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CENTER DISCUSSION PAPER NO. 50

JAPANESE GOVERNMENT MACRO POLICY:
FAILURE IN THE 1920's, SUCCESS (of a sort) IN THE 1930's

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Japanese Government Macro Policy:
Failure in the 1920's, Success (of a sort) in the 1930's*

The Japanese historical case is often cited as an example of active and effective government stimulation of economic growth, by fostering a market environment conducive to sustained expansion of output by private enterprise. The experience of the interwar period (between World Wars I and II) suggests, however, that such a generalization is too facile. In this essay I take up one aspect of the government's role. It is my contention that the Japanese government's muddled objective to return to the gold standard at pre-World War I par, and the attendant deflationary fiscal and monetary policies taken in the 1920's, were responsible for much of the retardation of growth in that decade. While the radical change in objectives, and concomitantly in fiscal and monetary policy, resulted in rapid growth from 1932 to 1936, and thereafter for a few more years, by then it was too late: the military were increasingly entrenched in control of the government, on the path toward the devastation of World War II. I thus focus upon government macro policies in the fiscal, monetary, and exchange rate arenas, excluding other areas of government policy. I proceed first by describing briefly the interwar economy, next by discussing the macro policies, and finally by raising some of the broader issues of the relationship

*A substantial portion of this essay is based on a paper entitled "Dilemmas of Growth in Prewar Japan", prepared for the sixth meeting of the Conference on Modern Japan held at Fajardo, Puerto Rico, January 2-7, 1968. I am indebted to Yoshiko Kido for research assistance.

of economic policy to the course on which Japan found itself in the 1930's.

The literature on the Japanese economy refers to the 1920's as a period of lagging or faltering growth. Relative to both the long-run trend (since 1885) and to the World War I boom this certainly is correct, as demonstrated in Table 1.

Table 1: Growth Rate of Real Net Domestic Product
per Decade (per cent)

1880-1890	29.5	1910-1920	61.5
1890-1900	67.6	1920-1930	33.4
1900-1910	42.7	1930-1940	72.1

Note on Table 1: Based on midpoint of five-year averages.

Source: Derived from Yujiro Hayami and Saburo Yamada, "Agricultural Productivity at the Beginning of Industrialization", presented at Agriculture and Economic Development: A Symposium on Japan's Experience, July 3-7, 1967, Appendix C (Tentative Estimates of National Income and NDP at Market Prices).

The facts¹ of growth of Net Domestic Product and of agriculture and manufacturing--the two major components for which relatively good data are available--suggest the following. First, the growth of NDP throughout the 1920's was indeed moderate but on the whole respectable, at a peak-to-peak (1919-1928) annual rate of 3.2 per cent, and trough-to-trough (1920-1930) rate also of 3.2 per cent. During the 1930's, however, growth was considerably more rapid: 5.5 per cent annually between 1928-1938 (the rate between 1930-1938, 5.9 per cent, is somewhat misleading since 1930 was at the bottom of re-

cession while 1938 represented continued high growth).

Second, the increase in NDP during the 1920's was entirely in manufacturing and services; as a trend value added in agriculture did not rise at all. Not only was the stagnation of agriculture the dominant contributor to the retardation of the overall growth rate, it had important implications for intersectoral relationships and for the growing agrarian distress. This very poor agrarian performance was true both of the 1920's and the 1930's.

Third, the year-to-year growth rate of NDP fluctuated considerably. The absolute decline of 1920 was followed by a short-lived boom, the Tokyo-Yokohama earthquake of 1923 by another short-lived boom, while 1929-1930 saw another absolute decline (though the statistics indicate a substantially less drastic decline than my conventional impression). Thereafter, the growth rate was rapid, except for a brief slowdown in 1934. Probably methods for estimating NDP (especially manufacturing value added) understate the actual degree of cyclical instability. For example, Professor Yasuba's index of industrial production, while not substantially different in results for the period 1919-1935 as a whole from that of Professor Shionoya, measures an absolute decline of 1.4 per cent in manufacturing value added in 1930 and particularly 1931 (a further 5.5 per cent). Moreover, the NDP figures mask what happened in the major goods-producing sectors. Agricultural production fluctuated rather widely, and real value added in agriculture even more (reflecting changes in the real

prices of output and of current inputs--fertilizers, etc.).

These aggregate results carry over directly into per worker and per capita terms. NDP per worker increased by 93 per cent between 1919 and 1938, and relative to total population by 78 per cent, with most of the growth occurring in the 1930's. Agricultural output per worker increased very slowly, and then only really after 1934 (when some decline in the agricultural labor force began).

Average personal consumption per worker and per capita also rose moderately, though less rapidly than NDP since a higher proportion of output was devoted to government expenditures and private investment.² Per capita average consumption grew only 5 per cent between 1922 and 1928 peaks, but subsequently declined almost as much to the low in 1932; the real increase came only thereafter. Moreover, this average level of living disguises what probably was an increasing inequality of living standards. The benefits of growth apparently accrued mainly to owners and employees of large-scale enterprise, skilled workers, government officials, landlords, and professionals, while workers in small-scale manufacturing and service establishments and most farmers had no improvement, and even declines. For them productivity was virtually constant, and real wages (deflated for changes in the cost of living), which remained high in the 1920's, declined in the Great Depression and were slow to rise thereafter. It was this problem of income distribution, rather than substantial overall declines in output, that would seem to account for the distress and tensions of the

period.

Why did this occur? One answer lies in the nature of economic performance in agriculture and manufacturing respectively. The striking change is the slowdown in agricultural output (in both total production and value added). This is due almost entirely to a slowdown in the growth of total productivity, since there was only a small decrease in the rate of growth of total inputs (a weighted average of land, labor, capital, and current inputs such as seeds and fertilizers). Current inputs actually increased, and capital inputs grew at about the same rate as earlier (though notably not trees as the silk boom finally ground to a halt). The growth of arable land area slowed down considerably, and the agrarian labor force actually decreased somewhat--but not in substantial numbers until the mid-1930's.³

Why then did the rate of growth of agricultural output per unit of land, and per worker, slow down so much? The issue is complex, and we do not have definitive answers. Clearly, agrarian price declines and the deflationary policy were important factors.⁴

On net balance, price incentives for farmers to produce declined substantially between 1925 and the 1931 low for relevant price indices.⁵ Prices farmers received dropped by 53.4 per cent; of course non-agricultural prices also decreased sharply (the manufacturers price index by 46.0 per cent and wholesale price index by 42.7 per cent). The impact on farm real incomes was two-fold: in terms of the absolute decline, and relative to the decrease in prices of goods pur-

chased by farmers.

The absolute decline in prices increased the burden of agricultural debt in proportion. Farm debt, as surveyed in 1929, was high, at 4.59 billion yen 86.6 per cent greater than value added in agriculture that year. Most (56.5 per cent) was owed to moneylenders and other individuals.⁶ Moreover, the price of land declined substantially, so that the value of debts relative to assets rose substantially. Rents, however, adjusted. In kind (koku of rice per tan of paddy) they actually decreased slightly, and in money terms (for upland fields) they dropped commensurately. Moneylenders, but not rentiers, benefitted from the deflation so long as their borrowers did not go bankrupt.

To a considerable extent the adverse impact on farm real income of the absolute decline in prices received for agricultural goods sold was offset by the decrease in prices paid by farmers for goods they used in production and consumption. Prices for fertilizer and other current inputs actually decreased slightly more than prices of agricultural output. However, the rural consumption price index did not decline as much (32.9 per cent). The terms of trade did turn somewhat against agriculture, however measured.⁷

This decline in farm prices occurred for a variety of reasons. One was the government policy to increase imports of cheap rice from Taiwan and Korea; this bid the price down in Japan. Liu and Suits have estimated that "the inclusion of Korea and Formosa in the Japanese rice market resulted in the suppression of rice price in Japan by 18 per cent," and that "a 1 per cent increase in the total rice im-

ports from the colonies would result in a 1.75 per cent reduction in the price of rice," and hence that the incentives in the rice market operated so as to restrict rice output in Japan and encourage it in the colonies.⁸ Second was the general deflationary policy of the government until 1931; probably prices were less elastic for agricultural than for manufactured goods. Third, the slide-off of world prices for agricultural goods beginning in the mid-1920's, and particularly (for Japan) the decline in the price of raw silk, put downward pressure on Japanese agricultural prices.

The decrease of silk prices by 32 per cent between 1925-1929, and another third by 1931 had a widespread agrarian impact, since two farm families out of five relied to some extent upon sericulture as a source of cash income. However, the average extent of this adversity may have been exaggerated. Sericulture at its maximum (in 1925 and again in 1929) constituted 19 per cent of total farm production at current prices; the minimum was 8 per cent in 1934 (when the price was unusually low). Suppose we take 1925 as the "right" base⁹ for the relative price of silk to all agricultural goods (and this is favorable to silk since its price was at a peak) and assume that the price of silk had declined no more than prices of all agricultural goods (excluding silk). The increase in the value of agricultural output in 1931 would have been about 90 million yen (in 1934-36 constant prices), or approximately 3 per cent, and in 1934 about 275 million yen (8 per cent).¹⁰

Presumably the decreases in prices reduced farmer incentives to produce. The labor inputs are measured in man-years, so we do not know whether or not farmers worked fewer man-hours per year. It appears that they did,¹¹ since the proportion of land double-cropped actually decreased slightly.

Furthermore, the deflationary conditions in the 1920's and early 1930's slowed the rate of growth in non-farm employment opportunities, especially in highly productive, large-scale manufacturing, as well as reducing the rate of growth of demand for agricultural products.

The interwar performance of the manufacturing sector, in terms of output, was considerably better. Between 1919-1940, value added in manufacturing grew at a 6.0 per cent average annual rate. Following a slowdown in the early 1920's, the growth rate accelerated from a beginning to end year average of 7.0 per cent for 1925-30, to 8.2 per cent for 1930-35, and 11.0 per cent for 1935-40. While the cotton textile industry came into full bloom, emanating from the World War I boom, there was continued diversification of production, particularly in iron and steel, chemicals and machinery. Large firms probably grew in relative importance. Nonetheless, as late as 1929, for gross output in factories of five or more employees as recorded in the census of manufactures, slightly less than one-third was produced by firms of 500 or more employees, and about 40 per cent came from firms of 5-99 employees. Firms with four or fewer employees produced from a fourth to a fifth of total manufacturing output.

As an absorber of labor, the manufacturing sector's performance was less good. The population censuses of 1920, 1930, and 1940 provide us the most complete information on the ways in which the economically active population (labor force) was used. Manufacturing absorbed only 11 per cent of the increase in labor force in the 1920's, but 74 per cent in the 1930's.¹² The 1920's and early 1930's was a period of workers looking anywhere for jobs; not until the mid-1930's did productive jobs become available. The result was a large swelling of the labor force in low-productivity service activities, notably retail trade and personal services, with correspondingly low incomes. Industrialization and population growth resulted in "surplus labor" spilling over from agriculture into the cities.

