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THE U.S. JAPAN TRADE IMBALANCE FROM THE JAPANESE PERSPECTIVES

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ABSTRACT

By 1981, Japan achieved both internal and external equilibrium; exports and imports roughly balanced at sixteen percent of the gross national product. However, within the country, there was concern that the growth in the government, accompanied by raising budget deficits, would make it impossible for the economy to cope with a future crisis similar to the oil price shocks of the seventies. The Chairman of Keidaren, Mr. Doko, called for a 'philosophy of preservance' requiring government austerity and individual sacrifice.

The expected crises never occurred but the policies followed led to a balance of payment surplus. Scientific studies to determine the exact sources of these imbalances are few but indications are that forty percent of the gap was due to differences in growth in demand at home and abroad, thirty percent due to differences in the elasticity of import and export functions and thirty percent due to movement in the exchange rate.

It is argued that political and economic frictions arise when it it attempted to treat the symptom without reforming the fundamental structure. Proper strategies can convert the 'Zero-sum game' to a 'positive-sum' game.

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The U.S.-Japan Trade Imbalance from the Japanese Perspective

By Ryuzo Sato

The U.S. - Japan Trade Imbalance from the Japanese Perspective

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. INTRODUCTION

Japan'success in coping with two rounds of skyrocketing oil prices in the 1970s has changed both her economic structure and her competitiveness in the world market more than anything else. The oil shocks were regarded in Japan as a declaration of "war" and a "national emergency" to a country poor in raw materials and arable land. By hard work and self-sacrifice the Japanese reaction to the national emergency gave Japan the confidence to be able to compete with any other country in the world.

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By 1981, Japan achieved virtual equilibrium, both internal and external, and was ready to take on any challenge. By the end of 1970's, Japan invested almost twice as much as the United States in R & D to reduce energy cost, and to create newer and younger vintages of capital stock in Japan. Overall investment in Japan has grown much faster than overall investment in other advanced countries. For instance, capital per unit of employment during the period 1973-1979 increased at the average annual rate of 6.1% in Japan, while in the United States it grew at the rate of only 0.9% (Sato and Suzawa [1973 p. 161]). Japanese imports and exports roughly balanced at the rate of 16% of GNP in 1981 and the excess of savings over domestic investment exactly matched the government's budget deficit, leaving domestic effective demand and supply in complete equilibrium.

In the early 1980s there was a growing concern among government officials and business groups, notably the Keidanren (the most powerful federation of business organizations in Japan) that the large government deficit would eventually cripple the government's ability to cope with the next round of national emergency, and that the size of the government was becoming too large. This was the period when Mr. Inayama's "Gaman-no-Tetsugaku" ("Philosophy of Perseverance") became the national motto. As

Chairman of the Keidanren, Mr. Inayama advocated Gaman-no-Tetsugaku and government austerity accompanied by further individual sacrifice to prepare for future challenges to Japan.

The anticipated challenging years never arrived. Instead, both falling oil prices and extremely brisk foreign demand for Japanese products, accompanied by Reaganomics' large deficits of the U.S. government budget, and high U.S. interest rates, became unexpected windfalls to Japan. By the end of 1986, the proportion of Japan's imports declined to 13% of GNP from the high rate of 16% in 1981, while exports continued to grow at a higher rate than the pre-Reagan era. The result is that Japan has achieved trade surplus to the extent that no other country has ever experienced. This is a story of "too much of a pleasant surprise" and a story of unfulfilled challenge. Even though the Japanese found that challenges anticipated around the beginning of the 1980s did not come to past, Japan's export policy had already driven them to "sell Japanese products by all means". This is as though their accumulated internal power waiting for a challenge had to be directed to something external. The result was the export drive that the rest of the world observed as "so disturbing".

The word "Gaiteki Fukinko" (external imbalance) started appearing in several Japanese newspapers around the end of 1983. There were fierce arguments on whether Japan's balance of payments surplus was cyclical or structural. But around 1985, it was generally recognized that the "Yushutsu Shiko" (export-

prone) nature of the Japanese economy was largely responsible to the persistent external surplus.

On October 31, 1985, the so-called Mayekawa Commission was organized to study "economic structural adjustments for the promotion of international harmony", in short, to correct "tne external imbalance of the Japanese economy". The commission isssued the report, the so-called "Mayekawa Report" on April 7, 1986, which, for the first time in the post-War period, called for transformation of the Japanese economy a saving-export oriented to a consumption-import oriented economy.

The U.S.-Japan trade conflict has approached a critical point as the Reagan Administration imposed 100% tariffs on certain Japanese products containing semiconductor chips in April, 1987. This conflict has occurred by the fundamental structure of trade relationship between the two nations and not by a mere flaw or two in the policy or strategy of either side. It is assumed that when a problem arises in the bilateral relationship which favors one side against the other, correction of the disequilibrium will result in a so-called "zero-sum" by shifting benefits from the plus side to the minus side, thereby causing pain and/or sacrifice on the favored side and also instigating resistance against the move. This happens when an attempt is made to treat the symptoms without reforming the fundamental structure. I believe that this type of solution must be replaced with more creative ones which results in a "positive-sum" of benefits for both sides. In what follows we will examine Japan-U.S. economic

imbalance from this point of view (i.e. how two countries can cooporate the strategy and benefit from the action.)

2. Imoalance of Trade

During the 1950s the United States continued to accumulate huge trade surplus each year, supported by its superiority of technology and undamaged economic structure. By the end of the 1960s, West Germany and Japan had completed their postwar recovery process, and trade surpluses ensued. The 1970s is the period during which the crude oil prices increased ten-fold, but the prices of industrial products increased only two-fold, forcing the oil producing nations to accumulate large surpluses. During the 1980s, the United States, oil producing nations and exporting countries of primary industrial goods have all experienced trade deficits, while Japan, West Germany and some of Newly Industrialized Countries ended up with huge surpluses. Figure 1 depicts historical trends of trade (im)balances in the U.S. and Japan.

Trade among various countries is determined by several factors which include domestic and foreign demands, changes in relative prices and exchange rates, tariffs, non-tariff barriers and etc. Between 1983 and 1985, Japan's overall trade surplus increased by almost $40 billion, while the U.S. overall trade balance deteriorated by more than $100 billion. Higher interest rates in the U.S., resulting from a large Federal budget deficit, stronger dollar (or weaker yen), and higher growth rate of GNP in the U.S. are said to be some of the factors responsible for the

increased trade surplus for Japan and for the deterioration of the U.S. trade position. Many also blame Japan for the closedness of her domestic markets.

Scientific studies to determine the exact causes of the trade imbalance are hard to come by. But a recent study by Japan's Economic Planning Agency provides with the analysis of how the causes of the Japan-U.S. trade imbalance may be broken down (Economic Planning Agency [1986]). Using regression and factor analysis, it is demonstrated that: (1) 40% of the imbalance is due to the gaps in the growth of domestic and foreign demands ($417 billion deficit out of $1.0007 billion for the U.S. deficit and $162 billion surplus out of $393 billion for the Japanese surplus); (2) the elasticity differences in the export and import functions are also responsible for the trade imbalance; and (3) the relative prices and exchange rate variations are additional factors responsible for the imbalance (See Appendix 1).

Table 1. Factor Analysis of the Rise of the U.S. - Japan Trade Imbalance (1982-1985)

	Japan	U.S.A.
Trade Imbalance	393 (100%)	- 1,007 (100%)
Due to Growth Effects	162 (41%)	- 417 (41%)
Due to Elasticity Differences	126 (32%)	- 231 (23%)
Due to Exchange Rates	120 (30%)	- 174 (17%)
Due to Relative Prices	- 59 (-15%)	- 122 (12%)

(Unit: 100 million)

Sources: Calculated from Economic Planning Agency's White Paper [1986].

Note: The sum of the factors shown here does not add to 100% because of the omission of other "unexplained" factors.

(1) Growth and Income Effects:

2a and 2b show how divergences in the growth rates of domestic and foreign demands in both the United States and Japan were responsible for the drastic increase of trade imbalance. The total domestic demand in Japan has steadily grown at an annual rate of 4% for the period 1982-1985, which is approximately the same rate as the average expected rate of growth calculated from the trend line for the 1978-1985 period (the shadowed portion). On the other hand, the foreign demand for Japanese products grew much faster than the trend anticipated (2.6%).

A substantial increase in the foreign demand for the Japanese goods came from the United States. While the U.S. exports moved along the trend line of 2.4%, the overall domestic demand in the U.S. exceeded its trend line of 2.2% by a substantial margin. Given the fixed nature of the propensity to import, this unprecedented rise in the domestic demand in the United States provided the basis for a sharp increase in imports, especially from Japan. As was observed in the previous section, this unexpected and abnormal windfall gain in the export industry in Japan gave a strong incentive for the export drive which became the critical point in subsequent discussions of the U.S. - Japan trade conflict. But the fact of the matter is that the gaps in the growth rates of domestic and foreign demands of the two

the growth rates of domestic and foreign demands of the two countries substantially contributed to the current trade friction.

(2) Exchange Rates - Expensive Dollar and Cheap Yen:

Another major factor responsible for the trade imbalance between Japan and the U.S. in the first half of the 1980s is the overvalued dollar. According to the factor analysis presented in Table 1, 32% of the increase in Japan's surplus is due to this factor and 23% of the U.S. deterioration of the trade balance resulted from the overvaluation of its currency. The high evaluation of the U.S. dollar was sustained by high interest rates reflecting the huge U.S. fiscal deficits.

(3) Price Effects:

The declining prices of crude oil and other primary products contributed to improvements in the trade balances in both Japan and the U.S. But the overall effects of changes in the prices of both export and import goods worked against both Japan and the U.S. The export and import functions estimated for this period seem to verify this assertion (See Economic Planning Agency [1986],See Also Appendix 1).

