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Japan

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I. THE LEVELS OF CAPITAL FORMATION AND PUBLIC FINANCE IN POSTWAR JAPAN

Postwar Economic Growth of Japan

The four key factors associated with the high economic growth rate in Japan have been a high level of capital formation, investment demand, and capital productivity coupled with the rapid absorption of disguised unemployment.

HIGH LEVEL OF CAPITAL FORMATION¹

One of the most conspicuous factors contributing to the very high growth rate of the postwar Japanese economy is the high proportion of capital formation out of gross national product (GNP) or gross domestic product (GDP). Table 1, which compares Japan's postwar and prewar periods, indicates that both the postwar growth

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For conversion purposes, 1 yen = 0.28 U.S. cents, or 360 yen = \$1.

¹ Unlike most other papers presented to the Conference, the analysis in this paper is confined mostly to the effects of taxation on capital formation. Undoubtedly taxation affects the course of economic growth in other ways as well. However, at least so far as postwar Japan is concerned, not much is known about the effects of taxation on work incentives, on supply of venture capital, on mergers and industrial organization, and so on. Also, in postwar Japan, the promotion of capital formation, encouragement of export, and development of heavy and chemical industries have been the three main pillars of economic policy. The policy-makers have paid little attention to the resource-reallocation, income-redistribution, or counter-cyclical functions of the tax system.

TABLE 1

Japan's Rate of Growth and Capital Formation Proportions, 1887-1960

Period	Number of Years	Rate of Growth in Real GDP	Gross Investment Ratio ^a	Net Investment Ratio ^b
1. 1887-96	10	4.2	11.0	6.4
2. 1897-1906	10	2.7	9.3	2.0
3. 1907-16	10	4.9	11.9	7.3
4. 1917-26	10	3.4	16.3	9.3
5. 1927-36	10	4.8	15.9	9.7
6. 1931-40	10	4.9	17.2	11.5
7. 1950-55	6	9.0	26.7	22.4
8. 1955-60	6	11.7	31.6	24.2

SOURCE: Kazushi Ohkawa, *Analysis of the Japanese Economy; Growth and Structure* (in Japanese), Tokyo, 1962; Japanese Government's *National Income White Paper* (annual); Henry Rosovsky, *Capital Formation in Japan: 1868-1940*, New York, 1961.

^a Gross domestic capital formation divided by GNP, both in current prices.

^b Net national capital formation divided by net national product, both in current prices.

rate and capital formation ratios are about double their prewar levels. Compared with the other industrial nations in this survey, Japan's gross domestic saving and gross domestic investment ratios were the highest (see Table 2). Moreover, starting from around 1955, there has been a marked upward trend in Japan's capital formation ratio (see Table 3). The postwar reconstruction process in various sectors of the economy ended around 1953 or 1954, and the Japanese economy entered, after 1956, a new era of growth, led by a heavy investment spurt. Between 1955 and 1961, the real gross fixed investment within the private sector increased at the exceptionally high rate of 29.6 per cent per annum and its ratio to GNP jumped from 9.4 to 24.2 per cent. In terms of saving, the average propensity to save of both the household sector and wage- and salary-earners' families doubled between 1954 and 1961. In 1961 the ratio of gross domestic investment to GNP stood at an unprecedented high level of 44.9 per cent, and the household sector's average propensity to save out of disposable income stood at 21.3 per cent.²

² The investment and saving ratios declined slightly in 1962. This was due to

TABLE 2
International Comparison of Rate of Growth and
Capital Formation Proportions, 1950-60
(ratio of investment to GDP,^a per cent)

Country	Rate of Growth in Real GDP	Gross Domestic Investment	Gross Investment in Plant and Equipment ^b	Increase in Stocks	Ratio of Gross Domestic Saving to GDP ^c
Japan	9.5	28.9	16.3	6.2	29.9
Germany, Fed. Rep.	7.7	23.8	13.4	2.7	26.0
Italy	6.0	21.0	12.7	0.9	20.5
Netherlands	4.4	25.0	14.8	2.3	26.8
France	4.2	18.4	11.2	1.6	18.4
United States	3.3	17.6	10.0	1.1	18.3
Sweden	3.2	21.3	12.1	1.0	21.4
United Kingdom	2.8	15.7	10.3	1.0	15.5

SOURCE: U.N., *Yearbook of National Accounts Statistics and World Economic Survey*, 1959 and 1960.

^a In constant prices. Average for 1950-60.

^b Fixed capital formation by private enterprises, public corporations and government enterprises.

^c In current prices. Average for 1950-60.

STRONG INVESTMENT DEMAND

Investment demand has been high in postwar Japan. Why has this been so?

1. Except possibly for some Eastern European countries, the damage to the Japanese economy caused by World War II was the heaviest, and the recovery and reconstruction period after the war was the longest, experienced by any nation. Most production and consumption statistics did not regain their prewar peaks until sometime between 1950 and 1954. Industrial production passed its prewar high in 1951 and real per capita consumption recovered its prewar (1934-36) level in 1953. Therefore, Japan's very rapid rate of economic growth and capital accumulation up until 1955 might be

the monetary tightening which followed the balance of payments difficulty in 1961, and to a rise in the income-share of hitherto low-income families.

TABLE 3
Japan's Investment and Saving Ratios,^a 1950-61
(per cent of GNP)

Fiscal Year	Gross Domestic Investment ^b	Private Fixed Investment ^b	Gross Domestic Saving ^c	Personal Saving ^c	Average Propensity to Save of the Household Sector ^d	Average Propensity to Save of Wage- and Salary-Earner's Families ^d
					Household Sector ^d	Earner's Families ^d
1950	26.5	9.8	29.4	10.4	13.8	—
1951	28.7	9.7	30.6	13.2	19.1	2.0
1952	26.1	10.4	25.9	11.3	15.6	4.4
1953	26.3	10.5	23.8	7.4	10.6	5.6
1954	23.7	10.3	22.1	7.5	10.4	7.2
1955	25.3	9.4	25.3	10.1	13.9	8.9
1956	30.0	13.8	30.3	10.5	14.9	11.3
1957	30.4	15.9	30.9	10.8	15.3	11.9
1958	28.0	16.3	30.4	11.3	15.5	12.1
1959	36.1	17.8	34.9	12.4	18.3	13.4
1960	40.1	22.0	39.4	13.4	20.1	14.3
1961	44.9	24.2	41.3	13.8	21.3	15.9

SOURCES: Japanese Government, *National Income White Paper and Annual Report on Family Income and Expenditure Survey*.

^a Ratio to GNP, unless otherwise specified.

^b Annual average in constant (1955) prices.

^c In current prices.

^d Personal saving divided by disposable income for calendar year.

explained as that of a recovery and reconstruction period, but the accelerated growth and capital accumulation thereafter cannot be considered part of the recovery process.³

2. Technological innovations which were introduced during and after the war in the United States and other foreign countries were introduced into Japan after the war. This rapidly narrowed the

³ Until a few years ago there were many writers in Japan who considered that the country's rapid economic growth was primarily due to recovery factors, and who predicted that the rate of growth would decline as recovery factors disappeared. See for example Japanese Government, *Economic White Paper* (in Japanese) for 1956 and 1958.

gaps in technology between Japan and foreign countries, and at the same time created in Japan vast new investment opportunities.⁴

3. The land reform, the dissolution of the Zaibatsu regime, the diffusion of labor unionism, and other reform measures which were carried out after the war resulted in a more equal distribution of income than in prewar years and in the expansion of the domestic market. Particularly, the land reform led to a rise in the living standards of the peasants. The rapid spread of consumer durables such as TV sets, sewing machines, and washing machines would never have occurred under the prewar semifeudal system of land-holding.

4. Dissolution of the Zaibatsu regime, rapid changes in the industrial structure, and the general increase in the size of the economy encouraged the growth of enterprising new firms and made most sectors of the economy more competitive than in prewar years. The much talked-about "excessive competition" or "excessive investment" in various industries often has been nothing but an ordinary form of competition in a growing industry. Generally, large firms in major industries engage in vigorous competition with each other through the rapid expansion of productive capacity, introduction of new products and processes, opening up of new domestic and export markets, modernization of management, and so on.

5. Finally, the expected and realized rapid increase in total effective demand induced a high level of investment.

HIGH CAPITAL PRODUCTIVITY

The productive efficiency of investment, as reflected in low capital-output ratios, tends to be higher in Japan than in the other industrial countries (Table 4).

There are several reasons why Japan's capital-output ratio is low. First, the level of effective demand relative to capacity has been on

⁴In postwar Japan, all contracts to buy foreign patent rights and technical know-how must be authorized by the government. The annual number of foreign patent and know-how contracts authorized by the government followed a pattern similar to the level of investment: a declining tendency from 1952 to 1955, and a spurt after 1956 and particularly after 1959. This power of the government to authorize patent contracts and imports of foreign capital will be one of the major tools of the government's selective control over industries and individual companies after trade liberalization.

TABLE 4
International Comparison of Incremental Capital-Output Ratios

Country	Total Gross Domestic Investment	Gross Investment in Plant and Equipment	Increase in Stocks
Japan	3.1	1.7	0.65
Germany, Fed. Rep.	3.1	1.7	0.35
Italy	3.5	2.1	0.15
France	4.4	2.7	0.39
United States	5.4	3.1	0.54
United Kingdom	5.6	3.7	0.36
Netherlands	5.7	3.4	0.53
Sweden	6.6	3.8	0.32

SOURCE: Table 2.

the average very high in prosperous postwar Japan. Thus, most industries have operated at a high level of capacity utilization. Second, in countries like Japan where the war damage was severe, industrial production declined to a very low level. Thus, a given amount of additional investment resulted in a relatively large increase in output when additional capital was used to repair partly damaged facilities and to convert the munitions industry to a peacetime one.⁵ This was true not only of plant and equipment but also of social overhead capital.

Third, the proportion of replacement to total gross investment is lower for a country where the rate of growth in output is higher. Therefore, there is some negative correlation between the rate of growth and the incremental capital-output ratio for various countries and periods.⁶ Fourth, so far as the total gross domestic investment is concerned, heavy investment in social overhead capital and residential construction tends to raise the incremental capital-output ratio. In this regard, it is noted that residential construction in Japan accounted for only 1.7 per cent (1950-60 annual average) of GDP, whereas in most other industrial countries it amounted to 4

⁵ Cf. Miyohei Shinohara, *Growth and Cycles in the Japanese Economy* (in Japanese), Tokyo, 1961, Chapter II.

⁶ A fact emphasized by Miyohei Shinohara, *ibid.*, pp. 161 ff.

to 5 percent. Fifth, perhaps the most basic reason why the capital-output ratio is so low in Japan lies in its supply of labor or factor proportions.

Japan's low capital-output ratio is not merely a postwar phenomenon. Among some ten countries for which long-run data on growth rates and capital formation ratios are available,⁷ Japan's capital-output ratio has generally been the lowest for a very long period.

ABSORPTION OF DISGUISED UNEMPLOYMENT

In Japan, although the level of clear-cut unemployment has been very low throughout the postwar period, there have been various forms of "disguised unemployment" in low-productivity sectors of the economy such as agriculture, retail trade, and small-scale manufacturing. It is extremely difficult to derive a meaningful definition of unemployment because of the existence of such disguised unemployment. However, according to the government's Labor Force Survey, the labor force actively engaged in agriculture, which accounted for about 43 per cent of total employment (including self-employed and family workers) in 1950, declined at a rate of 1.0 per cent per year between 1950 and 1955 and by 3.3 per cent annually between 1955 and 1961. Thus, agriculture's share in the active labor force was reduced to about 29 per cent in 1962. Since the index of agricultural output⁸ increased at a fairly steady rate of 3.9 per cent per year between 1950 and 1961, disguised unemployment in agriculture was apparently being mobilized for more efficient production in other sectors of the economy. Nonagricultural employment in Japan increased at an annual rate of 6.4 per cent between 1950 and 1955, and at a rate of 3.4 per cent between 1955 and 1961. This was much faster than in other industrial countries. That these are remarkably high rates is shown by the fact that from 1900 to 1941 the five-year average annual rate of increase in nonagricultural em-

⁷ See Simon Kuznets, "Quantitative Aspects of the Economic Growth of Nations, IV: Long-Term Trends in Capital Formation Proportions," *Economic Development and Cultural Change*, Vol. 9, No. 4, Part 2, July 1961, pp. 13-15. The countries included are Australia, Canada, Denmark, Germany, Italy, Norway, Sweden, United Kingdom, and United States.

⁸ In real terms. The index is published by the Ministry of Agriculture and Forestry.

ployment never surpassed 3 per cent at a time when Japan's total population was increasing at a much higher rate than it now is.⁹

Movement of labor from low- to high-productivity sectors, or, in other words, the reduction of disguised unemployment, has been taking place in other ways as well. In the last decade, and particularly since 1959, the degree of labor mobility has been increasing. The difference in wage rates between large- and small-scale establishments, which is very often mentioned as a peculiar characteristic of the Japanese economy, widened considerably in postwar years until 1959. Then the trend was definitely reversed, and in the past three years, the wage differential has been narrowing very rapidly.