Even those absorbed into manufacturing between 1920 and 1930 were hired mainly by small, low-productivity establishments.¹³ Employment in firms of 500 or more workers decreased by 90,000 (15.8 per cent from the 1920 base) over the decade, a decline from 1927 more than offsetting earlier increases. Not until 1933 did employment in such large firms begin to grow significantly. Corresponding to this distribution of labor was a large and widening difference in output per worker and wages per worker relative to firm size.¹⁴ Overall, output per worker in manufacturing rose absolutely and relative to agriculture. However, the productivity and wages of small manufacturing firms were probably fairly closely related to those in agriculture. The large firms were able to increase capital per worker substantially and to

take advantage of the most modern technology, thereby enhancing output per worker. This gave them the ability to pay higher wages, which they did for reasons which are not entirely clear. Partial explanations include: large firms probably used more skilled labor, they wanted to reduce labor turnover, they used relatively more males than females, they set higher educational standards for hiring employees, they wanted first pick of employees. The interwar period was characterized by what Ohkawa and Rosovsky have termed the "differential structure"--a widening productivity and wage gap between the modern sector comprising large-scale industrial enterprises (using modern technology and relatively large amounts of capital per worker) and the traditional sector of small-scale, labor-intensive units of production using traditional, or less modern, techniques of production--typified by agriculture, many small manufacturing enterprises, and certain components of the service sectors.¹⁵

During the World War I boom, money wages in manufacturing and agriculture rose rapidly, but the cost of living went up at an equal rate, so that real wages remained constant. In 1919, and again in 1921 when the cost of living increase had halted, money and real wages increased sharply for both skilled and unskilled labor. The remainder of the 1920's and the early 1930's was one of erratic but persistent and heightening deflation. The cost of living decreased at first slightly and then, between 1928 and 1932, sharply. Money wages also declined slightly during the 1920's, so that real wages were relatively

constant until 1930, and at considerably higher levels than those prior to 1919.

With the onslaught of the Great Depression, the pattern of money and real wages diverged for skilled and for unskilled labor.¹⁶ For unskilled labor (typified by female workers in agriculture and in textiles--whose relative wage rates remained very stable--and by male workers in agriculture) money wages were reduced even more than the sharp decline in prices, so that real wages dropped by 20 per cent or more before beginning to rise again in the mid-1930's. For skilled labor (typified by male workers in iron and steel and in machinery), money wages declined only slightly; real wages actually increased between 1929 and 1933. Hence, skilled worker wages rose relative to unskilled. This, together with the real wage patterns during the 19-20's, suggests the existence of two distinct labor markets in inter-war Japan: skilled and unskilled. The supply of skilled workers was not highly elastic nor increasing more rapidly than increases in demand. Demand for skilled workers grew due to: the overall growth of industry; the changing industrial composition, particularly the rise of such industries as machinery, iron and steel, and chemicals, which required a higher proportion of skilled workers; and a rising capital/labor ratio embodying more skill-using technologies within industries. In contrast, the supply of unskilled workers was highly elastic; indeed there was an overflow into services. Yet demand for unskilled workers increased only slowly.

How do we explain these wage-employment-output relationships?

The World War I boom culminated in a temporary labor shortage, even for unskilled labor. As indicated above, the continuing real wage increases for skilled workers is consonant with demand-supply relationships for their services. For unskilled workers the answers are less clear. During the 1920's they were not being absorbed into manufacturing in sufficient quantities relative to supply to suggest continuing shortage.

It appears that an important component of the explanation lies in the downward stickiness of money wages. For unskilled workers there was some actual decline during the 1920's in money wage rates but it was resisted, as the rising number of labor disputes, and their causes, testify. Not until the 1930-32 depression were firms able to push unskilled worker money wages down substantially.¹⁷ The downward stickiness of money wage rates appears to be a common characteristic of industrial countries, rather than anything which was specific to Japan. Indeed, in the face of real adversity, the Japanese wage and price structure was considerably more flexible than those in the United Kingdom, Germany, or the United States.¹⁸

My interpretation is that all this was produced by a combination of World War I boom-induced disequilibria, business subsequent deflationary expectations about price movements, and a downward stickiness of money wages. The World War I boom was tremendous; it engendered the most rapid industrial and overall growth Japan had ever had, and

in the process had resulted in a shortage of industrial labor, high prices (a doubling of the price level) and high money wages. It is likely that temporarily the price of labor relative to capital was higher than relative stocks of labor and capital would dictate in equilibrium. If these relative prices tended to continue, it would pay firms to substitute capital for labor. Businessmen realized that their prices for goods were high and that the pressures of foreign competition were likely to push prices down. They could anticipate deflationary fiscal and monetary policies. This made it imperative that ways be found to reduce costs of production. Moreover, they probably felt that it would be difficult to push money wages down much, whereas they could (correctly) expect some decrease in the price of investment goods, especially imported (or import-competitive) machinery. Firms hence felt it economical to obtain a more stable labor force, to train it more as skill requirements increased, and to use more capital-intensive techniques of production.

Institutional factors were not unimportant. It was known that legislation restricting night shift work by women and children would go into effect in the late 1920's. This struck particularly hard at the textile industry, which alone accounted for more than half of factory employment. Firms responded by "rationalization"; for example, in cotton spinning the number of operative spindles per worker increased from 23 in 1922 (not much different from prewar) to 42 in 1930 and 53 in 1935.

The substitution of capital for labor was probably reinforced by an imperfect capital market in which large firms, and firms affiliated with large banks, obtained access to funds to finance investment and at relatively low cost, whereas smaller firms had difficulty borrowing and issuing bonds and had to do so at higher cost. Moreover, this gap probably also existed in the ability to borrow and absorb foreign technology. All of this is tied in with economies of scale. To the extent that the differential structure results from skill differentials and market imperfections, it is probably a characteristic common to all industrializing countries.

In the previous section a continuing motif is the impact of deflationary pressures culminating in 1931: on agricultural productivity; on the capital/labor ratio in manufacturing (especially in large firms); hence on output per worker in manufacturing and on the (in) ability of the manufacturing sector to absorb the growing labor force; on the persistent high level of real wages due to downward stickiness of money wages; and consequently upon the distribution of income. The deflationary pressures were essentially a government policy response to the difficulties, emanating out of World War I, in restoring to equilibrium the relationship between Japan's domestic economy and its economic activity with the rest of the world.¹⁹ The basic problem was that prices in Japan had risen more than they had abroad; once the war ended, Japan was not able to compete sufficiently in international markets despite the war-induced growth and diversification of industry.

These difficulties manifested themselves in both Japan's balance of payments and in the exchange rate between yen and foreign currencies. Restoration of international equilibrium was the most important economic issue of the 1920's. The government saw the essence of the issue as: when, and under what conditions, should Japan return to the gold standard?

The emphasis upon the return to the gold standard was not something uniquely Japanese. Indeed, it underlay the policy objectives of all the major industrial countries.²⁰ The restoration of a nation's currency to convertibility and with a stable international value was generally regarded as fundamental to an international system of multilateral, relatively free trade. Only by this means could European recovery be achieved and international prosperity assured. Quite naturally, given the experience prior to World War I, countries conceived of such a fixed exchange standard: convertibility of one's currency was to gold, rather than simply to another country's currency. Throughout the 1920's the major nations struggled to return to gold, but on a piecemeal basis without much coordination. Some--the United Kingdom was archetypical--returned at a seriously overvalued exchange rate; others--notably France--at a seriously undervalued exchange rate.

For Japan World War I was a great boon--an external, exogenous demand stimulus for Japanese exports and depressant of imports which had out-competed domestic producers. The result was a surge of domestic growth, inflation, and a large current account surplus in the bal-

ance of payments which by 1919 had resulted in a cumulation of foreign assets in excess of the heavy indebtedness position of 1913. Most of the war-related increase in foreign assets was held by the government and the central bank (the Bank of Japan). Accordingly the money supply had virtually tripled, enabling prices to rise sharply despite government budget surpluses between 1914 and 1919. We do not have solid data for all types of capital flows; the information on non-governmental short-term capital flows is particularly weak. Nonetheless, the rough estimates of Table 2 provide adequate indication of the major shifts in the total long-term indebtedness, in foreign exchange reserves, and in certain of the specific items. Japan used its current account surplus (re Table 3 ²¹) to increase its own loans and investments in China, to help Britain, France, and Russia²², and to build up its foreign exchange reserves while not paying off its own foreign borrowings in advance to any substantial extent.

Japan ended the war in the strongest foreign exchange reserve position in its history. Reserves were equivalent to about 10 months' imports. Most were held abroad,²³ but Japan had also imported substantial gold for reserve purposes until September 1917, when the United States embargoed gold exports (England had gone off the gold standard earlier). Japan thereupon also went off the gold standard, which meant that the government and Bank of Japan refused to sell gold or allow it to leave the country. However, the government and Bank of Japan bought up the foreign exchange balances accruing to Japanese banks financing

Table 2
Japanese Balance of International Indebtedness
Exclusive of Short-Term Capital
(rough estimates in million yen)

	<u>1913</u>	<u>1919</u>	<u>1929</u>
Japanese Long-Term Liabilities	2,070	1,822	2,549
Borrowing from Abroad	1,970	1,722	2,304
Foreign Direct Investment in Japan	100	100	245
Japanese Long-Term Assets	529	1,850	1,676
Loans to Abroad	61	975	245
China	55	417	244 ^a
Allies	---	557	--- ^a
Japanese Direct Investment	468	875	1,431
China	278	(600)	(750)
South Manchuria Railway	100	100	391
Net Long-Term Position	-1,541	28	-873
Foreign Exchange Reserves	376	2,045	1,343
Net Position Excluding Short-Term Balances	-1,165	2,073	470

^a Excluded are defaulted loans of 27 million yen to the Chinese government and 240 million yen to Czarist Russia. The direct investment estimates are crude, particularly Japanese investment in China, which for 1919 and 1929 are no more than orders of magnitude. For China the distinction between loans and direct investment is somewhat arbitrary.

Source: Derived from Harold G. Moulton, Japan, An Economic and Financial Appraisal (Washington: Brookings Institution, 1931), pp. 390-403; Bank of Japan, Hundred-Year Statistics of Japanese Economy (Tokyo: 1966).

Table 3
Summary Balance of Payments of the Japanese Empire¹
(in million yen)

	<u>1908- 1913</u>	<u>1914- 1919</u>	<u>1920</u>	<u>1921</u>	<u>1922</u>	<u>1923</u>	<u>1920- 1923</u>
I. Balance on Current Account ^a	-1142.4	3035.0	- 79.3	-246.2	-181.5	-447.9	- 954.9
1. Trade Balance	- 706.5	1197.5	-500.1	-442.0	-336.1	-617.7	-1895.9
2. Invisible Balance	- 435.9	1837.5	420.8	195.8	154.6	169.8	941.0
II. Changes in Foreign Exchange	167.7	1700.7	126.7	- 74.7	-238.5	-171.1	- 357.6
3. Gold Flows	- 59.7	603.8	407.5	132.5	1.1	- 0.1	541.0
4. Balances Held Abroad	227.4	1096.9	-280.8	-207.2	-239.6	-171.0	- 898.6
III. Other Capital Flows ^c	-1310.1	1334.3	47.4	-171.5	57.0	-276.8	- 597.3
5. Long-Term	--	--	--	--	--	--	--
6. Short-Term	--	--	--	--	--	--	--
IV. Errors and Omissions ^d (I-II-III)							

¹ Japan Proper, Taiwan, Korea, South Sea Mandated Islands.

^a Minus indicates net inflow.

^b Minus indicates net decrease of reserves and outflow of gold.

^c Minus indicates net inflow of capital.

^d Where information not available, assumed to be fully in (short-term) capital account.