(4) Elasticity Differences:

Table 2 compares the elasticities of imports and exports in various countries. We find that the import elasticity with respect to income is the lowest (0.725) in Japan and the highest (1.687) in the U.S. However, the export elasticity with respect to income is the highest (4.207) in S. Korea, not in Japan

(2.210) and the lowest in W. Germany (0.976), the U.S. case (1.133) being slightly higher than W.Germany. In passing it is noted that W. Germany is relatively balanced between exports and imports as their elasticities have a smaller deviation.

Among the four countries compared, the U.S. is the only country whose imbalance factor is less than one (0.67), which implies that the U.S. tends to import more than they can afford, while S. Korea and Japan depend too much on exports for income generation.

Table 2.

Elasticity Comparison

	(A) Export Elasticity with respect to Income	(B) Import Elasticity with respect to Income	(A/B) Imbalance Factor
Japan	2.210	0.725	3.05
U.S.A.	1.133	1.687	0.67
W.Germany	0.976	0.803	1.22
S.Korea	4.207	0.746	5.64

Source: Calculated from White Paper [1986]

There is a multiplicative power in the accumulation of trade

imbalances in any country. For example, other things being equal, Japan can reduce its surplus if the domestic demand grows at the rate of 4.5 times the growth rate of net world import (1.4%) (i.e. Imbalance Factor x Growth Rate of World Import = 3.05 x 1.47% = 4.48%). This means that Japan must grow at the annual rate of approximately 7%. Conversely the U.S. can begin to reduce it's trade deficit if the world imports is 2.5 times the growth in its total domestic demand. These results show that the problem of imbalance has reached a level where mere policy coordination can do little in correcting trade imbalances.

3. Impact of Strong Yen

The value of the yen fell against the U.S. dollar between Spring of 1984 and Winter of 1985. After reaching a bottom of 263.04 yen per dollar on February 13, 1985, the Japanese currency has appreciated by 47% to the current level of 139 yen per dollar (May 12, 1987).

On the other hand, Japan's trade surplus has continued to rise to a level close to $100 billion. What is happening here? Economists often attribute this to a phenomenon called the "J-curve effect" where a surplus in the value-base balance increases temporarily due to a quantitative adjustment for the steep upsurge of the dollar value of the yen.

The analysis contained in the White Paper [1986] of the J-curve effect, admittedly tentative, gives some insights into how the huge surplus continues to exist for the Japanese economy.

Following the final quarter of 1985, when the G-5 meeting took place, the margin of surplus resulting from the combined quarterly effects expanded to approximately $3 billions in the second quarter of 1986 and reached some $4.1 billions in the fiscal year 1985. Although this is only 8% of the Japanese trade surplus in 1985, the continued appreciation (rather than a once-for-all appreciation of the yen) reflects various lags at work. (Figure 3)

A certain period will be required before all the J-curve effects or lags, are absorbed. How long it takes depends on the speed of contract renewals and other factors such as: (i) adjustment of transport and distribution; (ii) inventory liquidation; and (iii) change in production plans. One estimate shows that (See Appendix 2) a 10% yen rise will eventually reduce export volume by 7.6%

Shafigul Islam (New York Times, May 12,1987) at the Institute for International Economics claims that the appreciation of the yen vis-a-vis the dollar is already working to reduce the trade imbalance between the U.S. and Japan. The trade gap was only $1 billion higher in the last quarter of 1986 than a year earlier. The dollar depreciation in general has already brought about the improvements. The volume of American non-agricultural exports rose 5% last year, and by the fourth quarter stood 9% above those of the previous fourth quarter. Exports of capital goods and consumer goods also enjoyed hefty increases.

While these improvements in trade volume will continue over the

next several years, rising import prices will prevent a major decline in the dollar deficit - the J-curve effect. This does not mean that the lower dollar has no effect on the trade imbalance. The speed of adjustment for Japan has been so fast that industrial production last year remained flat; profits and investment in manufacturing plunged and lay-offs and unemployment reached post-war highs. Japan's merchandise export volume fell 2% and import volume rose 13% last year.

The high yen shock called "Yen Daka Shokku", has brought everything undesirable to Japan except the reduction of a huge trade surplus. The Japan Institute for Social and Economic Affairs, the Keidanren's public relations and communication branch, published a pamphlet titled "The Yen Shock" in March 1987, which describes how much Japan's economy has suffered from the yen appreciation. It says that:

> While domestic demand has stayed firm, the strengthening of the yen has caused Japan's export sector to contract. Real gross national product in the second and third quarters of 1986 was up less than 3% over 1985 levels.
>
> A real growth rate of only 2.3% is the average forecast of 20 major private research organizations for fiscal 1986 (April 1986 to March 1987). This would be the lowest level since the 1974 slump induced by the first oil crises --- Japan has lost the ability to be a locomotive of growth for the world economy as other countries had hoped.

Indeed the statistics show that the index of growth in industrial production has steadily declined from 6.5% in the

second quarter of 1985 to - 1.2% in the last quarter (Jan.-March 1987) of 1986 (Figure 4).

The yen shock has had a devastating effect on employment. It is estimated that in 1986 the number of "surplus" employees reached about 100,000 just in the 457 manufacturing and shipping companies listed on the first section of the Tokyo Stock Exchange and 900,000 for the manufacturing sector as a whole. If firms were to lay off all of those excess workers, the unemployment rate would jump from the present 3% level to 5%. The Keidanren's survey shows that major steel and shipbuilding companies have already closed some plants and factories, resulting in a 20 - 40% reduction in employment. (See Table 3.)

This is exactly what is expected from the economic adjustment resulting from the yen appreciation. Under the circumstances what is needed is for Japan to close the gaps created by the high yen by taking `positive' action in stimulating her domestic economy. The `positive' action is for the benefit of Japan as well as for the benefit of Japan's trade partners.

4. Capital Movement

Japan experienced net outflow of capital by $37 billion in 1984, $55 billion in 1985 and approximately $70 billion in 1986. The expanded outflow of Japanese capital went mainly to the U.S. in the form of the purchase of securities and other financial instruments. The bond investment in 1985 constituted a more than eight-fold increase over 1984. Financial investments in the U.S. by Japanese institutions represented the `positive' aspect of the

Table 3. Employment Cuts at Major Corporations

	Reduction in number of employees	Share of total staff (%)	Implementation
Iron and Steel			
Kawasaki Steel	5,300	21.6	Apr. 1987-Mar. 1989
Kobe Steel	6,000	21.4	Sept. 1986-Mar. 1989
Nippon Steel	13,000	20.3	Apr. 1987-Mar. 1991
Shipbuilding			
Hitachi Zosen	4,085	39.7	Sept.-Dec. 1986
Ishikawajima-Harima Heavy Industries	6,000	26.1	Oct.-Dec. 1986
Kawasaki Heavy Industries	4,831	22.1	Sept. 1986-Mar. 1988
Mitsubishi Heavy Industries	1,100	2.3	Jan. 1987-Apr. 1989
Mitsui Engineering & Shipbuilding	2,500	23.4	Apr.-Sept. 1986
Sumitomo Heavy Industries	1,700	22.4	Jan.-Mar. 1987
Automobiles			
Isuzu Motors	300	2.0	Nov. 1986-Jan. 1987
Nissan Motor	2,500	4.4	June 1985-Dec. 1986

Source: Keidanren's survey

trade imbalance in goods and services, because they are complementary in supplying much needed funds for the U.S. institutions and in preventing the U.S. interest rates from rising. They not only provided necessary stimulus to the bond and stock markets in the U.S., but also helped manufacturing and other non-financial institutions to invest in physical and real investments.

Figure 4 depicts international transactions of the banking sector. In interbank credit, the proportion of the Euromarket, the U.S. and offshore centers have had high relative weight, while Japan's weight has also risen noticibly in recent years. Japan is increasing playing an important role in the World finance as its trade surplus is channelled into the cycle of world economic development. In this respect, Japan is <u>not</u> Merchantilist!

Investment in external and foreign assets by Japanese residents was liberalized in 1980, and since then the Japanese, particularly, institutional investors such as life and non-life insurance companies participated in the foreign markets with a wide range of investments. Figure 5 shows the outstanding balances of foreign securities held by the institutional investors.

The external financial assets held by a country can be regarded as an accumulated surplus of international balance of payments (current account balance). Many believe that the present huge surplus in Japan's current account is a transitory

phenomenon associated with the "development stage of an immature creditor country". From the macroeconomic point of view, Japan's accumulation of external assets has meaning in terms of "saving for a rainy day", because the present surplus is not the result of incomes generated from the past investments abroad associated with the stage of a "mature creditor nation." The financial aspect of the U.S. - Japan relations is more apparent than the commodity trade aspect. We may simply observe how the Japanese and also American investors acted rationally from the global point of view, selecting optimal combinations of liquidity, return and risk.

Statistics prepared from IMF's publication (Table 4 and Figure 6) can be used to illustrate the U.S. Japan differences in return and risks. The table shows that investment return of U.S. bonds has been relatively high in recent years which induced the Japanese investors to purchase U.S. securities. The risk measured in terms of standard deviation is associated with return higher in U.S. bonds than Japanese bonds. Risk on capital gain/loss is associated with fluctuations of the exchange rate. Japanese investors attempted to avoid such exchange rate risk. Return and risk also depend on both domestic and foreign inflation rates.