The Structure of Public Finance and Government Capital Formation

Public finance in postwar Japan has several distinctive characteristics compared with other countries in this study. Tables 5 and 6 provide selective comparison of tax structures and government saving and investment ratios. These tables are based upon the United Nations, *Yearbook of National Accounts Statistics*, and give the average ratio of each item to GDP for 1950 through 1960. The concepts used here are similar to those in the *Yearbook*, except that in these tables interest on public debt is included in government's current expenditure rather than subtracted from current revenue as in the *Yearbook*. The term government in these tables means the general government comprising central and local governments and social security funds, but does not cover government enterprises and public corporations.

First, the aggregate level of public finance in postwar Japan is very low as compared with other countries. In levels of government current revenue, government current expenditures, or total government expenditures (including both current and investment expenditures), Japan is ranked below the countries listed in Table 5. Since the Meiji period, the government has played a leading role in the development of the Japanese economy, and its role has not diminished in postwar years. However, in terms of the aggregate level of

⁹ See K. Ohkawa, *Analysis of the Japanese Economy* (in Japanese), Tokyo, 1962, p. 32.

TABLE 5

International Comparison of Components of Public Finance: Current Revenue and Expenditure^a
(per cent of GNP)

Country	Current Revenue			Current Expenditures					
	Total	Indirect Taxes	Direct Taxes on Corporations	Direct Taxes on Households	Total	Interest on Public Debt	Civilian Consumption Expenditure	Defense Expenditure	Transfer Payments to Households
Germany, Fed. Rep.	35.7	14.5	3.1	15.1	29.0	0.5	10.8	3.8	12.2
Netherlands	32.3	11.1	3.8	14.8	26.2	2.8	9.2 ^b	4.6 ^b	8.2
France	32.0	16.8	2.2	12.2	29.0	1.2	8.4 ^c	5.8 ^c	11.1
Sweden	31.4	9.3	3.4	15.2	26.3	1.4	11.8	4.9	7.0
United Kingdom	31.0	14.2	4.8	15.7	30.1	4.0	9.6	8.0	6.0
Italy ^d	30.8	13.5		13.9	28.2	1.8	10.0	4.4	10.6
United States	26.0	8.7	5.3	12.1	24.0	1.5	7.7	10.3	4.2
Japan	21.3	9.9	3.6	7.0	15.0	0.6	8.1	2.0	3.4
Japan ^d	20.9	9.7	3.7	6.1	15.2	0.6	8.3	1.6	4.0

Source: U.N., *Yearbook of National Accounts Statistics and World Economic Survey*, 1959 and 1960; Japanese Government, *National Income White Paper*.

^a Annual average ratio of each item to GDP for 1950-60, unless otherwise specified.
^b 1951-60. ^c 1954-60. ^d 1955-60.

TABLE 6

International Comparison of Components of Finance: Saving and Investment^a
(per cent of GNP)

Country	Ratio to GDP		Proportion of Government Saving to Current Revenue	Proportion of Government Investment to Total Government Expenditures	Difference Between Government Saving ^b and Investment
	Net Government Saving	Gross Fixed Investment by Government			
Germany, Fed. Rep.	6.7	2.7	18.9	10.0	4.3
Netherlands	6.1	3.4	18.9	12.7	3.2
France	3.0	2.0	9.4	6.8	1.2
Sweden	5.1 ^c	3.2	16.1	11.2	1.9
United Kingdom	1.0	1.4	3.1	5.5	0.5
Italy ^d	2.6	2.5	8.4	8.8	0.3
Canada	3.2	3.5	12.4	14.5	0.8
United States	2.1	2.3	8.0	9.2	2.5
Japan	6.4	4.8	29.8	24.9	0.6
Japan ^e	5.7	5.1	27.1	25.9	—

SOURCE: U.N. *Yearbook of National Accounts Statistics* and *World Economic Survey*, 1959 and 1960; Japanese Government, *National Income White Paper*.

^a Annual average ratio for 1950-60, unless otherwise specified.

^b Adjusted for government's provisions for fixed capital consumption, where data are available.

^c Includes provisions for fixed capital consumption.

^d 1955-60, except col. 2, which is 1950-60.

^e 1955-60.

public finance, the relative weight of the government in the economy is quite low in Japan compared with European standards. Since the government takes less from the private sector in postwar Japan, *ceteris paribus*, there is a larger amount of resources available for capital formation within the private sector.¹⁰ This is particularly so

¹⁰ It may be argued that the relative weight of the government in most advanced countries is also low. In fact, the ratio of government current revenue to GDP (1950-60 annual average) for countries for which data are available from the *Yearbook of National Accounts Statistics* is as follows (per cent): Burma 17.7, Chile 19.4, Taiwan 12.6, Colombia 14.0, Ecuador 19.4, Greece 20.8, Philippines 10.5, Portugal 19.2. However, although Japan, in per capita na-

in view of the Japanese tax structure, as discussed in the next section.

In an economy where a lack of investment incentives is an obstacle to economic growth, an increase in government expenditures may promote capital formation in the private sector. But in postwar Japan, a lack of investment opportunities has seldom been a problem. Most interest rates have been kept artificially low by government intervention under the so-called "low interest rate policy," so that very often some form of allotment of funds is enforced. Yet, the free-market interest rate is substantially higher than in other advanced countries.¹¹ Nevertheless, there has rarely been a lack of investment demand. In such an economy, the available supply of investment funds is a very important factor determining the level of private capital formation, and a small share of government revenue is conducive to private capital formation.

It has been possible to keep the level of government revenue relatively low in Japan because the levels of defense, social security expenditures, and interest on public debt have been low. In postwar Japan, the development of a social security system has been sacrificed in favor of low government expenditures and economic growth. Also, postwar inflation (price level rose to three to four hundred times the prewar level) and adherence to the principle of the balanced budget by the central government have held government interest payments at a low level.

The second conspicuous feature of postwar Japanese public finance is the high level of government saving and investment, as shown in Table 6. In spite of the low level of government revenue, in the ratio of government net saving to GDP, Japan was surpassed

tional income evaluated at the official exchange rate, is not significantly different from some of those countries, the general characteristics of the Japanese economy are more akin to the countries listed in Table 5 and 6 (for example, in birth rate, literacy, spread of higher education, the percentage of population in agriculture, average life expectancy, availability of financial and savings institutions to small business and general public, patterns of income distribution by size, industrial distribution of national income produced, and so forth).

¹¹ For example, the average yield on newly-issued first-class corporate bonds with a maturity of five years ranged from 9.0 to 9.2 per cent between 1950 and 1954. From 1956 to 1961, similar bonds with a maturity of seven years were issued, to yield from 7.6 to 7.9 per cent. See Bank of Japan, *Economic Statistics of Japan* (annual).

only by Finland, Norway and West Germany, and in the ratio of government saving to government revenue, only by Finland. In the ratio of government fixed investment to GDP, Japan was the highest of all countries, except New Zealand and Australia where investment expenditures of government enterprises and public corporations are not separated from those of general government.

Although the two main driving forces in the process of capital formation in postwar Japan have been a brisk private investment in plant and equipment and a high level of household saving, the relatively small government sector has made a significant contribution to capital formation by maintaining very high levels of public saving and investment.

II. PERSONAL SAVING AND THE TAX SYSTEM

The High Personal Saving Ratio

In postwar Japan, the ratio of personal saving¹² to disposable income in the household sector has been very high and, particularly since 1955, has shown a marked upward trend (See Table 3 above). Factors associated with this high level of personal saving include:¹³ (1) A high rate of growth of real income per capita. (2) A large share of proprietors' income in the nonagricultural sector.¹⁴ (3) A high and increasing proportion of "bonus"¹⁵ income in the income of wage and salary earners. (4) Certain characteristics of the Japanese life cycle of income-earning and spending.¹⁶ (5) Lack of de-

¹² Personal saving in Japanese national income statistics is defined similarly to the American concept, as disposable income of the household sector less personal consumption expenditures. Therefore, it includes "net" savings of independent proprietors.

¹³ See my, "Supply of Personal Savings," in *Economic Growth of Postwar Japan* (in Japanese), ed. by R. Komiya, Tokyo, 1963, for detailed discussion.

¹⁴ The average saving ratio for peasant families has been lower than that for urban wage- and salary-earners' families since 1953.

¹⁵ The "bonus" is paid by larger corporations and by the government to all of their regular employees at the end of the year or accounting period, and amounts to two, three or even six months' salaries depending upon the profits earned.

¹⁶ For example, the so-called "salary-schedule-according-to-age," saving for dowry by young female workers, or the custom of leaving property to posterity.

velopment, until recently, of systems of consumer finance and of home mortgage finance, which has resulted in consumers saving first and accumulating liquid assets before buying consumer durables or even houses.

On the other hand, the high personal saving ratio cannot be attributed to an unequal size distribution of income, or to a "low wage rate," or a small share of labor income in total personal income. Despite conceptual difficulties in international income comparisons, existing comparisons of the size distribution of income suggest that the Japanese income distribution is about as unequal as that in the U.S. and definitely less unequal than that in Germany or Holland.¹⁷ Furthermore, the share of pure property income of households in total personal income is much smaller for Japan than for Belgium, the United States, Britain, Canada, or Australia.

Decline of the Personal Income Tax Relative to Indirect Taxes

Table 5 shows that Japan's ratio of direct taxes on households to GDP is very low. For the period 1955-60, direct taxes on households amounted to only 6.1 per cent of GDP, lower than for any other country in the table. Moreover, Japan has one of the lowest ratios of personal direct taxes to total government revenue among advanced countries.

According to the U.N. definition, direct taxes on households include not only the personal income tax, death duty and other direct taxes on individuals, but also contributions to social security funds by employees and employers. Thus, not all components of direct taxes on households are progressive. Generally, however, the tax structure as a whole is less progressive in countries where direct taxes on households constitute a relatively smaller, and indirect taxes a larger, share of the total tax revenue.¹⁸ In postwar Japan, the personal income tax share has not only been low but was shrinking

¹⁷ See *ibid.*, I. B. Kravis, "International Differences in the Distribution of Income," *Revue of Economics and Statistics*, November 1960; and H. Oshima, "The International Comparison of Size Distribution of Family Incomes with Special Reference to Asia," *ibid.*, November 1962.

¹⁸ This argument ignores the relative importance of the corporate income tax. However, studies have yet to settle the question of the incidence of this tax.

TABLE 7
Composition of Tax Revenues, 1950-63
(per cent)

Fiscal Year	National and Local Taxes				National Taxes ^a		
	Personal Taxes and Nontax Payments (1)	Contributions to Social Security Funds by Employees and Employers (2)	Corporate Profits Tax and Nontax Payments (3)	Indirect Taxes (4)	Personal Income Tax (5)	Corporate Income Tax (6)	Indirect Taxes (7)
1950	32.9	8.4	12.4	46.4	38.6	14.7	45.1
1951	27.3	8.2	19.8	44.7	31.2	25.4	41.2
1952	27.3	9.2	16.7	46.9	32.0	22.0	43.6
1953	27.3	9.5	15.5	47.8	31.0	21.1	46.2
1954	26.0	10.9	15.4	47.7	30.6	21.4	46.9
1955	25.7	11.9	14.5	47.8	29.8	20.5	48.6
1956	24.2	11.9	16.4	47.5	28.1	23.9	46.9
1957	20.0	12.1	20.3	47.6	21.0	30.3	47.7
1958	20.3	13.0	17.5	49.2	21.8	25.9	51.3
1959	19.0	12.9	19.8	48.2	20.3	28.5	50.3
1960	19.4	12.5	21.8	46.3	21.7	31.8	45.7
1961	19.7	13.1	22.1	45.2	22.2	32.1	44.9
1962	—	—	—	—	24.1	32.2	42.9
1963	—	—	—	—	25.5	30.4	43.2

SOURCE: Cols. 1-4 are computed from Economic Planning Bureau, *National Income White Paper*. Cols. 5-7 are based upon Ministry of Finance, *Public Finance Statistics*, 1962, and data prepared by Ministry of Finance.

^a Figures for 1962 and 1963 are budget figures; others are settlement figures.

prior to 1959, as indicated in Table 7.¹⁰ Because of the very high rate of economic growth, the government has reduced tax rates almost

¹⁰ Although there are minor national and local taxes on individuals and corporations other than income tax, more than 90 per cent of the figure for personal and nontax payments in national income statistics is represented by national and local income taxes, and, except for the surplus of the government

TABLE 8
Estimated Amount of Tax Reduction, 1950-63^a
(billion yen)

Year	National Taxes				Local Taxes
	Personal Income Tax	Corporate Income Tax	Indirect Taxes		
1950	135.8 (48.7)	24.4 (39.8)	60.5 (20.7)	—	—
1951	60.5 (26.8)	4.5 (5.4)	51.0 (19.8)	—	—
1952	112.7 (49.9)	-19.1 (-10.4)	- 6.5 (-2.2)	27.7 (10.2)	
1953	77.3 (28.6)	15.5 (8.3)	33.2 (9.0)	18.0 (5.8)	
1954	31.4 (10.7)	2.6 (1.3)	-20.0 (-4.6)	26.3 (7.8)	
1955	53.3 (18.7)	12.0 (6.0)	0.8 (0.2)	6.6 (1.8)	
1956	22.6 (8.1)	-14.4 (- 7.5)	- 6.7 (-1.5)	-12.3 (-3.2)	
1957	110.2 (36.1)	-21.9 (- 8.4)	-26.6 (-5.2)	12.3 (2.7)	
1958	6.3 (2.5)	21.5 (5.9)	6.3 (1.1)	20.0 (3.8)	
1959	23.1 (9.4)	3.8 (1.1)	-17.4 (-2.8)	8.4 (1.5)	
1960	0 (0)	0 (0)	- 6.6 (-1.0)	11.8 (2.2)	
1961	56.3 (14.4)	39.9 (7.0)	-21.8 (-2.6)	12.8 (1.7)	
1962	50.3 (10.1)	1.3 (0.2)	62.4 (6.2)	39.9 (4.4)	
1963	66.8 (11.7)	-12.8 (1.7)	- 4.2 (-0.4)	18.8 (2.0)	

SOURCE: Computed from Ministry of Finance data.