Table 3 (continued)

	<u>1924</u>	<u>1925</u>	<u>1926</u>	<u>1927</u>	<u>1928</u>	<u>1929</u>	<u>1924- 1929</u>
I. Balance on Current Account ^a	-565.6	-202.1	-302.5	-141.1	-172.7	19.0	-1365.0
1. Trade Balance	-729.8	-357.0	-442.5	-289.0	-333.9	-168.3	-2320.5
2. Invisible Balance	164.2	154.9	140.0	147.9	161.2	187.3	955.5
II. Changes in Foreign Exchange Reserves ^b	-118.5	- 90.0	- 59.8	- 80.0	- 71.6	144.0	- 276.7
3. Gold Flows	0	- 22.0	- 31.8	- 36.0	0.4	0.5	- 88.8
4. Balances Held Abroad	-118.5	- 68.0	- 28.0	- 44.0	- 72.0	143.5	- 187.9
III. Other Capital Flows ^c	-447.1	-112.1	-242.7	- 2.4	- 44.6	- 86.5	-1088.3
5. Long-Term	-238.0	- 63.9	- 36.9	+126.2	- 53.4	52.8	- 213.2
6. Short-Term	-209.1	- 48.2	-205.8	-128.6	8.8	-139.3	- 875.1
IV. Errors and Omissions ^d	--	--	--	- 58.7	- 56.5	- 38.5	--

Table 3 (continued)

	<u>1930</u>	<u>1931</u>	<u>1930- 1931</u>	<u>1932</u>	<u>1933</u>	<u>1934</u>
I. Balance on Current Account ^a	- 27.3	- 57.5	- 84.8	43.3	31.9	62.9
1. Trade Balance	-160.3	-141.1	-301.4	- 58.8	- 77.9	-129.3
2. Invisible Balance	133.0	83.6	216.6	102.1	109.8	192.2
II. Changes in Foreign Exchange Reserves ^b	-383.0	-403.0	-786.0	- 3.0	- 59.0	0
3. Gold Flows	-286.8	-388.2	-675.0	-112.1	- 20.9	0
4. Balances Held Abroad	- 96.2	- 14.8	-111.0	109.1	- 38.1	0
III. Other Capital Flows ^c	319.7	328.7	720.4	127.8	152.5	- 2.9
5. Long-Term	92.0	233.9	325.9	167.8	41.0	233.2
6. Short-Term	227.7	94.8	494.5	- 40.0	111.5	-226.1
IV. Errors and Omissions ^d	- 36.0	16.8	- 19.2	-174.1	-179.6	- 65.8

Table 3 (continued)

	1935	1936	1937	1932- 1937
I. Balance on Current Account ^a	310.1	131.0	- 653.0	- 73.8
1. Trade Balance	131.8	-101.9	- 635.0	- 871.1
2. Invisible Balance	178.3	232.9	- 18.0	797.3
II. Changes in Foreign Exchange Reserves ^b	36.0	46.0	-1220.1	-1200.1
3. Gold Flows	0.1	0	- 866.9	- 999.8
4. Balances Held Abroad	35.9	46.0	- 353.2	- 200.3
III. Other Capital Flows ^c	245.8	130.7	567.1	1221.0
5. Long-Term	454.6	226.6	567.1	1123.2
6. Short-Term	-208.8	- 95.9	--	97.8
IV. Errors and Omissions ^d	28.3	- 45.7	--	--

Note: 1937 capital and foreign exchange data are not fully comparable with previous years; "balances held abroad" might equally well be classified under short-term capital flows.

Source: E. B. Schumpeter, ed. The Industrialization of Japan and Manchukuo 1930-1940, Appendix Table III; Ministry of Finance, Zaisei Kinyu Tokei Geppo, No. 5 (May 1950).

exports, in effect pegging the exchange rate at close to the gold standard par (100 yen equal to \$49.85).²⁴

What did Japan need to return to the gold standard at a particular par rate? The most important requisite was sufficiently competitive export strength, in terms of domestic prices converted into international prices at the target exchange rate, to be able to pay for imports (given capital flows) commensurate with a desired or expected rate of growth of GNP. Moreover, Japan needed sufficient foreign exchange reserves to be able to combat any immediate or eventual temporary situation of excess demand for foreign exchange over supply. Related to this, the government had to inspire confidence that the exchange rate and the timing were correct in order not to provoke adverse speculation. An additional concern was to have adequate gold backing, held in Japan, for the Bank of Japan paper currency in circulation.²⁵

The Japanese government was astounded at the bold United States move to return (in June 1919) to the gold standard, (at the prewar par) rather soon after the war ended. It moved much more cautiously, and for good reasons.

The immediate reason was the speculative bubble of late 1919 and early 1920 which burst in March 1920. Businessmen had expected prices of goods to continue to rise; since anything could be sold at a profit it was delivery, not price, that became important. This spread from the commodities market into the stock market, where a speculative mania erupted. It also spilled over into foreign trade, with a big

upsurge of imports leading to a current account deficit. This in turn produced an automatic contraction of the domestic money supply. The bubble burst from the combined impact of cheap imports and tighter money. The downturn was sharp. Wholesale prices, which had gone from 200.3 (1913 = 100) in May 1919 to 321.5 by March 1920, declined precipitously to 247.7 by June, and continued to slide off to a low 189.8 in April 1921 when the government's counter-recession policies took hold. For there was indeed a recession, in Japan and worldwide--the downturn in England and the United States did not begin until summer 1920 and continued longer than in Japan.

Another immediate, and pervasive, reason was highly political. Although government bureaucrats in 1919 favored an early return to the gold standard, Finance Minister Korekiyo Takahashi rejected it on the grounds that it would probably result in a gold outflow from Japan and Japan needed the gold for expansion into China. China needed investment in railroads and industry. If Japan did not lend China the funds, England and the United States would. Whoever did so would be able to dominate China. Inouye, then president of the Bank of Japan, supported Takahashi's position.²⁶

The government was too caught up in its immediate problems, and the uncertainties which they engendered, to move toward quick re-establishment of the gold standard at the prewar par. The underlying problem was more serious: during World War I Japan's prices had risen more than, and in the 1920-21 recession did not decline nearly as much

as, its competitors in world markets (see Table 4). At the prewar par exchange rate, at about which the actual rate continued due to government pegging, Japanese exports were too expensive and foreign imports too cheap. The consequence was inevitable: the current account of the balance of payments moved from surplus to deficit.

What policy alternatives were available to Japan to restore equilibrium in its balance of payments? The fundamental problem under such circumstances is to obtain and maintain a balance between domestic and world price levels. One method is to let domestic prices go their own way (to achieve domestic goals) and to achieve international equilibrium by a fluctuating exchange rate. Aside from some adverse effects on foreign traders by increasing uncertainty, this approach was the antithesis of the objective to return to the gold standard (fixed exchange rate) system. Under such a system the only way to adjust to world prices is to change the domestic price level. Here there were two choices: to return at the prewar gold value of yen, or to establish a new value. For Japan, the former meant a deflationary policy sufficient to get domestic prices in line with (declining) world prices, the latter meant devaluation--setting a new parity, less yen to the dollar and pound--such that domestic deflation would not be necessary.²⁷

But devaluation was not considered a really suitable alternative for major, advanced countries--in the 1920's even more than today. A country had to bear its burden, swallow its medicine, and do the right thing. After all, look how England fought stubbornly and valiantly to

get back to the gold standard at the ordained par--even if domestic deflation did mean 10 per cent unemployment and it did take until 1925. Apparently devaluation--returning to the gold standard at a new, lower par--was never considered seriously by Japanese policymakers in the 1920's. The only choice was to push prices down at home. (We must remember that in the 1920's it was not well understood that an important part of this adjustment process was not just prices but the slowing of economic growth.)

There were other ways in which Japan could at least mitigate the fundamental disequilibrium in its balance of payments. One was to restrict import demand by raising tariffs.²⁸ Another was to return to a pattern of net foreign borrowing, which after all had successfully shored up the gold standard before World War I. In the first instance this would simply involve the drawing of accumulated foreign exchange reserves, but eventually would necessitate substantial long-term borrowing. Given its income level and growth potential, there is no reason why Japan should not have been a net borrower.

During the 1920's Japan tried all these methods, in concert and sequentially: exchange rate fluctuation and thereby depreciation, deflation, increases in tariffs, using up of foreign exchange reserves and renewed foreign borrowing, and finally, return to the gold standard at the prewar par. But no policies were pushed long and hard enough until 1929--they were palliatives reflecting a fundamental indecisiveness at the highest policy level. I believe this was a basic

Table 4: Wholesale Prices, Terms of Trade, and
the Foreign Exchange Rate

Year	Wholesale Price Index				Terms of Trade	Average Foreign Exchange Rate	
	United Kingdom	United States	Japan	Adjusted for Changes in the Exchange Rate ^a (Japan)		100 yen/\$	yen/shilling
1913	100.0	100.0	100.0	100.0	100.0	49.375	2/-1/2
1914	100.0	97.9	95.5	95.3	94.3	49.500	2/-1/4
1915	127.0	100.0	96.6	95.6	90.5	48.875	2/-9/16
1916	160.0	122.9	116.8	118.3	98.5	50.000	2/10 1/4
1917	206.0	167.2	147.0	150.3	94.5	50.500	2/10 9/16
1918	226.0	187.9	192.5	200.3	82.3	51.375	2/10 15/16
1919	242.0	198.9	235.9	241.9	99.9	50.625	2/3-
1920	307.0	220.8	259.3	260.6	98.1	49.625	2/7 1/2
1921	197.0	139.9	200.3	194.7	142.0	48.000	2/5 7/8
1922	159.0	138.9	195.8	189.9	134.2	47.875	2/1 3/4
1923	159.0	143.9	199.2	197.2	136.6	48.875	2/1 9/16
1924	166.0	140.8	206.5	175.7	117.7	42.000	1/10 13/16
1925	159.0	147.9	201.7	166.5	108.2	40.750	1/8 1/4
1926	147.9	142.9	178.7	169.7	109.3	46.875	1/11 1/8
1927	141.9	137.0	169.8	162.9	117.5	47.375	1/11 7/16
1928	140.0	139.9	170.9	160.9	105.5	46.500	1/10 7/8
1929	137.0	137.9	166.1	155.0	106.6	46.070	1/10.755
1930	119.9	125.1	136.7	136.7	98.6	49.367	2/0.342
1931	105.2	105.7	115.6	114.4	100.6	48.871	2/1.947
1932	102.6	93.8	128.2	73.0	84.6	28.120	1/7.157
1933	102.7	95.4	147.0	75.1	77.6	25.227	1/2.409
1934	105.6	108.4	149.8	89.5	67.4	29.511	1/2.069
1935	106.7	115.7	153.7	88.9	62.7	28.570	1/2-
1936	113.3	117.0	160.1	93.9	65.6	28.951	1/2-
1937	130.4	150.5	194.4	113.4	64.1	28.813	1/2-
1938	121.6	137.0	205.0	118.3	68.4	28.496	1/2-
1939	123.3	111.6	226.6	119.3	81.9	25.984	1/2.054

^aWholesale price index multiplied by average exchange rate in dollars.

Sources: Bank of Japan, Hundred-Year Statistics; Ohkawa et al., Prices, Vol. 8, LTES.

cause of the malaise of the 1920's. Before turning to a discussion of the deflationary approach, I trace briefly the use of other policy measures.