5. Industrial Structure and Technology

It is clear that the present imbalance of trade is due to both the "export-prone" nature of the Japanese economy and the "import-prone" nature of the U.S. economy. These "surplus-prone"

Table 4. Comparison of Investment Return

(US bonds are of the uncover type)

Items \ Period	1981	1982	1983	1984	1985 (year)	1985 I	II	III	IV
(US bonds)									
Bond earning rate	14.36	23.63	5.97	13.25	19.74	2.60	36.63	9.13	30.59
Coupon revenues	13.92	13.33	10.95	12.50	10.84	11.38	11.43	10.31	10.24
Trading loss & gain	0.44	10.30	△ 4.98	0.75	8.90	△ 8.78	25.20	△ 1.18	20.35
Exchange earning rate	1.18	2.27	4.83	1.78	△ 7.32	7.00	△ 4.57	△ 8.05	△23.66
Comprehensive earning rate	15.54	25.90	10.90	15.03	12.42	9.60	32.06	1.08	6.93
(Japanese bonds)									
Bond earning rate	10.64	9.69	10.53	9.84	3.92	△ 6.11	14.46	11.94	△ 4.63
Coupon revenues	8.37	8.16	7.82	7.35	6.43	6.54	6.93	6.44	5.83
Trading loss & gain	2.27	1.53	2.70	2.49	△ 2.52	△12.65	7.54	5.50	△10.48
Exhange earning rate	0	0	0	0	0	0	0	0	0
Comprehensive earning rate	10.64	9.69	10.53	9.84	3.92	△ 6.11	14.46	11.94	△ 4.63

Source: Economic Planing Agency (1986).

and "deficit-prone" characteristics are closely related to the corporate behavior in each country.

First we observe that the elasticity of imports of finished industrial goods is much higher in the U.S. than in Japan and that the relative weight of intermediate goods in the overall import of industrial goods is high in Japan, while in the U.S. the relative weight of capital goods and consumer durables is high. (See Table 5). These differences constitute the gaps in the import behavior in the two countries.

Corporate behavior in the two countries may be compared by studying the management objectives in Japan and in the U.S. Table 6 summarizes the comparison of management objectives in Japan and the U.S. The figures are the average scores given in rank order by the respondent (top being 3 points). The U.S. companies emphasize the rate of return and the profit rate as their primary objective, while Japanese managers emphasize the market share objective more than other objectives. "High stock prices" rank as a top priority in the U.S. but it is the least desirable objective for the Japanese companies. American perception of the typical Japanese corporation is that managers take care of workers' welfare. As far as the working condition are concerned, both American and Japanese managers pay very little attention to this problem.

Another revealing aspect of Table 6 shows that Japanese managers emphasize introduction of new products more than their counterparts in the U.S. (1.06 vs 0.21). Japan's export prices

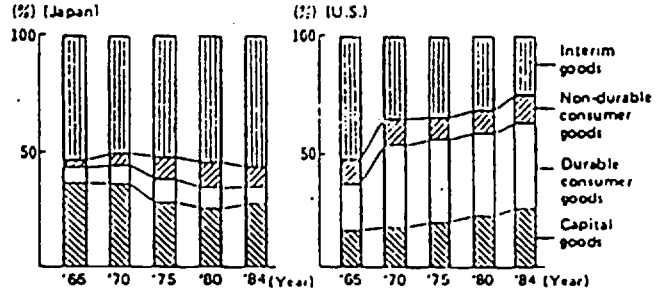
Table 5. Import of Industrial Products in Japan and the U.S.

(1) Trends in demand and import by goods for Japan and the U.S.

(Increase rate of 1984 against 1980, %)

	Japan			U.S.		
	Increase in demand	Increase in import	Increase in import rate	Increase in demand	Increase in import	Increase in import rate
Capital goods	21.5	17.4	△ 3.4	37.9	97.8	43.4
Durable consumer goods	27.5	16.0	△ 9.0	46.5	82.8	23.1
Non-durable consumer goods	17.0	13.4	△ 3.1	28.1	95.8	52.8
Interim goods	4.0	15.8	11.3	18.2	43.8	21.7

(2) Transition in import composition ratio by goods



Source: Economic Planing Agency (1986).

Table 6. Comparison of Management Objectives

Corporate objectives	U.S.	Japan
Rate of return on investment (ROI)	2.43	1.24
Increase in stock prices	1.14	0.02
Market share	0.73	1.43
Improving product portfolio	0.50	0.68
Rationalization of production and physical distribution systems	0.46	0.71
Net worth ratio	0.38	0.59
Ratio of new products	0.21	1.06
Improving the social image of the company	0.05	0.20
Improving working conditions	0.04	0.09

Source: Tadao Kagono, A Comparison of Management of Japanese and U.S. Companies (in Japanese). Tokyo

went up 2.6 times between 1970 and 1984, almost the same rate as the export prices of advanced countries of 2.7 times. The labor cost in yen in the Japanese manufacturing industry went up only 0.2%, due to the high rate of productivity growth compared with 32.5% in the U.S. If we take the present depreciated dollar as the index, the Japanese labor cost rose 31.2%, which implies that, as far as the price competitiveness due to labor cost is concerned, the U.S. and Japan are on par because of the recent appreciation of the yen.

Advantages in quality competition come from many factors-including product design, delivery date, customer service and etc., not to mention the quality of the product. Although it is difficult to substantiate the claim that Japanese products are always better in quality, the low break-down rate, high quality of after-sale service of Japanese cars, and the high resolution of video cassette recorders are the commonly accepted customer perception. These market and "technological" know-hows are responsible for the success of Japanese products.

Japan has already achieved a high state of technological efficiency in the basic materials industry, a high flexibility in small and medium-size subcontracting firms, and general "process" innovations used to improve the existing products to newer and more reliable products. Total Quality Circles movement and Flexible Manufacturing Systems to respond to diversified demands have all contributed to the superiority of Japanese products.

The Office of Science and Technology (Figure 7) estimated the

overall technology gap of Japan with respect to the U.S. and other advanced countries. Although Japan is still behind in the general technology of the other advanced countries, in some areas it has already surpassed them. The "technological power" of Japan is certainly responsible for a high growth rate of Japan's success in export markets.

Japan's surge in the export industry is not by accident. From the historical point of view, Japan now enjoys the third stage of the so-called "product cycle". The development of a given industry is supposed to undergo a product cycle of importing, import substitution, export growth, maturity and reverse import. The Japanese export industry is now at the third stage or export growth phase, where the growth of the domestic demand slows down but production increases and export surges (Vernon and Akamatsu). The product cycle is usually associated with changes in quality, investment and technology cycles.

OECD statistics are usually used to indicate a clearer picture of the product cycle theory. (Though we will not reproduce them here because of the limitation of space). It is known that large export products such as steel, televisions, automobiles, and machine tools are already approaching the mature stage in Japan, while semiconductors and computers are still in the growth stage, while aircraft is in the infant and importing stage, but apparel and furniture are in the reverse importing stage. In the U.S., the product cycle in these industries proceeded the Japanese cycle, which explains why Japan tends to export more than the

U.S.

Perhaps South Korea may become the most fierce competitor to Japan and therefore to the U.S. South Korea has been steadily narrowing the gap in technology vis-a-vis Japan, the United States and Europe. For instance, direct foreign investments in South Korea increased sharply from $150 millions per year on the average between 1970 and 1975 to $300 millions between 1981 and 1985. Technology import from Japan was $16 million in 1975, but reached $63 million in 1984.

In adopting the strategy of global production and building their production bases outside the U.S., the major U.S. corporations caused the so-called "Hollowing-Out Effect" in America. Electric machinery, transportation machinery and other traditional manufacturing industries moved their production and distribution facilities overseas.

The "Hollowing-Out" resulted in decline in the technological capabilities of the industries that remained in the U.S., which is also responsible to the one-sided surge of imports. Changes in the relative position in the overall technological competitiveness are partly responsible for the long-term imbalances. Figure 8 depicts relative competitiveness measured in terms of export price index. After the end of 1980 the Japanese competitivness steadily improved over the U.S. competitivness, while S. Korea proves to be a strong competitor to Japan.

The difference in the income elasticity of export among Japan, tne U.S. and S. Korea (see Table 2 i.e. Japan=2.21, U.S.=1.13 and

S. Korea=4.2) suggests that these three countries are at different stages of the product cycle. Also trade (im)balance of each country is strongly related with the competitiveness (price index) and the export elasticity (See Figure 9) That is, the U.S. current account has been deteriorating steadily since the early 1960s, while the S. Korean current account has been improving and Japan can basically maintain surplus since the beginning of 1970 except for the periods of energy crises. If Japan is unable to develop new growth in product innovation in the future, it is very possible that it will move into the stage of maturation like the U.S.

The exchange rate and real wage rate and competitiveness are closely related. When we compare the wage rate at Y260=$1, which is the exchange rate in February 1985, the wage rate in Japan becomes 54% of the U.S. wage rate, the exchange rate in May, 1987 is Y140=$1. If we use this base, the Japanese wage rate is almost equal to the U.S. wage rate. Japan's wage rate vis-a-vis S. Korea was approximately 4 times in 1984. Now it almost doubled in 1987.

The yen appreciation has also had the effect of shortening the product cycle. This may be seen from the comparison of productivity difference among the three countries, Japan, the U.S. and S. Korea. (See Figure 10) In steel and nonferrous metals industries, the S. Korean productivity growth is so high that neither the U.S. nor Japan can ever catch up to it. S. Korea has achieved the position of superiority in a much shorter

period than any other country.

