

THE DISTRIBUTION OF INCOME AND WEALTH IN JAPAN

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This paper reviews research on the distribution of income and wealth in Japan, identifies sources of data on income and wealth, and describes limitations of these data. Evidence that Japan's poorest income groups are relatively well-off is convincing, but there is less evidence that the overall distribution of income in Japan is more equal than in other OECD countries. Agricultural policy, social welfare policy, the tax system, trends in earnings differentials, and the role of the Japanese family are among the many factors that have shaped Japan's income distribution. The rapid appreciation of the stock market and land prices during the late 1980s led to greater inequality in the distribution of wealth. Rapid population aging is expected to lead to an increase in total national wealth relative to national income which may have an adverse impact on the distribution of income.

International comparisons of the distribution of income conclude that Japan has one of the highest degrees of income equality of any of the industrialized countries (Keidel, 1981; Bronfenbrenner and Yasuba, 1987; Jones, 1987; Sawyer, 1987; Buss *et al.*, 1989). Sawyer (1987), using data for 1969, found household income in Japan, both before and after taxes, to be more equally distributed than in six other major industrial countries. Buss *et al.* (1989), in their study of household disposable income for the late 1970s and early 1980s, found that Japan again ranked at or near the top among OECD countries.¹ It had the lowest Gini coefficient and the highest share of income going to the poorest income quintile.

Japan's relative equal distribution of income has been attributed to a number of factors—low rates of rural poverty caused by land reform, industrial decentralization, and substantial price supports; the absence of an urban underclass; narrowing of earnings differentials during the rapid growth of the 1960s; a progressive income tax; and, an extended family system.

Recent changes in Japan may be leading to a more unequal distribution of income. As is true of other countries, wealth in Japan, and the income it produces, are much less equally distributed than total income. Rapid appreciation of the stock market and property prices in Tokyo and other major cities have had substantial effects on the distribution of wealth. Moreover, a major determinant of the wealth distribution in Japan, inheritance, is becoming increasingly important as Japan's population ages.

These and other conclusions regarding the distribution of income and wealth must be tempered by an appreciation of the inadequacies of the country's income and wealth data. Surveys often exclude substantial population sub-groups and important components of household income and suffer from other problems, discussed more extensively below.

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¹The income figures, compiled by the United Nations, include earnings, property income, and cash transfers. They exclude non-cash transfers.

Despite these limitations, a review of the available evidence on Japan supports a number of important conclusions. In the remainder of this paper, we will examine trends in the distribution of income and the factors which are responsible for these trends. The distribution of wealth is discussed in parallel fashion, with a detailed examination of sources of data and their limitations, a presentation of recent estimates of the distribution of wealth, and a discussion of factors, such as the rapid appreciation of the stock market and land values, that are affecting the distribution of wealth.

We conclude with a more speculative look at the future. Although some European populations are more aged, Japan's transition to an aged population is more rapid than in any other country. Early in the next century, over 25 percent of Japan's population is expected to be 65 and older. The impacts on the intergenerational distribution of wealth and the relative importance of inherited wealth are likely to be substantial.

THE DISTRIBUTION OF INCOME

The survey data used to estimate Japan's income distribution suffer from a number of serious problems, including the exclusion of capital gains from reported income (Keidel, 1981), incomplete coverage of the population and undersampling of the rich and the poor (Mizoguchi and Takayama, 1984), and underreporting of social security and property income (Ishizaki, 1985).

The Family Income and Expenditure Survey (FIES) and the Farm Household Economic Survey (FHES), each with samples of approximately 10,000 households are often used in distribution studies.² The FIES excludes single-person households and households where the head is employed in agriculture. The FHES, therefore, is used to analyze farm incomes.

Coverage is not complete, even when these two surveys are used together. They exclude nonagricultural entrepreneur households and all single-member households—which combined account for about 30 percent of the population (Mizoguchi and Takayama, 1984, p. 52). Also, the FIES has income data only for households where the head is a paid employee. It does, however, have expenditure data for nonemployee households.³ (See Table 1 for a summary of the coverage in various income surveys.)

The National Survey of Family Income and Expenditure (NFIE) is also used in several studies.⁴ This survey does include one-person households, unlike the FIES.⁵ The survey is especially valuable in that it reports imputed rent for owner-occupied housing. Its usefulness is somewhat limited, however, in that it is conducted only once every five years. Ishizaki (1985, p. 33) further criticizes the survey, arguing that it seriously underreports social security transfers, received

²Takei Chosa.

³Mizoguchi and Takayama (1984) use the reported expenditure data, along with estimates of saving ratios by income class from the Family Saving Survey, to estimate incomes for non-employee households.

⁴Zenkoku Syohi Zittai Chosa.

⁵Ishizaki (1985) claims, however, that the survey in fact includes very few single-member households.

TABLE 1
SURVEYS USED TO ANALYZE INCOME DISTRIBUTION IN JAPAN

A. Most Often Used Surveys

Family Income and Expenditure Survey (FIES)

Coverage: Excludes single-person households and agricultural households.

Notes: Includes income data only for employee households, but also includes expenditure data for entrepreneurial households. Income does not include imputed rent from owner-occupied housing.

Farm Household Economic Survey (FHES)

Coverage: Includes only farm households and excludes single-person households.

Notes: Includes income from agricultural and non-agricultural activities. Farm households are those which cultivate at least 0.1 hectare of land or earn equivalent incomes from other agricultural activities.

National Survey of Family Income and Expenditure (NFIE)

Coverage: Includes single-person households. Since 1974, includes part-time farm households, though excludes households primarily engaged in agriculture.

Notes: Survey enumerated only every five years and covers only September through November, excluding months when bonuses are paid. Income includes imputed rent from owner-occupied housing. Survey reports financial assets.

B. Other Surveys

Employment Status Survey (ESS)

Coverage: Includes all types of households—farm and non-farm, single-person and multi-member.

Notes: Reports cash income, excludes property income and transfer income after 1968. Enumerated every 5 years since 1982, every 3 years prior to 1982.

Survey of People's Living Conditions (SPLC)

Coverage: Includes all households.

Survey of Consumer Finances (SCF)

Coverage: Covers same households as combined FIES and FHES.

Note: Please see Mizoguchi and Takayama (1984, pp. 192-209) for an extensive discussion.

mainly by low-income groups, and property income, which is concentrated among the rich.

The Employment Status Survey (ESS), the Survey of People's Living Conditions (SPLC), and the Survey of Consumer Finances (SCF) have also been used. The ESS, enumerated every three years, is a large survey which covers all types of households. Income is not the focus of the survey, however, and Mizoguchi and Takayama (1984) regard its income data as biased. They believe the SPLC, a survey of 10,000 households of all types, provides more reliable data. The SCF is sampled from the same population as the FIES and FHES. Whereas its income data is considered more reliable than the ESS, it is thought to be less reliable than the FIES (Mizoguchi and Takayama, 1984, p. 8).

Mizoguchi and Takayama (1984) compare income distribution statistics derived from several of these surveys using data from the late 1960s and early 1970s. They find that estimated Gini coefficients⁶ for income⁷ vary substantially

⁶The Gini coefficient is the most commonly used, and criticized, index of income inequality. The coefficient can assume values ranging from 0 to 1, with larger Gini coefficients indicating greater inequality. If all households had exactly the same income, then the Gini would be zero. It would approach one as income became more unequally distributed, with the share of total income going to the rich rising and the poor declining. Income Gini coefficients in the range 0.2 to 0.35 indicate a fairly equitable distribution, whereas coefficients over 0.5 indicate great inequality. The Gini for U.S. income inequality is about 0.35.

⁷Household income includes earnings, property income, and transfers.

from survey to survey, even when they restrict their analysis to multi-member households. The ESS and SPLC yield Gini coefficients for gross annual household income ranging from 0.30 to 0.35. Estimates for household disposable income derived from the FIES, FHES, and FSS are substantially lower, around 0.20. The SCF provides intermediate estimates of the Gini for gross household income, 0.26 to 0.28.