Japan had sharply depreciating and then again rising exchange rate between March 1924 and mid-1926 not because of a deliberate government policy but because the government could no longer maintain the pegged rate near parity. The basic reason was a persistent current account deficit which ate up foreign exchange reserves; the pegged rate simply could not be maintained indefinitely. There was also a highly important immediate cause: the Tokyo-Yokohama earthquake of September 1, 1923. The destruction was great; quick reconstruction required a large amount of imports over and above regular needs. Exports were needed at home; moreover, substantial productive capacity had been destroyed or rendered inoperative. The trade deficit worsened sharply. Successive governments insisted that the exchange would remain pegged, but it began to slip in New York. A divergence between New York and Tokyo rates could not be maintained; finally on March 18, 1924 the government had to abandon pegging and allow the rate to find a market-determined level. The rate dropped sharply, to a low \$38.50 per 100 yen by year-end, a decline of 22 per cent. The trade balance responded favorably; the demand for imports slowed down and exports increased.

The improvement in the trade balance, an increased receptivity in foreign capital markets to Japanese borrowing, and a policy decision to ship government gold out all tended to raise the exchange rate in

1925. To this was added a speculative element. Those who had previously speculated against the yen now speculated in its favor because of the more favorable underlying factors plus renewed expectation that the government would support the parity rate.²⁹ Thereafter the foreign exchange rate meandered between \$44-49, rising fairly sharply from this lower level in the second half of 1929 when Japan had finally determined to return to the gold standard at prewar parity.

Tariff policy was also used to restrict imports, but for protectionist as much as balance of payments reasons. Certain World War I growth industries, such as chemicals and iron and steel, which were not yet fully competitive against imports, obtained increased tariff protection in 1920. The Great Earthquake quite naturally was an occasion for the imposition of 100 per cent ad valorem duties on some 120 luxury items (primarily manufactured consumer goods). In 1926 there was a complete revision of tariffs, thereby embodying and formalizing principles which were already in operation. Industrial raw materials were duty free; this increased the effective tariff protection of manufactured goods and made their export more competitive. Some important infant industries--iron and steel, sugar, copper, dyestuffs, woolen textiles--were protected, though engineering was not particularly. High duties continued on the luxuries.³⁰

In addition to the apparently rather large amount of short-term capital, speculative in part at least, which flowed into Japan between 1920-1929, Japan was a net borrower on long-term. The national govern-

ment was only a sporadic borrower: 229 million yen (£25 million 6 per cent 35-year bonds issued at $87\frac{1}{2}$, \$150 million $6\frac{1}{2}$ per cent 40-year bonds issued at $92\frac{1}{2}$) in February 1924 to redeem sterling loans falling due and for earthquake reconstruction; and 102.5 million yen (£12.5 million $5\frac{1}{2}$ per cent 35-year bonds issued at 90 and \$71 million $5\frac{1}{2}$ per cent 35-year bonds issued at 90) in May 1930 to redeem sterling bonds falling due between July 1930-January 1931. In addition, government outstanding domestic bonds were purchased by foreigners, especially when the exchange rate was low. Municipalities sold some bonds abroad, but the main long-term issues abroad were of industrial debentures, notably by Japanese electric power firms.

The balance of payments data in Table 3 are net estimates, while Japan's gross foreign capital needs were somewhat larger, in order to finance Japanese lending and investment abroad. From the rough estimates of Table 2, it appears that Japan's long-term assets increased only moderately between 1919 and 1929, from 1,850 million yen to 2,187 million yen (including 511 million yen in bad debts).

Overall Japan was not able, or did not try hard enough, to borrow sufficient long-term capital to finance more than a small fraction³¹ of its current account deficit. The immediate alternative was to use up foreign exchange reserves. The longer-run solution lay only in restoration of export competitiveness by domestic deflation.

The indecisiveness in deflationary policy during the decade of the 1920's was, to my mind, a fatal weakness. If it had to be done at all--

and clearly a preferable policy would have been to de-value and thereby return to the gold standard at a lower par soon after World War I (say in 1921 or 1922), or certainly after the excuse provided by the Great Earthquake--deflation should have been more swift and severe. The 20 per cent decline in 1921 from the 1920 average wholesale price level was not enough; perhaps as much as another 20 per cent would have been required. Such a policy would have ruined many more firms, caused the collapse of many more banks, and probably led to really severe disruption of the economy, but at least it would have cleared the slate for a renewed emphasis on growth. On the other hand, erratic doses of deflation, countered by renewed counter-deflationary expansion of demand through fiscal and especially monetary policy, was essentially debilitating. The problem with the former, more drastic approach is like that of major surgery: the operation may be a success but the patient may die.

Why didn't the government ever really push through a fully effective deflationary policy until 1929? The main reason seems to lie in a series of minor economic crises emanating from a variety of exogenous and endogenous sources: the Great Earthquake, shifts in foreign demand due to the world business cycle, the domestic speculative mania of 1919-1920, the banking system crisis of 1927, the deflationary policy itself. In all these instances difficulties were exacerbated by the inherent weakness of the domestic financial system. In order to prevent the system from collapsing, at the first (or eventual) signs

of trouble the Bank of Japan had to rush in and pump in liquidity. This inevitably undercut the deflationary policy.

Why, and in what ways, did the difficulties in the economy show up in the financial sector? First, the financial system in most market economies is the usual intermediary of a tight or easy monetary policy, spreading its effects to producers and distributors by shifts in its willingness and ability to lend. On the whole, the evolving Japanese banking system had demonstrated its ability to assist in the financing of economic growth when things were going well--when funds were available and business wanted to borrow for investment purposes. Indeed the development of the banking system prior to³² and during World War I had been highly responsive to the types of financing needed for growth, rather than adopting the inhibiting rules of, say, British commercial banking.

However, Japan's banking system was not well constructed to withstand the pressures of recessions, of deflation, or of sporadic random shocks. The deficiencies of the system can be summed up in three interrelated characteristics: there were a large number of small, unit banks; many banks tended to concentrate risk of default by lenders, rather than diversifying it, by making large loans (relative to net worth) to a few borrowers; and depositors had no guaranteed means of protection.

While the number of ordinary (commercial) banks had declined from the peak of 1841 in 1901, many remained at the end of World War I (see

Table 5). Although there were a number of banks of intermediate size, in essence there were two groups: a small number (epitomized by the "Big Five") of very large banks located in the major cities, notably Tokyo and Osaka; and a large number of quite small banks located in smaller towns as well as the larger cities. The government, in principle, did not allow new banks to be established during the interwar period. It encouraged the reduction in total number by merger among small, weak banks in the same locality. Mergers often did not help much, being only an amalgamation of dubious assets. The decline in total bank net worth attests to the necessary writing down of reserves and capital upon merger. The occasional crises forced many small banks to fail; they usually would be absorbed by larger banks. In this way there was some increase in the number of branch offices of the large city banks, though still moderate until the 1930's. The amalgamation of banks from 1925 on led to a reduction in the total number of bank offices. The apparent decline in service to the population was compensated, in part at least, by the increasing urbanization.

Many of the banks--both large and small--were owned and controlled by stockholders who also had industrial interests. These banks, and others as well, tended to lend a high proportion of their funds to these related business interests--to help their growth in good times and prevent, if necessary, their bankruptcy in bad times. There were no restrictions on the maximum size of a loan in relation to a bank's worth, and bank inspection did not become a significant factor until after the

Table 5: Growth of Ordinary Banks, 1919-1938

Year	Number of Bank Offices			1,000 People per Bank Office	Net Worth (million yen)	Average Net Worth (1,000 yen)	Deposits (million yen)	Loans and Ad- vances (million yen)
	Head Office	Branches	Total					
1919	1,340	2,540	3,880	14.27	878	655.2	5,744	5,666
1920	1,322	2,772	4,094	13.66	1,211	916.0	5,826	5,902
1921	1,327	3,129	4,456	12.71	1,364	1027.9	6,444	6,242
1922	1,794	5,122	6,916	8.29	1,918	1069.1	7,801	7,848
1923	1,698	5,239	6,937	8.41	2,011	1184.3	7,805	8,059
1924	1,626	5,288	6,914	8.51	2,071	1273.7	8,093	8,289
1925	1,534	6,320	7,854	7.61	2,114	1378.1	8,726	8,842
1926	1,417	5,297	6,714	9.01	2,146	1443.9	9,178	9,219
1927	1,280	5,218	6,498	9.44	2,097	1638.3	9,027	8,180
1928	1,028	5,044	6,072	10.23	1,963	1909.5	9,330	7,545
1929	878	4,917	5,795	10.86	1,976	2250.6	9,292	7,246
1930	779	4,763	5,542	11.63	1,878	2410.8	8,738	6,818
1931	680	4,542	5,222	12.52	1,776	2611.8	8,269	6,594
1932	538	4,311	4,849	13.67	1,747	3247.2	8,319	6,343
1933	516	4,021	4,537	14.82	1,701	3296.5	8,815	6,085
1934	484	3,893	4,377	15.58	1,702	3516.5	9,438	5,987
1935	466	3,708	4,174	16.59	1,698	3643.8	9,950	6,193
1936	424	3,654	4,078	17.23	1,685	3974.1	11,007	6,765
1937	377	3,621	3,998	17.82	1,644	4360.7	12,434	7,793
1938	346	3,600	3,946	18.30	1,646	4757.2	15,191	8,848

Note: The large increase in ordinary banks in 1922 was due to changes in the Savings Bank Law whereby many institutions found it desirable to alter their status.

Sources: Bank of Japan, Hundred-Year Statistics; Ohkawa et al., The Growth Rate of the Japanese Economy.

panic of 1927. Many banks had aggressive growth aims. Not only did they expand loans to affiliated borrowers, they would borrow funds in the call market to do so. This made them even more vulnerable to adversity, since other financial institutions making call loans might well refuse to continue their loans to the bank.

Depositors were attracted to a bank by its convenience of location, deposit interest rate, and degree of safety. The larger banks did not have many offices, so it often was not convenient to deposit with them. A wise man would withdraw his deposit in currency if he thought his bank might somehow be in, or on the verge of, trouble. There was no deposit insurance against default by the bank due to its inability to cash in deposits for currency.

The system was made for panic-stricken bank runs. An individual bank was heavily loaned up, holding small reserves. It was subject to insolvency (having to close its doors--refusing to provide currency for deposits) either because of a depositor run or difficulties of one of its major borrowers. A major borrower could either be in temporary straits (fundamentally sound but in a liquidity crisis because, for example, a buyer might delay in paying his bill) or bankrupt (assets less than liabilities). The bank would have to lend to this borrower or else face the likelihood of its loan being defaulted. News of the business's difficulty might get out; people, knowing of its close relationship with the bank, would fear for the safety of their deposits and hurry to withdraw them. Or the bank and its borrowers might be in

perfectly sound condition, but a run might have started on another small bank in town and depositors, becoming generally apprehensive, would decide to withdraw.

These shifts in liquidity preference happen rapidly, and spread rapidly and cumulatively, in the manner of a self-fulfilling prophecy. No single bank can afford to hold currency in its vaults sufficient to meet a sudden, large-scale demand to pay off its depositors. It must receive currency from other banks--larger banks with which it has a correspondent or other relationship, ultimately from the Bank of Japan as central bank.