^a Figures in parentheses give the ratio of tax reduction to the previous year's revenue of each item in per cent.

every year. Since the income elasticity of most taxes is substantially greater than one, and only for a very few is it less than one, if tax rates had not been cut, tax revenue would have increased at a much faster rate than national income. Thus, the annual changes in the tax laws constitute an important part of the government's budgetary policy every year and are called the "tax-cut policy" in Japanese. Table 8 shows the amount of tax reduction for a "normal year" brought about by each year's change in tax laws since 1950. The table shows, for example, that the changes in personal income tax laws in 1950 reduced the personal income tax revenue for the "normal year" by 135.8 billion yen; this was 48.7 per cent of the person-

owned Bank of Japan, practically all of the corporate profits tax and nontax payments is made up of national and local corporate income taxes.

al income tax proceeds in 1949. Table 8 indicates not only that there have been very substantial cuts in personal income taxes almost every year since 1950, but also that a very high proportion of total tax reduction has been represented by reduction in personal income taxes. During the period between 1950 and 1963, the basic exemption was raised from 25,000 to 110,000 yen and the exemption for the first dependent (spouse) was raised from 12,000 to 105,000 yen. The increase in the basic exemption was somewhat greater than the increase in per capita national income. Tax rates at higher income levels have also been reduced: for example, the marginal rate at 300,000 yen, which was 55 per cent in 1950, is now 15 per cent.²⁰

On the other hand, the proportion of corporate income tax to total tax revenue has been rising during this period as the share of corporate income in national income has increased from 9.9 to 16.4 per cent, with no major changes in the corporate income tax laws. The proportion of indirect taxes to total tax revenues remained at almost the same level from 1950 to 1961. Income elasticity is only slightly higher than unity for most indirect taxes.

Indirect taxes are generally regressive: that is, lower income families pay more indirect taxes in proportion to their income than higher income families. Japanese indirect taxes are no exception in this regard. Table 9 gives the per cent of total indirect tax revenues derived from each of the major indirect taxes.

A large proportion of indirect tax revenue comes from taxes on liquor, tobacco, sugar, electricity and gas, and admissions. These taxes are undoubtedly regressive.²¹ Also, a substantial part of some

²⁰ Marginal rates of national personal income tax in 1963 start at 8 per cent for annual taxable income less than 100,000 yen and go up to 75 per cent for income over 60 million yen. Local personal income tax rates for the highest bracket are between 10 and 15 per cent depending on locality, so that when national and local taxes are taken together, the rate goes up to 90 per cent of the taxable income. This does not necessarily mean that such a high rate of tax is actually borne.

²¹ According to Ministry of Finance estimates, on the assumption that these taxes are shifted to consumers, the average ratio of indirect tax burdens to family income is 5.2 per cent for families subject to national income tax, whereas it is 8.4 per cent for lower income families paying no income tax. This regressive tendency is observed even in excise taxes which are generally considered as taxes on luxuries. See Commission for Tax Policy Investigation, *Supplementary Materials to the Report* (in Japanese), Dec. 1961, p. 93.

TABLE 9
Composition of Indirect Tax Revenues, 1955-63^a

Tax	National or Local	Percentage
Liquor tax	National	21.9
Taxes on tobacco and other government monopoly goods ^b	National and local	18.7
Real estate tax	Local	15.8
Gasoline tax	National	9.5
Customs duty	National	7.8
Excise tax	National	6.0
Sugar tax	National	4.4
Revenue stamp	National	4.1
Electricity and gas tax	Local	3.2
Amusement and restaurant tax	Local	2.3
Automobile tax	Local	1.3
All others		5.0
Total		100.0

SOURCE: Ministry of Finance data.

^a Figures give the average ratio of each item to the total revenue of national and local indirect taxes.

^b Includes profits of the Government Monopoly Corporation and local taxes on tobacco.

indirect taxes, such as the local and national automobile taxes, the amusement and restaurant tax, or the liquor tax on higher quality liquor, very likely are shifted to consumers through price increases by companies using automobiles or restaurants for business purposes.²² Assuming that at least part of the corporate income tax is shifted to the general public, these facts indicate that the Japanese tax structure has become considerably less progressive since 1950. This tendency has been reinforced by the favorable treatment of property income explained below.

If the marginal propensity to save is greater for higher income brackets, the decline in progressivity of the tax system, though difficult to measure precisely,²³ may be considered one factor contributing to the postwar rise in the personal saving ratio.

²² "Expense-account" consumption is practiced on a much larger scale in Japan than in the United States.

²³ On the other hand, the popular argument that taxation of income reduces

Special Tax Provisions to Promote Personal Saving

Under the policy slogan of "reinforcement of personal saving," the government has introduced several special tax provisions to favor various types of property income. In a country like postwar Japan, where investment incentives are strong and the rate of interest is quite high, the rate of capital formation is largely determined by the supply of savings at the full employment (or full capacity) level of GNP. Thus, the "reinforcement of personal saving" is considered one of the most important objectives of Japanese tax policy. The major tax provisions of the personal income tax to promote saving include the following.

1. *Tax exemption of interest income from small deposits.* When the principal of a deposit, postal saving, other saving account, or a bond is under a specified upper limit, the interest income is exempted from personal income tax. The limit has been increased four times since 1950; it was 500,000 yen in 1963. By depositing savings in many small accounts, one may evade taxes on interest income altogether. This form of evasion was unchecked until 1963, when banks and other financial institutions were required to report the names of depositors to the tax office. Within a few months, the number of all deposit accounts for which this provision applies fell to about one-third the previous number.

2. *Separate low taxation of interest income.* Between 1955 and 1957, interest income was wholly tax exempt. Since 1957, interest income has been taxed separately from other personal income at a low withholding tax rate. Until 1963, the rate was 10 per cent; since then, it has been only 5 per cent. Thus, interest income has not been subject to progressive taxation. Since personal savings in small accounts were already tax exempt, the low withholding rate has ap-

saving while taxation of consumption is favorable to saving is largely wrong, since the argument ignores the fact that taxation of consumption reduces the purchasing power of savings for future consumption or even of inheritance. The argument is correct, apart from the income redistributive effect discussed in the text, only to the extent that saving is increased by the change in the effective interest rate, or in other words, that the interest elasticity of saving is greater than zero.

plied to only a small fraction (21.7 per cent in 1960) of total personal deposits and saving accounts.

3. *Favorable treatment of dividend income.* First, the withholding tax rate for dividends was temporarily lowered from the normal rate of 20 per cent to 10 per cent in 1955, and then to 5 per cent in 1963. These low withholding rates on dividends have resulted in a loss of personal income tax revenue, since only dividend payments over a certain minimum must be reported to the tax office having jurisdiction over the shareholder involved. Thus, the effect has been almost the same as the tax exemption of interest on small deposits. Secondly, the taxpayer can deduct 20 per cent (10 per cent if his total income is more than 10 million yen) of dividend income from his total income. This provision is also related to the basic question of how to deal with the problem of double taxation of corporate profit and personal dividend income. However, so far as its immediate effects are concerned, this measure represents a typical example of the erosion of progressive taxation by special tax provisions, since investments in stocks are more concentrated in higher income classes than deposits and saving accounts,²⁴ and since the flat deduction rate of 10 per cent is advantageous to very high income classes. This is particularly true if a part of corporate income tax is shifted to the general public.

4. *Exemption of capital gains on securities.* Security gains are tax exempt unless they are earned regularly, by cornering stocks or by selling a business.²⁵

²⁴ See, for example, the following table:

<i>Income Distribution Quintile</i>	<i>Number of Households</i>	<i>The Balance of Deposits and Saving Accounts Per Household</i>	<i>The Value of Stocks Held Per Household</i>
First	967	65,712	12,376
Second	968	100,440	21,248
Third	967	117,485	41,523
Fourth	968	205,324	96,980
Fifth	967	462,981	419,335

Source: Bureau of Statistics, Prime Minister's Office, *Survey of Trends in Saving for 1960 and 1961*, pp. 127-128.

²⁵ In the Japanese tax system, other capital gains are not altogether exempt from personal income tax. Approximately half of capital gain is added to taxable income.

5. *Deduction of life insurance premiums.* Life insurance premiums up to a certain amount are deductible from income. The amount was 2,000 yen in 1951, and has been raised eight times since then. The amount deductible is now the first 15,000 yen plus half of the next 35,000 yen. This provision does not reduce the progressivity of the income tax as much as other concessions to property income, so long as the upper limit to the deduction is reasonably set. Whether the limit for this deduction is reasonable is a problem similar to that of the basic exemption.

The budgetary estimates for revenue losses under each of these provisions are given in Table 10. The amounts shown relate only to the national personal income tax and do not include revenue losses of local personal income taxes which automatically result from revenue losses of the national personal income tax. It can be seen that the revenue losses amount to no less than 15 per cent of total personal income tax revenue in 1958, 1959, and 1963. The rise in the revenue losses after 1958 is attributable primarily to rapid increases in personal saving brought about by the rapid economic growth rate and a rise in the saving ratio. Particularly as regards provisions (1) and (2), there has been no extension of coverage since 1958,²⁶ so the rise in revenue losses since then has been due to a rapid increase in the balances of deposits and saving accounts. For example, in the total deposit balances of individuals with all ordinary commercial banks, the proportion of time deposits accounted for 41.0 per cent in 1950 and 72.6 per cent in 1962. This rise of time deposit balances relative to demand deposits (including "ordinary deposits") may be taken as an indication of the increase in the balance of personal savings relative to the level of income.²⁷

Effects of Special Tax Provisions on Personal Savings

It is extremely difficult to evaluate the effects of these special tax provisions on personal savings. It is almost impossible to measure

²⁶ Except the reduction in the tax rate in 1963 from 10 per cent to 5 per cent on deposits to which 2. is applicable.

²⁷ According to a rough estimate, the share of deposits and saving accounts in annual personal saving was around 50 per cent between 1954 and 1957, and declined steadily thereafter to about 30 per cent in 1961. This is primarily due to a rapid expansion of capital market and an increase in personal investment in mutual investment funds in recent years.

TABLE 10
Revenue Losses Due to Special Tax Provisions for the Encouragement of Personal Savings, 1950-63^a
(billion yen)

	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963
1. Exemption of interest income from small amount saving	0.3	0.5	1.0 ^b	1.0	1.8	2.6 ^b	2.8	4.0 ^b	4.5	6.0	10.0	12.0	15.0	13.0
2. Separate taxation of interest income	—	—	—	1.4 ^b	3.0 ^b	8.5 ^b	10.0	8.0 ^c	8.0	10.0 ^c	9.0	9.5	12.5	36.0 ^b
3. Low withholding tax rate for dividends	—	—	—	—	2.5 ^b	5.0 ^b	6.0	5.0 ^c	4.0	5.0	8.0	10.0	12.0 ^c	21.0 ^b
4. Exemption of capital gains on securities	—	—	—	0.6 ^b	0.6	0.3	1.5	0.2	1.0	6.5	8.0	9.0 ^c	6.0	7.0
5. Deduction for insurance premium	—	1.7 ^b	4.5 ^b	8.0 ^b	9.5 ^b	11.0 ^b	12.0	13.0 ^b	14.0 ^b	15.0	16.0	16.0	20.0 ^b	22.0 ^b
6. Total	0.3	2.2	5.5	11.0	16.2	27.4	32.3	30.2	37.8 ^d	42.5	51.0	56.5	65.5	97.0
7. Ratio of line 6 to total personal income tax revenue (per cent)	0.1	1.0	2.0	3.8	5.7	9.8	10.6	12.0	15.4	15.3	13.1	11.4	11.5	15.2

SOURCE: Ministry of Finance data, partly published in *Supplementary Materials to the Report (in Japanese) by the Commission for Tax Policy Investigation, December 1950, p. 246, and December 1961, p. 106.*

^b Indicates that in that year either the coverage of the provision was widened or the tax rate was reduced.

^c Indicates that in that year either the coverage of the provision was narrowed or the tax rate was raised.

^d Includes other items.