Why such a broad range? In part, Gini coefficients vary because some are based on pre-tax income and others on disposable income. Mizoguchi and Takayama stress sampling problems. Sampling biases related to a high refusal ratio for the FIES may lead to an over-estimate of income equality. The refusal ratio for the survey is higher among low-income households, who may find it difficult to keep the monthly account books required of respondents, and for the high income households, who may be reluctant to disclose their wealth. Thus, households with moderate incomes are over-represented. The SPLC, which uses trained interviewers, and the ESS, which inquires mainly about employment, have better refusal rates among low-income households.

Mizoguchi and Takayama (1984, p. 10) regard the SPLC data as the most reliable. The SPLC and ESS, among the surveys employed, yield the highest Gini coefficients, but, as discussed below, even these estimates may be low.

Income Distribution in Japan Versus Other Countries

Most comparative studies, including those cited in the introduction, conclude that Japan has a relatively equal distribution of income. The Gini coefficient for disposable household income in 1979 was 0.27, for example, as compared with a Gini of 0.33 for the United States in 1980 (Buss *et al.*, 1989). The problems that plague an accurate assessment of the distribution of income in a single country obviously undermine the reliability of international comparisons. Income surveys and statistics differ in their coverage of various population groups and sample selection, definitions of income, underreporting of various types of income, treatment of income-in-kind, and reporting periods. These studies make only incomplete adjustments for these problems.⁸

Ishizaki (1985) offers the most serious challenge to conventional wisdom regarding Japan's distribution of income. He compares statistics on the distribution of gross household income for several OECD countries with two sets of estimates for Japan, using data from the late 1960s (see Table 2). The "official" estimates for Japan are derived from the National Survey of Family Income and Expenditure (NFIE), and show that Japan had achieved the most equal income distribution. Using Ishizaki's revised estimates, Japan's income distribution is

⁸There is even some debate over just how affluent a society Japan really is. Remarkable economic growth has generated a very high level of per capita income—US\$18,200 by 1986, about 5 percent higher than in the United States. However, a number of factors lead critics to discount this figure as an indicator of economic welfare. The Japanese face higher costs of living. Jones (1987) cites an OECD study which estimates that, when differences in consumer prices are taken into account, Japan's per capita real income in 1987 was actually 30 percent lower than that in the United States. Housing prices are far higher in Japan than in the United States or Germany and average living space is much smaller (Ozawa, 1985; Jones, 1987). Finally, the Japanese work much longer hours and, therefore, enjoy less leisure than workers in most countries (Ozawa, 1985; Jones, 1987).

TABLE 2
INTERNATIONAL PERSPECTIVE ON JAPAN'S INCOME DISTRIBUTION

	Gini	Share of Income (Percent) Going to:	
		Poorest Decile	Richest Decile
Japan (official) 1969	0.335	2.9	28.6
Japan (Ishizaki) 1968	0.408	1.2	31.9
United States 1972	0.404	1.2	28.4
Canada 1969	0.382	1.2	23.8
Sweden 1972	0.346	2.0	24.4

Source: Ishizaki (1985).

Note: Japan (official) are the official estimates derived from the National Survey of Family Income and Expenditure. Japan (Ishizaki) are estimates by Ishizaki (1985) using data from the Employment Structure Survey. The figures are based on gross annual household income, except for Sweden and Canada which are based on after-tax income.

much like that of the United States, and relatively unequal as compared with the OECD as a whole.

He believes his estimates, which are based on the Employment Status Survey (ESS), to be more accurate for a number of reasons. Whereas the NFIE includes part-time farm households, it excludes households that are engaged primarily in agriculture. He also argues that the NFIE underreports both social security and property income. Unfortunately, comparisons with the national income accounts also suggest that property income, social security, and other transfer income are also seriously underreported in the ESS. Therefore, he is forced to adjust the income statistics from the ESS to make them consistent with the national income account totals.⁹

Ishizaki (1985) makes additional international comparisons regarding the components of income. Property income and proprietor's income comprise relatively large shares of total income in Japan. Moreover, property income, according to his revised estimates, is heavily concentrated among Japan's high-income groups. As a result, property income accounts for a full 21.9 percent of all income going to the richest 10 percent of households in Japan, as opposed to an average of 13.5 percent for other major OECD countries. Proprietor's income in Japan was found to account for a larger share of income, as compared to other OECD countries, among all income groups.

To summarize, the overall distribution of income in Japan is probably less equal than often claimed and similar to the distribution in other OECD countries. It is the case, however, that Japan's lowest income groups are relatively better off than those in many other industrialized countries.

⁹Exactly how he does this is not clear. Also note that he does not adjust the data for other countries. If they also suffer from underreporting, he would have stacked the deck against Japan in his international comparisons. He does present data, however, which suggest that underreporting is more serious in Japan. For example, consider the ratio of property income presented in income distribution statistics relative to the estimates from national income accounts. These ratios range from 87.1 percent in the United Kingdom, to 45 percent in the United States, to 11.6 percent in Japan.

Trends in the Distribution of Income

Kuznets observed that income inequality tends to first increase and then decrease during economic development. Mizoguchi and Takayama (1984, pp. 46–47) observe this pattern for Japan from 1953 to 1975, with inequality increasing to the early 1960s and declining thereafter.

During the late 1970s and the early 1980s, the distribution of income exhibited no clear trend, although Economic Planning Agency estimates indicate that the Gini for household income increased in 7 out of the 10 years following the first oil shock in 1973 (Jones, 1987). Gini coefficients in the 1970s and 1980s tended to rise during recessions and fall during economic booms as workers received substantial wage gains (Economic Planning Agency, 1990).

Equality did not increase during the economic boom of the late 1980s, despite the upsurge in business activity (Economic Planning Agency, 1990). Increased income from interest, dividends, and capital gains generated by rising stock prices, a phenomenon we investigate below, offset further wage gains.

Three key factors have contributed the most to shaping the distribution of income: the absence of poverty, the narrowing of earnings differentials during Japan's period of rapid economic growth, and a progressive income tax system.

Absence of Poverty

Although the overall extent of income equality is debatable, lower income groups are relatively well off (Bronfenbrenner and Yasuba, 1987; Ogino, 1984). Data from the National Survey of Family Income and Expenditure (NFIE) for the early 1980s imply the poorest quintile's income share in Japan was around 10 percent, as compared with only about 5 percent in the United States (Levy, 1987, p. 14). The income share of the richest quintile was around 35 percent in Japan and 42 percent in the United States.

Rural poverty largely disappeared in Japan as the income gap between farm and non-farm households narrowed in the 1960s. A number of factors contributed to raising farm incomes. Postwar land reform effectively redistributed land. Government price supports substantially subsidized farmers.¹⁰ Decentralization of industry afforded farm families the opportunity for supplementing their incomes. Finally, rapid growth during the 1960s induced substantial migration to urban areas, reducing the number of small farms (Mizoguchi and Takayama, 1984; Jones, 1987; Keidel, 1981).

Japan also has no significant economic underclass in urban areas, in part because it has not had large-scale immigration of cheap labor. There is no public assistance system to support an indigent class. Rather, low-level self-employment and family businesses replace the public welfare system and reduce the size of the Japanese underclass (Bronfenbrenner and Yasuba, 1987). Moreover, Japan's family system, low rates of divorce and co-residence among the elderly and adult children, provides effective insurance against poverty for many.

¹⁰Farmers enjoy a political influence incommensurate with their numbers, in part because of delays in electoral reapportionment (Keidel, 1981). The Japanese government has, therefore, supported high agricultural prices, imposing substantial costs on both consumers and tax payers. The producer price of Japanese rice is six or seven times the international level (Jones, 1987).

