis. As an example of soft means, we cite the announcement of "vision" by the government. The Japanese government has published various types of vision, such as "Vision of Industrial Policy in the 1970's", "Long-run Vision of the Industrial Structure" (which has been published every year since 1974), "Vision of Industrial Policy in the 1980's", etc.¹⁶⁾

"Vision" is somewhat different from other publications by the government, such as the Economic White Paper, the White Paper of International Trade and

Industry, and so on. While these White Papers have characteristics of annual reports, "vision" shows only a figure in future. It is also different from an economic forecast. It is not only a forecast but also shows the desired figure.

"Vision of Industrial Policy in the 1970's" contained the following:

- (1) Japanese industries should change the behavior from growth-seeking type to growth-using type. Growth-using means that both the government and business make efforts to improve labor environment, to fill up social capital, to preserve a good environment, to increase investments of R & D, to increase money for international cooperation, and so on, using the growth ability of the Japanese economy.
- (2) The "vision" emphasized that the role of industrial policy should be restricted only to the fields where market failure prevailed, making use of market mechanism at its maximum, warning of excess intervention by the policy, and for the protection of industry.
- (3) It emphasized that industrial structure should be altered from a structure that attached importance to capital-using heavy industry to such structure that attached an importance to a knowledge-intensive or technology-intensive processing industry. The word, "knowledge-intensive" has become a kind of fashion word from this period.

You should notice that the new criterion of "knowledge-intensive" was fairly sufficed after 1975, as I showed in the previous section. Also you should notice the government has come to emphasize that industrial policy should be confined to market failure since the 1970's.

The "vision" is presented by an advisory committee of the government, whose members consist of representatives of the business society, men of learning and experience, and ex-bureaucrats in general. Therefore governmental policy reflects the will of business.

Let us show the change in policy means and its estimation. The advisory committee of the industrial structure issued a "Long-run Vision of Industrial Structure" in 1974. It aimed to clarify the significance of showing vision. The report classified the policy means for improvement of industrial structure as follows:

- (1) To show vision
- (2) To form an institutional framework
- (3) Inducement by some policy means
- (4) Promotion, adjustment and regulation by law

The inducement by policy means can be divided into two: one is inducement by finance, tax credit, and subsidy; the other is direct practice by the government and administrative guidance.

The promotion, adjustment, and regulation by law have the following character. The law is nothing but an orientation or showing of basic direction. There-

fore, the government must use its tax system or regulation to make the law effective.

Table 2 shows the relationship between these means and the direction of the policy.

I would like to emphasize that soft policy means which were not based on pecuniary incentives such as subsidy, tax credits, etc., have been effective and we can find the Japan-specific characteristics of industrial policy in this point. Especially, soft means are shown by the announcement of vision and administrative guidance. Administrative guidance may appear as if it is strongly controlled by the government, but it has not been based on an legal basis, and therefore not enforceable. The

Table 2. Relationship between Policy Purpose and Policy Means

Purpose of Policy	Policy Means	Announcement of Vision	Institutional Frame	Inducement					Promotion Adjustment Regulation by Law
				Finance	Tax System	Subsidy	Direct Practice by Government	Administrative Guidance	
a. Correspondence to National Need		O		O		O	O		
b. Correspondence to the Constraint:		O		O					
to Conserve Energy		O	O	O	O			O	O
to Reserve Environment		O	O	O	O			O	
c. To Foster the Strategic Industry		O		O	O	O	O		O
d. Bringing up Technology		O		O	O	O	O		
e. To Promote Reallocation of Industries		O		O	O	O			O
								Industrial Reallocation Act	
f. Foreign Investment		O	O	O	O			O	
g. Structural Improvement of Particular Industry		O		O	O	O			
h. Modernization of Medium and Small Firms		O		O	O				
							Modernization of Medium-Small Firms Act		O
i. To Build Desired Industrial Structure		O		O	O				

O: Already practiced.

announcement of vision is only an offering of information which the government desires. Also the adjustment by law is almost the same. It does not show any enforcement in the sense that if one did not obey the law, he would not be punished. We find social, economic, and cultural features of Japan in this point. The word, Government-Business Partnership has been used to show this feature of Japanese industrial policy, and business response to the policy.