The main characteristic of Japanese technological development has been first to import technology from abroad and then to add process innovation for quality improvement and cost reduction. Thus,Japan was able to catch up to Western technology by adopting the imitation and latecomer strategy. The second advantage that Japan had in developintg her own technology of process innovation was that products were mainly for the use of the private sector and for non-defense related use. In the United States, on the other hand R & D as a whole has been directed mainly toward defense research, and scientists and engineers have closely worked for the defense-related industries. Looking at R & D expenditures financed by the government in various countries, Japan and the U.S. have almost identical figures of approximately 0.6% of national income, while European countries like W. Germany and France spend much more. The tax burden in Japan and the U.S. are also very similar.

One advantage of Japan is obviously that Japan could almost freely use the basic technology developed by other advanced countries, notably the U.S. The basic technology usually results from the non-commercial or defense-related R & D expenditures.

Technology and productivity are closely related and so are productivity and employment systems. The Japan Productivity Center's recent survey (Figure 11) compares how Japanese and American management views individual ability development. Japanese companies show a stronger tendency in actively

encouraging their employees to develop new skills than American companies. Also Japanese corporations look at the effect of educational training from the long-term point of view. This is understandable in view of the fact that Japan has the custom of "lifetime" employment system. Also "On the Job-Training" is much more emphasized in Japan than in America. These management practices may have the indirect effect on the strength of the Japanese corporation and thus on the trade imbalance ultimately.

6. Trade Barriers and Openness of the Japanese Market

In an effort to sidetrack the protectionist sentiments growing in the U.S. and to give the impression that progress was being made in opening up the Japanese marketplace to American goods and services, the Nakasone government announced "The Action Program for Improved Market Access" in July 30, 1985. The Official Government Bulletin of the Japanese government published in April 1987 assesses the results of the "action" taken by Japan. As "the Action Program is hard to sum up briefly because it is so comprehensive and it is even harder to evaluate the program's impact quantitatively, hence the charge that it has had only a cosmetic effect," the publication cites three examples where progress is made and improvements are forthcoming: telecomunnications equipment, automobiles, and wine.

Example 1 : The telecommunication market was liberalized in April 1985 when Nippon Telegraph and Telephone (NTT) was made a private corporation. The Action Program removed all tariffs on telecommunications equipment in January 1986. The number of

technical standards for terminal equipment was reduced from 53 to 21. As a result, approvals for foreign terminal equipment jumped from 25 cases in 1984 to 103 cases in 1985. Japan communications satellite placed an order with Hughes Communications for two satellites and related ground facilities. In December 1985, NTT reached a contract with Northern Telecom Inc. for the purchase of digital switching system - the first foreign purchase. Ford Aerospace Communications succeeded in the sale of communication satellites to Japan. These purchases amounted to the increase of Japanese imports by $800 million.

Example 2 : (Automobiles): Tariffs on finished automobiles were completely eliminated in April 1978. Tariffs on automobile parts were virtually abolished by January 1986. The effect of the Action Program is seen as the doubling of import value for one year. Figure 12 shows a sharp increase of imported cars after the Action Program was implemented. But it is noted that imports of the U.S. made automobiles has virtually unchanged, while a sharp increase of imports came from European cars. This is considered as a reflection of preferences of Japanese consumers.

Example 3 : (Wine): Under the Action program the tariffs on imported wine was reduced to 20% in April 1986, and 30% in April 1987. Imports of American wine have risen from 1,333 kiloliters in 1984 to 2.504 kiloliters in the first 11 months of 1986.

Generally speaking, Japan's tariffs on imported goods have been the lowest among advanced countries. On January 1, 1986, tariffs on 1,849 items were either completely eliminated or reduced by an

average of 20%. Non-tariff barriers such as import restrictions, standard and certification systems have also been eliminated. The so-called Moss negotiations (Market Oriented Sector Selective) between the U.S. and Japan have also contributed to the elimination of not only tariffs but also non-tariff barriers. Standards and certification systems and import procedures are established in any country to protect life and health, consumer interests, the environment, and cultural and traditional values to a certain extent. To take account of the average physical size of the Japanese, a cold medicine, "Contac", made in Japan is 60% less in size and potency than in the U.S.A. Japan now accepts more foreign test data than ever before and recognizes the results of foreign testing organizations. Foreign companies also have easier access to the JIS (Japan Industrial Standards) marks on the manufactured goods.

Representatives of foreign interests in Japan have taken part in meetings of 51 councils to express their views, and 617 foreign representatives have participated in the "standard-setting committees." In many cases when standards are changed,it is not the U.S. but other advanced countries and some developing countries that benefit the most, thereby resulting in a relative decline of American imports.

Government procurement has also increased by nearly 80% according to the Bulletin. But like the case of the Kansai Airport construction, many American contractors want to participate in the market simply by subcontracting with Japanese

and/or foreign (mostly Korean) subcontractors. In other words, American contractors do not directly or indirectly use their comparative advantage.

Financial and capital markets have also been liberalized. The government began public offerings of Japanese Treasury Bills for the first time in 1986. The Action Program has given foreign financial institutions improved access to Japan's market. Nine foreign banks have already received licenses to engage in trust banking and the Tokyo Stock Exchange admitted 10 new members, six of them foreign securities companies.

Even a journalistic article from Tokyo correspondents of major American newspapers concede that the Japanese are importing much more, but that the U.S. lags compared with other countries. The May 16, 1987 issue of the New York Times reports that although the Nakasone government's campaign to buy foreign goods has been succeeding, imports from the United States have not increased dramatically. Imports from Europe and such newly industrializing countries as Taiwan and S. Korea have shown far larger gains. The explanations for the relative lag in American imports vary widely, but American goods face a distinct image problem in Japan. Where European goods have an image of luxury and craftmanship and Asian goods have compelling price advantages, the Japanese suspect the quality of American goods with higher prices - American goods do not have a brand-name image. (This point is also confirmed by Figure 12).

Some Japanese blame American companies for not trying hard

enough to modify their products to Japanese taste. For example, few foreign companies were willing to modify dress patterns in order to make them fit better to Japanese bodies. But there are many success stories in Japan. Mister Donut, which has changed its doughnut recipe to make them less sweet in Japan, is one of the most successful companies in Japan. Table 7 shows examples of successful American businesses in Japan.

7. Looking Ahead

There are some encouraging signs on the horizon to reduce the trade imbalance. Trade statistics released by the U.S. Commerce Department in the beginning of May, 1987 shows that American exports to Japan continued to increase in March 1987 rising to $2.14 billion, from $2.03 billion in February. Japan bought 12.6 percent more goods from the U.S. in 1986 that in 1985.

The strong yen is causing many Japanese companies to "reimport" their own products from the United States. For example, the Honda Motor Company is considering reimporting passenger cars produced in the U.S.

One important statistic shown in Table 8 is that although total import value in 1986 decreased by 2.3%, it came largely from the reduction of oil prices. The import value of fuels decreased by 33.6%, while practically all the other items in import have increased ranging 97% increase in motor vehicles and 52.4% increase in nonmetal mineral products. The import value of manufactured goods has a hefty increase of 31.3% in 1986, now comprising 41.7% of total imported value.

The Japanese government as well as the business community has been obsessed with the idea that the government budget has to be balanced, before measures for expansionary domestic demand are adopted. Mr. Inayama's "Gaman-no-Testsugaku" was the philosophy often said to be responsible for this sentiment, as mentioned in the beginning of this paper. The consensus was, then, first close the gap of the budget deficit by implementing indirect taxes, specifically European value-added tax system. The government proposal of this new tax submitted in the fall of 1986 was completely defeated by the objection of the opposition parties and the so-called "people's power." This is fortunate from the long range point of view, because a bigger government is usually associated with the value-added tax system as evidenced by the European countries. The problem here is that the Japanese government and the ruling LDP party have spent practically their total political energy on the passage of the tax law, rather than, the passage of import stimulating measures. Here is the case of a priority gap between the U.S. and Japan. The U.S.'s priority was to see that Japan spends more effort on reducing the trade imbalance, rather than on instituting a new tax system which will in many cases reduce domestic effective demand. The Japanese priority was, first, to institute a new tax system which will enable the government to expand public expenditures at a later stage.

It is hard to project what the Japanese government will do to stimulate domestic demand, other than saying "specific measures

have already taken...", because the fundamental philosophy and mentality have not changed, even with the strong appreciation of the yen and Reagan's tariff on certain electronic products.

Rice Deregulations:

In September 1986 the U.S. Rice Miller's Association surprised many Japanese by filing a complaint with the Office of Trade Representatives, charging that Japan's rice policy constituted an unfair practice. Since rice, the staple of the Japanese diet and the mainstay of the farm sector, has been granted a waiver under the GATT agreement, this U.S. move had not been anticipated. The nature of agriculture in any country is shaped by that country's history, climate and topography and the people's dietary habits and cultureal patterns. But Japan today is faced with the need to build up a highly productive and competitive agricultural sector. Even the Keidanren now recognizes this need for change. Their projection suggests that it will take five to ten years before the Japanese farms can be reorganized into considerably larger units. The current policy for preventing a rice surplus has discouraged farmers from working to improve productivity and reduce costs of operation. Together with the improvement of the distribution system, the Japanese agricultural sector must be developed to a viable industry. The basic difference we should observe in dealing with less productive sectors of the Japanese economy compared with the method of coping with such sectors in the U.S. is that Japan tries to improve that sector rather than conceding to the foreign pressure and importing rice from say,

the U.S. The traditional comparative cost theory suggests that Japan abandon the agricultural sector, while the U.S. abandons some sector less efficient. This approach is valid, provided that the Japanese agriculture will never be more productive in the long run. American industries tend to abandon the sector without even trying. This is another reason why Japan tends to win a competitive edge over the other country, even in the area where there exists an obvious disavantage in Japan. This does not suggest that Japan's agriculture will be more competitive than the U.S. in the near future.