Rapid Growth and Narrowing Earnings Differentials

There are four sources of persistent earnings differentials in Japan—firm size, age, education, and gender. Women earned on average only 57 percent of what men did in 1987. Differences in earnings by firm size and age are more pronounced among male than female workers. Bauer and Ogawa (1991) estimate earnings equations for Japanese men using data from the 1990 National Survey on Family Planning (NSFP) conducted by the Mainichi Newspapers. Although the focus of this survey is demographic, it includes a rich set of data on the earnings and human capital characteristics of a random sample of roughly 2,100 men.

Bauer and Ogawa find that, controlling for other variables, earnings differ substantially by tenure, firm size, and education (see Table 3). Workers with 10 years of tenure, for example, earn about 48 percent more than new hires. Those with 30 years of experience earn over 140 percent more than new hires. Workers in the largest firms, those with over 1,000 employees, earn about 40 percent more than those in the smallest firms, even after controlling for their higher education and longer tenure. University graduates in 1990 earned 24 percent more than upper secondary school graduates, and 54 percent more than lower secondary school graduates.

TABLE 3
ESTIMATED EARNINGS DIFFERENTIALS AMONG JAPANESE MEN,
1990
(Earnings relative to the lowest paid group)

Years of Tenure		Firm Size (# Employees)	
0	1.00	1-9	1.00
10	1.48	10-99	1.08
20	1.96	100-499	1.15
30	2.43	500-1000	1.29
		1000+	1.40
Education			
lower secondary	1.00		
upper secondary	1.24		
junior college	1.34		
university	1.54		

Source: Bauer and Ogawa (1991).

Note: These are partial effects based on a regression of annual earnings on tenure and its square, previous experience and its square, and dummy variables for education, firm size, occupation, and residence.

We are not aware of similar studies of earnings differentials among Japanese women, but simple cross-tabulations presented below indicate that female earnings also vary substantially by firm size and educational attainment. Age-earnings profiles, however, are much flatter for women than men. According to the 1989 Basic Survey on Wage Structure, women in their late forties earn only 20 percent more than women in their early twenties, whereas men aged 45 to 49 earn on average about twice as much as men aged 20 to 24.¹¹

¹¹Female profiles are especially flat in the smaller firms. In firms with 1,000 or more employees, women aged 45 to 49 earn 63 percent more on average than women aged 20 to 24.

Labor force characteristics of women and men differ in a number of other important respects. Female labor force participation is lower and more discontinuous than that of males—about 49 percent of women aged 15 and older work. Women who do work are more likely to do so part-time, are more likely to be employed in trade or services, and are less likely to be college graduates or employed in large firms.

Earnings differentials in Japan have changed over time. During the period of rapid economic growth from the early 1960s to the early 1970s, real wages rose rapidly at annual rates of 4 percent from 1960 to 1965, 9 percent from 1965 to 1970, and 7.4 percent from 1970 to 1975 (Japan Statistical Yearbook 1989, Table 3-26). Moreover, growing labor shortages led to a substantial narrowing of wage differentials by age, education, firm size, gender, and occupation (Mizoguchi and Takayama, 1984; Keidel, 1981; Jones, 1987; Bronfenbrenner and Yasuba, 1987).

Wage growth slowed from the first oil shock in 1973 to the mid-1970s. Real wages grew at an average annual rate of 1.34 percent from 1975 to 1980 and 0.99 percent from 1980 to 1985. Earnings differentials widened as the labor market loosened (Bronfenbrenner and Yasuba, 1987; Jones, 1987). The income gap between farm and non-farm workers increased in favor of the former, and government employees gained relative to workers in the private sector. The wage gap among industries, between men and women, employees of large and small firms, and white collar versus production workers widened (Jones, 1987).

Trends in earnings differentials by firm size, gender, education, and age are presented in greater detail in Tables 4 through 6 and Figures 1 and 2. Table 4 shows the substantial narrowing of the earnings inequality among workers in different size firms during the 1960s. These differentials continued to decline during the early 1970s. The earnings gap increased once again from 1975 to the late 1980s, though the degree of inequality observed in the early 1960s has not returned.¹²

The gender gap in earnings closed substantially from 1960 to 1975, but has remained stable since then (see Table 5). Women currently earn only 57 percent that of men—a much lower average than in most industrialized countries.

Japan has low income differences associated with education, as compared to age or tenure (Bronfenbrenner and Yasuba, 1987). Earnings differentials by education also narrowed in the 1960s and 1970s, at least among male workers (see Table 6). Relative earnings among education groups did not change significantly from 1980 to 1989.

The largest earnings differentials among Japanese men are those associated with age. Differences in earnings between younger and older workers increased from 1950 to 1962, became smaller from the early 1960s to the mid-1970s, only to expand once again since then (Bronfenbrenner and Yasuba, 1987; Ishizaki, 1985). Figure 1 graphs age-earnings profiles for 1975, 1980, 1987, and 1990. The profiles became steeper over this period, indicating the increase in earnings differentials by age.

¹²Ishizaki (1985) and Ozawa (1985) also report this trend.

TABLE 4
EARNINGS DIFFERENTIALS BY FIRM SIZE, 1960-87
 (earnings relative to that in largest firms—in percents)

Male	Firm Size		
	10-99	100-999	1,000+
1960	63.0	77.8	100.0
1970	81.3	88.0	100.0
1975	81.6	89.6	100.0
1980	78.8	86.0	100.0
1985	75.6	84.2	100.0
1987	75.3	84.0	100.0
1989	74.4	82.6	100.0
Female	10-99	100-999	1,000+
1960	61.5	69.2	100.0
1970	75.6	80.5	100.0
1975	78.1	86.5	100.0
1980	77.8	84.0	100.0
1985	75.0	81.5	100.0
1987	73.9	81.4	100.0
1989	73.0	80.0	100.0

Source: Ministry of Labour, *Basic Survey on Wage Structure*, various years.

Note: Figures based on mean earnings by firm size. Data covers firms with 10 or more employees and excludes part-time workers.

TABLE 5
RATIO OF FEMALE TO MALE
MEAN EARNINGS (%), 1960-89

1960	45.5
1970	51.5
1975	56.8
1980	56.1
1985	56.2
1987	57.5
1989	56.9

Source: Ministry of Labour, *Basic Survey on Wage Structure*, various years.

Note: Data covers firms with 10 or more employees and excludes part-time workers.

Firm size and age interact to generate the largest differences in earnings (see Figure 2). The earnings differentials by firm size are small among entry-level workers. However, firm size differentials become substantial among workers in their peak earning years because earnings appreciate more dramatically with age in the larger firms.

TABLE 6
RATIO OF MEAN EARNINGS OF UNIVERSITY TO UPPER SECONDARY GRADUATES

	Males	Females
1965	1.32	na
1970	1.26	na
1975	1.23	1.31
1980	1.19	1.31
1985	1.18	1.32
1987	1.20	1.33
1989	1.19	1.34

Source: Ministry of Labour, *Basic Survey on Wage Structure*, various years.

Note: Data taken from the *Basic Survey on Wage Structure* which covers establishments with 10 or more workers and excludes those employed in government, agriculture, and domestic services.