^a Estimated by the budget authorities, when compiling the annual budget.

the effect of a tax measure on personal saving by econometric research since the number of observations is too small to eliminate the influences of other factors. In a survey of ten macroeconomic models of the postwar Japanese economy, one finds that the fit for investment functions is very unsatisfactory, but an aggregate consumption function fits very well whatever explanatory variable is used: disposable income, national income, consumption expenditure in the last period, or the previous highest consumption expenditure. It does not make much difference statistically which aggregate is taken as the explanatory variable, and the addition of any second explanatory variable leads to a spurious increase in the correlation coefficient.²⁸

Although it is almost impossible to measure econometrically the effects of special tax provisions on personal saving, for the purpose of evaluation, let us distinguish three aspects of special tax provisions which favor property incomes in order to promote personal saving.

THE INTEREST ELASTICITY OF SAVING

The basic theory implicit in these special tax provisions is that the elasticity of the supply of personal saving is substantially greater than zero. The theory is dubious both on theoretical and empirical grounds. Theoretically, even if a saver is rational and sensitive to the change in the interest rate when deciding to save or spend, it does not necessarily mean that he saves more when the rate of interest is higher. For example, if he saves for future living expenses (hump-saving) or to buy some consumer durable in the future, he might well save less when the interest rate is higher and the principal grows faster. Therefore, there is no a priori ground to assume that interest elasticity of personal saving is substantially greater than zero.

Empirically, the average Japanese saver does not seem to be sensitive to small changes in the interest rate. If he were rational with respect to the relation between the interest rate and saving, he should take into account, not only special tax provisions on saving, but also the change in the consumer price index. However, a sharp

²⁸ Tadao Uchida, "A Survey of Macroeconometric Model Analysis of the Japanese Economy," in *The Japanese Economy: Prewar and Postwar* (in Japanese), Ed. by Kazuo Okochi et al., Tokyo 1963.

increase in the consumer price index in Japan since 1959 does not seem to have affected the level of personal saving thus far.²⁹

Until recently, the personal savings ratio had been rising steadily since 1958, in spite of the rise in prices. It would appear that the average Japanese consumer determines his personal saving as a sort of residual, after all "necessary" consumption expenditures have been made, and that he does not pay much attention to the rate of interest or the tax treatment of future interest income when making his savings decisions.

This is not to deny the fact that the rate of interest may have a considerable influence on consumers' decisions about the form in which to hold assets. For example, the separate taxation of interest income may have increased the relative share of deposits and saving accounts in the total assets held by households. This is perhaps the main reason why banks press for separate taxation of interest income, security companies for favorable tax treatments of dividends, and insurance companies for tax deduction of life insurance premiums. Still, the average Japanese saver does not appear to be sensitive to minor changes in the rates of returns effected by special tax provisions. Wealthy businessmen, when questioned about their income taxes, have shown that they are well informed about the taxes on their salaries and bonuses, but frequently do not know much about the special tax provisions applicable to their saving.

In the political climate of postwar Japan, the government cannot favor any one of these pressure groups exclusively, so that the effects, if any, on the composition of savings funds of various special tax provisions to promote saving seem largely to cancel out.

THE INCOME REDISTRIBUTION EFFECT

Property income is concentrated in the higher income brackets, although it is perhaps less so in Japan than in the United States or Great Britain since the average propensity to save out of disposable income is considerably higher than zero even for low income fami-

²⁹ In Japan the consumer price index was fairly stable between 1954 and 1959, but has risen rapidly since then.

Consumer Price Index (1960=100)

1958	95.5	1961	105.3
1959	96.5	1962	112.5
1960	100.0	1963	122.5

lies. To the extent that higher income families receive a higher proportion of their income from property holding, favorable treatment of property income makes income distribution more unequal. If it is assumed that the marginal propensity to save is higher for higher income families,³⁰ favorable tax treatment of property income would have a positive effect on the total supply of personal saving.

THE TAX EVASION EFFECT

Two provisions to promote personal saving, namely, the exemption of interest income from small deposit accounts, and the separate taxation of interest income, have given rise to increased personal income tax evasion. When a person who has earned a large income buys stocks or real estate, his name and earnings are reported to a tax office, and there is a possibility that he will be questioned about the source of these funds if the income reported in his annual tax return is disproportionately low. However, when he deposits money with a bank, the latter institution is not required to notify the tax office of the deposit, first, because most deposits are exempt as small amount deposits, and secondly, because those deposits which are not exempt are subject to separate taxation. Thus, these two provisions make it possible for taxpayers to hide from the eyes of tax officials certain types of income, such as proprietors profits, capital gains, or professional income, for which the marginal propensity to save is probably much higher than the average. This is perhaps one of the reasons why personal deposits and savings with banks and other financial institutions account for a large proportion of personal saving in Japan.

³⁰ Another possibility is higher marginal propensity to save on the part of property-income recipients than wage- or salary-earners of the same income size, or higher marginal propensity to save out of property income than wages or salaries even when received by the same person. In this connection, it may be mentioned that tax burdens of independent proprietors and owners of small corporations are relatively light, in comparison with other income groups, such as wage- or salary-earners and property income recipients who are subjected to withholding taxation, because of administrative difficulties in assessing the income and expenses of those income groups. Although there are other factors which lower or raise the tax burden of each income group, it is generally believed that the above administrative factor outweighs others. If this is the case, it is conducive to a high rate of saving, since the average, and hence perhaps also marginal, propensity to save of the owners of small business is much higher than that of others.

Conclusion

It is difficult to verify positive or negative influences of the special tax provisions introduced to "reinforce personal saving." As of now, there is no convincing empirical evidence that they have increased personal saving. It seems, however, that if these provisions tend to increase personal saving, it is only through their adverse redistributive effects,³¹ and not through an increase in the saving ratio out of the income of the same size. In other words, personal saving could have been increased only at a cost to equity. If an increase in personal saving were sought, an over-all moderation of the progressive structure of personal income taxation would have been a less inequitable solution. A still better solution might have been to increase government saving by raising taxes rather than by trying to increase the supply of personal saving.³²

III. SPECIAL TAX PROVISIONS AND CORPORATE SAVING AND INVESTMENT

Special Tax Provisions

A peculiar characteristic of the national tax system in postwar Japan is the enormous number of what are called "special tax provisions" under which taxes are reduced selectively. There are be-

³¹ Except possibly for the deduction of insurance premiums. See above.

³² Strange as it may seem to American economists, there is almost no discussion of the effects of personal income taxation or favorable treatment of property income on the incentive to undertake risks in Japan. This is in sharp contrast to a heated discussion of the effects of taxation on personal saving, and perhaps suggests that such effects on incentives are not important in Japan, although there is a need to examine them carefully. An overwhelming majority of large companies in Japan are managed by salaried executives who have been employed in the same companies for twenty to thirty years after graduation from a university. Generally, shareholders other than institutional investors have little influence over company management. In such a situation, entrepreneurship would be relatively little affected by taxation. The effects on incentive are perhaps more important for smaller, closely held corporations, but they are not influential politically. Also, in recent years no necessity has been felt to encourage risk taking, since there are so many aggressive and enterprising firms, both small and large.

tween 50 and 100 of these provisions, depending upon how we classify them.³³ Each of these provisions was introduced in order to achieve certain specific policy objectives, and is concerned with a particular type of income, asset, or transaction, or with a particular industry. In a rather extreme case, for example, the Special Tax Provisions Act stipulates, in Article 66-9, that manufacturers of sulphate ammonium may deduct from their income a certain prescribed part of the balance of their credit sale accounts receivable from Japan Sulphate Ammonium Exporting Company (a semigovernmental trading agency).

Most of these special tax provisions are subject to certain time limits. However, these time limits are themselves openly debated in connection with the government's annual budgetary and tax policies, since most are related to narrow policy objectives subject to change. Every year, as a real or ostensible need to achieve a certain objective arises or disappears, new provisions are introduced, old ones abolished, or the coverages and tax rates are changed.

For the purpose of analysis here, the major provisions effective in 1963 may be classified as follows:

1. Provisions to reinforce personal saving. These provisions have been dealt with in the previous section.

2. Provisions for tax-free reserves. Certain types of reserves are made tax exempt up to certain prescribed limits in order to increase the supply of internal funds of corporations and proprietors. There are separate but similar provisions dealing with reserves in the personal and corporate income tax laws.

3. Provisions for accelerated depreciation allowances. To encourage investment in certain fields, depreciation allowances at much higher rates than usual are permitted selectively on certain types of fixed assets, in certain industries, or for certain purposes. For each provision in this category there are detailed specifications as to the

³³ All of these provisions reduce rather than increase taxes selectively. The provision limiting expense accounts of corporations is usually counted as one which increases tax revenue, but it should be considered instead as providing a standard for the assessment of income. These provisions are concerned with national taxes. There are very few special tax provisions in local tax laws. However, since the tax bases of local personal and corporate income taxes are almost the same as national taxes, revenue losses in national taxes brought about by special tax provisions also affect local revenues.

type of fixed assets, the name of the industry, the time period concerned, and the rate at which the asset involved may be depreciated.

4. Provisions to promote introduction of new products and technologies. In addition to the use of accelerated depreciation to promote some innovations, other special tax provisions encourage introduction of new products and technologies. One major one is the exemption from personal or corporate income taxation, under certain conditions, of income from the sales of "important new products" designated by the Minister of Finance. The products so designated have been those whose production and sale involved great risks, either because of technological inexperience or because of the difficulty of predicting demand. (It was feared that some socially desirable new products would not be introduced unless they were given preferential tax treatment.) A second (since 1952) is the taxation at lower than normal rates of royalties on patents and technical know-how which are used in industries specified by the Minister of Finance. A third (since 1951) allows the duty-free importation of certain types of machinery and equipment used in industries designated by the Ministry of Finance.

5. Provisions to encourage export. A certain part of income from export has been exempt from corporate or personal income tax since 1953. This provision will be abolished in the near future, since it is becoming more difficult to continue this form of subsidization of export industries in view of GATT provisions. Since 1961, an accelerated depreciation privilege is granted corporations and proprietors who raise the proportion of income from export in their total income over the previous year's level. In the past there were a few other minor provisions to encourage export, such as a reserve for losses arising out of cancellations and claims in export contracts (1953-60), and accelerated depreciation on assets used in overseas branch offices (1953-60).

The estimates by the budget authorities of revenue losses resulting from provisions grouped under (2) through (5) are given in Table 11. As shown in this table, most of these special provisions were introduced around 1952 and 1953. When the Japanese tax system was reformed in 1950, after the Shoup Report,⁸⁴ there were no

⁸⁴ Shoup Mission, *Report on Japanese Taxation*, 1949.

TABLE 11

Revenue Losses Due to Special Tax Provisions for Reserves, Accelerated Depreciation, New Products and Technologies, and Export, 1950-63^a

	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963
(billion yen)														
A. Tax-free reserves														
1. Bad debt	0.5	0.5	2.0	8.0	8.0	8.0	10.0	6.5	7.0	11.5	16.5	14.5	18.0	13.0
2. Inventory price fluctuations	—	—	6.0	10.0	12.0	10.0	12.0	8.0	5.0	11.0	14.0	11.5	13.0	4.0
3. Retirement allowance	—	—	4.0	8.0	10.0	12.0	2.0	2.5	4.0	13.0	16.5	22.5	16.0	19.5
4. Special repairs	0	0.2	0.4	0.3	0.3	0.2	0.5	0.4	0.3	0.5	0.6	0.6	0.7	0.7
5. Total (including others) ^b	0.5	0.7	14.6	30.3	34.5	34.7	29.0	19.6	18.6	38.4	50.3	50.4	50.1	38.1
B. Accelerated depreciation^c														
6. Modernization and "important machinery"						2.0	2.5		6.5	6.0	10.0	9.0	8.0	9.0
7. Mining and prospecting machinery, etc.		1.1	3.0	4.0	2.5			9.8	1.5	1.0	1.0	1.0	1.0	1.0
8. Newly built houses						0.8 ^b	1.2	1.2	1.2	1.0	1.5	1.8	2.0	2.5
9. Research and development ^d	—	—	—	—	—	—	—	—	1.6	1.5	1.5	2.5	2.5	2.5
10. Modernization of small business	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5
11. Total	—	1.1	3.0	4.0	2.5	2.8	3.7	11.0	10.8	9.5	14.0	14.3	13.5	16.5
C. New products and technologies														
12. Exemption of income from the sales of "important new products"	0.5	2.0	4.0	4.5	5.0	5.5	6.0	2.0	3.0	4.5	4.5	5.2	1.8	1.8

13. Low withholding tax rate for foreign patent and "know-how" royalties	—	—	0	0	0.2	0.6	0.6	0.8	1.0	1.4	1.6	0.5	0.7	0.8
14. Exemption of customs duty on important machinery	—	0.4	1.0	2.0	2.0	2.0	2.5	3.0	3.5	5.0	6.0	9.4	9.0	9.0
15. Total	0.5	2.4	5.0	6.5	7.2	8.1	8.5	5.8	7.5	10.9	12.1	15.1	11.5	11.6
D. Encouragement of export														
16. Exemption of income from export	—	—	—	4.7	4.0	3.5	4.5	7.5	12.5	10.0	11.5	11.0	19.5	22.5
17. Accelerated depreciation privilege for exporters ^e	—	—	—	—	—	—	—	—	—	—	—	—	2.0	1.0
18. Subtotal ^f	—	—	—	4.7	4.0	3.5	4.5	7.5	12.5	10.0	11.5	11.0	21.5	23.5
19. Total for A, B, C, and D	1.0	4.2	22.6	45.5	48.2	49.1	45.7	43.9	49.4	68.8	87.9	90.8	96.6	89.7
20. Total revenue from corporate income tax plus personal income tax on nonagricultural proprietors	139.0	240.5	243.0	249.4	240.1	225.5	298.5	396.7	334.2	418.0	610.6	753.9	806.6	809.4
21. Ratio of lines 19 ^g and 20 (per cent)	0.7	1.7	9.3	18.2	20.1	21.8	15.3	11.1	14.8	16.5	14.4	12.0	12.0	11.1

Source: Ministry of Finance data.