This being the case, the U.S. should not expect that Japan will open the agricultural market now, which will improve the trade imbalance. In fact, the U.S. should expect that Japan will fight to the tilt to preserve the traditonal sector, while paying much attention to make the sector more productive and competitive. The Keidanren's proposal of the two stage approach (the first stage = partial private production and the second stage = reduction of the government control of rice) is exactly the Japanese method of solving the rice problem.

The Mayekawa Report and Restructuring

The Mayekawa report also suggests the expansion of domestic demand, but Mayekawa himself concedes that "a serious policy concern relating to domestic demand expansion is how to do it..." (Recent speech at the Center for Japan-U.S. Business and Economic Studies at New York University on April 10, 1987). This is due to:

(i) Budget deficit of the Japanese government;

(ii) High and rising land prices which are the major impediment to the housing and construction industry;

(iii) Japan's existing "export-prone" structure itself;

(iv) Regulations for domestic expansion such as in housing and other construction industries.

The Keidanren maintains that at the current rate the yen is clearly overvalued and should be stabilized to a more appropriate level and that the government should make some effort to realize such an appropriate level. At the same time the U.S. should be more concerned about its budget deficit. Unless some effective measures are taken immediately, the "Hollowing-Out" of the Japanese industries will be unavoidable like the case of many U.S. industries. Japan's total direct overseas investment exceeded $10 billion in fiscal 1984 and reached $12.2 billion in 1985. What does this do to Japan and the rest of the world? Certainly it will increase some form of "hollowing-out" effect to Japan but it will bring more jobs to other countries.

Japan still has a long way to go in terms of real improvement in the standards of living. Problems of social capital, and housing being the number one priority, cannot be solved overnight. There is a group of economists who advocate the efficient use of savings (i.e. investment in physical capital) within the domestic territory of Japan, for improvement of social capital and housing accomodation, while realizing that some savings must certainly be invested abroad. However, it is easily

said but very difficult to be done. Japan's future is as difficult as eliminating the imbalance of trade with the rest of the world.

Table 7. Successful American Businesses in Japan

Examples of Successful American Businesses in Japan

Product	Name of manufacturer	Market share (%)
Carbonated beverages	Coca-Cola	60
Powdered soup	CPC International Inc. (Knorr)	80
Canned soup	CPC International Inc. (Knorr)	30
Breakfast cereals	Kellogg	80
Ointment	Johnson & Johnson	31
Floor wax	S.C. Johnson & Son, Co.	30
Car wax	S.C. Johnson & Son, Co.	20
Deodorants	American Drug	59
Odorants	S.C. Johnson & Son, Co.	21
Bulldozers	Caterpillar Tractor	43
Panel heaters	Koehring, Hosty Corp.	50
Computers[a]	IBM	40[b]
Instant cameras	Polaroid	45
Instant cameras	Eastman Kodak	45
Stem wine glasses	Owens-Illinois Inc.	60
Tupperware	Rexall Drug & Chemical Co.	30

Source: MITI

Table 8. Trend of Japanese Imports

	1984		1985		1986	
	$ million	% change from 1983	$ million	% change from 1984	$ million	% change from 1985
Total Import Value	136,503	+8.0%	129,539	−5.1%	126,498	−2.3%
Import Value of Fossil Fuels	60,337	+2.4	55,790	−7.5	37,033	−33.6
Import Value of Manufactures	40,614	+18.2	40,157	−1.1	52,746	+31.3
Medical products	1,258	+3.6	1,292	+2.7	1,714	+32.7
Organic chemicals	2,423	+14.8	2,411	−0.5	2,843	+18.0
Plastics	763	+13.6	744	−2.4	981	+31.7
Office machinery	1,362	+32.8	1,545	+13.4	1,704	+10.3
Tubes & semiconductors	1,293	+42.2	1,016	−21.5	1,216	+19.7
Motor vehicles	500	+14.8	571	+14.2	1,124	+97.0
Aircraft	928	−36.9	1,484	+59.8	1,777	+19.8
Scientific optical instruments	947	+19.8	929	−1.8	951	+2.4
Iron & steel products	1,912	+41.7	1,479	−22.6	1,760	+19.0
Textiles	3,875	+29.7	3,886	+0.3	5,024	+29.3
Nonferrous metal products	4,700	+13.9	4,041	−14.0	3,652	−9.6
Nonmetal mineral products	1,201	+9.1	1,264	+5.2	1,927	+52.4
Manufactures as % of Total Import Value	29.8%		31.0%		41.7%	
Volume Index (% change from previous year)						
All imports	+10.8%		+0.4%		+12.5%	
Manufactures	+20.2		+1.8		+24.6	

Sources: Official Government Bulletin, April, 1987

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Appendix 1: Factor Analysis

Growth gaps are computed from export and import functions for Japan and the U.S.A. (See Economic Planning Agency [1986]):

Export

Japan:

$$\ln(REJP) = -12.682 + 2.210 \ln(RDWJP) \quad (-8.411) \quad (12.397)$$

$$+ \sum_{i=0}^{4} \{\alpha_i \ln (EPJP)\}$$

$$\alpha_i : \sum_{i=0}^{4} \alpha_i = -0.844 \quad (-5.199)$$

$$\overline{R^2} = 0.886 \quad S.E. = 0.064 \quad DW = 0.833$$

U.S.A.:

$$\ln(REUS) = -3.119 + 1.133 \ln(RDWUS) \quad (-2.999) \quad (9.032)$$

$$+ \sum_{i=0}^{4} \{\alpha_i \ln(EPUS)\}$$

$$\alpha_i : \sum_{i=0}^{4} \alpha_i = -0.918 \quad (-12.425)$$

$$\overline{R2} = 0.832 \quad S.E. = 0.033 \quad DW = 1.387$$

Import

Japan:

$$\ln(RIJP) = -5.812 + 0.725 \ln(RDJP) \quad (-4.274) \quad (8.639)$$

$$+ \sum_{i=0}^{4} \{\alpha_i \ln(IPJP)\}$$

$$\alpha_i : \sum_{i=0}^{4} \alpha_i = -0.281 \quad (-24.540)$$

$\overline{R2}$ = 0.701 S.E. = 0.035 DW = 0.843

U.S.A.: $\ln(RIUS) = \underset{(-\ 8.264)}{-\ 16.390} + \underset{(11.454)}{1.687}\ \ln\ (RDUS)$

$$+ \sum_{i=0}^{4} \{\alpha_i \ln(IPUS)\}$$

$$\alpha_i : \sum_{i=0}^{4} \alpha_i = \underset{(-\ 5.245)}{-\ 0.871}$$

$\overline{R2}$ = 0.912 S.E. = 0.041 DW = 0.837

Where:

REJP = Japan's exports in real terms (Dollars)
REUS = U.S.A.'s exports in real terms (" ")
RIJP = Japan's imports in real terms (" ")
RIJS = U.S.A's imports in real terms (" ")
RDWJP = World's imports - Japan's imports in real terms
DWJS = World's imports - U.S.A.'s imports in real terms
EPJP = Relative Export Price Index of Japan
EPUS = Relative Export Price Index of U.S.A.
RIJP = Japan's Real Imports

RIJS = U.S.A.'s Real Imports
RDJP = Real GNP of Japan
RDJS = Real GNP of U.S.A.
IPJP = Relative Import Price Index of Japan
IPUS = Relative Import Price Index of U.S.A.

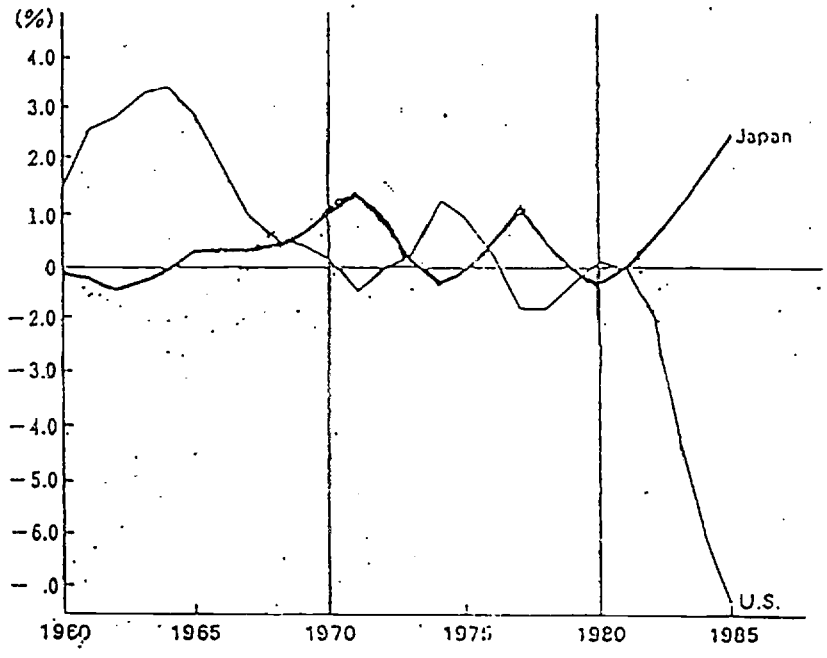
Appendix 2 : J-Curve Effect

The increase in Japan's trade surplus attributable to the yen's appreciation is calculated from the following table: (See Economic Planning Agency [1986]):