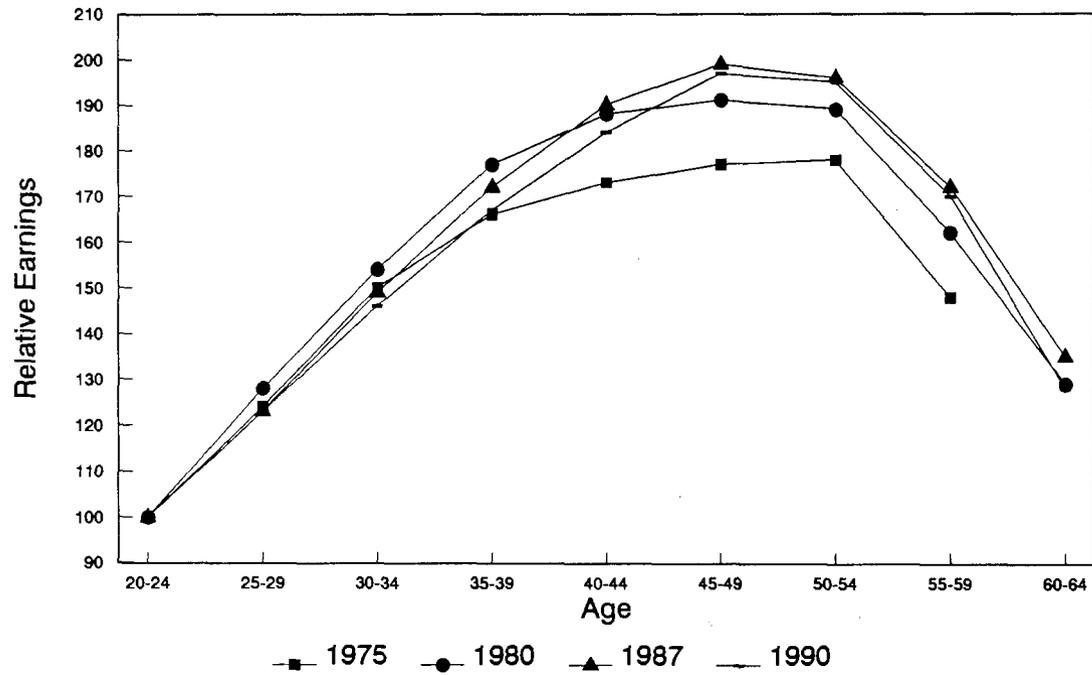
The Income Tax System

There is no question that the rates imposed by Japan's personal income tax system are among the most progressive in the world. Those earning over 20 million yen a year (US\$ 160,000), for example, face a marginal tax rate of 65 percent. The extent to which *effective* tax rates are progressive is quite a different matter. Itaba and Tachibanaki (1987) estimate the tax laws in Japan to be more progressive than those in the United States, but Ishizaki (1985) argues that Japan's system does not have much of a redistributive effect. He examines the effect of taxes using data from the Employment Status Survey and the 1967 Survey of Income Redistribution and concludes that changes in income distribution induced by Japan's tax system are considerably less than the average for OECD countries. The reason is that the income share of the richest income decile in Japan declines by only 1 percent after taxes, as opposed to an OECD average of 2.1 percent.

Ishi (1980) found that the redistributive effects declined from 1950 to 1976 due to increasing levels of exemptions and deductions, which sharply reduced the progressive bite of the tax system. Jones (1987) notes that preferential treatment of dividend and interest income reduces the progressivity of the tax system.

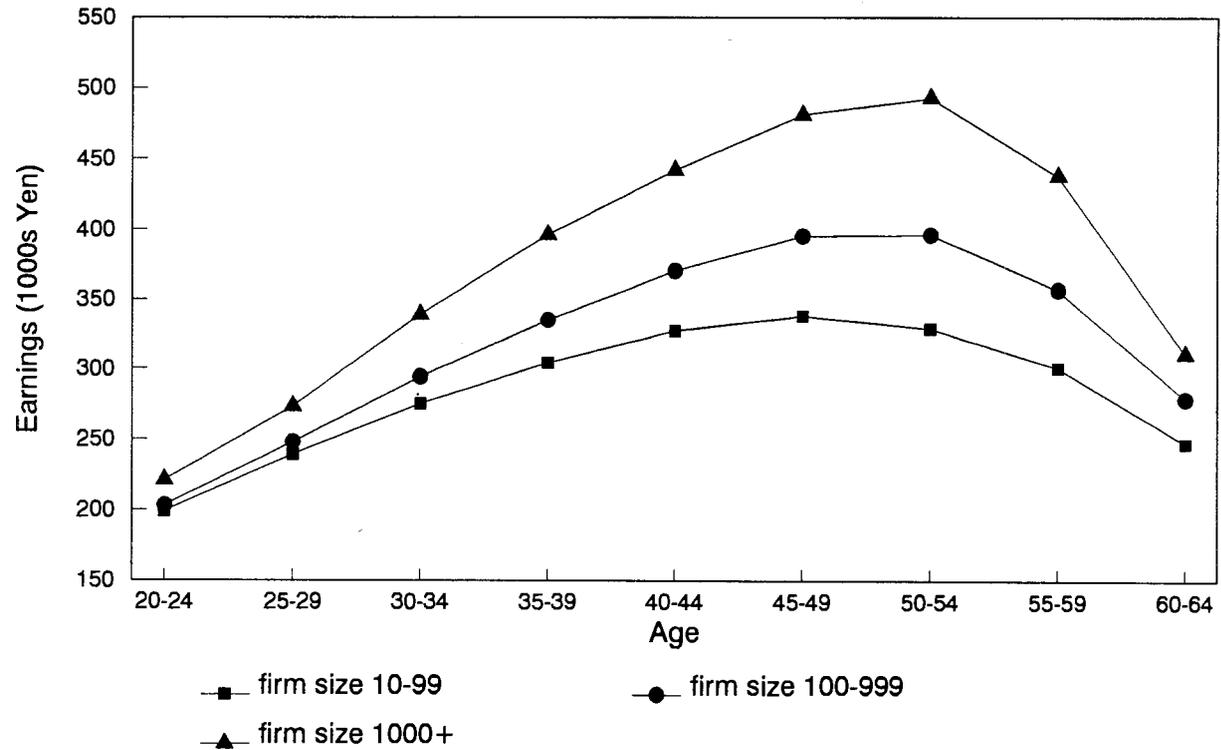
Homma and Ohtake (1990) argue that tax reform is needed for three reasons. Tax burdens vary substantially by occupation because of differentials in the rates of capture on various kinds of income—the disparity in tax burdens is large between wage earners and the self-employed. Wage earners also have experienced “bracket creep” because tax brackets have not been adjusted for inflation since 1975. Finally, increased inequality in asset holdings, and the tax system's inadequate capture of income from assets, has led to increased inequity in the tax system.

Amendments to the tax system passed in the 109th session of the Diet abolished the tax exemption given to interest income, but made only minor



Calculated from Basic Survey on Wage Structure, various years.
Based on average earnings of regular workers.

Figure 1. Male age-earnings profiles (earnings of 20-24 age group = 100)



Calculated from Basic Survey on Wage Structure.
Based on average earnings of regular workers.

Figure 2. Male age-earnings profiles (by firm size group, 1990)

changes in the taxation of capital gains from stocks. Tax exemptions on stock trading were lowered from fifty transactions and 200,000 shares to 30 transactions and 120,000 shares. This effective exemption on capital gains from stock sales benefits the rich, who own more stocks (Homma and Ohtake, 1990).

THE DISTRIBUTION OF WEALTH

Wealth in Japan, as in other countries, is much less equally distributed than income. Ozawa (1985, p. 79), for example, estimated that during the early 1970s the top income decile held 27.4 percent of all income, but 46.9 percent of all financial assets and 51.9 percent of real assets. Moreover, the distribution of wealth became less equal in the late 1980s as property and stock values surged.

We begin this section by discussing Japan's wealth data and then present recent estimates of the distribution of wealth holdings. The factors which determine this distribution are then examined—postwar reforms, inheritance taxes and bequests, rapid income growth, and the stock and property market booms of the late 1980s. We end with a discussion of the substantial impacts that demographic change will have on Japan's distribution of income and wealth.

Data on Wealth

The problems which plague Japan's income data are also present in its wealth data, only more so. There are no comprehensive wealth data for the population as a whole. Data are available only for some groups (Mizoguchi and Takayama, 1984, pp. 62–63). Comparisons with national income account data indicate that surveys substantially underestimate asset holdings (Campbell, 1990).