The Government-Business Partnership was not only promoted by the government, but also supported by business. The purpose of MITI and the goal of business were in accordance with each other in the period of high economic growth, especially in the 1960's, when restructuring of industries was the main theme.

As mentioned in section 2, restructuring of industries is characterized by pursuit of the economy of scale and strengthening of its international competitive power. To achieve this purpose, MITI encouraged mergers and the arrangement of Keiretsu. But such an extreme policy was not necessarily successful. For example, an act for promoting particular industries which was prepared by MITI could not pass the Diet.

The characteristic of Japanese industrial policy has gradually changed. It was in the 1950's that direct control was general. Administrative guidance has already become the main stream among various policy means in the 1960's. After the 1970's, the means changed from hard to soft.

We can say that Japanese industrial policy was rather indicative than enforceable. It is just this feature of Japan — orientation by the government which had no legal basis, such as administrative guidance which has been effective. A simple announcement of "vision" could influence business activities after the 1970's. If we consider the result, it may appear that industrial policy has had some influence. Why could such a soft and not enforceable policy be effective? I think such Japan-specific phenomena are related to cultural or social features of Japan. We can observe these features in Japanese society.

- (1) Generally speaking, there cannot be a remarkable difference of value judgement among people.
- (2) There exists a common goal among people including the business world, so that an agreement among firms could be easily brought about, at least until the 1970's.

But the following point is important. The policy means has been effective if and only if the policy did not contradict the working of the market mechanism. The announcement of a governmental goal could not necessarily influence all aspects of economic activity. For example, concerning industrial location, the government intended to disperse factories and offices, but the central offices were concentrated in Tokyo. As a result of rational behavior among firms, the central offices were more and more concentrated in Tokyo in spite of the government's dispersing policy. This tendency is now continuing. The influence of the government has gradually

weekend since the 1980's.

6. Summary and Conclusion

Japanese industrial policy can be said to have been successful at least until the 1970's, although it was not enforceable but indicative. It was in the 1960's that industrial policy was the most successful. The reason why the policy was successful depends on such factors. The goals of government and business were in accord with each other, and the indicative means were sufficiently effective. The most typical industrial policy was represented by a policy for intraindustrial adjustment which mainly aimed to exclude excess competition and a policy for improvement of the industrial structure.

The exclusion of excess competition was only effective in the situation where an economy of scale existed and it was just at the time of the 1960's high economic growth, when the economy of scale was found in many industries.

The policy for improvement of industrial structure which was based on the dynamic comparative advantage has been the most distinguishing industrial policy in Japan, and it has been successful even in the 1980's.

However, the feature of Japanese industrial policy has gradually changed. Policy means changed from the hard type to the soft type. In the 1970's, soft policies were still effective, but now, the effect has weakened.

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Notes

- (1) The second and the third are related to each other. Because a concentrated input of resources are found in industries which have been expected to become comparatively advantageous in future.
- (2) The view of "Japan Company" has been mainly supported by economists who were critical of governmental policy, including marxian economists. Economists who appraise the effect of this policy are not necessarily included in this group. Western countries have gradually come to notice Japanese industrial policy by 1970. OECD successively published investigative reports on Japan's industrial policy.

OECD, the Industrial Policies of 14 Member Countries, Paris, 1971.

_____, The Industrial Policy of Japan, Paris, 1972.

- (3) Concerning Japanese economic development, there have been famous controversies so-called, the controversies on dual structure in Japan. Dual structure means a situation of coexistence with a modern developed sector and a less developed sector. Such a structure can more or less be found in every country but it has appeared extreme in Japan. It was brought about by concentrative input of capital into the strategic sector

which was expected to become a comparatively advantageous sector in future.

Concentrative input of capital into the strategic sector brought about a difference of physical productivity between the strategic sector and the non-strategic sector, consisting of medium and small firms. The difference in physical productivity brought on a difference of value-added productivity through an imperfect market which did not bring a decrease in price in the high productivity sector. The difference of value-added productivity brought a wage difference between the strategic sector and the non-strategic sector. Dual structure typically appeared in the extreme wage difference between big business and small business. It was one of the features of the Japanese economy.

Miyoei Shinohara, *Sangyo Kozo (Industrial Structure)* Shunju Sha, 1959. Keizai Seicho no Kozo (Structure of Economic Growth), Chapter 4.