^a These estimates were made by the budget authorities at the time when they were preparing the government's annual budget. They give the estimated reduction in tax revenues for the "normal year," assuming that the new law applied from the beginning of the year. The budget authorities tended to underestimate the rate of economic growth and therefore the tax revenues and revenue losses under these special tax provisions.

^b Reserves for water scarcity in hydroelectric generation, for abnormal risks in accident insurance, and for default losses of commodity and stock exchanges.

^c These estimates do not take into account increases in the

revenue in the second and later years due to accelerated depreciation in the first year or first few years.

^d Including machinery and equipment for research and development and for industrial utilization of new technologies.

^e Supposedly not including losses due to other provisions for accelerated depreciation. No estimate for any of these other provisions for accelerated depreciation is available, but the amount involved is probably very small.

^f Including losses due to provision of reserves for losses arising out of cancellations and claims in export contracts, and for accelerated depreciation allowance for assets used in overseas branch offices.

^g Excluding line 14.

special provisions except for "important new products" (which originated in 1914) and the bad debt reserve and special repairs reserve which were recommended by the Shoup Mission. Coverages of these provisions tended to be extended, the rates reduced, and new provisions introduced until around 1955. Line 21 of Table 11 gives the ratio of total revenue losses due to these provisions to total revenue from personal and corporate income taxes. The ratio reached a peak of 21.8 per cent in 1955. Since then, although there have been changes in the coverage in both directions, the curtailments of coverage seem to have outweighed the extensions, and revenue losses have increased less rapidly than the total tax revenue.

Of these four groups of special provisions, (2) and (3) will be dealt with in the remaining parts of the paper. Here a few remarks will be made on (4) and (5).

Theoretically, special provisions for new products and technologies, particularly tax exemption granted on "important new products" (as well as accelerated depreciation for machinery and equipment used in research and development) have much to recommend themselves from the standpoint of the "infant-industry" argument for protection. The choice of the period during which corporate or personal income is exempt from tax under the provision for "important new products" is about four years after the fixed assets used in the production of such products are acquired by the corporation or individual. This time period seems reasonable. The revenue loss due to this provision is relatively small since the product in question is rather narrowly defined, but the provision has played a crucial role in the introduction of certain new products.

However, since this provision is selective in its application, there remains the question of its administration: whether the choice of "important new products"³⁵ and of the period of exemption for each product can be made well enough to justify these selective tax treatments. Also, before 1957 there was no upper limit to the amount of income exempt from the tax, and there were cases in

³⁵ Before the revision in 1957, a few products which are not new, such as metal ores, coal or lignite, were included. Among really "new" products, the application of the provision is concentrated in particular fields, such as synthetic fibers, synthetic rubber, chemical fertilizers, pulp, petrochemical products, antibiotics, or rare metals.

which very large quasi-monopoly incomes were exempted. Since 1957, tax exemption has been granted only until the cumulated income from the sales of such products amounts to 40 per cent of the acquisition cost of fixed assets used in the production of such products.

Tax exemption of export income has an effect somewhat similar to that of exchange depreciation.³⁶ If there is any need to promote exports by policy measures working through the price effect, it would be better to depreciate the exchange rate rather than to introduce special tax provisions. The latter complicates the tax system unnecessarily and distorts the price structure because of its discriminatory nature.

Tax-Free Reserves and Corporate Saving

Although many provisions of the tax system have important effects on corporate saving and investment policies, two special features of the national tax system in postwar Japan will be dealt with in this section: provisions for tax-free reserves and accelerated depreciation allowances.

DESCRIPTION OF THE PROVISIONS FOR TAX-FREE RESERVES

There are seven types of transfers to reserves which are deductible from corporate income under the Japanese tax laws:

1. Reserves for bad debts (since 1950)
2. Reserves for inventory price fluctuations (since 1951)
3. Reserves for retirement allowances (since 1952)
4. Reserves for special repairs (since 1950)
5. Reserves for water shortage (since 1952)
6. Reserves for abnormal risks (since 1953)
7. Reserves for default losses (since 1952)

Of these seven types of reserves, the first three are relevant to most industries, while the last three are applicable to only one industry each: hydroelectric generation, accident insurance, and commodity and stock exchanges, respectively. The reserve for special

³⁶ The special low withholding tax rate for foreign patent and technological royalties has a similar effect.

repairs may be accumulated for major repairs on ships, blast furnaces, and a few other items, and is relevant primarily to marine transportation, the iron and steel, and the glass industries. Reserves of types (1), (2), (3), and (4) are also deductible from personal income, although the provisions applicable to individual proprietors are somewhat different from those applicable to corporations.

Table 11 shows that in most years transfers to the first three types of reserves accounted for more than 90 per cent of all revenue losses due to special provisions for tax-free reserves. Table 12 gives rough estimates of the ratios of accumulated reserves to owned capital for each of these categories. The figures for owned capital used in these computations were taken from balance sheets of corporations and do not include tax-free reserves. The ratios for industrial corporations rose sharply from 1953 to 1956, but since then have leveled off at about 10 per cent of owned capital. Since 1955, the tax-free reserves of financial corporations have amounted to more than 50 per cent of owned capital.

THE LEVEL OF CORPORATE SAVING AND TAX-FREE RESERVES

In the usual presentation of balance sheets, tax-free reserves are not shown as a part of owned capital, but in their actual functions a large part of these reserves should be considered as part of owned capital.⁸⁷ For this reason, in Japanese national income statistics, increases in tax-free reserve balances are treated as a part of corporate profits and saving.

Column 2 of Table 13 shows corporate saving as a percentage of GNP from 1950 to 1961, and columns 3 through 6 give the percentages of corporate saving accounted for by increases in various types of tax-free reserves. After 1950, when the provision for a bad debt reserve was first introduced into the Japanese tax system, new provisions were added, coverages expanded, and the maximum limits

⁸⁷ Undoubtedly, not all of the reserves are to be so considered. For instance, it is required to hold one-fourth of the reserve for retirement allowances in liquid form. A certain part of each type of reserve should be similarly treated, to meet the necessary payments from the reserve. However, when the total amount transferred to the reserve in each accounting period is far greater than the amount paid out, the increase in the balance of the reserve is very similar to undistributed profit. The ways these tax-free reserves and transfers thereto are treated in financial statements differ somewhat from one corporation to another.

TABLE 12

Ratios of the Balances of Tax-Free Reserves: All Industries and Financial Institutions, 1953-61

	1953	1954	1955	1956	1957	1958	1959	1960	1961
1. Nonfinancial industries ^a									
Bad debt	1.0	0.8	0.8	0.7	1.0	1.2	1.4	0.9	1.0
Inventory price fluctuations	1.1	2.2	2.9	3.7	3.8	3.4	3.3	2.8	3.0
Retirement allowances	3.1	3.6	4.3	4.9	4.3	4.5	4.6	4.5	4.7
Total, including others	5.3	7.7	9.4	11.1	10.9	10.9	11.3	9.7	9.9
2. Financial institutions ^b									
Bad debt	20.0	28.0	29.6	31.0	33.6	36.6	34.7	35.1	35.6
Inventory price fluctuations	8.3	8.5	9.1	8.4	7.7	7.8	7.9	8.0	6.9
Retirement allowances	9.8	10.0	12.6	9.6	8.9	8.9	7.9	8.5	8.6
Total, including others	38.1	46.6	51.3	48.1	50.2	53.3	51.0	51.6	51.1

SOURCE: Computed from Ministry of Finance, *Annual Report of Corporation Statistics*; National Federation of Commercial Banks Association, *Analysis of Financial Statement of All Commercial Banks*; National Association of Mutual Banks, *Analysis of Financial Statements of All Mutual Banks*; National Federation of Credit Associations, *A Survey of All Credit Associations*; Ministry of Finance, *Insurance Yearbook*; and other Ministry of Finance data.

^a The balances of reserves are computed by deducting the balances of financial corporations (included in 2 above) and of securities dealers from the total balances of reserves given in the Ministry of Finance data. Therefore, they are overestimated by the amount of reserves held by such financial corporations as credit cooperative associations (*shinyo-kumiai*), labor credit associations (*rodo-kinko*), and a few others which are not included in 2.

^b Commercial banks, long-term credit banks, mutual banks, credit associations (*shinyo-kinko*), and life and accident insurance companies.

raised, until 1955 (see Table 12). During this period, the accumulation of these reserves accounted for a very large proportion of total corporate saving—almost 50 per cent in the recession year 1954. In 1956, the tax laws began to restrict the accumulation of these reserves and, since then, the proportion of corporate saving accounted for by the increases in these reserves has declined fairly rapidly.

TABLE 13

Ratios of Direct Taxes on Corporations and Corporate Saving to GNP,
and Increases in Tax-Free Reserves, 1950-61

(per cent)

Year	Ratio to GNP		Percentage of Corporate Saving Accounted for by Increases in Tax-Free Reserves			
	Direct Taxes on Corporations (1)	Corporate Saving (2)	Bad Debt (3)	Inventory Price Fluctuations (4)	Retirement Allowance (5)	Total (Including Other Types of Reserves) (6)
1950	2.8	4.9	5.8	0	0	5.8
1951	3.8	5.4	3.8	0	0.1	4.2
1952	3.9	2.7	7.4	3.8	21.3	35.3
1953	3.2	4.4	6.7	9.6	12.2	34.0
1954	3.5	2.7	11.3	16.6	16.0	47.5
1955	2.8	3.1	6.3	12.7	15.8	38.0
1956	3.1	5.1	4.6	8.2	7.1	23.6
1957	4.0	5.0	9.1	7.0	2.7	22.3
1958	4.0	2.9	13.2	1.8	10.4	27.7
1959	3.7	5.4	5.7	2.5	4.4	15.1
1960	4.4	7.0	2.8	2.9	7.1	12.1
1961	4.8	6.8	5.3	4.1	7.1	16.5

SOURCE: *National Income White Paper* and Ministry of Finance data.

Another reason for the higher percentages for 1952-55 than for later years is that in the earlier years the maximum limits on the accumulated balances of the bad debt and retirement allowance reserves had been reached by few corporations, whereas in later years the limits had become effective in more cases. Also, the years 1952-55 were less prosperous than those which followed 1956 when a heavy investment spurt started.

Another point to be noted in Table 13 is that, except during the recession years 1952, 1954, and 1958, corporate saving was substantially in excess of direct taxes on corporations. In an international comparison of the levels of corporate saving and direct taxes on cor-

porations (shown in Table 14), it may be observed that the level of corporate saving relative to GNP is highest in Japan, and that only in Japan, the Netherlands, and Australia does corporate saving exceed direct taxes on corporations. The difference between Japan and the United States is striking; the level of direct taxes on corporations relative to GDP is much higher in the United States than in Japan, while the rate of corporate saving is twice as high in Japan as it is in the United States. This may seem somewhat puzzling, since both the profit rate³⁸ and the effective corporate income tax rate are about the same in the two countries.³⁹

This is primarily due to a high propensity to save by Japanese corporations. Table 15 provides an international comparison of corporation saving ratios. Since this table is based upon national income statistics, intercorporation dividend payments are excluded from corporate income and, in the case of Japan, increases in tax-free reserves and accelerated depreciation allowances are included in corporate income. However, even when adjustments are made for these factors, the proportion of dividend payments in corporate dis-

³⁸ The rate of net profit (after tax) on owned capital is only slightly higher, and the rate of operating income to total assets is lower, in Japan than in the United States. The following table is based upon financial statements of corporations, so that the profit rate in Japan might be underrepresented to the extent that tax-free reserves and accelerated depreciation allowances are more important in Japan than the corresponding items, if any, in the U.S.

	<i>Profit Rate of All Manufacturing Corporations (per cent)</i>		<i>Profit Rate of Largest Manufacturing Corporations^a (per cent)</i>	
	Japan (1955-60)	U. S. (1958-61)	Japan (1955-60)	U. S. (1958-61)
Ratio of net profit after tax to owned capital	11.8	9.1	11.3	11.1
Ratio of operating income to total assets	9.7	10.6	9.8	10.5
Ratio of net profit after tax to sales	2.6	4.4	5.8	8.2

Source: Computed from Ministry of Finance, *Annual Report of Corporation Statistics*, for Japan, and from SEC-FTC, *Quarterly Financial Report for Manufacturing Corporations*, for U. S.

^a Corporations with capital stock more than 100 million yen for Japan; ones with total assets more than 1 billion dollars for U. S.

³⁹ In Japan, the effective tax rate on corporate profit, including local tax, is approximately 50 per cent.

