Household Savings and Wealth Distribution in Japan

Yukinobu Kitamura, Noriyuki Takayama and Fumiko Arita*

1. Introduction

It has been seven years since our publication on household savings in Japan. Our previous publication made use of the large micro data, the National Survey of Family Income and Expenditure (NSFIE), over the period of 1979-1989 (see Takayama and Kitamura (1994)). Now that the micro data from the 1994 NSFIE has become available among academic users, we would like to add new information to our previous work and uncover new facts that have emerged after the burst of the bubble economy.

The main objectives of this paper are to update the data provided in Takayama

---

* This paper was prepared for International Comparisons of Household Saving (Academic Press). We are grateful to the editors of the conference volume ,especially to Dr Axel Börsh-Supan. We are very grateful to Richard Blundell, Fumio Hayashi, Charles Yuji Horioka for their constructive comments on the early draft. We are also grateful to Michiko Baba for her efficient and skillful data processing. This research is partially financed by the grants from the Ministry of Education, Science and Culture, given to the Project on Intergenerational Equity (Director General, Professor Noriyuki Takayama) as one of the Scientific Researches Priority Areas. Corresponding address: Noriyuki Takayama and Yukinobu Kitamura, Hitotsubashi University, Institute of Economic Research, Naka 2-1, Kunitachi, Tokyo 186-8603, Japan. Fumiko Arita, Toyo Eiwa Women's University, Department of International Social Science, Miho-machi 32, Midori-ku, Yokohama, 226-0015, Japan. E-mail address: Noriyuki Takayama: takayama@ier.hit-u.ac.jp, Yukinobu Kitamura: kitamura@ier.hit-u.ac.jp, Fumiko Arita:

and Kitamura (1994) and to present descriptive information rather than testing particular models of household saving behavior, so that future researchers can examine the household saving behavior in Japan as they like.

Before presenting our results, it is worthwhile reviewing the recent literature on the household saving behavior in Japan. First of all, Hayashi (1997) is a landmark of this literature. Chapter 10 of Hayashi (1997) provides an excellent account of recent literature and evidences on Japanese saving. He identifies key stylized facts; (1) Japan's saving rate is not as high as commonly thought, and (2) the accumulation of wealth by Japanese households starts very early and lasts until very late in life, with unconsumed wealth transferred to the next generation in the form of bequests. As to the second point, Hayashi, Ando, and Ferris (1988) argue that the bulk of intergenerational transfers take place in the form of bequests and that bequests come not only from the independent (nuclear) old, but also from the pool of extended families that seem to accumulate wealth regardless of the parents' age. Barthold and Ito (1992), using bequest tax filing information, show that about one-third to one-half of household assets are obtained by bequests in Japan. It implies that the old households do not dissave enough and leave sizeable bequests, intended or not. Takayama and Kitamura

---

arita@toyoeiwa.ac.jp. .

(1994) also find some evidence of substantial intergenerational transfers from the NSFIEs. Ohtake (1991) argues that bequests are motivated by selfishness rather than by altruism. From these studies, we conclude that intergenerational transfers do occur at a substantial magnitude, no matter what motivation lies behind it.

Horioka (1990, 1993) provides another good survey of the literature from the viewpoint of different motives for saving. The author has identified more than 30 factors. Horioka and Watanabe (1997) also conducted empirical investigation of saving motives using a micro data from a Japanese government survey. Horioka finds that net saving for retirement and precautionary motives are of dominant importance. Using a different data set, Ohtake and Horioka (forthcoming) discover that retirement and housing motivations are of importance. Motivation for the acquisition of owner-occupied housing remains strong and it promotes high saving, especially because of limited mortagage markets and high down-payment requirements (i.e. the presence of liquidity constraints). Hayashi, Ito and Slemrod (1988) investigate the effects of tax incentives and down-payment requirements on a household's tenure choice and on saving behavior in the U.S.A. and Japan by simulation methods. The result is that these factors do not offer a complete explanation of the large gap between the saving rates of the two countries largely because of institutional differences in the typical

down-payment ratio and tax incentives.