Several problems exist. One is simply the technical difficulty of timing: in having delivery of currency made before the bank subject to the run runs out. The bank might close its doors for a few hours or days, but at the price of reducing its future creditability. The more serious problem is to obtain the loan of currency. The financial institution lending to it wants sound collateral, not the bad or risky debts of affiliated, small enterprises. Moreover, the large banks were perhaps not so sorry to see runs occur, so long as the runs were of minor proportions and did not affect them. After all, depositors at the small banks under pressure didn't simply hold the cash they had withdrawn; they deposited in the large bank. Moreover, the small banks would be forced into amalgamation with the large banks on terms favorable to the latter.

The system hence was intrinsically subject to failures of individual

banks and to depositor runs on the banks. Public loss of confidence in banks disrupts the economy, making it difficult to finance economic activity. The Bank of Japan and government were well aware of this. Whenever a panic got underway, they stepped in quickly to avert its spread.

The monetary authorities were impaled upon the horns of a dilemma. The basic policy was to restrict central bank credit and money supply enough to reduce prices sufficiently to restore balance of payments equilibrium. But equally basic was a determination to prevent widespread financial panics. The relief measures inevitably involved central bank loans, by direct or indirect routes, to affected banks and business enterprises. Money supply, particularly currency, inevitably increased. This directly undercut the deflationary policy and made it necessary, once the crisis was over, to have an even stiffer deflationary policy.

Data on the net change in Bank of Japan credit during the 1920's are presented in Table 6. It did not significantly contract absolutely until 1929-1931; since the economy was growing the net impact was deflationary (as evidenced by the decline in wholesale prices in Table 4). Money supply had a very slightly declining trend during the 1920's before dropping off sharply in 1930 and 1931; to some extent this was offset by an increase in income velocity.³³ The persisting deficit in the current account of the balance of payments, together with the continued loss of foreign exchange reserves, indicates that the deflation

Table 6

Increases in Bank of Japan Credit (million yen)

Year	To Government	To Private Sector			To Finance Gold and Other Reserves ^a	Total ^b
		Total	Loans	Other		
1909-1913	28	- 139	- 1	-138	168	57
1914-1919	-2123	1,551	559	992	1,701	1,129
1920	431	- 678	-481	-197	127	- 116
1921	91	91	139	- 48	- 75	107
1922	478	- 227	176	-403	- 239	12
1923	27	289	303	- 14	- 171	145
1924	246	- 168	-130	- 38	- 119	- 41
1925	279	- 220	- 26	-194	- 90	- 31
1926	154	- 156	-110	- 46	- 60	- 62
1927	- 15	208	306	- 98	- 80	113
1928	236	- 107	- 44	- 63	- 72	57
1929	- 148	- 94	-169	75	144	- 98
1930	159	19	74	- 55	- 383	- 205
1931	212	85	210	-125	- 403	- 106
1932	75	- 168	-192	24	- 3	96
1933	165	12	84	- 72	- 59	118
1934	66	17	21	- 4	0	83
1935	85	18	- 35	53	36	139
1936	229	- 176	- 97	- 79	46	99

a: Foreign exchange reserves are here consolidated to the Bank of Japan so that credit to the government was for domestic purposes. The changes in credit for foreign exchange reserves (the mirror image of changes in reserves themselves) had their impact directly on the private sector.

b: Equivalent to changes in Bank of Japan currency issue outstanding.

Sources: Bank of Japan, Hundred Year Statistics of the Japanese Economy; data on foreign exchange reserves from Table 3.

was not sufficient until 1929-1930--at which point the Great Depression completely changed the game and its rules.

A serious problem of a deflation is that it creates large amounts of bad debts. A financial crisis does so, too. The purpose is to encourage greater efficiency in given uses of resources, to reallocate resources to more efficient uses, and to squeeze out inefficient users. However, it is not clear that deflation does not penalize firms which may simply be illiquid (because of rapid growth, or discrimination in credit markets, or small size) rather than basically inefficient. Certainly there is no clear evidence that the incidence of financial crisis falls more heavily on the inefficient and the uncompetitive than on others who are unlucky in location, in financing connections, in liquidity position. It is a tricky operation to estimate what is really bad debt in the sense that underlying assets have a lower value than liabilities, both immediately and even if the economy were growing. Neither severe deflation nor inflation are good allocators of resources; moreover, both have undesirable income distribution effects.

The Bank of Japan's greatest success in the 1920's was in overcoming the potential financial chaos which the Great Earthquake engendered by destroying not only housing and businesses but by putting the Tokyo financial system out of operation. The Bank of Japan immediately agreed to provide virtually unlimited loans to affected banks, and thus businesses, by discounting commercial paper which came to be known as "earthquake bills."³⁴ The government guaranteed the Bank of

Japan against loss to 100 million yen, in effect absorbing part of any eventual net loss from inability of business borrowers to repay.

There was a feeling during the 1920's that somehow the bad debts from the excesses of the World War I boom had never been written off, and to them had been added bad debts in the form of the remaining earthquake bills for which there were no underlying assets, as well as a cumulation of bad debts from each successive financial crisis. Somehow all this had to be cleaned up. One proposal in early 1927 was that the government go ahead and provide financial aid to buy up and write off the outstanding earthquake bills rather than extend their life by another year. In the course of public discussion it became known that certain large banks, notably the Bank of Taiwan and the Fifteenth (Peers) Bank, which held earthquake bills, appeared in unsound condition due to having large loans outstanding to borrowers who appeared unable to pay.

A monetary panic ensued in the spring of 1927. It was of much larger proportions than had ever occurred before. Not just small banks were involved, but large banks of impeccable credentials. At the core of the scandal was the Bank of Taiwan, a semi-official bank of the government with power of banknote issue for Taiwan.

The Bank of Taiwan was an extreme case of a highly growth-oriented financial institution, willing to incur high risks in gambling on continued prosperity of the Japanese economy and especially its major borrowers. Earlier in the 1920's it had decided to expand aggressively by lending in Japan rather than restricting its operations to Taiwan.

It lent especially to the rapidly growing Suzuki conglomerate, which was based on extensive commercial interests in and with Taiwan, but which sought further growth in undertaking various manufacturing activities in Japan. While deposits at the Bank had been at the level of its loans during World War I, from 1919 on deposits declined sharply to only 23 per cent of the 1918 peak in 1926, and less in 1927. In contrast, loans expanded by 66 per cent over the same period. This loan expansion was financed primarily by call loans to the Bank of Taiwan from large banks in Japan.

In early 1927 it appeared possible that Suzuki was overextended. Not only could it not repay loans, but some of its operations had liabilities greater than assets--the collateral for a portion of its loans was worthless, even though termed "earthquake bills." The banks lending call funds to the Bank of Taiwan recalled them. The Bank of Japan was unwilling to extend emergency loans without government guarantee against losses due to accepting worthless collateral. This took time, and political machinations in the Diet were disruptive. The Bank of Taiwan, the Fifteenth Bank, and other banks, large and small, had to close their doors. The run was on.

Public fear this time was not restricted to a particular locality, or to small banks. Everyone wanted cash. The Bank of Japan responded valiantly, increasing its loans from 539 million to 1484 million yen in a few weeks; correspondingly, Bank of Japan currency in circulation rose by 50 per cent. But even this was not enough. A

three week bank moratorium was declared on April 22, 1927. Many banks failed. Others, including the Fifteenth, had to be merged.

The extent of the financial crisis of 1927 severely frightened the monetary authorities; they haven't gotten over it yet. They determined to press ahead with the elimination of as many of the small banks as possible by merger with each other or with larger banks. A new banking act, raising the minimum capital requirement and making possible greater supervision, was passed in 1927. As Table 5 indicates, the number of banks dropped sharply after 1927, and average net worth per bank increased as sharply. It had been decided that the way to strengthen the system was to centralize it, to eliminate the presumably weakest elements.³⁵ In this way the Bank of Japan could more readily step in and help individual banks in times of crisis, and thereby prevent the development of panics. Nothing was done, however, to insure deposits for the benefit of depositors, or to restrict the proportion of loans (relative, say, to net worth) of a single bank going to single firm or group of interrelated firms.

The Bank of Japan was not alone in trying to stem the chronic financial instability of the 1920's. The government took a vigorous role, not just in guaranteeing at times the financial system against losses due to default on discounted paper, but also in its own lending activities. It used the government-dominated special long-term credit banks, notably the Industrial Bank and Hypothec Bank, to extend relief loans in emergencies. These loans came essentially from funds

amassed by the Ministry of Finance's Deposit Bureau through postal savings, government bond issue, and government budgetary surpluses. Such loans constituted an important component of the relief packages put together when panics occurred. For example, in the 1920 crisis as much as 40 per cent of the Industrial Bank's loans were for the relief of large enterprises.³⁶ While there undoubtedly was a bias in the government's relief programs in favor of big business, some loans were made to smaller firms, particularly in the 1927 debacle.

In part because monetary policy was pre-occupied with the instability of the financial system, fiscal measures were importantly relied upon to implement the deflationary policy. This was also consistent with the legacy of budgetary orthodoxy that prevailed in Japan as elsewhere, in the 1920's. The basic estimates of government expenditures and revenues³⁷ are presented in Table 7, and pertinent ratios in Table 8. The decrease in government expenditures relative to net domestic product between 1921 and 1925 is impressive, as is the even sharper use in the next three years, the abrupt decline in 1929-1930 (especially at the central level), and the rapid rise in 1931-1932. Thereafter the growth of government expenditures was outstripped by the growth of net domestic product. Interestingly, the total government sector ran deficits continuously from 1926, while the central government deficit between 1927-1929 turned to surplus in 1930-1931, before turning again to deficits. This suggests that fiscal policy had a deflationary impact until the mid-1920's, but was more or less expansive thereafter except for 1929-1931.

Table 7
Consolidated Central Plus Local Government Expenditures and
Revenues (million yen)

Year	Government Expenditure			Government Revenue		Government Surplus or Deficit	Note: Central Government Surplus
	Total	Military ^a	Investment ^b	Total	Savings ^c		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1910	680	186	167	697	184	17	78
1911	828	206	214	803	189	- 25	17
1912	696	201	185	803	292	107	138
1913	682	192	186	813	317	131	149
1914	698	222	165	782	248	84	94
1915	657	240	143	768	254	111	97
1916	661	273	139	894	372	233	204
1917	897	391	207	1,118	428	221	190
1918	1,250	641	270	1,358	377	108	65
1919	1,817	981	432	1,864	479	47	31
1920	2,350	940	685	1,902	237	-448	-383
1921	2,404	842	681	2,163	440	-241	-160
1922	2,487	693	756	2,489	758	2	36
1923	2,331	530	747	2,256	672	- 75	- 14
1924	2,425	487	778	2,465	818	40	47
1925	2,351	448	753	2,535	937	184	202
1926	2,503	437	872	2,445	814	- 58	78
1927	2,837	494	878	2,456	497	-381	- 93
1928	3,148	519	865	2,574	291	-574	-173
1929	2,912	497	871	2,518	477	-394	-156
1930	2,438	444	608	2,121	291	-317	265
1931	2,690	462	545	2,045	-100	-645	50
1932	3,076	705	631	2,077	-368	-999	-473
1933	3,384	886	679	2,209	-496	-1,175	-470
1934	3,309	953	632	2,543	-134	- 766	-547
1935	3,550	1,043	647	2,715	-188	- 835	-561
1936	3,684	1,089	687	2,978	- 19	- 706	-385
1937	5,788	3,299	755	4,286	-747	-1,502	-2,047
1938	8,007	5,984	901	4,107	-2,999	-3,900	-3,799
1939	8,778	6,495	1,167	4,785	-2,826	-3,993	-3,992
1940	11,711	7,967	1,472	6,510	-3,729	-5,201	-4,588

Note: Expenditures consist of purchases of goods and services plus current subsidies and transfers to the private sector.

a: Narrowly defined to exclude military pensions and interest on the government debt.

b: Excludes all military investment; all military expenditures are regarded as current.

c: Government revenues minus the sum of government current purchases of goods and services, subsidies and transfers.

d: Government revenues minus expenditures (Col. 4 - Col. 1); by definition it also is government savings minus investment (Col. 5 - Col. 3).