TABLE 14
 International Comparison of Ratios of Corporate Saving and Direct
 Taxes on Corporations to GDP, 1950-60
 (per cent)

Country	Corporate Saving	Direct Taxes on on Corporations
Japan	4.9	3.6
Netherlands	4.9 ^a	3.8
Finland	2.1	3.5
Germany, Fed. Rep.	1.9	3.1
Australia	4.2	3.5
Canada	2.7 ^b	4.8
New Zealand	2.8 ^a	4.8
France	1.7	2.2
Belgium	0.5	2.1 ^a
United States	2.1 ^b	5.3
United Kingdom	4.6	4.8
Japan, 1955-60	5.2	3.7

SOURCE: U.N., *Yearbook of National Accounts Statistics*.

^a 1954-60.

^b Including inventory valuation adjustment.

^c 1951-60.

posable income seems definitely lower in Japan than in the United States.⁴⁰

The high propensity to save of Japanese corporations is due to several factors. First, in Japan the need to accumulate internal funds is more urgent in view of rapidly expanding investment opportunities. Second, the separation of management and ownership is more pronounced in Japan than in the United States, thus giving management relatively more freedom in the disposition of profits. Third, Japanese corporations can hold down the ratio of dividends to corporate profits because new shares are issued at face value; the shareholders are given the difference between the market and face

⁴⁰ The average ratio of saving to disposable income of all corporations (excluding corporations in finance and insurance) in Japan, computed from Ministry of Finance, *Annual Report of Corporation Statistics*, is 47.4 per cent (average for 1953-60). The corresponding figure for the United States, computed from the Internal Revenue Service, *Statistics of Income*, is 27.6 per cent (an average for 1951, 1953, 1955, and 1958).

TABLE 15
International Comparison of the Ratio of Corporate Saving to
Corporate Income After Tax, 1950-59
(per cent)

Norway	88.3	New Zealand	52.1
Japan	78.4	Canada	51.1
Finland	73.9	Australia	49.1
Germany, Fed. Rep.	68.1	France	47.9
United Kingdom	54.6	United States	44.0

SOURCE: U.N.: *World Economic Survey*, 1960, and *Yearbook of National Accounts Statistics*. Corporate income after tax was computed from national income statistics.

values as capital gains, so that dividends represent only a small part of their earnings. This practice gives rise to very difficult statistical and conceptual problems when making an international comparison.

POSSIBLE EFFECTS OF SPECIAL TAX PROVISIONS FOR TAX-FREE RESERVES ON CORPORATE SAVINGS

Table 13 shows that increases in accumulated tax-free reserves represent a substantial part of corporate saving in postwar Japan. This does not necessarily mean that the special provisions permitting tax-free reserves really increased the supply of internal funds of corporations to that extent. Two effects of these provisions may be separately considered for the purpose of our analysis: a general or over-all effect on the saving of a "representative" corporation, and differential effects on the saving of various industries or corporations. To analyze the general effect, let us consider two situations.

Case 1. We assume first that the provisions allowing tax-free reserves are abolished and that there is no change in the corporate income tax rates. In this case, the total corporate income tax that a "representative" corporation has to pay will increase, a part of the increase in tax will be shifted to the general public, and the sales of corporations will decline somewhat relative to the sales of unincorporated firms. Only in an extreme case will all of the increase in the tax be shifted without effecting corporate profits. Thus it is clear that the incidence of corporate income tax is one of the key factors

here; it is also one of the problem areas in economics about which very little is known. Another key factor is corporate dividend policy. The effect of the abolition of the special provisions depends on whether corporations try to maintain the same dividend rate as before or whether they reduce dividends in order to maintain the same level of corporate saving. But we also know very little about corporate dividend policy. While it is likely that corporate saving (including tax-free reserves) would decrease, the amount of the decrease would probably be considerably less than the previous amount of transfers to hitherto tax-free reserves. The total supply of national saving will be more likely to increase than decrease if the marginal propensity of the government to save is very high and that of the shareholders moderately high.

Case 2. We assume that the provisions for tax-free reserves are abolished and the corporate income tax rate is reduced so as to leave the total corporate income tax payments unchanged. In this case there would be no change in the tax burden of our "representative" corporation and, if corporations paid the same rate of dividend as before, there would be no change in the level of corporate saving. In other words, if corporate dividend policy is such that dividends represent a certain given proportion of real corporate profit including transfers to tax-free reserves, corporations would have reduced corporate saving out of after-tax income to the extent that they made transfers to tax-free reserves when the provisions allowing such reserves were introduced. On the other hand, if corporations pay as dividends a certain given proportion of their after-tax incomes including such transfers, they will in this case increase dividend payments and reduce corporate saving.

We do not know enough about the determinants of corporate dividend policy to be able to say which of these rules is more likely to be adopted; for example, why the dividend ratio (approximately equal to unity minus the saving ratio given in Table 15) is so different from country to country. What is certain is only that corporations are induced by a tax-free reserve provision to save in this form rather than in the form of retained profit out of their after-tax income.⁴¹

⁴¹ Incidentally, in Table 13 it is observed that between 1952 and 1955, when the

The intention of the government in introducing the special tax provisions for tax-free reserves is not quite clear. If the purpose of the provisions was to increase the total supply of national saving, they do not seem to have been very effective. If it was to lighten the tax burden of corporations, a general reduction in the tax rate would have been a more equitable solution. If it was to increase the proportion of owned capital and reduce that of borrowed funds in corporate financing, the provisions might have been effective, but again there were much better ways of accomplishing this.⁴²

Let us now turn to the differential effects of the special tax provisions on tax-free reserves. Table 16 is based upon an unpublished survey by the Ministry of Finance of leading corporations with capital stock of more than 100 million yen. The total number of corporations covered was 1,312 in the 1959 survey and 501 in 1961. These corporations account for a large percentage of the total corporate income tax revenue: 54.1 per cent and 40.3 per cent respectively for the 1959 and 1961 surveys. Nonfinancial corporations in the survey accounted for 69.2 per cent in 1959 and 46.8 per cent in 1960 of the total owned capital of all nonfinancial corporations.

Table 16 gives the ratios of tax-free reserve balances to owned capital in selected industries. Undoubtedly the banking industry is the one which benefits most from the provision for bad debt reserves, and the insurance industry (also included among financial corporations in Table 16) from the provision for abnormal-risk reserves. The electricity industry gains most from the provision for water-shortage reserves, and marine transportation and iron and steel benefit most from the provision for special repair reserves. However,

provisions were lenient and the accumulation of the reserves was rapid, the level of corporate saving (including increases in reserves) was lower than in other years, and that the level of total corporate saving went up rather than declined relative to GDP from the early 1950's to later years when the importance of tax-free reserves declined. If other things were equal in these years, this may be taken as an evidence of the failure of the provisions to promote the supply of corporate saving, but "other things" could not be equal.

⁴² For example, the government might have lowered the tax rate on retained profits, to avoid double income taxation at corporate and personal levels, and have abolished separate taxation of interest income under personal income tax laws. As mentioned in section II, separate taxation of interest income makes deposits with commercial banks and other financial institutions more attractive, and makes it possible for these financial intermediaries to attract a much larger percentage of total personal saving than otherwise.

TABLE 16

Ratios of the Balances of Tax-Free Reserves to Owned Capital: Large Corporations in Selected Industries, 1959 and 1961

Industry	No. of Corps.	Bad Debt		Inventory Price Fluctuations		Retirement Allowances		Total, Including Others (per cent)
		Per Cent	No. of Corps.	Per Cent	No. of Corps.	Per Cent	No. of Corps.	
Mining	50	0.8	32	0.8	16	21.4	45	23.1
Petroleum refining	15	1.1	10	5.0	10	2.6	11	8.7
Construction	15	1.4	9	0.6	10	16.4	14	18.4
Food manufacturing	40	1.1	37	4.4	34	4.9	39	10.5
Textiles	87	0.5	65	3.0	59	3.7	72	7.1
Paper and pulp	46	1.3	34	2.4	29	6.8	38	10.6
Chemicals	140	1.7	114	2.8	101	7.2	121	11.6
Cement and related products	42	1.1	36	1.6	33	6.2	38	11.7
Iron and steel	56	0.9	48	2.7	39	5.9	52	10.4
Nonferrous metals	23	1.6	15	2.8	15	5.1	17	9.4
Machinery	72	1.5	59	4.3	59	5.2	64	11.0
Electrical machinery	63	1.9	59	5.4	56	4.6	59	12.1
Transportation equipment	70	2.3	59	2.5	44	7.3	62	12.8
Precision machines	21	1.4	16	3.7	13	5.9	18	11.0
Trade	96	3.8	71	6.7	67	4.1	75	15.7
Finance	142	32.4	140	8.4	126	5.7	140	46.6
Marine transportation	53	0.0	4	0.2	2	0.4	20	0.9
Gas and electricity	24	0.7	14	0.5	5	3.9	22	10.7
All industries	1,312	5.0	932	3.0	795	5.9	1,097	13.9
All nonfinancial industries	1,170	1.1	792	2.3	669	5.9	957	9.3

	1961							
Mining	17	7.0	17	1.1	8	16.0	15	18.2
Petroleum refining	9	1.2	10	2.5	7	2.8	10	6.5
Construction	9	1.2	7	0.3	7	9.2	9	10.7
Food manufacturing	27	1.1	27	3.3	26	5.4	27	9.7
Textiles	29	6.1	27	3.6	27	5.1	29	9.3
Paper and pulp	16	1.5	17	2.0	13	7.9	16	11.4
Chemicals	63	1.6	58	2.2	55	7.5	59	11.3
Cement and related products	17	1.0	17	1.2	17	6.0	17	9.0
Iron and steel	33	0.8	32	2.8	30	5.4	32	9.7
Nonferrous metals	9	1.8	9	2.9	9	5.1	9	9.7
Machinery	25	1.4	25	3.3	25	3.9	25	8.6
Electrical machinery	27	1.7	27	3.7	27	3.5	27	8.8
Transportation equipment	29	2.3	28	1.8	26	6.7	29	10.8
Precision machines	7	1.4	7	3.2	7	4.6	7	9.2
Trade	27	4.8	27	4.9	25	3.7	26	13.4
Finance	70	29.0	70	6.5	69	5.5	70	41.0
Marine transportation	12	0.0	0	0.0	0	0.4	4	0.5
Gas and electricity	5	0.2	3	0.3	4	3.2	5	3.7
	9	0.1	9	0.0	1	4.9	9	9.8
All industries	501	5.8	456	3.0	426	6.1	481	15.7
All nonfinancial industries	431	1.3	386	2.3	357	6.2	411	10.9

Source: Ministry of Finance data.

it should be remembered that rates of interest, insurance premiums and power rates are subject to close government regulation.

The provision for retirement allowance reserves gives an advantage to labor-intensive industries such as mining or construction, but the advantage disappears when payments from the reserve exceed transfers to it, as has been the case in mining in recent years.

Accelerated Depreciation Allowances

Since 1951, a number of special provisions for accelerated depreciation allowances have been introduced into the Japanese tax system.⁴³ Major ones are as follows: (1) Machinery for modernization (since 1952); (2) "Important" machinery (1951-62);⁴⁴ (3) Machinery and equipment for research and development (since 1952); (4) Machinery and equipment for industrial utilization of new technologies (since 1958); (5) Mining and prospecting machinery, equipment and driftways (since 1954); (6) Machinery for modernization of cooperatives (1953-61, see note 44); (7) Machinery for modernization of small business (since 1963); (8) Industrial machinery in underdeveloped or coal-mining areas (since 1961); (9) Cost of afforestation (since 1957); (10) Newly built houses for rent (since 1952).

Since 1950, the Japanese government has tried to raise the ordinary rate of depreciation: first, by allowing corporations and proprietors three times (1950-54) to revalue their fixed assets in view of the war and postwar inflation, and second by twice revising the list of useful lives for each type of fixed asset (in 1951 and in 1962). The Ministry of Finance in an unpublished study of the results of the revision of useful lives in 1962, found that the present ordinary rate of depreciation given in the Japanese tax law is in most cases a little higher than the American rate after the 1962 revision, or the British rate after the 1963 revision. Also, the ratio of total depreciation allowances to the value of fixed assets is higher in Japan than in the United States or Britain in most industries.⁴⁵

⁴³ All of these provisions (except item 10) are applicable both to individual and corporate income taxes, but the amounts relevant to personal income tax are negligible. The literal translation of the original Japanese words is "special" rather than "accelerated" depreciation, but I use accelerated depreciation since it is more familiar in English.

⁴⁴ Partly abolished and partly absorbed into (1), in 1961.

⁴⁵ However, the German rate is still definitely higher than the Japanese one

Therefore, it is clear that the provisions for accelerated depreciation listed above are not an attempt to adjust unduly low ordinary depreciation rates, but are intended to promote investment in particular industries by giving them extraordinary privileges.

The provisions relating to these accelerated depreciation allowances constitute one of the most complicated parts of the Japanese tax system; only a brief outline of them will be given here.

THE PURPOSE

The purpose of provisions 1, 2, 6, and 7 is modernization of industrial facilities. Quantitatively, these four groups, and particularly provisions 1 and 2, are overwhelmingly important (see Table 11). Advancement of new technologies is the purpose of provisions 3 and 4, and provisions 5 and 9 are designed to promote better utilization of domestic natural resources. The purpose of provision 8 is to promote industrialization of underdeveloped or depressed coal-mining areas and that of provision 10 is to alleviate the shortage of houses in big cities.