2. The Data

Several large-sample micro-surveys concerning Japanese household behavior are conducted regularly by the government[1]. Detailed comparisons of the NSFIE with other data sources in Takayama *et al*. (1989, chapter 3) indicate that the NSFIE captures a fairly accurate and unbiased picture of the household behavior in Japan and thus the NSFIE is one of the most reliable sources of information (though we admit that it contains possible reporting errors). For this reason, throughout this paper, the NSFIE is used to identify household behavior in Japan. In addition, fortunately we are able to use four different NSFIE data points in time, i.e., the 1979, 1984, 1989 and 1994 surveys. Although these are not panel data, intertemporal comparisons among four data points in time can be made to approximate actual life cycle behavior[2].

---

[1] For details, see Takayama and Kitamura (1994, section 3.2). The major surveys include the Family Income and Expenditure Survey (Designated Statistics No.56), the Family Saving Survey (Approved Statistical Report), the National Survey of Family Income and Expenditure (Designated Statistics No.97), the Basic Survey of Japanese Living Conditions (Designated Statistics, No.116) and the Survey on Time Use and Leisure Activities (Designated Statistics, No.114).

[2] The statistical surveys by the government are published regularly in highly summarized forms. Although these summaries contain valuable information and are accessible by everyone, detailed data

Since 1959, the NSFIE has been conducted every five years to reveal levels of income, consumption and household assets, their structure and distribution, as well as the differences among regions. All these analyses are performed through the investigation of two key areas: family income and expenditure, and assets and liabilities in Japanese households. This survey is designed to sample over 50,000 households (53,000 in 1979, 54,000 in 1984, 59,100 in 1989, and 56,000 in 1994). Survey items include (1) family income and expenditure, (2) annual income, financial assets and liabilities, (3) major durable goods, and (4) attributes of households and their members, including housing conditions.

With a large sample size and wide coverage in items, the NSFIE is a treasure trove of information. It enables researchers to make detailed analyses according to various household characteristics[3].

We need to explain briefly how we construct our final data set.

First, we eliminate two large categories from the original sample over 50,000; agricultural households and a single member household (about 4,900).

---

analysis can not be made without using the original micro data tapes. According to laws governing the use of these statistics, researchers must apply to use these original tapes and give sound reasons. Only after obtaining permission from the government can researchers use the data tapes in which individual identities are carefully disguised.

[3] For details of the NSFIE, see Hayashi, Ando and Feris (1988).

Second, if some relevant data such as yearly income, savings, financial assets, housing assets, home ownership, durable assets are missing, these households are eliminated from the sample.

Third, we also drop the households whose yearly incomes exceed 4 times of standard deviation of the income distribution of the whole sample from its mean.

Fourth, if information on debt outstanding and golf club membership certificates are missing, we put zero-value on such items.

Fifth, employee's households include (1) regular laborers, (2) private office workers, (3) public office workers, and (4) corporate administrators. The rests are considered as self-employed households.

Sixth, the definitions of disposable income and consumption in the system of national accounts differ from those of the NSFIE in the treatment of imputed rents from housing and depreciation of housing structures. It will be useful to list characteristic features and shortfalls of the disposable income concept used in this paper. These are as follows:

(1) Remittances to other family members or relatives are treated as part of "other consumption expenditures". On the other hand, remittances from relatives are counted as a source of yearly income of receiving households. Intergenerational transfers within

extended families are not reported separately and counted in consumption expenditures.

(2) Medical benefits in kind are excluded.

(3) Imputed rent from housing is excluded from income.

(4) The flow of services from consumer durable is not reported. Expenditure on consumer durables is counted as consumption.

(5) Capital gains or losses on stocks, equity in one's own home and equity in consumer durable are not included.

(6) The annual tax burden is not reported. Income and resident taxes are to be estimated. Annual social security contributions are also not reported in the NSFIE, while annual social security benefits are reported.

(7) Interest on loans is included in income and is also treated as part of non-consumption expenditures.

(8) Interest and dividends are underreported[4].