Source: Emi and Shinoya, Government Expenditures, Vol. 7, LTES. Data in Col. 7 for 1930-40 are based on general account revenues in Prime Minister's office, Japan Statistical Yearbook 1950 (Tokyo: 1951).

Table 8

Ratios of Military to Total Expenditures and of Government
Expenditures to Net Domestic Product (in per cent)

Year	Central Government Expenditure	Military Expenditures to		Central to Net Domes- tic Product	Central Plus Local to Net Domestic Product
		Central and Local Govern- ment Expendi- tures	Net Domestic Product		
1910	43.5	27.4	5.8	13.2	21.0
1911	42.5	24.9	5.3	12.5	21.3
1912	49.9	28.9	4.6	9.1	15.8
1913	46.6	28.2	4.2	9.1	15.0
1914	50.9	31.8	5.4	10.5	16.8
1915	57.7	36.5	5.6	9.7	15.4
1916	65.2	41.3	5.1	7.8	12.4
1917	64.7	43.6	5.3	8.2	12.2
1918	73.0	51.3	6.1	8.4	12.0
1919	76.2	54.0	7.7	10.1	14.3
1920	60.5	40.0	7.1	11.7	17.8
1921	56.2	35.0	6.7	11.9	19.0
1922	48.4	27.9	5.4	11.2	19.4
1923	39.7	22.7	4.0	10.1	17.7
1924	33.9	20.1	3.4	10.0	16.9
1925	34.2	19.1	3.0	8.8	15.8
1926	31.6	17.5	3.0	9.6	17.3
1927	30.3	12.4	3.4	11.2	19.4
1928	29.4	16.5	3.6	12.1	21.6
1929	29.5	17.1	3.5	11.8	20.4
1930	41.7	18.2	3.6	8.7	18.9
1931	34.9	17.2	4.1	11.6	21.9
1932	39.1	22.9	5.5	14.2	22.9
1933	46.0	26.2	6.1	13.3	21.5
1934	48.3	28.8	6.3	13.0	21.3
1935	50.7	29.4	6.3	12.5	20.7
1936	52.0	29.6	5.9	11.4	19.3
1937	77.3	57.0	15.4	19.9	26.9
1938	92.0	74.7	23.0	25.0	30.8
1939	88.3	74.0	19.3	21.9	26.1
1940	85.9	68.0	21.2	24.7	31.1

Sources: Table 7 and net domestic product data underlying Table 1.

The change in composition of expenditures in the 1920's is striking. Military expenditures dropped sharply on an absolute basis, and even more sharply relative to total government expenditures and to net domestic product. This was possible because of the Washington Conference of 1922, which not only forestalled an imminent arms race but also provided the basis for a Japanese security policy of "armament reduction and cooperation with the Western powers."³⁸ Government investment expenditures, for public works, etc., rose, as did current expenditures for non-military purposes.

The government's spasmodic use of fiscal and monetary measures during the 1920's not only were not sufficient in deflationary effect to restore balance of payments equilibrium and the exchange rate at pre-war parity, but resulted in a general malaise in the economy. The 19-27 financial crisis at home, and the return of all the major Western powers to the gold standard by 1928 was too much. The pressures in Japan to resolve the gold standard problem once and for all finally came to a boil. The drift had continued too long. The chronic instability of the domestic financial system and of domestic economic performance seemed somehow tied up with the government's prolonged failure to take care of the matter.

Businessmen producing for foreign trade and foreign traders felt that exchange rate fluctuation, which had become much more erratic in the spring of 1928 due to the troubles in China was detrimental to business, since it increased the risk of the profitability of foreign trade.³⁹

Large banks had come out of the 1927 crisis with large amounts of surplus funds; deposits had accrued to them and they became somewhat conservative in lending to Japanese business. They wanted to make liquid investments in the United States as interest rates there rose during 1928 and most of 1929. A number of banks did so in large amounts, and at a market exchange rate which was below parity. The banks were anxious to see Japan return to the gold standard at the old parity not only to be protected from possible losses due to exchange rate fluctuation but also to make an exchange profit on short-term funds held abroad.

Ministry of Finance officials were worried about the 230 million yen sterling debt falling due between July 1930-January 1931. They wanted to refund it by new debt issue, but apparently financial houses in London and New York were unwilling to underwrite a new government bond issue unless Japan displayed its credit-worthiness by following sensible economic policies--including return to a gold standard fixed exchange rate.⁴⁰ Japan still had fairly large foreign exchange reserves (1,199 million yen at the end of 1928), and most (1,084 million yen) was held at home in the form of gold.

It is difficult to disentangle this concatenation of forces to determine what were the most important reasons. It probably was quite natural that the Hamaguchi Cabinet coming into power in July, 1929, would announce a decision to return to the gold standard, at the pre-war par, at the earliest possible date. The decision was based on an expectation that some domestic adjustment would be necessary, but it

would not be great because of continued prosperity for the world economy. Prior to the decision several economic commentators urged a return to gold at a lower parity, around \$40/100 yen. Their views were brushed off by those making the decision. Apparently the feeling prevailed that devaluation would be a shameful affront to national honor.⁴¹

Japan's exchange rate was then pegged at \$45/100 yen, and its wholesale price level was at about 165 (1913 = 100), still substantially above England and the United States. A precondition for returning to the gold standard was to push down Japan's price level sufficiently, and thereby the market determined exchange rate would normally move up to the desired parity level.

An orthodox approach was implemented: an austere fiscal and somewhat restrictive monetary policy, with main reliance, symbolically and in terms of its economic impact, on the former. Government expenditures were cut, while tax rates were maintained. The Bank of Japan did not raise its discount rate, but reduced to loans. A serious difficulty for monetary policy was that the banking system was so liquid as a result of Bank of Japan liberal steps in the 1927 crisis; this reduced subsequent Bank of Japan control. Interest rates reversed a tendency to drift downwards. The government also aided industries in the process of cost-cutting, already underway.

The policy was successful in terms of its objectives. The wholesale price index declined by 6 per cent in six months, and continued to drop sharply in 1930 (though in part as a result of the transmission of

the world depression to Japan). The foreign exchange rate quickly moved up to par. Moreover, foreign exchange reserves increased significantly. This resulted not only because of the actions taken by the government but also due to the expectations thus generated. Speculators saw the opportunity and bought yen (for foreign currency); the inflow of short-term capital was substantial. Foreign traders postponed the purchase of imports and rushed exports. Both of these helped to push up the yen exchange rate. However, both these forces were temporary and inherently to be reversed once the gold standard was reattained; to the extent that they were significant they resulted in an overestimation of the true restoration of Japan's competitive position. As it turned out, this probably did not matter too much, because Japan's competitive position was due to be severely eroded and its gold standard status under irresistible attack from the rapid deterioration of the international economy and thereby the institutional environment for world trade and capital flows in 1930-1931.

I have argued that it was a fundamental mistake to return to the gold standard at the prewar parity anytime in the 1920's. The deflationary burden, the costs in terms of economic growth, the social and political effects in terms of income redistribution, distress and tensions, were all too great. Moreover, by coincidence, the timing of Japan's return to the gold standard (on January 11, 1930) could not have been worse: the world economy had just begun to bog down on the most serious and extended adversity it has ever had to suffer. Unfortunately, the Japanese did not realize that; New York's stock

market crash appeared only a temporary set-back.

World prices declined sharply (see Table 4); accelerated deflation in Japan could not keep pace. The bottom fell out of the United States silk market, Japan's single most important export commodity.⁴² The current account of the balance of payments was in deficit. On a net basis long-term capital flowed out rather than in. Even worse was the tremendous outflow of short-term capital. Speculators, who previously felt confident that Japan could go onto the gold standard, now felt equally sure that, because of the changed world environment, Japan could not remain on the gold standard. Many large banks and trust companies, and eventually wealthy individual investors, participated in these short-term capital outflows, for both interest rate differential and speculative reasons. Speculation against the yen was enhanced when England went off the gold standard in September, 1931. Gold poured out of the country--some 675 millions worth. Overall Japan lost 786 million yen (58.5 per cent) of its foreign exchanges reserves in the brief period it was on the gold standard. At the same time the Japanese economy was sinking into the slough of depression, due both to the deflationary policies and to the impact of the collapsing world economy.

It was inevitable that Japan should go off the gold standard, as it did in December, 1931. What followed probably could not have been anticipated: one of the most brilliant and highly successful combinations of fiscal, monetary, and foreign exchange rate policies, in an adverse international environment, that the world has ever seen. The

basic decision was to generate incomes and demand at home by large-scale deficit financing and easy money, and to let the balance of payments take care of itself by allowing the exchange rate to depreciate as much as necessary. This would encourage exports and discourage imports, both desirable for domestic expansion. The crucial decision was to forsake the interrelated objectives of a) being on the gold standard, and b) having the yen exchange at its prewar parity. Adherence to this objective was the ultimate cause of the difficulties of the 1920's. Its repudiation removed the major obstacle to expansionary fiscal and monetary policies to get out of depression and once again start on rapid growth.⁴³

The only effective way for an industrial country to come out of (excess capacity) depression is to spend its way out. In this the government has to take the lead, since business expectations are usually quite pessimistic about the future. The Japanese government pursued this approach with great vigor and success. For 1931-33, government expenditures increased by 26 per cent, and net domestic product grew at a comparable rate. Probably equally important, three-quarters of the rise in government expenditures was deficit-financed; tax revenues were held down, providing a multiplicative effect on private demand (Table 7). Throughout the 1930's the government ran large deficits--sufficiently large that revenues did not even cover current purchases of goods and services and transfer payments (i.e., government saving was negative).

Significantly, almost three-fifths of the increase in government

expenditures during the 1930's prior to the outbreak of the war with China in 1937 was for military uses. Much of the increase followed immediately upon the Manchurian Incident of 1931. We have fairly detailed functional estimates only for central government expenditures in certain benchmark years. Between 1930 and 1935, of the 946 million yen increase in central government expenditures, 62 per cent was for military uses, 14 per cent for social welfare, 7 per cent for transportation, agriculture and other economic services, and 17 per cent for interest on the expanding national debt.⁴⁴

Monetary policy was an important complement to fiscal policy, though as probably is inevitable in a depression it was less important since financial institutions were wary of lending to business. The Bank of Japan probably should have taken positive steps to increase commercial bank reserves rather than standing ready to rediscount upon request. Since requests were limited, as shown in Table 6, it did not expand credit greatly to the private sector. Money supply increased only moderately until 1937. What the Bank of Japan did do was to underwrite the government bond issues from 1932 on. It purchased outright that portion not subscribed to by the Ministry of Finance Deposit Bureau. As government deficit-financed expenditures resulted in an increase in commercial bank deposits, banks were eager to purchase government bonds from the Bank of Japan until the mid-1930's when they began, once again, to engage in private lending. The Bank of Japan lowered its discount rate far below any previous minimum level, to 3.29 per cent in 1936 as compared with 6.57

per cent at the end of 1931. The average yield on government bonds decreased from 6.0 to 3.9 per cent between 1932 and 1936; the commercial bank average lending rate did not decline so much, from 5.8 to 4.6 per cent. Lowered interest rates and easy money abetted the rapid recovery and the new surge of growth that was soon underway.