J-curve Effect

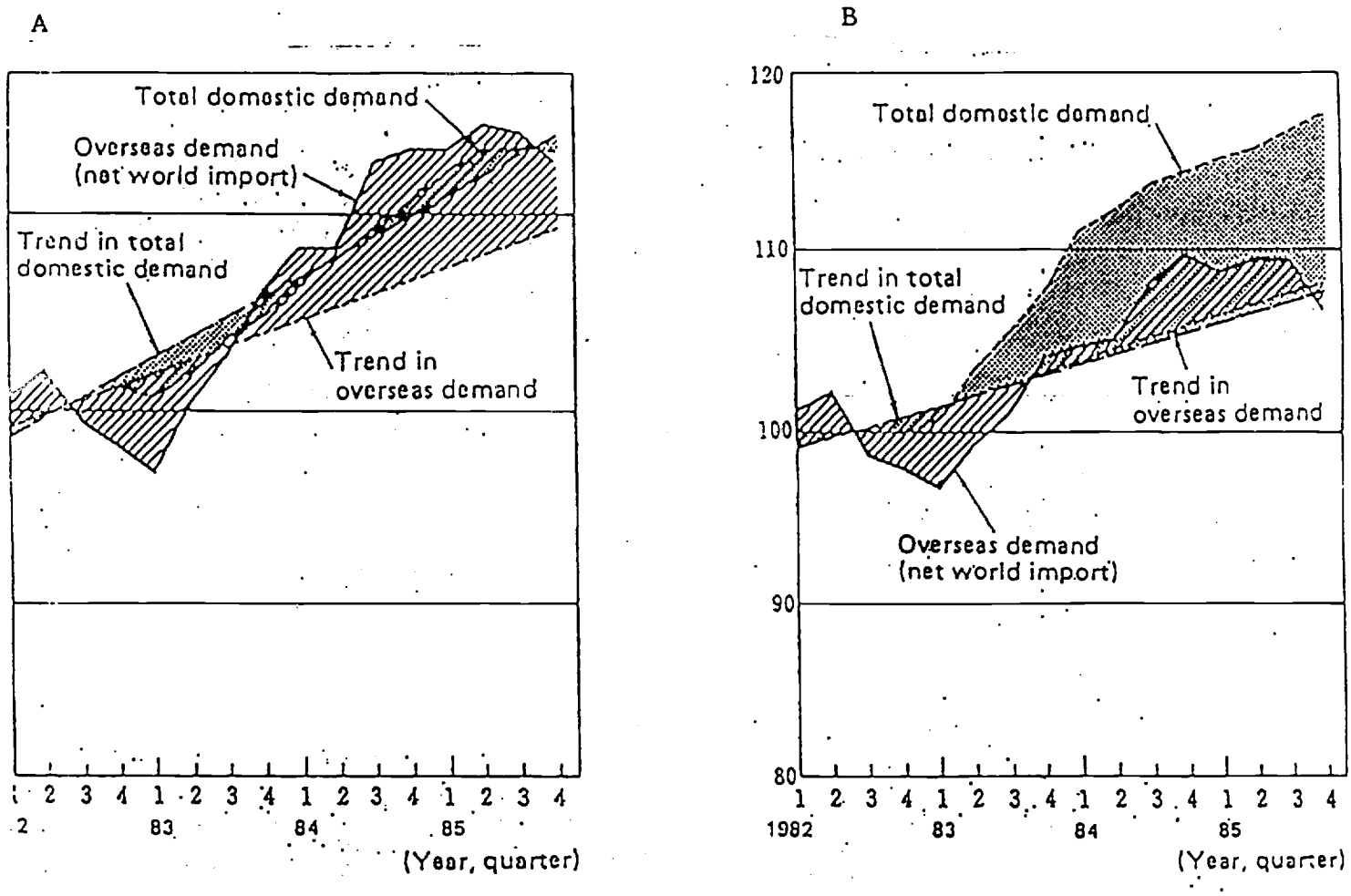
Period		Oct-Dec 1985	Jan-Mar 1986	Apr-June 1986	1985
J-curve for Oct.-Dec. 1985	Exports	1,293	2,178	1,018	3,471
	Imports	81	220	386	301
	Balance	1,212	1,958	632	3,170
J-curve for Jan-Mar. 1986	Exports		938	1,580	938
	Imports		58	159	58
	Balance		880	1,421	880
J-curve for for Apr.-June, 1986	Exports			968	
	Imports			58	
	Balance			910	
Combined J-curve	Exports	1,293	3,116	3,566	4,409
	Imports	81	278	603	359
	Balance	1,212	2,838	2,963	4,050

Figure 1. Trade Imbalances of Japan and the U.S.A.



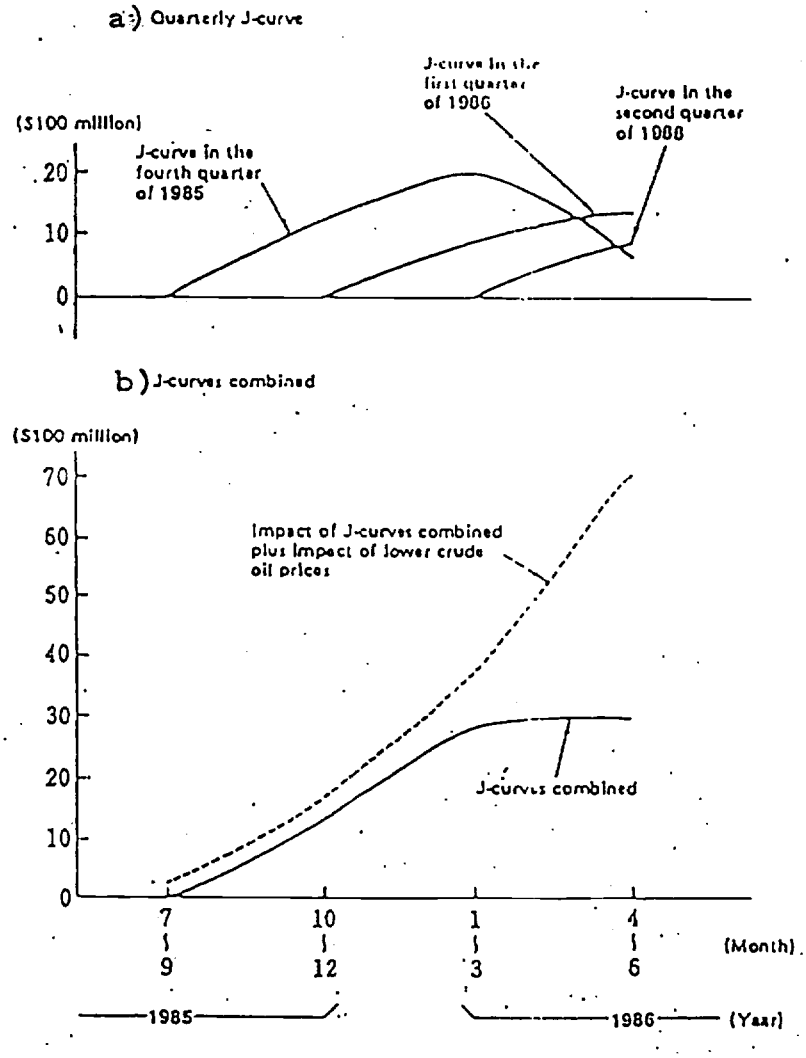
Sources: Calculated from Economic Planning Agency [1986] and IMF's statistical year books.

Figure 2. Growth Gaps in Japan and the U.S.A.



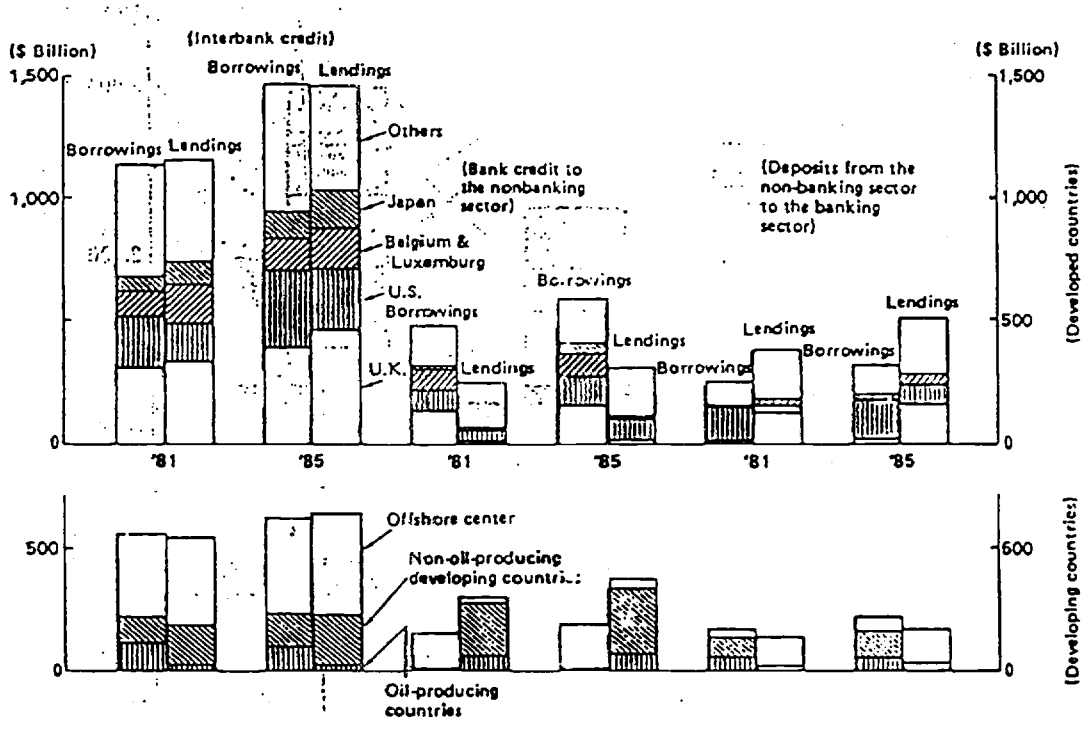
Sources: IMF's statistics and Economic Planning Agency's regression analysis [1986]