Underreporting of wealth may be a serious problem. Because of heavy income and bequest taxes, many rich shelter their assets in holding companies. The apparent value of assets is drastically reduced because of the methods used for valuing shares in these companies (*The Economist*, 2 March 1991). Japan has more limited liability companies, 6.7 million, than any other country (*Tokyo Business Today*, October, 1987). This loophole in the tax codes was closed in September of 1990—too recently to be reflected in available wealth distribution estimates.

A number of surveys have been used to estimate the distribution of asset holdings. The Family Saving Survey (FSS), used to examine financial assets, is enumerated annually and includes about 6,300 households with two or more members. It includes information on financial assets of non-farm households, but no data on real estate holdings.

The National Survey of Family Income and Expenditure (NFIE), which is collected every five years, does include both one-person and multi-member households. Households in which the head is primarily engaged in agriculture are excluded. Information on income, expenditures, ownership of consumer durables, and some assets and liabilities are collected. The survey reports imputed rents for owner-occupied housing, but does not include information on all property holdings. Nor are data on the holdings of merchants, private and corporate administrators, and professionals reported. The exclusion of these

households causes a downward bias in estimates of inequality in the overall distribution of wealth (Mizoguchi and Takayama, 1984, pp. 62–63).

The Family Income and Expenditure Survey (FIES) and the Farm Household Economic Survey (FHES) are also used in some studies. The FHES supports estimates for wealth holdings of agricultural households. Unfortunately, reported land values are based on tax assessments, which are substantially less than market values (Mizoguchi and Takayama, 1984, pp. 62–63).

Estimates of the Distribution of Wealth

Takayama (1991) provides one of the most comprehensive studies of wealth in Japan. He uses the 1984 National Survey of Family Income and Expenditure (NFIE) to estimate household holdings of both financial and real assets. Financial assets include demand deposits, time deposits, in-company deposits, life insurance, bonds, trusts, and stock shares. Net financial assets are calculated by subtracting liabilities. Real assets include residential land, housing structures, rental property, and consumer durables. Takayama does not attempt to estimate net real assets by taking mortgage debt into account. He does, however, estimate total net worth by adding the value of real assets and net financial assets. Unfortunately, the values of real asset holdings are not recorded in the NFIE and Takayama had to take great pains to estimate them using supplemental data.¹³

He found that real assets account for the bulk of net worth, 85 percent, and that land holdings are especially important, accounting for 56 percent of net worth. The most important determinant of the size of asset holdings is whether or not the household owns or rents its housing. Due to high land prices, the asset holdings of households living in greater Tokyo (25 percent of all households) are substantially larger than those living in rural regions. Also, non-worker households (excluding the jobless) were much wealthier than households headed by workers—they held 50 percent more real assets, 70 percent greater land assets, and 30 percent more financial assets.

Table 7 presents Takayama's estimated Gini coefficients for asset holdings in 1984. The Gini for overall net worth is 0.52. Whereas ownership of consumer durables is fairly equal, with a Gini of 0.27, holdings of housing, land, and especially rental property are not.

Takayama compares his estimates of the distribution of wealth in Japan with estimates for the United States and Great Britain, and concludes that inequality in Japan is comparatively low. Estimated Gini coefficients for net worth for the United States, 0.72 in 1983, and Great Britain, 0.78 in 1972, are both substantially

¹³The value of owner-occupied residential land is estimated by multiplying estimated land area by land price. He estimates land area from total floor space, which is reported in the NFIE, using data from the Current Survey of Construction and Housing. Land price data is obtained from the Land Price Survey. The value of housing structures net of depreciation is obtained by estimating the reconstruction costs in 1984. Reconstruction costs are obtained by multiplying floor space by the average construction cost per square foot minus depreciation. Costs per square foot are taken from the *Current Survey of Construction*. The NFIE does include data on rental income from housing and land. Takayama divides these rents by the rate of return on rental property, which he estimates from the 1983 *Housing Survey*, to obtain the value of rental property. The NFIE reports ownership of consumer durables. Takayama imputes their value by using 1984 prices and subtracting for depreciation.

TABLE 7
GINI COEFFICIENTS FOR HOUSEHOLD
ASSETS, 1984.

Net worth	0.52
Real assets	0.53
Land	0.55
Housing	0.62
Rental Property	0.97
Consumer durables	0.27
Gross monetary assets	0.54

Source: Takayama (1991).

greater than his estimate for Japan.¹⁴ The wealth share of the richest 5 percent was 49 percent in the United States (1983), 55 percent in Great Britain (1972), and only 25 percent in Japan (1984). However, Takayama does caution that given its many problems, the NFIE may not be a satisfactory instrument for examining the top wealth holders in Japan.

Tachibanaki (1989) provides additional estimates of Japan's wealth distribution. He examines financial asset holdings using the Family Saving Survey (FSS) and real asset holdings using the 1981 Survey on Savings Behavior and Motivations (SSBM). He considers the latter, conducted by the Ministry of Posts and Telecommunication, to be valuable despite questions concerning the reliability and coverage of this small survey. One problem with the SSBM is that asset values are based on the respondent's assessment. However, he cites a study which concludes that assessment errors made by owners were within 10 percent of market values and concludes this margin of error to be less than those from other estimation procedures.

He finds the distribution of wealth, especially real asset holdings, to be somewhat more unequal than does Takayama. For example, he estimates Gini coefficients of 0.58 for net worth, 0.62 for real assets, and 0.56 for financial assets. He shares Takayama's view that ownership of land and housing are the principle source of inequality in wealth. Mizoguchi and Takayama (1984), who examine 1969 and 1974 NFIE data, also share this conclusion.

Factors Affecting the Distribution of Wealth

Reforms adopted after World War II, inheritance taxes and intergenerational transfers, rapid economic growth in the 1960s, and trends in property and stock share values have each affected the distribution of wealth in Japan. We discuss each of these factors below.

Postwar Reforms

Inequality in the distribution of wealth decreased dramatically in the period immediately following World War II. Land reform, implemented by the

¹⁴He does not, however, discuss any attempt to make wealth definitions comparable for the three countries.

Occupation Forces, transferred most of the land from rich landlords to tenants at negligible prices. The share of property income in total personal income is estimated to have declined from 21 percent in 1940 to 3.4 percent in 1950. The real value of financial assets was also substantially reduced by the hyper-inflation of 1945 through 1948 (Mizoguchi and Takayama, 1984, pp. 51–52).

Two additional factors acted to reduce inequality in wealth holdings. One was the destruction of the Japan's capital stock during the war—an estimated 40 percent was destroyed. The second was the dissolution of the large conglomerates or zaibatsu after the war (Jones, 1987).

Inheritance Taxes and Bequests

A large proportion of household assets, especially land, are acquired through bequests in Japan. Barthold and Ito (1991), for example, examine the share of household assets gained through bequests in both Japan and the United States. They estimate that in Japan, based on data from the *Family Saving Survey*, 30 to 40 percent of household wealth, and 40 to 60 percent of land, were obtained by bequests rather than life-cycle saving. In the United States, they estimate that about 25 percent of assets are inherited. Moreover, we argue below that projected demographic change in Japan will dramatically increase the importance of inherited wealth in relation to disposable income.

In principle, Japan's steep inheritance taxes should limit the concentration of wealth across generations. The rates on the taxable portion of bequests are very progressive. The marginal rate for a taxable transfer of US\$25,000 is 10 percent, 20 percent for \$100,000, 30 percent for \$200,000, 40 percent for \$500,000, and 50 percent for one million dollars. The maximum rate of 70 percent applies to taxable transfers in excess of four million dollars.¹⁵

Barthold and Ito (1991) point out, however, that there are a number of exemptions and other provisions which limit the progressiveness of the inheritance taxes. The progressive tax rates are applied to each "statutory heir" so that the greater the number of heirs to a given estate the lower the total tax liability. Prior to 1988, this provided a loophole for the rich. They would adopt "children," who given a nominal fee for their service, would lower the inheritance tax bill. Tax revisions adopted in 1988 place a cap on the number of adopted children which can be included as heirs.