The foreign exchange rate plummeted as soon as Japan left the gold standard, hitting the pre-World War II low relative to the dollar of \$20.70/100 yen in December, 1932. The pound was also depreciating relative to the dollar. At the end of 1933, the Japanese government decided to peg the yen to the pound, but at a rate some 43 per cent below what it had been when both yen and pound had been on the gold standard (see Table 4). This was a major net depreciation in a world of depreciating currencies.

The effect on Japanese exports of drastically reduced prices in terms of foreign currencies was highly beneficial; exports increased rapidly. The net effect on the world was probably beneficial too because, with the balance of payments constraint lifted, Japan grew more rapidly and thereby increased its demand for imports. Nonetheless, exchange rate depreciation was sufficiently large that Japan's trade balance tended to improve; its balance on current account moved to surplus and remained so until 1937. There is some merit in the criticism that Japan pursued a beggar-my-neighbor policy; in the world economy at that time, though, neighbors had to look out for themselves.

The success of this period of Japanese economic policy, despite a much more difficult world environment as compared with the 1930's, is

manifested in the rapid economic growth which occurred once the new policies were undertaken (see Table 1). But this success occurred too late. By 1936 the military were entrenched in a strong power position, perhaps impossible to dislodge. As the economy approached capacity operation in 1936, it became desirable to slow down the expansion of government expenditures. This was, of course, in conflict with the desires of the military. The assassination on February 25, 1936, of Finance Minister Takahashi, who had so ably guided Japan through its "reflation" period, marked the end of any possibility of restoring power to the business-political parties group. The expansive fiscal and monetary policies were to continue, and increasingly strict direct controls to be imposed, as Japan went onto wartime footing first to fight China and eventually the United States.

It remains to explore in this section some broader implications of Japan's interwar economic performance, and to raise questions if not provide answers. A fundamental question is: to what extent did economic factors, and just what factors, cause Japan to choose, or stumble onto, the path it did which led to militarism and war? In raising this issue I do not want to grapple with the broader problem of historical interpretation: whether Japan's path in the 1930's was an aberration from the basic trend of the democratic, modernization process of the 1920's and earlier and renewed after World War II; or whether it was a natural, likely, perhaps virtually inevitable consequence of the social and political stresses and strains emanating from the very process of modernization.

Nonetheless, with the gradual passing away of the Meiji oligarchy, the 1920's presented an opportunity for nascent parliamentary democracy, based on business-oriented political parties, to display its ability as a system to sustain relatively rapid economic growth, to overcome or at least ameliorate the tensions of growth, and to cope with the country's security objectives. The basic policy stance of the governments of the 1920's was internationalist, of cooperation in the world order of the West. Economically this meant the early postwar restoration of multilateral, relatively free trade and of a gold standard fixed exchange rate system, together with free movement of short-term and long-term capital. National security was also met by cooperation with the West, including general acceptance of the status quo, which implied Japanese hegemony in East Asia. In this international environment, created in large part by the Washington Conference of 1922 and the Kellogg-Briand Pact, it was possible to retrench on armaments and overall military expenditures.

The internationalist policy of the 1920's failed, and with it parliamentary democracy and political parties failed the test opportunity presented. I do not

mean to imply that this was the only test, or that failure inevitably signalled the effective end of the party system; those judgments are for political historians to make. Nor do I mean that the military immediately and directly took over; their encroachment was less rapid until 1936 or 1937. It is obvious that the failure was in large part attributable to economic causes. Two such factors, one exogenous and the other endogenous, were critical: the breakdown, with the Great Depression, of the world economic order; and the mediocre performance of Japan's economy in the 1920's.

The collapse of the world economy, in addition to sharply lowering total demand for internationally traded goods, shifted the emphasis away from free trade to increasing trade restrictions, from multilateralism to increasing bilateralism, from fixed exchange rates based on parity with gold to fluctuating, competitively depreciating exchange rates unlinked to gold and brought an end to long-term capital lending. In this new international game with new rules Japan played superlatively. The exchange rate and the balance of payments were no longer a constraint on domestic economic growth. It is ironic that at the time when Japan's international economic performance, operating in world markets, was so successful, the domestic swing in its policy stance was towards autarchy.

The very success of Japan's international economic performance between 1932 and 1936 suggests that we should attribute the dominant economic factor in the failure of parliamentary democracy to the distinct lack of success of macro economic policy prior to 1932. Japanese policymakers succeeded only in exacerbating social tensions, not in ameliorating them.

The off-again-on-again deflationary policy of the 1920's was clearly a calamitous mistake. An acceptance of, say, the 1922 level of prices as reasonable, a correspondingly appropriate exchange rate adjustment, and the return

then to the gold standard would, by hindsight, have been much more efficacious. The domestic economy would not have needed to be subjected to the continual buffeting it received, and could have gone about its business of growth. This fundamental error -- to return to gold at the prewar par -- was compounded by the cataclysmic timing of the actual re-establishment of the prewar parity in returning to the gold standard at the beginning of 1930. Incidentally, big business by speculating against the yen in 1930 and 1931 succeeded in undercutting the very basis of their political power. From then on, they would have increasingly to make deals directly with the military.

The alternative to internationalism was decreased reliance on the West and, eventually, on autarkic bloc economy. Not surprisingly the proponents of this option were the military, who saw the issues primarily in security rather than economic terms. They were apprehensive over the London Naval Treaty of 1930, whereby it appeared national security was being compromised for the sake of budgetary retrenchment and adherence to the gold standard.⁴⁵ The military leaders were not a bunch of wild-eyed, right-wing, young conspirators intent upon a coup by which they could manipulate ministers of state. They, and those from all elements of Japan's broadly defined elite who supported them, were on the whole reasonable, responsible men making relatively conscious, mostly incremental decisions based on their perceptions of the changing world and the options available. In the perceptions of the militarists and many others the internationalist approach had failed by 1931, for both foreign and domestic reasons. They proposed what they considered to be superior alternatives. This is not to say that the military were wholly altruistic; they too were elitist and presumptuous, contemptuous of parliamentary democracy. The expenditures retrenchments of the 1920's, predicted upon absolute cut-backs of personnel and restrictions upon armament aims, disturbed the military greatly. They had been

used to a greater share of the central government budget and of GNP, and of attendant political power, and they wanted "their share" back.

But suppose the foreign exchange rate--balance of payments problem had been solved in the early 1920's and the economy had grown more rapidly and more stably. Would that have resolved the difficulties inherent in the differential structure? It probably would have done no more than ameliorate them--but perhaps that would have been enough. More rapid growth would have been mainly in the industrial sector; with the stable prices there would probably have been less substitution of capital and labor. Together these would have meant a greater absorption of unskilled labor into manufacturing, as indeed occurred during the 1930's. But the unskilled-skilled wage differential would have remained. Would this relative deprivation of the unskilled have led to their discontent? Or was it the inability to find factory jobs, the absolute decline in money wages which were the real issues generating so much friction? I suspect it was the latter.

The real difficulty, even with successful industrial performance, could well have been agriculture. There the differential structure would likely have remained. A lower exchange rate and a stable price, instead of the deflationary policy, would have made for more favorable price incentives for agriculture than existed. Silk incomes, in yen, would have been even higher, but still subject to the precipitous decline in world prices after 1926. Rice was imported from the colonies which were on the yen standard, so exchange rate devaluation would not have helped. The policy of importing cheap rice was in principle efficient in the long run since resources in Japanese agriculture should be transferred into manufacturing. But the rub was in the long time it would take these resources--particularly labor--to be absorbed in manufacturing. It simply could not have been achieved quickly enough to prevent a long adjustment period of

agrarian relative deprivation and, presumably, discontent. The government was on the horns of an income distribution dilemma: a relatively high price of rice and other foodstuffs would maintain, and enhance, incomes in agriculture, but at the expense of the discontent of urban workers and capitalists. But an import program, while helping urban workers and their employers, hurt farm incomes. However, a better pricing policy would at least have prevented agricultural incomes from declining absolutely.

Even if better price incentives had existed for agriculture, it is not clear that this alone would have been sufficient to increase productivity in agriculture at the rate at which it had been growing between 1885 and 1919. It seems inevitable that a differential structure emerges in the phase of the industrialization process when the demand for skilled labor outstrips supply and large reservoirs of unskilled labor remain. Until the industrial sector is large enough and growing rapidly enough to absorb large amounts of unskilled workers, their wages will not increase substantially. Perhaps social tensions are bound to increase during this phase of development because of the observable differences in income received by capitalists, by skilled workers, and by farmers and unskilled non-farm workers.

The problem then for the ruling government in an industrializing nation is how to keep these tensions within bounds, to ameliorate conditions such that military coups, or revolutions, do not occur. At the least, the real incomes of large groups cannot be allowed to fall absolutely. More positively, the real incomes of the surplus labor (notably that in agriculture) may well have to rise somewhat, though less than that of capitalists or of skilled labor. Minimum wage-type legislation will not achieve this. It may even be difficult, and perhaps undesirable from the developmental process of mobilizing savings, to move

the agricultural-manufacturing terms of trade in favor of agriculture. Essentially, the only hope seems to lie in raising productivity, output, and hence real income in agriculture.

Objective economic conditions are important not only in themselves but particularly as they affect the perceptions, objectives and tactics of those in political power and those attempting to achieve power. For Japan this involved on the one hand the political activities of various economic interest groups--such as "old" and "new" zaibatsu, workers, landlords, small land owning-cultivating farmers, tenants, and whatever organizations they had--and on the other hand the concern with economic issues, and economic bases of (economic and political) support of the various political actors--parties, various strata of the Army and Navy, etc. We should separate the influence of economic difficulties on the objectives of political actors from their capitalizing upon these difficulties as a means of attaining power. Objectively, some of the economic issues of the late 1920's and early 1930's were false, though probably not entirely so in the perceptions of the important political actors.

Much more analysis is needed of the perceptions by the political actors of the economic realities of interwar Japan. For example, the military perception that the basic conflict involving agriculture was the capitalists versus the farmer, rather than the landlord versus the tenant, is highly revealing. So were military and bureaucracy perceptions of the foreign trade environments, particularly the evolving feeling that world prices for many imports they needed for military purposes were rigged by international cartels and that they simply could not obtain sufficient foreign exchange for their (expanding) definition of minimum military requirements. Increasingly they came to feel that the only viable alternative was for Japan to develop its own bloc economy in a relatively autarkic manner. The complexities of these issues suggest that we need to

explore the varying relationships among big business, the political parties, the bureaucracy and the military--and the degree to which these relationships were affected by economic causes--before we can assess fully the extent to which economic factors, and which factors, were responsible for Japan's taking the militaristic path of the 1930's.