Figure 3. J-Curve Effect



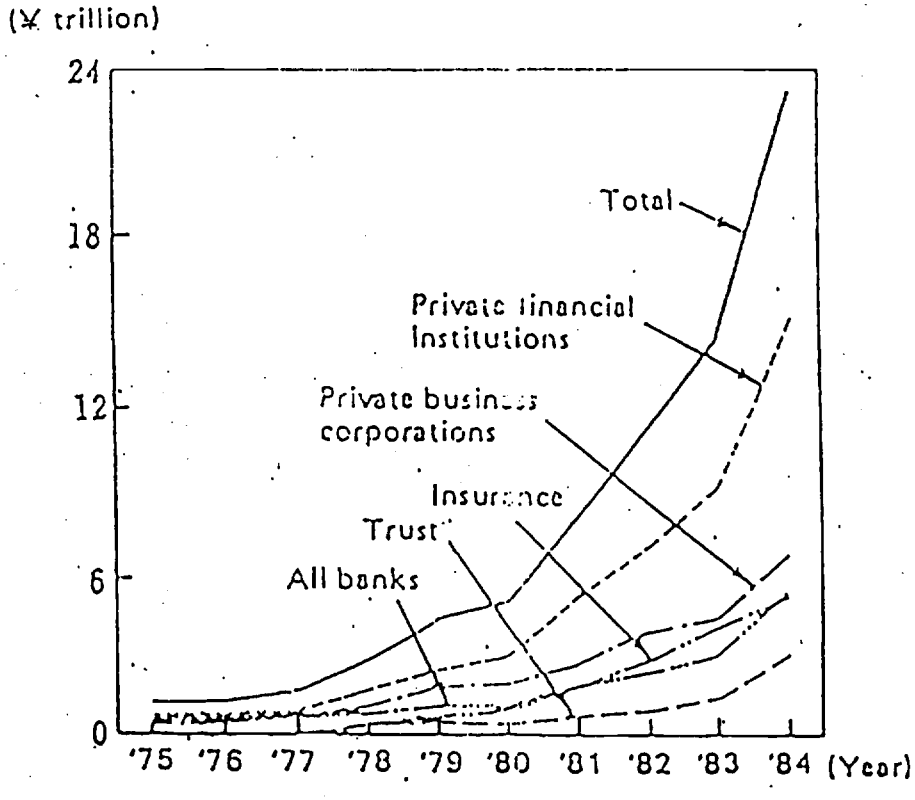
Source: Economic Planning Agency [1986].

Figure 4. International Banking Transaction



Source: IMF's "International Financial Statistics"

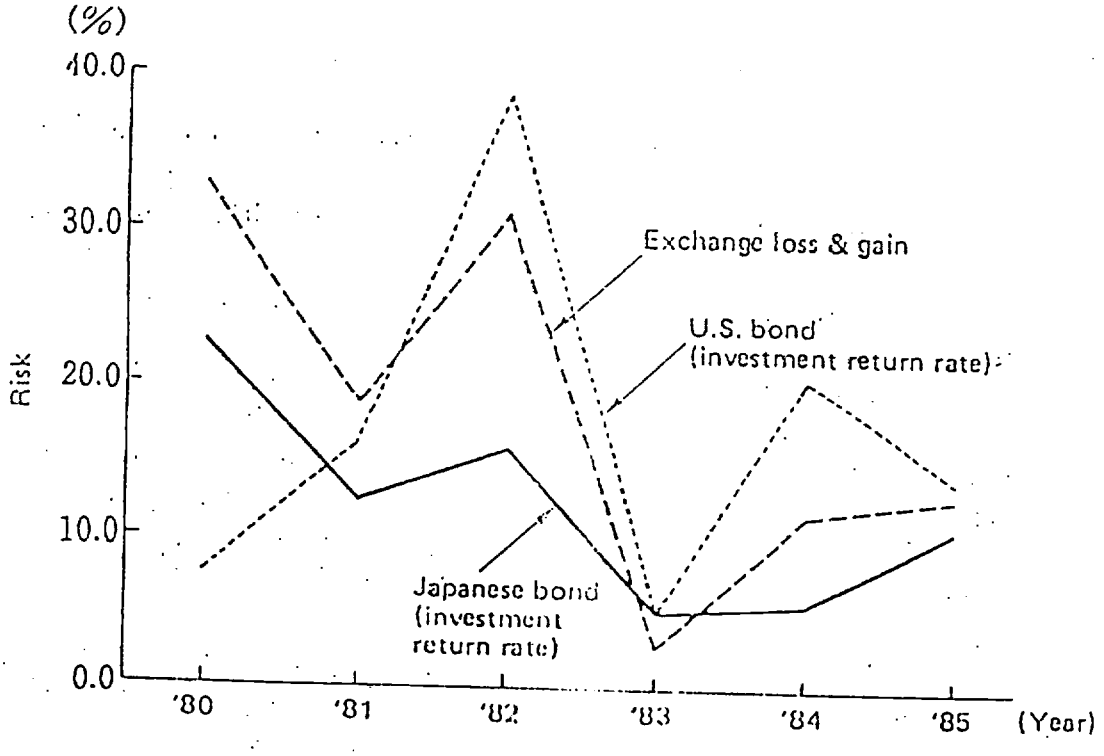
Figure 5. Japanese Investment - Foreign Securities



Source: "Annual Report on National Economic Accounting"
Economic Planning Agency, and

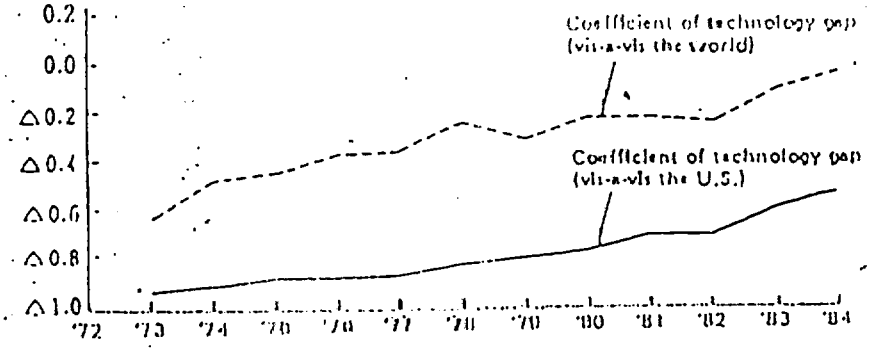
"Economic Statistical Monthly"
Bank of Japan

Figure 6. Risks of U.S. and Japanese Bonds



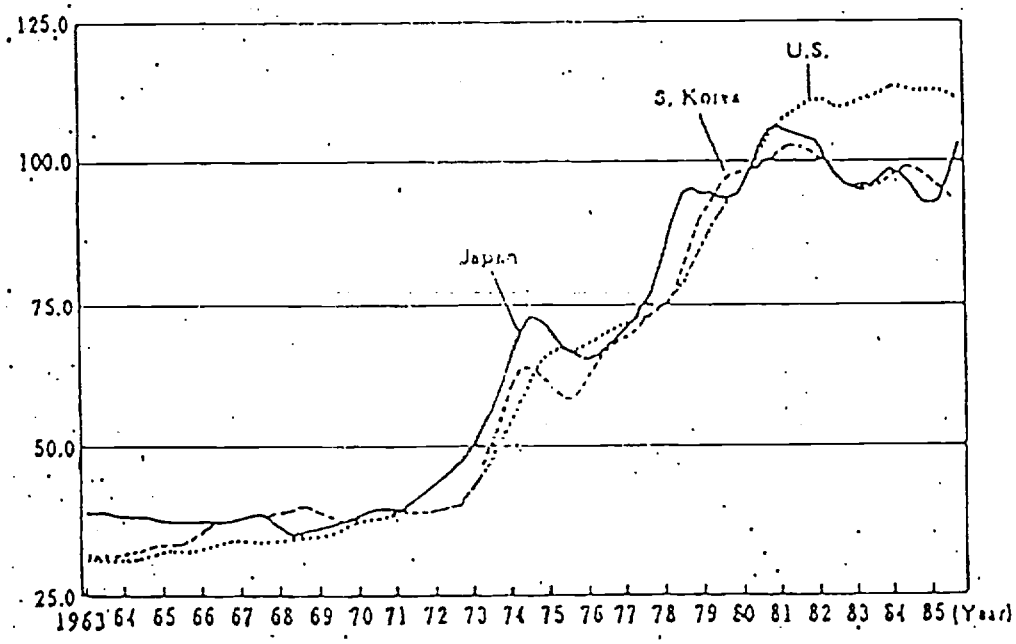
Source: Economic Planning Agency [1986]