ACCELERATED DEPRECIATION RATE

The rate at which the assets may be depreciated varies from one provision to another. The typical rate before and after the revision in 1961 under each provision is as follows:

<i>Provisions</i>	<i>1958-60</i>	<i>1961-63</i>
1.	One-half of the cost of acquisition in the first year.	One-third of the cost of acquisition in the first year.
2.	150 per cent of the usual depreciation allowances in the first three years.	Abolished (partly absorbed in provision 1) in 1961.
3.	50, 20, and 20 per cent respectively of the cost of acquisition in the first three years.	One-third of the cost of acquisition in the first year.

in most cases. There are still complaints from some industries that the useful lives given in the tax law are too long, since machines are used for longer hours every day (with two shifts or even three shifts) in Japan than in other countries. In boom years a few big corporations in such industries as automobiles and electrical machinery actually depreciate their assets at faster rates than the ordinary and accelerated rates prescribed in the tax law. In such a case the announced profit of the corporation becomes substantially less than the profit for tax purposes.

4. Same as provision 1.	Same as provision 1.
5. 90 to 100 per cent of the cost in the first year.	Same as in 1958.
6. 150 per cent of the usual depreciation allowances in the first three years.	Abolished (partly absorbed in provision 1) in 1961.
7. Not yet introduced.	133 per cent of the usual depreciation allowances in the first five years (introduced in 1963).
8. Not yet introduced.	One-third of the cost of acquisition in the first year (introduced in 1961).
9. 20 per cent each of the cost of acquisition in the first five years.	Same as in 1958.
10. 200 per cent of the usual depreciation allowances in the first five years.	Same as in 1958.

The rate of depreciation was generally reduced and made more uniform by the extensive 1960 revision of the provisions for accelerated depreciation.

Most of these provisions are very selective in their application. In many, there is a clause "in industries designated by the Minister of Finance," or "types of machinery or equipment specified by the Minister of Finance," or both. The list of industries, the detailed specifications of each type of machinery and equipment, and the relevant time period, for which provisions 1 and 2 apply runs about 150 pages and is longer than the list of the useful lives for ordinary depreciation. According to the *Report of the Commission for Tax Policy Investigation*, published in 1960,

the present system of accelerated depreciation is . . . extremely complicated. Particularly under provisions 1 and 2 the types of machinery and equipment eligible for accelerated depreciation are so minutely classified that no less than 500 types under (1) and 1,300 under (2) are distinguished. Moreover, the provisions prescribe such meticulous details in specifications that only a very experienced specialist could tell whether or not a certain machine is eligible for accelerated depreciation.⁴⁶

It may be mentioned also that the selective nature of the system necessitates very complicated administrative procedures. The report quoted above also says, ". . . formalities to apply for these compli-

⁴⁶ *Report by the Commission*, Dec. 1960, p. 313.

cated accelerated depreciation allowances are very cumbersome for small business."⁴⁷

THE EFFECTS OF ACCELERATED DEPRECIATION ON THE
AGGREGATE LEVEL OF CAPITAL FORMATION

The effect of the provisions for accelerated depreciation on the aggregate level of capital formation is to be distinguished from their differential effects on various industries or various groups of corporations. My tentative position is that acceleration depreciation does not seem to have much effect on the level of total investment in a country like Japan, where the investment demand continues to be very brisk, and excess demand for investment funds persists.

Accelerated depreciation is essentially the same as a loan at zero interest rate made by the government to the firm involved, and as such stimulates investment in several ways. This stimulus seems to be particularly great in Japan for three reasons. First, the rate of interest is much higher in Japan than in other advanced countries.⁴⁸ This fact makes a loan at zero interest rate particularly attractive to Japanese investors. Second, the rate of growth of most firms is much higher, so that accelerated depreciation lowers the effective tax rate more substantially in Japan than in other countries. According to opinions of industry representatives and tax officials, accelerated depreciation gives a very strong incentive where it applies. Corporations try to "save" corporate income tax by making heavy investment in those types of machinery on which accelerated depreciation is allowed, and particularly in those for which the designated time period expires in the near future.

Third, corporations depend on bank loans more heavily in Japan than in other countries as a source of their investment funds in plant and equipment (see Table 17). Japanese bankers say that they are more willing to make loans on investment for which accelerated depreciation applies, since they can recover the loans within a shorter period and with more certainty. Therefore, there is no doubt that accelerated depreciation is particularly effective in Japan in stimulating incentives to invest in fixed assets on which

⁴⁷ *Ibid.*

⁴⁸ See footnote 11.

TABLE 17
 Percentage Distribution of Sources of Funds for New Investment in
 Plant and Equipment, 1955-61

Sources of Funds	All Industries	Manufacturing
Borrowed capital		
Bonds	2.7	2.7
Loans of private financial institutions		
Banks	15.0	13.8
Others	12.4	10.3
Government funds		
Loans of governmental financial institutions	5.9	4.1
Special accounts for financial purposes	2.1	0.0
Foreign loans and bonds	1.5	1.4
Subtotal	39.6	32.3
Own capital		
Stocks	8.0	9.9
Depreciation	30.4	43.1
Retained profits	22.0	14.0
Subtotal	60.4	67.7

SOURCE: Bank of Japan, *Economic Statistics of Japan*, and Ministry of Finance, *Monthly Bulletin of Statistics on Public Finance and Money*, No. 140, June 1963.

such rapid write-offs are permitted. However, this does not necessarily lead to the conclusion that accelerated depreciation has raised the *aggregate* level of capital formation in Japan.

When the level of annual plant and equipment investment of all corporations rose by more than seven times within six years, or from 556.6 billion yen in 1955 to 3,607.9 billion yen in 1961, a substantial part of the funds necessary for corporate investment came from commercial banks and long-term credit banks (see Table 17). Also, as there is practically no open market for bonds in postwar Japan, bond financing is virtually not much different from a joint loan from the banks which have consented to buy the bonds at the time of flotation.⁴⁹ Commercial banks and long-term credit banks

⁴⁹ Commercial banks used these bonds as a security for advances from the Bank of Japan. Other financial institutions or the general public rarely buy

in turn depend on Bank of Japan advances⁵⁰ for their sources of funds and, through this channel, cash money necessary for economic growth is supplied to the economy.

Two circumstances significantly differentiate the United States from Japan in this connection. First, in Japan, even large corporations depend heavily on bank loans for financing their investment in plant and equipment, so that commercial banks operating with funds borrowed from the central bank play a key role in allocating investment funds. Second, both lenders and borrowers in Japan are not much concerned with the ratio of owned capital to total assets. The average ratio of owned capital to total assets of all nonfinancial corporations was 29.0 per cent (34.0 per cent for manufacturing) in 1955, about half the prewar level. The ratio declined further through the years of a heavy investment upsurge to 22.3 per cent (27.3 per cent for manufacturing) in 1961.

During this period, part of the funds for private plant and equipment investment came from the government and government banks. Particularly, the Japan Development Bank played a strategic role in allocating funds to industries favored by the government. The J.D.B. can persuade private banks to join in extending loans to certain industries. In addition, the credit standing of corporations which are able to borrow from the J.D.B. is often raised. The funds of government banks and the government's special accounts come partly from postal savings, post office life insurance and postal pension funds, and partly from ordinary government revenue.

The aggregate amount of funds made available for private investment is therefore determined primarily by three factors: the levels of personal saving, the government's saving-investment balance, and the Bank of Japan advances to commercial banks. The Bank of Japan can increase its advances so long as it does not incur inflationary pressures or balance of payments difficulties. In other words, the Bank of Japan adjusts the money supply so as to keep

bonds, since the rate of interest is kept too low in comparison with other financial assets. The situation has changed only slightly since 1961, when a new type of investment trust was started. The funds of these trusts are invested exclusively in bonds.

⁵⁰ The interest rate on Bank of Japan advances is normally lower than the rate at which commercial banks lend, leaving a margin to be earned by commercial banks.

the total effective demand at a desired level. In European countries such a level of effective demand would correspond to the condition of full employment, but in Japan it is determined by industrial capacity and by the balance of payments situation.

So long as investment is not entirely inelastic with respect to the interest rate, the monetary authorities can adjust the level of effective demand (a "liquidity trap" is unlikely to occur in postwar Japan). When the Bank of Japan behaves in this way, under certain simplifying assumptions, an upward shift in the investment schedule caused by the introduction of special depreciation will not raise the aggregate level of investment, but will result in a rise in the rate of interest.⁵¹ In such a case, the aggregate level of capital formation is determined by the supply of saving at the desired level of national income, and not by the position of the investment schedule. It is clear then that, in a country like Japan, special depreciation could contribute to a higher rate of capital formation only in the following cases.

1. If effective demand is below the level of national income which the monetary and fiscal authorities think desirable, an upward shift in the investment schedule will increase investment. In postwar Japan, however, except possibly for a short period in 1955-56, there has always been an excess demand for investment funds, and, despite high rates of interest, the monetary authorities have had to restrict the money supply by various measures very close to direct controls. Moreover, if effective demand is short of the desired level, the monetary authorities can increase investment by increasing the money supply and thereby lowering the rate of interest. It may be argued that such a policy would not be effective if investment is inelastic with respect to the rate of interest. However, if that is the case, accelerated depreciation, being a loan at zero interest rate, would not be effective either.

2. If personal saving is elastic with respect to the rate of interest, a rise in the interest rate will increase the total supply of saving and therefore the rate of investment. But this possibility seems remote.

3. If the total gross saving of the government and corporations

⁵¹ In other words, when the government lends money to private firms in the form of special depreciation, the amount that the Bank of Japan and government banks can safely lend without incurring inflationary pressures or balance of payments difficulties is reduced.

taken together is increased by accelerated depreciation, an increase in investment would follow. To examine this, consider a situation in which the provisions for accelerated depreciation are all abolished. Whether the total saving of the government and corporations would be reduced or not depends on the government's marginal propensity to save and the dividend policy of corporations. Again the possibility seems remote.

Our tentative conclusion is, then, that accelerated depreciation does not seem to have affected the aggregate level of capital formation much, and if it has, the same result could have been achieved by a more expansionary monetary policy.

DIFFERENTIAL EFFECTS OF ACCELERATED DEPRECIATION

As explained earlier, accelerated depreciation stimulates incentives to invest more strongly in Japan than in other countries. Therefore, it is beyond doubt that the provisions for accelerated depreciation have had important effects on the allocation of resources among industries, among fields of activity, between big and small business, and so on.

Selective or discriminatory treatment of various industries in the special tax provisions for accelerated depreciation are an integral part of postwar Japanese economic policy. The government has tried to favor certain industries, certain types of economic activity, or certain groups of firms through such measures as the import license system, allocation of investment funds, licensing of foreign patent and technological know-how contracts, and special tax provisions. The announced policy objectives are to accelerate "modernization" of industry, technological progress, structural change toward higher stages of economic development, and to improve the balance of payments. The government policies seem to have favored the following groups of industries.

1. The so-called "heavy and chemical industries." The possibility of technological progress and expansion of export demand in the near future is considered to be greater in the "heavy and chemical industries" than in others.

2. Export industries and import-competing industries which improve the balance of payments.

3. Industries which supply important basic materials, energy, or

basic productive services: namely, iron and steel, electric power, coal, marine transportation, and chemical fertilizers. However, the emphasis on these industries was greater in the early postwar years and has been gradually diminishing.

Furthermore, from time to time, capital or producers' goods industries have received preferential treatment over consumers' goods industries, modern industries over traditional or small business sectors, and heavy over light industries. Moreover, politically influential-declining industries, such as agriculture, coal mining, or marine transportation, have succeeded in securing some privileges from the government, very often because of the argument that they make important contributions to a favorable balance of payments.⁵²

Detailed examination of various statistical sources has revealed that the industries most favored under accelerated depreciation provisions during 1955-61 were iron and steel, bearings, automobiles, industrial machinery, shipbuilding, and synthetic fibers. In addition, from time to time, industries such as paper and pulp, petroleum refining, electrical wires, nonferrous metals, and food processing also seem to have benefited considerably from accelerated depreciation. With so many different industries granted special privileges, one wonders about the objectives of government policy for industry.

It is difficult to appraise the differential effects of accelerated depreciation on economic growth. Since the selective tax policy in regard to accelerated depreciation constitutes a part of the whole system of government intervention in industry, it must be evaluated together with other policy measures. For example, tax exemption for water shortage reserves is in a sense partial compensation for low electric power rates. A high rate of accelerated depreciation for iron and steel represents only a small part of the government's protectionist policy toward this industry. An increase in the accelerated depreciation for transportation equipment in recent years is a reflection of the government's effort to prepare for the coming import-liberalization of automobiles.