Footnotes

1. The aggregate "facts" are fairly rough. The basic estimates of Japan's interwar GNP, in toto and by sector of production and type of use, in current prices and adjusted for price changes, in absolute amount and growth rates, secularly and cyclically, are in a jumble. The standard Ohkawa estimates prepared in the early 1950's are being revised by Professor Ohkawa and others at the Economic Research Institute, Hitotsubashi University, based upon new estimates of agricultural and industrial production and other important data. The new estimates will appear, as have already appeared some of the underlying data, in the thirteen-volume series Estimates of Long-Term Economic Statistics of Japan Since 1868 hereafter referred to as LTES. For this paper I use interim aggregate output and related estimates which are better than the older published data, but which no doubt will be superseded by the new LTES estimates once they are completed. My estimates are based on the method used by Hayami and Yamada cited in Table 1. The tertiary sector output, almost half the total, is estimated by applying ratios to primary and secondary production. Manufacturing output is based on the Shionoya industrial production index. Price deflation of the various output series in order to exclude the effects of changes in the price level is imperfect and, to some extent, hazardous.
2. The national accounts data on the expenditure side have not been fully reconciled with that on the production side; our preliminary attempts suggest that the divergence is not too great, however.
3. For supporting data see Mataji; Umemura et al., Agriculture, Vol. 9, LTES.
4. Ohkawa and Johnston cite these, together with a reduced potential for technological advance in the agricultural structure of small farms and substantial tenantry, as the major causes of the slowdown. See Kazushi Ohkawa and Bruce F. Johnston, "The Transferability of the Japanese Pattern of Modernizing Traditional Agriculture," Universities-NBER Conference on the Role of Agriculture in Economic Development, December 1-2, 1967, Table 1.
5. For price data see K. Ohkawa et al., Prices, Vol. 8, LTES; Umemura et al., Agriculture, Vol. 9, LTES.
6. Kōkichi Asakura, Nogyō Kinyūron (Treatise on Agricultural Finance), (Tokyo: Shisakasha, 1949), p. 54.
7. Between 1925 and the 1931 trough the ratio of rural to urban consumer prices dropped by 5.6 per cent, of prices farmers received to rural consumer prices by 30.7 per cent, and of prices farmers received to the manufactured goods price index by 13.7 per cent.
8. Jung-Chao Liu and Daniel B. Suits, "An Inter-Regional Model of the Rice Market in the Japanese Empire," Discussion Paper, Research Seminar in Quantitative Economics, University of Michigan, July 1959.

9. Prices of silk tended to fluctuate more than agricultural commodities in toto, rising more during the World War I boom, falling more between 1925 and 1931, and rising more thereafter. This makes it particularly difficult to determine a "normal" base year.
10. This is computed by applying the percentage decline in agricultural prices (excluding silk weighted at 10 per cent) to the 1925 silk price and multiplying it by the quantity produced. This figure is compared with the value when the actual price decline is used.
11. Takekazu Ogura, ed. Agricultural Development in Modern Japan (Tokyo: Fuji Publishing Co., 1963) p. 38.
12. Irene B. Taeuber, The Population of Japan (Princeton: Princeton University Press, 1958), p. 87.
13. If we assume the same industrial definitions for the population census and the census of factory manufacturing, then of the 264,000 increase in employment in manufacturing between 1920 and 1930, 147,000 was in establishments of four workers or less, 95,000 in firms of 5-99 employees, 112,000 in firms of 100-499 employees, and minus 90,000 in firms of 500 or more employees.
14. See Miyoei Shinohara, Growth and Cycles in the Japanese Economy (Tokyo: Kinokuniya, 1962), pp. 14-16; Koji Taira, "The Dynamics of Japanese Wage Differentials, 1881-1959," Ph.D. dissertation, Stanford University, 1961, pp. 74-84, and Konosuke Odaka, "Historical Developments in the Wage-Differential Structure," unpublished manuscript.
15. Kazushi Ohkawa and Henry Rosovsky, "A Century of Japanese Economic Growth," in W.W. Lockwood, ed., The State and Economic Enterprise in Japan (Princeton: Princeton University Press, 1965).
16. See Ohkawa et al., Prices, Vol. 8, LTES; Umemura et al., Agriculture, Vol. 9, LTES; and Odaka, ibid.
17. For example, money wages for female cotton textile workers were 0.92 yen/day in 1922, 0.82 in 1928, thereafter falling sharply to 0.55 in 1932. In part mills substituted younger for older girls. There was substantial turnover of workers; new workers could be and were hired at lower wage rates.
18. See the comparisons for 1929-31 in W. Arthur Lewis, Economic Survey, 1919-1939 (London: George Allen and Unwin, 1949), p. 118.
19. In this section I have relied on a variety of materials, but especially on Ministry of Finance Showa Zaisei Shi, Vol. 10 (Kinyu) (Tokyo: Toyo Keizai, 1955); Kiyoshi Oshima, Nihon Kyoko Shi Ron (Tokyo: Tokyo University Press, 1955); Katsami Mitani, Kokusai Shushi to Nihon no Seicho (Tokyo: Heibonsha, 1957); Mitsuhaya Kajinishi et al., Nihon Shihonshugi no Botsaraku (Tokyo: Tokyo University Press, 1960), esp. Vol. I; Moon H. Kang "The Monetary Aspect of the Economic Development in Japan with Special Reference to Monetary Policies: 1868-1935," Ph.D dissertation, University of Nebraska, 1960.

20. See Lewis, op. cit., p. 156; Ragnar Nurkse, International Currency Experience (League of Nations, 1944), pp. 116f.
21. The balance of payments is for the Empire; while the main reason is pragmatic (this is what is available) for my purpose it is preferable to a Japan Proper balance of payments because it contains all transactions which involve foreign exchange; since the colonies used yen as currency, current and capital flows between them and Japan had no direct foreign exchange implications.
22. Britain and France repaid by the mid-1920's, but Japan had to write off 240 million yen in loans to Czarist Russia.
23. Japan had in effect been on a gold exchange standard since its inception in 1897, investing much of its reserves in safe, short-term assets in London and New York.
24. The rate did appreciate somewhat, to a maximum of \$51.50 (3.3 per cent) in 1919.
25. See S.Y. Furuya, Japan's Foreign Exchange and Her Balance of International Payments (New York: Columbia University Press, 1928). The holding of gold relative to the domestic currency supply rather than balance of payments needs was one of the "rules of the game" of the gold standard system. It was a very expensive anachronism of the system carrying over from the days of mistrust in banknotes. Japan was not alone in its concern; vide United States policy in Autumn 1931.
26. Ministry of Finance, Kinyu, op. cit., p. 157.
27. A simple application of the purchasing power theory, using a 1922 price index of 140 for the United States and 200 for Japan, would suggest a new par of 100 yen = \$34.90. This probably would have been too low, because of the increase in industrial capacity in Japan during World War I and the immense increase in U.S. demand for Japanese silk during the 1920's. However, much of the industrial capacity created during World War I was in new industries which arose because they temporarily had little foreign competition in either domestic or foreign markets, so they could sell high-cost goods at high prices. In terms of long-run growth as well as short-term (war) gains, it probably was desirable to have these industries develop at this time even though they faced considerable difficulties once the war ended. The time period for a new industry to become competitive was too long for these industries to contribute much to interwar exports until the mid-1930's (and then mainly for Japanese investment in its Empire) or, in some cases, until the mid-1950's. See William V. Rapp, "A Theory of Changing Trade Patterns under Economic Growth: Tested for Japan," Yale Economic Essays, Vol. 7, No. 2 (Fall 1967), pp. 69-135.
28. Quotas were not in the arsenal of accepted weapons in the 1920's, though of course in the economic warfare of the 1930's any weapon could be, and was, used.

29. This speculative demand began first in Shanghai in February 1925, and several months later was joined by demand from New York. Inouye has some amusing comments on the difference between Chinese and American speculators; see Junnosuke Inouye, Problems of the Japanese Exchange, 1914-1926 (London: MacMillan, 1931), pp. 114-126.
30. See G.C. Allen, "Japanese Industry: Its Organization and Development to 1937," in E.B. Schumpeter, ed., The Industrialization of Japan and Manchukuo 1930-1940 (New York: MacMillan, 1940), pp. 737-38.
31. For the 1924-1929 period for which we have data it was only 15.6 per cent; for 1930-31 there was a net outflow of long-term (as well as short-term) capital, in addition to a current account deficit.
32. See Hugh T. Patrick, "Japan, 1868-1914," in Rondo Cameron et al., Banking in the Early Stages of Industrialization (New York: Oxford University Press, 1967).
33. The best money supply estimates have been made by Professor Shozaburo Fujino; they are not yet published. I rely here on the net domestic product estimates underlying Table 1 and Fujino's money supply as adjusted in W.C. Hoekendorf, "The Secular Trend of Income Velocity in Japan, 1879-1940," Ph.D. dissertation, University of Washington, 1961.
34. The Bank of Japan rediscounted 431 million yen of earthquake bills, and large banks held considerably more, confident of the Bank's guarantee; the total amount issued is estimated at 2,100 million yen. All but 276 million yen had been paid off by November 1924; this remainder proved difficult to liquidate (reflecting underlying bad debts); in early 1927, 207 million yen remained outstanding, almost half held by the Bank of Japan.
35. This also resulted in considerable increase in concentration in the financial sector. The "Big Five" banks (Yasuda, Mitsubishi, Mitsui, Sumitomo, Daiichi) as a group had only 19.5 per cent of loans and 24.3 per cent of deposits of all ordinary banks in 1926; the shares increased thereafter, to 27.8 per cent and 34.5 per cent respectively in 1929, to 30.5 per cent and 40.1 per cent in 1931, and to 39.3 per cent and 42.1 per cent in 1937. See Oshima, Nihon Kyokō Shi Ron, p. 284, and Fuji Bank, Banking in Modern Japan (Tokyo: 1961), p. 96.
36. Kojinishi et al., op. cit., p. 154.
37. The data are consolidated for central plus local governments; the latter were dominated by the central government. While the local governments ran budgetary deficits between 1920 and 1940, central government expenditures and revenues (and central government general account expenditures) moved closely with the total in Table 6.
38. James B. Crowley, Japan's Quest for Autonomy - National Security and Foreign Policy 1930-1938 (Princeton: Princeton University Press, 1966), p. 30.

39. The Yokohama Specie Bank had to change its stated rate for dollars 90 times during 1928. In addition, silk spinners were hurt by the seasonality of trade, since they tended to export in the fall (following the spring cocoon crop) when the trade balance tended toward surplus, the exchange rate rose, and the yen proceeds of given dollar sales declined.
40. A Ministry of Finance official who took a trip abroad between February-May 1929 to survey foreign opinion was advised that Japan should return to the gold standard, but at a new, lower parity. Ministry of Finance, Kinyu, op. cit., p. 211.
41. Katsumi Mitani, Kokusai Shushi to Nihon no Seichō (Tokyo: Heibonsha, 1957), pp. 228-230.
42. Silk exports in 1929 were valued at 781 million yen, 36.3 per cent of total exports of 2,149 million yen; in 1930 they were 417 million yen, 28.4 per cent of much smaller total exports of 1,470 million yen. The decline in value of cotton textiles was also substantial.
43. Professor William Lockwood has suggested that the "brilliance" of macro policy between 1932 and 1936 may have been little more than a political response to pressures to expand expenditures (by the military, business, etc.) without raising taxes, rather than a reasoned analysis and understanding of aggregate demand. The point is well taken though clearly talk of "reflation" had imbedded in it a vague appreciation of what subsequently has been termed Keynesian economics.
44. Emi and Shionoya, op. cit., pp. 270-273.
45. See Crowley, op. cit., Chpt. 1. Professor Crowley's thinking on national security has strongly influenced mine.