Figure 7. Technology Gap



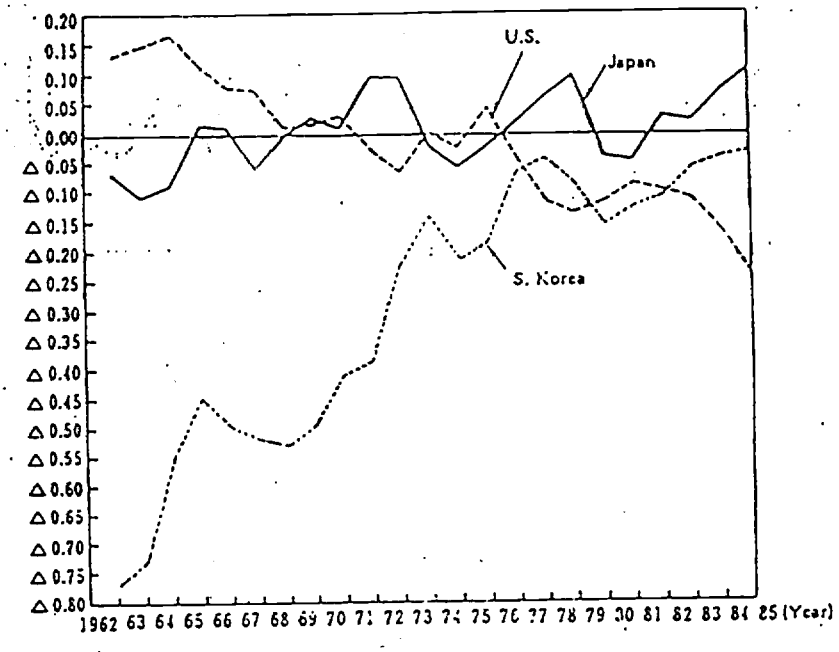
Source: Economic Planning Agency [1986]

Figure 8. Export Price Index



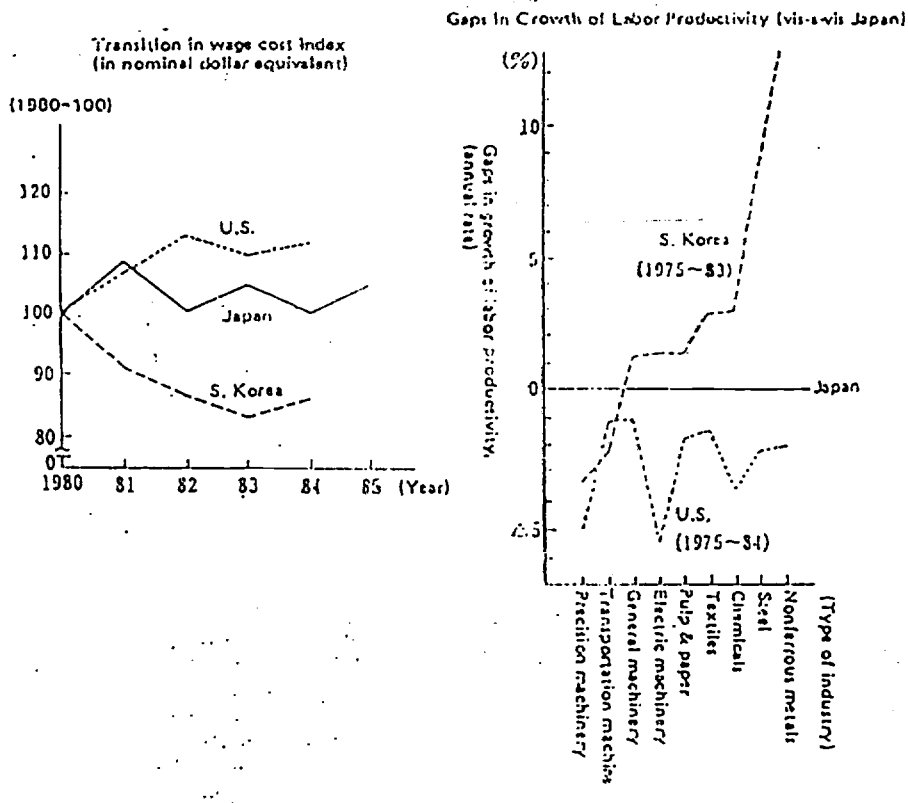
Source: IMF's International Financial Statistics

Figure 9. Imbalance of Trade for Japan, the U.S.A. and S. Korea



Source: U.N. Foreign Statistics

Figure 10. Comparison of Productivity and Wage Cost Index

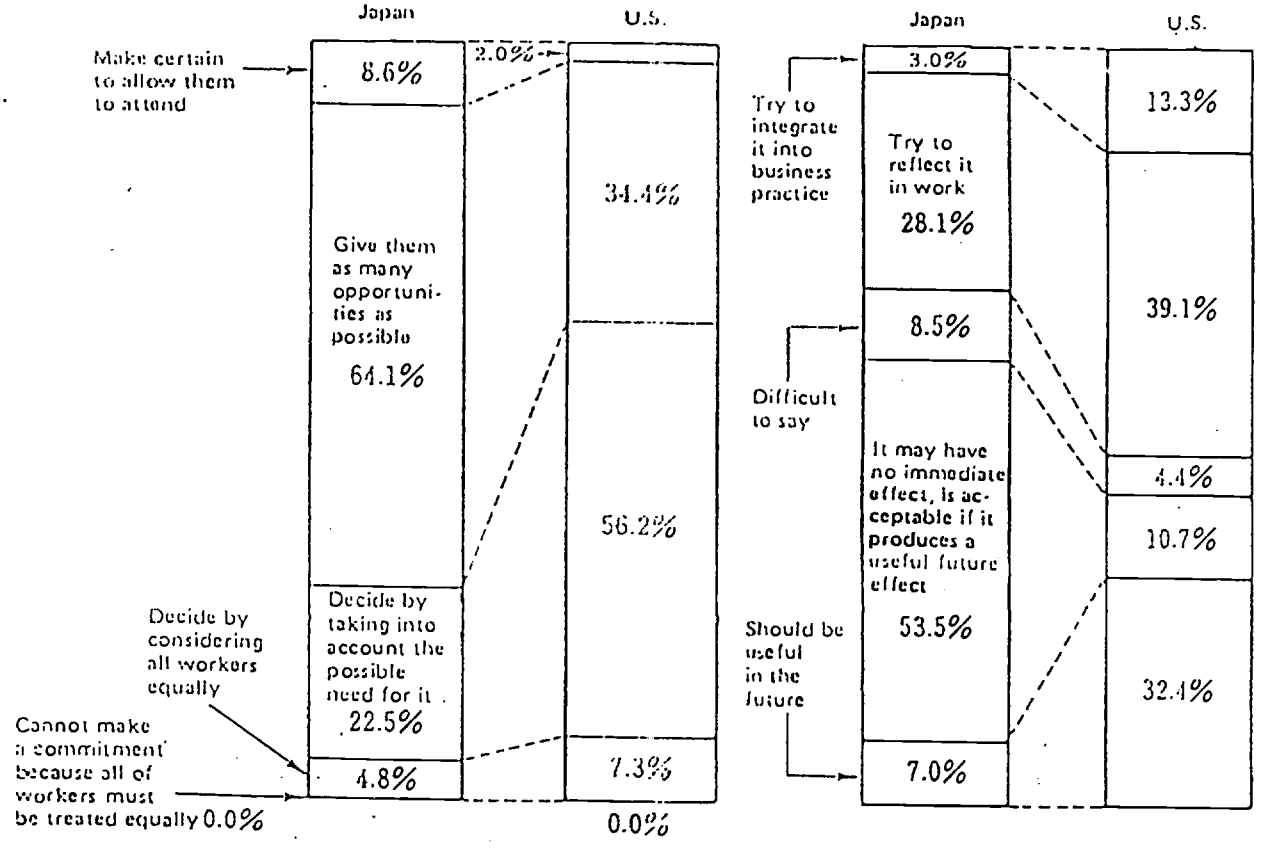


Sources: ILO "Yearbook of Labour Statistics"

IMF "International Financial Statistics"

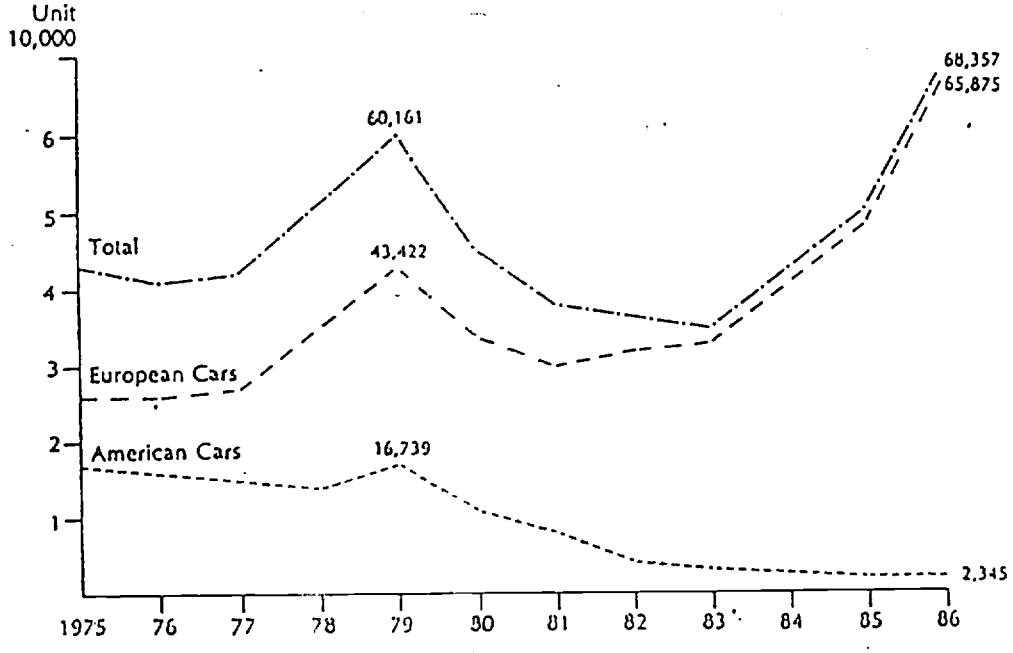
MITI "Index of Industrial Production"

Figure 11. Comparative Study of Japanese and American Management



Source: Japan Productivity Center

Figure 12. Initial Registration of Imported Cars



Source: Japan Automobile Importers' Association