There is also a minimum bequest that is not taxed. Forty million yen (\$320,000) plus 8 million yen for each statutory heir are deducted from the value of the estate before the tax rates apply.

The transfer of agricultural land benefits from special provisions. Bequests in the form of residential land and property in family businesses are also subject to lower inheritance tax rates than other assets since they are assessed at well below market values—typically 40 to 50 percent of market value. In Japan about 65 percent of bequests are in the form of land, while in the United States only about 20 percent are land bequests (Barthold and Ito, 1991).

¹⁵These figures assume an exchange rate of 125 yen per dollar.

Rapid Income Growth in the 1960s

Mizoguchi and Takayama (1948, p. 67) argue that the rapid economic growth and rising wage levels in the 1960s enabled employee households to save and led to greater equality in financial asset holdings. They estimate that the Gini coefficient for financial assets declined from 0.62 in 1962 to 0.53 in 1974. Tachibanaki (1989), using *Family Saving Survey* data, also finds that the distribution of financial assets improved substantially in the 1960s. The ratio of financial asset holdings of the highest income quintile to that of the lowest quintile declined from 8.2 during 1961–65, to 4.5 during 1966–67.

Rising property and stock share values generated dramatic increases in wealth from 1985 to 1990. Of the two, the property market boom had the greater impact on the distribution of wealth. The dramatic rise in property values is considered to be one of the most important socio-economic phenomena in Japan over the past two decades. We examine the effects of rising asset prices below, starting with a brief discussion of the stock market boom.

The Stock Market Boom

Household ownership of stocks is relatively limited in Japan. Individuals owned only 20 percent of total shares in 1987, as opposed to 65 percent in the United States. The other 80 percent were owned by institutional investors. Moreover, only 11 percent of households own shares. Tachibanaki (1989) argues that because stocks are not widely held, it was the rich that benefitted most from the stock market boom.

Recent data from the *Family Saving Surveys* support this conclusion. The value of stock shares held by households more than doubled from 1985 to 1988. These gains were enjoyed mainly by the wealthy. In 1988, the richest income quintile had stock holdings that were nearly 14 times greater than that of the poorest quintile, and 3 to 4 times that of the second, third, and fourth quintiles.¹⁶

During 1990, Japan's stock market dropped 38 percent, moderating the earlier boom's adverse effects on the distribution of wealth. The market dropped an additional 26 percent from March 1991 to March 1992.¹⁷

The Property Market Boom

Land prices increased dramatically in Japan's six major cities from 1985 to 1989. The average price of commercial land increased 244 percent, residential land 125 percent, and industrial land 124 percent. For the most part, the phenomenal appreciation was limited to these large cities. The average price of land in all of Japan's urban districts increased at a relatively more moderate pace, increasing by 66 percent from 1980 through 1989 (Takahashi, 1990). The Economic Planning Agency (1990) reports that land prices in the Tokyo area began to level off in 1989, but continued to rise in other regions of the country. The boom ended in 1991 and property values began to decline in Tokyo and other major urban areas.

¹⁶These figures were calculated from the *Family Saving Survey*.

¹⁷No estimates of the impact of these declines on the distribution of wealth holdings were available when this article was written.

The property boom increased inequality in the distribution of wealth. Takayama (1991), Tachibanaki (1989), and Mizoguchi and Takayama (1984) stress the importance of land and housing as shares of household asset holdings. The dramatic rise in property values, therefore, must have had substantial effects on the distribution of wealth.

Mizoguchi and Takayama's (1984) investigation of the 1969 and 1974 NFIE surveys illustrated the importance of property market trends. For example, they found that increasing land prices in the early 1970s substantially increased the inequality in wealth between farm and employee households, in favor of the former because of their larger holdings. However, they estimated that the wealth distribution among employee households improved over this period because of an increase in home ownership. The rising property values in the late 1980s, on the other hand, generated a reversal in home ownership rates (Economic Planning Board, 1989).

Data constraints make it difficult to fully assess the impact of the recent boom and subsequent drop in land prices. However, a number of recent studies indicate substantial effects. The Economic Planning Agency (1988), using data from the FIES and Land Price Publication data, estimates that the Gini coefficients for housing assets increased from 0.58 in 1985 to 0.65 in 1987—about half-way through the boom. In a more recent report, the agency estimates that the Gini coefficient for ownership of residential property increased from 0.67 in 1986 to 0.74 in 1988, declining only marginally to 0.72 in 1990 (Economic Planning Agency, 1990).

Takayama (1991) estimates the effect of the boom, up to 1987, on the distribution of total household wealth. In his study, already discussed above, he estimates the distribution of total holdings using the 1984 NFIE. He then simulates what happens to this distribution when land and stock prices rise to their 1987 levels. The Gini coefficient for net worth increases substantially, from 0.53 to 0.60. Moreover, the share of land holdings of the top one percent (in terms of land ownership) more than doubles, rising from 8.1 to 16.4 percent. Remember that property values continued to increase substantially from 1987 to 1990.

What caused the property market boom? Several factors have been cited, including a strong demand for property, speculation, and an abundant money supply. Tax laws which discourage land development, however, are believed to be the major cause of the high property values in Japan (Noguchi, 1990; Homma and Ohtake, 1990; Takahashi, 1990). Japanese economists argue that the system of land taxation, which taxes land holdings lightly and taxes gains from land sales heavily, has had an adverse effect on land utilization and conversion. This makes the supply of land inelastic and causes the effect on prices of growing demand and speculation to be much greater. They argue that effective real estate taxes should be increased, especially on farmland within urban areas, and capital gains taxes reduced.

Effective real estate taxes are relatively low because land is assessed at substantially below market value—at roughly 30 percent of posted values (Noguchi, 1990). Effective property tax rates, as of 1987, were only 0.07 percent in Tokyo and 0.14 percent on average for all Japan. This contrasts to rates of 1.42 percent in New York City and 1.99 percent in Chicago (Takahashi, 1990).

Farmland in urban areas is taxed especially lightly. Tax waivers are given to farmers who hold more than 300 tsubo (10,674 square feet) and intend to continue farming for at least 10 years. An estimated 44,000 hectares of urban land in Japan was used for farming, an area equal to the size of Tokyo proper. Moreover, only about one thousand hectares per year have been converted from farmland to residential use since 1982 (Noguchi, 1990). In greater Tokyo, about 11 percent of the land remains classified as farmland (do Rosario, 1990).

Demographic Change and Prospects for the Distribution of Wealth

Japan is in the midst of several important demographic trends that could have a substantial impact on the future distribution of income and wealth. The first is population aging. Recently prepared projections anticipate that the percent of the population 65 or older will rise from 12.0 percent in 1990 to 26.6 percent in 2025. Growth of the population 75 and older will be even more rapid, rising from 4.8 percent of the population today to 15.2 percent in 2025 (Ogawa *et al.*, 1990). Two demographic factors account for this trend. Childbearing rates are so low that each generation is smaller than the previous one, and, because Japan has the longest life expectancy of any country in the world, many elderly are surviving into their 80s and beyond.

The number of households headed by the elderly is growing even more rapidly than the elderly population because seniors are increasingly likely to live independently from their children. Among men 75–79 years old, for example, the percentage heading households increased from 55.0 to 70.3 between 1970 and 1985, the last year for which data are available. For women 75–79, headship increased from 12.1 percent to 20.0 percent during the same 15 year period. Many of the elderly, particularly women, are living alone. Of women 65 and older, 14.5 percent lived in one person households in 1990 as compared with 7.0 percent in 1970.¹⁸ The percentage of all households with a head 65 or older has recently been projected to increase from 14.3 percent in 1985 to 36.1 percent in 2025. Of those, more than half will have a head who is 75 or older (Mason *et al.*, 1992).