Although the government's policy toward industry is intended to

⁵² Since there are so many ways to rationalize the preferential treatment of an industry, the government's policy measures are not infrequently contradictory. It is quite probable, therefore, that the effects of some measures cancel out the effects of others.

promote economic growth and/or to improve the balance of payments, there are cases in which its effects are of doubtful benefit. For example, coal mining and marine transportation were among four or five industries granted top priorities in the early postwar period, but later it became apparent that too much of the country's resources were being drawn into these industries. In the field of tax policy, a notable example of misdirected intervention is the short-lived (1955-58) provision for special depreciation of the cost of remodeling coal-burning boilers into fuel-oil-burning ones. In 1955 this provision was introduced in order to reduce the cost of energy, but was hastily abolished in 1958 in view of the rapidly rising unemployment of coal miners. Since then, the government has been trying to increase the demand for coal by various measures.

Another controversial case is the generous special depreciation granted the iron and steel industry. This may have been a cause of overinvestment in that industry in 1959-60. Since the end of 1961, there has been substantial excess capacity in iron and steel, and a strict cartel to curtail production and investment, in which the government has participated, has been in effect. It is conceivable that in other cases as well some discriminatory special tax provisions may have misdirected rather than improved resource allocation.

These considerations suggest that whether special depreciation has contributed to economic growth through its differential impacts on individual industries is a question which is almost impossible to answer. Up to now there has been no attempt to examine such a problem empirically, and it would be extremely difficult to do so.

CONCLUDING WORDS

In spite of the great emphasis laid in postwar Japan upon the promotion of capital formation and economic growth as policy objectives of the tax system, very little is known empirically about the contribution of various tax measures to such ends. The effect of a particular tax measure in promoting capital formation or economic growth seems at best to be very limited, and the slight desirable effect on growth has often been bought at substantial cost. For example, discriminatory tax provisions are accompanied by rather ob-

vious undesirable effects, such as distributive inequity, complication of tax administration, and discouragement of cooperation by taxpayers,⁵³ not to speak of the dubious relations between pressure groups and Congressmen or bureaucrats.

Often there would seem to be better ways of producing the same result. For example, to promote personal saving it might well have been as effective and would have been more equitable, to moderate the progressiveness of the rate structure of the income tax rather than to introduce preferential treatment of property incomes. Or, government saving through a surplus budget rather than through private saving might have been used to finance investment. To promote plant and equipment investment, either a more expansionary monetary policy or an over-all shortening of the period defining useful lives of fixed assets would have probably been better than discriminatory special depreciation.

COMMENT

SUMIO HARA, BANK OF TOKYO

My remarks will be divided into three parts. First, I will give my over-all opinion on the main sections of Ryutaro Komiya's report. Point-by-point discussions of it will, I hope, be made by Makoto Yasui.

In general I agree with Komiya's arguments in Section II on personal savings and the tax system. Indeed, whenever an important request to alleviate the tax on property income, interest, or dividends was considered, it was the people of the Tax Bureau, including myself, who pointed out the high cost of inequity as opposed to the precarious effect on accelerating personal savings. I feel that, besides inequity, the tax evasion aspect is very significant, for, if tax evaders have a safe haven in which to hide their unreported income, it is a significant deterrent to full compliance by good taxpayers.

As to the special tax provisions on tax-free reserves, those provi-

⁵³ These adverse effects are emphasized by Sei Fujita, "Tax Policy," in *Economic Growth of Postwar Japan*, pp. 47-49.

sions were introduced not only for the three purposes mentioned by Komiya—to increase total supply of national saving, to lighten the tax burden of corporations, and to increase the proportion of owned capital—but also to comply with the principles of business accounting that a taxpayer's credit and his inventory assets have to be partly counterbalanced by some reserve fund corresponding to their inherent and possible depreciation, and that a taxpayer's liability to pay his employees allowances when they are retired must be measured and debited against his assets. As for the effectiveness of these special tax provisions in meeting these four purposes, I feel that all of these purposes have been largely accomplished anyway.

As to the accelerated depreciation allowance, I feel that Komiya is again too pessimistic. I think that the accelerated depreciation has contributed to increasing corporate saving and, in turn, to increasing total capital formation. As for the differential effect of accelerated depreciation, the differentiation was not only among different kinds of industries, but it was inclined to favor modern, ultramodern, or mammoth-size equipment. This answers Komiya's questions about why such industries as paper and pulp, foods, and textiles were given preference. The differentiation must have been fairly effective in bringing about the conspicuous modernizing of Japanese industrial equipment.

In the second part of my discussion, I would like to give the historical background of how and why such generous and divergent special tax provisions were adopted. What we call special tax provisions are provisions intended to provide incentives for certain policy purposes, which are more numerous than those discussed by Komiya. They include: (1) accelerating savings; (2) increasing the retained earning reserves of individual or corporate businesses; (3) technological innovation and modernization of equipment; (4) divergent kinds of industrial incentives, such as export-import credit, exemption from tax on the income from new important products, exemption of custom duties on the import of essential machines; and (5) other miscellaneous purposes, including the allowance for income from rice sold to the government and a special percentage allowance in computing income from medical treatment under social security insurance.

When the Japanese tax system was drastically remodeled in 1950

upon the recommendation of the Shoup tax mission, the whole system was logically rearranged and correlated. And most of the special tax provisions then in force were abolished. However, as Japan has followed "the tax cut policy" persistently ever since, the cuts could not be confined to general and over-all alleviation, and a number of special tax provisions were introduced in 1952 and 1953. This was partly due to the fact that in those years a general tax cut, which naturally required a change in law, was considered more difficult to accomplish than changes in government ordinances, which were largely entrusted to the administration. Various tax-free reserves could be provided by such ordinances. On the other hand, I feel that the fact that the Japanese government became more sensitive to its economic policy after the termination of the occupation in April 1952 was another reason for such new special tax provisions. Besides, judging from our experience, the pressure for special tax provisions is generally much stronger than that for the general tax alleviation.

Then, in 1957, the tide was somewhat reversed. A general tax cut was given top priority and the increase in revenue resulting from the repeal or curtailment of special tax provisions was appropriated to offset a part of the loss of revenue due to the general cut. Since then, the principle of narrowing the scope of special tax provisions has with time come to be established, and now this principle is accepted as a part of the government's avowed tax policy, although it maintains the attitude that new special tax provisions will still be required from time to time.

I have given this historical background at some length because I feel that tax policy for economic growth should be studied not only from a theoretical point of view, but also from sociopolitical and practical standpoints. As has been pointed out here, tax policy has not been determined solely by theoretical growth considerations. Moreover, whenever some growth point of view is taken up, pressure groups are very apt to wield such strong influences as to distort the whole picture. So I hope that this kind of international cooperation in the formulation of tax policy will be particularly outspoken on this point and as far as possible provide counter influences against such distortions.

In our case, we felt that the balance between equity and economic policy had to be very carefully maintained all through the processes of tax law changes. For this reason, we endeavored to have as many of these changes as possible discussed openly before the people. The devices for this were manifold. Every year the government set up a Tax System Research Commission which somehow came to be the arena for such open discussions. The press, magazines, and other communications media took a keen interest in tax changes. Of course, the debates in the Diet Committee were also very valuable for this purpose.

In the third and last part of my discussion, I want to point out that the Japanese tax system has a very strong built-in stabilizing effect, although this power has never been actually allowed to play its part because of the extraordinary elasticity of credit supply in our monetary system. The built-in stabilizing effect of our tax system is well demonstrated by the fact that tax revenues have been so susceptible to economic vicissitudes as to show an elasticity in relation to GNP of over two during boom years compared with well below one during slumps. So, if this stabilizing effect had been kept intact, the trend of the Japanese economy would have been much smoother than it actually was. However, the Japanese monetary supply was somehow too elastic. When the economy was booming, banks were not very reluctant to satisfy the demand for more credit from business. And their monetary sources were, after all, replenished by the Central Bank to the extent that the deflationary effect through higher tax revenue was not only offset but sometimes even more than offset. As a result, Japanese economic growth has become very spasmodic since the overheated economy has to be cooled down by rather sudden contractions of credit. This somewhat extraordinary elasticity of credit supply by banks was probably one of the most powerful causes of the spectacular growth of the Japanese economy, although whether the resultant spasmodic nature of the growth gave us a higher rate of growth in the long run than would otherwise have prevailed needs further study.

In closing, if a frank observation may be permitted, I would like to say that this latent stabilizing effect reflects the greater compliance of our taxpayers as well as the increased efficiency of the tax

administration. I say this because the correspondence between the increment of the unexpected economic growth and that of the tax revenue can be numerically traced fairly closely.

MAKOTO YASUI, MINISTRY OF FINANCE

I will begin my discussion of Komiya's report by acknowledging the help of the staff of the Tax Bureau. However, the opinions expressed here are my private ones and do not necessarily represent the opinions of the Japanese government.

I would like to comment on three points, personal saving, tax-free reserves, and accelerated depreciation.

In general I agree with Komiya's opinions on personal savings, but I should like to discuss briefly his remarks on the relative weights of personal income tax and indirect taxes. Japan's tax cut policy has mainly stressed reduction of personal income tax. During the past fourteen years, the total amount of tax reduction has exceeded 1 trillion yen. Personal income tax reductions account for 84 per cent, of which 64 per cent is attributable to increases in personal exemptions. In actual prices, the personal exemption is now almost six times as high as it was in 1950. In real prices, it is about four times as high.

According to the Family Income and Expenditure Survey in Japan, low income groups below the minimum taxable income begin to do some saving. Steady increases in the personal exemption as a way of implementing the tax cut policy has resulted in increasing the total amount of saving by permitting low income families to save.

As for this tax cut policy, I should like to point out the fact that the percentage of tax reduction achieved by changing the tax rate was not high. The largest amount of tax reduction was in the 1957 tax reform, but at the same time two revenue-increasing measures were taken. That is, a new high rate was added by changing the maximum rate from 65 to 70 per cent and by making the new rate applicable to a new and higher bracket of income. Also the rate of dividend credit was cut down from 30 to 20 per cent. In recent tax reforms, reductions of tax rates have been both small in size and

have been limited to the low brackets. Also, the rapid increase of income in recent years has made the income tax structure more progressive. I admit, though, that it is not clear what criteria should be used to judge progressivity.

In discussing tax-free reserves, Komiya stated that the intention of the government in introducing the special tax provisions on tax-free reserves was not quite clear. As Hara already pointed out, these reserves were introduced mainly to implement certain accounting principles. I would like to discuss this point further. First, consider the reserve for bad debts. Here it should be noted that the Japanese tax laws have two special characteristics. First, the criterion of what constitutes bad debts that may be deducted from income is very severe. For example, the bankruptcy of a debtor is not sufficient; the debt must also be proved uncollectible. Secondly, valuation losses on credit are not allowed in the Japanese tax laws. So, from an accounting viewpoint, the reserve for bad debts is recognized as a kind of valuation reserve.

Next, take the reserve for inventory price fluctuations. Some accounting scholars defend it as a way of equalizing the profit which is necessary for business, as a reserve for contingencies, or even as a kind of valuation reserve. But generally this reserve is considered by tax experts as a kind of retained profit.

Last is the reserve for employee retirement allowances, which is generally regarded as a liability reserve. For example, Komiya states that the maximum limit on the balance is half the assumed total retirement allowance. According to the estimate by the Tax Bureau, the present value of future retirement allowances is 50.8 per cent, if it is recalculated on the basis of an annual interest rate of 8 per cent.

I admit that these reserves contribute to corporate savings, and the extent of the contribution does, in fact, differ among industries. So it may be necessary to revise the method of allowing these reserves, and possibly to change the percentages. However, in my opinion the necessity of allowing some reserves cannot be denied completely, especially for bad debts and employee retirement allowances. In other words, these reserves should not be treated as special tax provisions.

The Japanese economy came through a rampant inflation after

the war and as a result the retained income of enterprises was largely wiped out. Attention should be paid to this point in making international comparisons of current corporate saving.

As for the accelerated depreciation allowance, my argument here is chiefly concerned with the so-called "differential effects of accelerated depreciation." Komiya has said that he is puzzled about the principle governing government policy toward industry. Accelerated depreciation is applicable only to an enterprise that meets two requirements. One is that the business of the enterprise must belong to an *important industry* designated by the law on enterprise improvement promotion. The other is that the machinery or equipment which the enterprise acquires must be designated as *urgently needed to modernize such an industry* by a notification from the Ministry of Finance.

Machinery or equipment thus designated is limited to the basic components. Therefore, investment on such machinery and equipment inevitably invites related investment. Some actual examples from the first half of the 1962 accounting period are available. For steel companies, the total amount of new investment was 6 billion yen, of which the amount of the machinery and equipment eligible for accelerated depreciation was 3 billion yen, or 50 per cent. For companies manufacturing machinery, these figures were 4.3 billion yen, 1.5 billion yen, and 34 per cent. For companies manufacturing electrical machinery, they were 10.6 billion yen, 1.0 billion yen, and 10 per cent.

We can assume that the largest part of the new investment was accelerated by the application of accelerated depreciation. Loss of revenue by accelerated depreciation is limited to the interest on the corporation tax because, over the useful lives of such machinery and equipment, the bulk of the loss of revenue will be recovered. Accelerated depreciation is, on the one hand, less inequitable than other special tax provisions and, on the other hand, is effective in the promotion of investment because it invites related investment. My conclusion on this point is that the government may have committed some errors in designation, but nevertheless accelerated depreciation has apparently contributed to the modernization of Japanese industry.