- (4) This type of thinking can be found in Japanese Journalism.
- (5) See Ryutaro Komiya: *What Is the Industrial Policy?* R. Komiya, M. Okuno and K. Suzumura ed. *Nihon no Sangyo Seisaku (Industrial Policy in Japan)*. The University of Tokyo Press., 1984., Chapt.1.
- (6) The Shinohara doctrine fitted not only the prewar days but also the postwar period, at least until the early 1970's.
- (7) These criteria were showed by Y. Murakami in "An Age of the New Middle Class". He is one of the economists who emphasized the Japan-specific relationship between government and business. It is different both from western society and the "Japan Company" as criticized by the US Ministry of State.
- (8) Y. Morozumi: *Sangyo Seisaku no Riron (Theory of Industrial Policy)*, 1966.
- (9) Concerning the theoretical analysis of excess competition Kiyono applied the Cournot oligopoly Model. K. Kiyono, "Fundamental Nature of Quasi-Oligopoly Markets", *Gakushuin Economic Papers*, 59, 1986.
- (10) Such a case can be shown as follows: We assume that all firms in this oligopolistic industry produce a homogeneous output. The quantity of the output is shown by q . They have the same technique. The cost function of the firm is shown by $C(q)$. $C(q)/q$ is average cost $AC(q)$.

$$AC'(q) < 0 \quad (1)$$

(1) can arise under the existence of the economy of scale. Reverse demand function is given by

$$P = P(Q), \quad P'(Q) < 0. \quad (2)$$

P is market price of goods and Q is total output of this industry. Firm i 's profit function $\pi^i(1)$ is shown by

$$\pi^i(q_i, Q_{-i}) = P(q_i + Q_{-i}) q_i - C(q_i). \quad (3)$$

q_i is output of firm i , and Q_{-i} is the sum of other firms' output besides i .

$$Q = q_i + Q_{-i}.$$

An increase in the output of rival firms Q_{-i} will bring a decrease in the profit of firm i . Let us assume that firm i is a new entrant and Q_{-i} is the total output of existing firms. If the existing firms are already producing sufficiently large amounts of products, firm i cannot expect positive profits. Such a situation can be shown as follows: If $Q_{-i} > Q_{-i}^e$, $\max \pi^i(q_i, Q_{-i}) < 0$.

This means that if existing firms' outputs exceed a level Q_{-i}^e , the new entrant's profit becomes negative.

- (11) See M. Ito, K. Kiyono, M. Okuno, and K. Suzumura: *Sangyo Seisaku no Keizaibunseki* (Economic Analysis of Industrial Policy). The University of Tokyo Press, 1988, Part IV.

The following works are applicable for the analysis of excess competition. C. Eaton and R. Lipsey, "Exit Barriers are Entry Barriers: The Durability of Capital as a Barrier to Entry", *Bell Journal of Economics*, 11, Autumn, 1980. C. Eaton and R. Lipsey, "Capital Commitment and Entry Equilibrium", *Bell Journal of Economics*, 12, Autumn, 1981.

- (12) K. Miyazawa, "Sangyo Seisaku no Rinen to Shijokiko" (An ideal of Industrial Policy and Market Mechanism), *Toyo Keizai*, June, 18, 1974.
- (13) H. Ueno: *Kyoso to Kisei-Gendai no Sangyo Soshiki* (Competition and Regulation — Modern Industrial Organization), *Toyo Keizai*, 1987.
- (14) Ueno, op cit, pp.200-201.
- (15) R. Komiya, *Gendai Nihon Keizai* (Modern Japanese Economy), The University of Tokyo Press, pp.188-189.
- (16) There are many advisory committees in each Ministry in Japan. The most representative committee of MITI is the Advisory Committee of Industrial Structure. These publications are written through the meetings of the Committee and reported to the Cabinet.

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- (1) Eaton, C and R. Lipsey, "Exit Barriers are Entry Barriers: The Durability of Capital as a Barriers to Entry," *Bell Journal of Economics*, 11, Autumn, 1980.
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- (3) Ito, M.K. Kiyono, M. Okuno and K. Suzumura: *Sangyo Seisaku no Keizaibunseki* (Economic Analysis of Industrial Policy), The University of Tokyo Press, 1988.
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- (6) Komiya, R, M. Okuno, and K. Suzumura, ed.: *Nihon no Sangyo Kozoh* (Structure of

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