Second, marriage among young adults is on the decline. The proportion of 30 to 34 year old men who were married declined from 87 percent in 1970 to only 66 percent in 1990. The proportion of 25 to 29 year old women married declined from 80 percent to 58 percent during the same period (Statistics Bureau, 1972 and 1991). Available data are insufficient to determine whether the decline in the proportion married is the leading edge of a permanent rise in calibacy or merely represents a delay in marriage. In either case, the change in marriage has led to a decline in headship among young men and particularly a decline in the number of households headed by young adults.

Marital dissolution is a third important demographic factor that has had an important effect on the distribution of income and wealth in the United States. Divorce is far less prevalent in Japan than in the United States. In 1990, only 3.3 percent of women and 1.9 percent of men 15 and older were divorced. Divorce has increased in recent years in Japan. Among ever-married women aged 35–39,

¹⁸Single individuals living in boarding houses and company dormitories are not included as one person households.

for example, the percent divorced has increased from 2.9 percent in 1970 to 4.5 percent in 1990. However, Japanese households will continue to be predominantly intact, unless the trend in divorce accelerates substantially. In fact, continued decline in widowship means that Japanese can expect to be married to a later age than previously. Among men in their early 70s, the percent widowed declined from 31.1 percent in 1970 to 16.1 percent in 1990. Among women 70–75, the decline has been from 78.7 percent in 1970 to 65.7 percent.¹⁹

These trends are important to the future of Japan's distribution of income and wealth both for what they imply and what they do not. Recent demographic trends in the United States have been dominated by the decline in the traditional family. The most striking aspect of this trend is the increase in the number of children who live with only one parent and an increase in the number of children who live in poverty. In Japan, the rise in age at marriage has not resulted in an increase in births to unmarried women. Since divorce has risen only slowly, Japan is not experiencing the demographic changes that have led to a relative decline in the economic status of children and single mothers in the United States.

On the other hand, the distribution of income and wealth will be affected by population aging. As the relative size of the elderly population grows, real wealth in Japan is expected to increase more rapidly than national income. The importance of inherited wealth relative to disposable income will increase very dramatically because estates will be shared among fewer siblings. Although the impact on the intergenerational distribution of wealth and income is likely to be beneficial, the overall distribution of income and wealth will probably become less equal in response to these demographic trends.

These conclusions are based on the results of a model of the Japanese economy used to simulate the level and distribution of economic resources, capital and quality adjusted human resources. The factor income accruing to each household cohort is determined by the distribution of economic resources and their relative returns (Mason *et al.*, 1992).

Over time the resources of households change. Labor resources respond to change in household composition, labor force participation, and the labor productivity of household members relative to that of other households. Changes in wealth are determined by the household consumption rate and the distribution of disposable income. The consumption function is based on research by Ando (1985); its arguments are the household's disposable income, wealth, and demographic characteristics.

Changes in the relative returns to economic factors are likely to have an important impact on the intergenerational distribution of income and wealth because households headed by the elderly are relatively well-endowed with physical resources and households headed by the young relatively well-endowed with human resources. The relative returns to factors are modeled using a production function approach in which the relative returns to capital are depressed by a rise in the ratio of capital to effective labor.

¹⁹Although Japan's population is aging and the population 75 and older is the fastest growing age group, the overall percentage of men and women who are widowed has actually declined slightly between 1970 and 1990.

The model uses an elaboration of the headship method to calculate the number of households by age and sex of the household head and the number, sex, and age of household members.²⁰ Disposable income is determined by netting both private and public intergenerational transfers from factor income. The net impact of taxes and public transfers is held constant, as a fraction of household income, at the level prevailing in 1983, the last year for which the requisite data are available. Private transfers consist of resources received by younger households associated with the decline of households headed by the elderly.

The aging of Japan shifts the distribution of wealth towards older cohorts (see Figure 3). Between 1990 and 2005 the percent of national wealth held by those 65 and older will increase from 15 percent to 22 percent. The percent held by those 50 and older will rise from 57 percent to 67 percent. After 2005, the age distribution of wealth is projected to remain relatively stable.

The shift in the distribution of wealth reflects both Japan's aging and important changes in the mean wealth of older relative to younger households. During the first part of the simulation the relative wealth of elderly households improves, but during the latter part of the simulation the wealth of young households rises very substantially relative to that of older households (see Figure 4). By 2025 the age distribution of wealth per household is much more uniform than in either 1990 or 2005.

Due to the complexity of the wealth simulation, it is difficult to untangle the reasons for these changes. However, during the early part of the simulation changes in the distribution of wealth are dominated by the rapid growth of wealth held by the elderly. Older households are being replaced by households that were just entering the labor force at the end of World War II and participated fully in Japan's rapid economic growth.

During the latter part of the simulation two factors drive the shift to a more uniform distribution of wealth. First, the age pattern of bequests changes so that inheritances by households with a head 35–49 grow relative to households at other ages. Moreover, the importance of inherited wealth grows substantially. Annual private transfers from inheritance, as a fraction of disposable income, are projected to increase from 5.6 percent in 1990 to 7.9 percent in 2025. Second, the rise in the wealth to income ratio of middle-aged households depresses their rate of saving. As a result, wealth grows more slowly among older households.

The projected changes in the intergenerational transfer of wealth make the wealth distribution more equal by raising the average wealth of the young relative to the old. However, the forecast rise in the importance of inherited wealth will likely lead to greater inequality in the "within generation" distribution of income because wealth and the income it generates are less equally distributed than labor income.

SUMMARY

Japan has one of the highest degrees of reported income equality of any of the industrialized countries. A recent study reports a Gini coefficient of 0.27 for Japan, considerably lower than the 0.37 coefficient for the United States in 1987.

²⁰See Mason (1987) for a complete description of the demographic model.

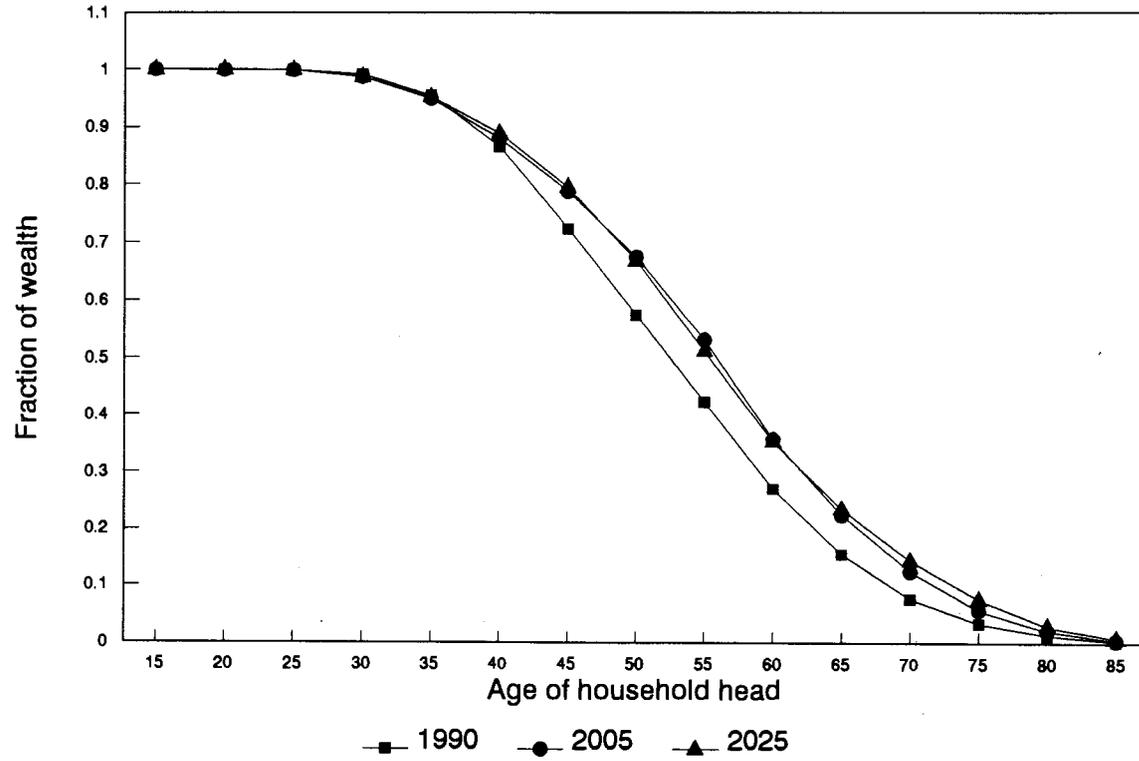


Figure 3. Cumulative distribution of wealth

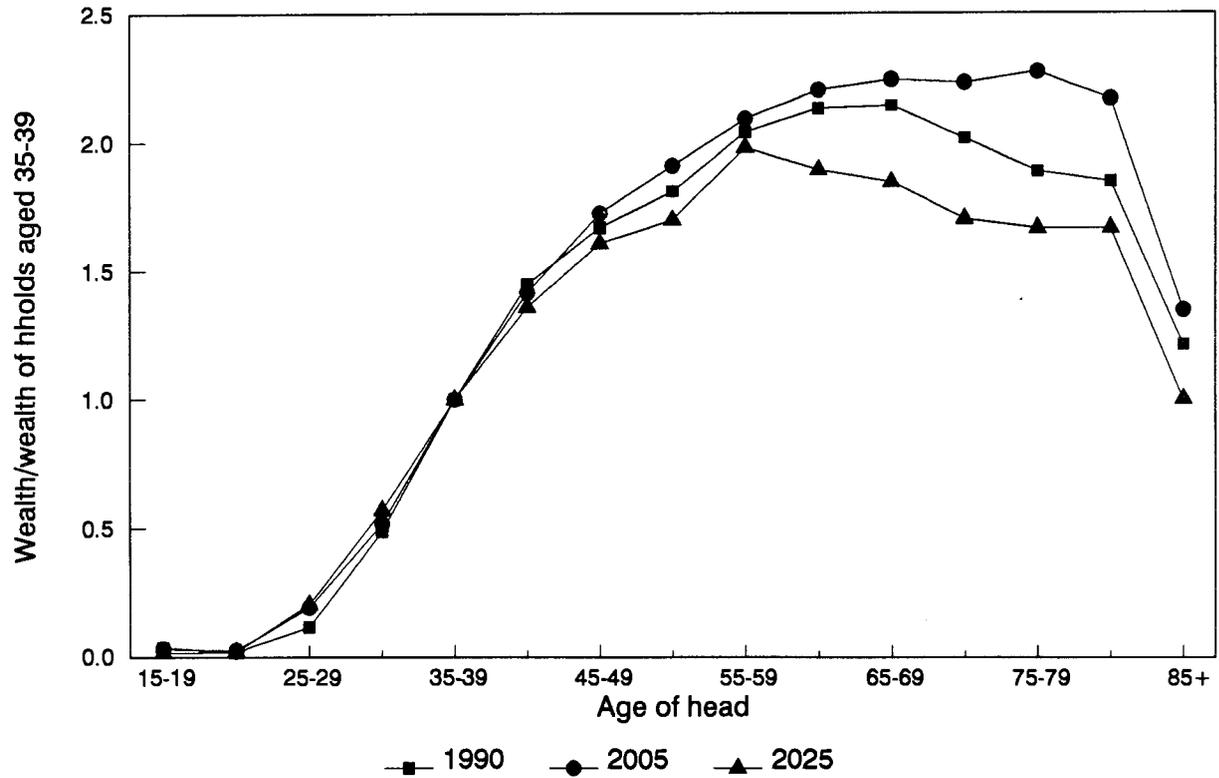


Figure 4. Mean wealth per household

Japan ranks high largely because the members of its poorest class are relatively well off. Poor data, however, severely constrain our knowledge of Japan's income distribution. Moreover, given these data problems, the country's relative ranking in international comparisons of income equality is a matter of some dispute.

The decline in rural poverty, absence of any urban underclass, narrowing of earnings differential during Japan's period of rapid economic growth, and a progressive income tax system have each contributed to shaping Japan's distribution of income. A number of factors have contributed to the relatively high incomes earned by farm households. Postwar land reform effectively redistributed land. Industrial decentralization has afforded farm families the opportunity to supplement their incomes. Under the Japanese political system, rural constituencies enjoy undue political influence, leading to substantial price supports. The producer price for rice, for example, is six or seven times the international level.

Although earnings differentials have narrowed during the past few decades in Japan, there are important differentials associated with age, gender, and firm size that persist. Between 1960 and 1975, the gap between female and male workers narrowed, but since 1975 women have earned only 57 percent of the average wage paid to males. Japan's wage system is seniority based, particularly for men, and wages rise rapidly with age. It is likely that the gap between older and younger workers will narrow in the future as demographic change generates shortages in the number of young workers.

Wealth in Japan, as in other countries, is much less equally distributed than income. Data are generally less reliable for wealth than for income, particularly for the wealthiest households, but recent estimates for the Gini coefficient range from 0.5 to 0.6 as compared to 0.7 for the U.S. and almost 0.8 for Great Britain.

The destruction of 40 percent of Japan's capital stock during World War II and reconstruction policy, notably land reform and the elimination of zaibatsu, are major factors that account for the relatively egalitarian distribution of wealth. Rapid economic growth and pervasively high rates of saving are believed to have contributed to increasing equality in the distribution of wealth through the mid-80s.

However, rapid appreciation of the stock market and housing prices in Tokyo and other major cities have made the distribution of wealth less equal in recent years. Between 1985 and 1988, for example, the value of shares held by households more than doubled, but only 11 percent of all households held shares and high income households held a disproportionate share. The recent drop in the stock market has had a moderating impact on the distribution of income, but was not large enough to wipe out previous gains.

Between 1985 and 1989, commercial land appreciated by 244 percent and residential land by 125 percent in Japan's six major cities. In Tokyo prices increased at a more moderate pace from 1989 to 1991, but continued to rise rapidly in Osaka, Nagoya, and other prefectures until late 1991 and early 1992, when property values declined substantially. Home ownership has declined during the 80s and is increasingly distinguishing the "haves" from the "have-nots". Recent studies by the Economic Planning Agency show a substantial deterioration in the distribution of residential property and, as a consequence, increasing inequality in the overall distribution of wealth.

A major determinant of the distribution of wealth in Japan is inheritance. One recent study estimates that twice as much wealth in Japan can be traced to bequests than is true in the U.S. Demographic trends in Japan are likely to exacerbate this trend as the importance of inherited wealth relative to income more than doubles.

Tax policy has an extremely important bearing on the distribution of income and wealth, and the distributional effects in Japan are decidedly mixed. Personal income taxes rates, with a maximum marginal rate of 65 percent, are among the most progressive in the world. However, preferential treatment of capital gains, dividend and interest income, and other special provisions undermine the progressivity of the system. Recent studies conclude that the Japanese system is considerably less progressive than the average OECD country.

The tax schedule for inheritance taxes is also very progressive but is undermined by important loopholes and exemptions. In recent years, several important loopholes have been tightened up, but residential land, property in family businesses, and especially agricultural land are given preferential treatment.

Tax laws which deter land development are often cited as a major cause of high property values in Japan. Effective property tax rates, as of 1987, were only 0.07 percent in Tokyo as compared with 1.42 percent in New York City. Urban farmland is taxed especially lightly. The system has had an adverse effect on land utilization and conversion, which has contributed to rising prices. In 1990, the Finance Ministry proposed tax changes intended to increase the availability of land, but the government failed to adopt the measures, bending to pressures from big business.

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