The most discussed data problem with the NSFIE is the sample selection bias with old households. The problem goes as follows. Because of the prevalence of the

[4] Around 70 percent of households in the NSFIE don't report any amount of interest or dividends. With such a low awareness of capital income, the value of real interest income seems to be hardly recognized by households.

extended family for example, in 1994, 17.5% of all households were extended family (i.e. the heads of households are the younger members of the families) and 30.6% of all households have household members aged above 65[5]. The existence of extended families implies that there are two categories of older people: those still maintaining an independent household (i.e. the independent old) and those living with children (i.e. the dependent old). Wealth and flow of savings for the dependent old cannot be observed directly because of no breakdown among family members in the NSFIE. When the true age profile of saving behavior is to be identified, we have to extract savings and wealth of dependent old from the extended families and add them to those of the independent old. As the economic status of the independent old is substantially better than that of the dependent old, the old age saving behavior would have a self-selection bias if we do not make such adjustments. Hayashi, Ando and Ferris (1988) suggests a method of removing this bias by comparing nuclear families and extended families whose younger generation is similarly aged. We find however that this method needs to be refined due to insufficient control of household characteristics to carry out

[5] This implies that 13.1% of the elderly live their own and this trend has been increasing over time. Sooner or later, of all people age above 65, more than half of them live independently from their children, given a rapid urbanization and generous social security benefits.

statistical matching between nuclear and extended families[6]. Takayama and Kitamura (1994) provide a complementary estimation method of intergenerational transfers to Hayashi, Ando and Ferris (1988).

It is quite important to adjust this sample selection bias, if the main research issues are concerned with the saving and wealth accumulation behavior of the old households or intergenerational transfers from the old to the young households.

We decide not to adjust our data based on two reasons. First, we find ample evidences of rapidly decreasing number of extended families, thus, it may be quite misleading to excessively stress the importance of extended family in Japan. Second, this paper is not directly concerned with the old households as it were, but with the entire household saving behavior in Japan.

In the following, we would like to explain our definitions of variables in the NSFIE data[7].

---

[6] For example, the extended families are prevalent in self-employed households living in the rural areas, while the nuclear families are prevalent in employees' households living in the big cities. A simple comparison between the two only adjusting age cohorts is quite misleading, because this comparison may reflect differences in region, occupation, and social values.

[7] For those who want to convert yen into Euro values, the following two steps can be used. (1) To convert nominal values into the 1998 real values in yen, use Consumer Price Index (CPI) by setting 1998 =100, 1979=69.96, 1984=83.72, 1989=88.57, 1994=97.38 and 2000=98.35. (2) To exchange yen with

2.1. Disposable Income

In the NSFIE, gross yearly income (all household members) includes wages and salaries, income through business and work at home, returns from assets, social security benefits, donations, and consumption in kind. The amount left over after deducting non-consumption expenditures such as taxes and social security contributions is disposable income. After subtracting consumption expenditures from disposable income, we obtain savings on the flow base.

Taxes and social security contribution on annual base are not available in the NSFIE. We need to estimate these items for individual households by adjusting with household characteristics such as yearly income, family composition, age, employment-status. We consider only two types of taxes, income tax and inhabitant tax and two types of social security contributions, public pension contribution and social health insurance contribution (c.f. employment insurance tax is negligible, as it is lower than 0.4%).

Definition of disposable income is given as follows (see Table 1).

Disposable Income = Yearly Income – Tax and Social Security Contribution (1)

Euro, use the market exchange rate in 1998, 1Euro=159.57yen.

2.2. Consumption Expenditure

The NSFIE definition of consumption expenditure includes medical expenditures in cash and purchases of consumer durables. Remittances to other family members and intergenerational transfers in the form of gifts are also included.

In the NSFIE, monthly average household income and expenditure are obtained only for three months, i.e. September through November. It is necessary to convert monthly data to yearly data. In so doing, seasonal adjustment ratios for 10 major expenditure items are calculated to obtain an annual conversion factor (see Tables 2-3). For example, yearly consumption for 1994 is calculated as follows.

Yearly Consumption = 12.288947*(Foods) + 11.994339*(Housing) + 12.97166261*(Fuel, Light & Water Charges) + 12.34859801*(Housing Furniture & Household Appliance) + 13.46894251*(Clothes and Footwear) + 12.311852*(Medical Care) + 11.847619*(Transportation & Communication) + 12.192596*(Education) + 13.340823*(Recreation) + 12.973387*(Others) (2)

2.3. Saving Flows

After subtracting consumption expenditures from disposable income, we obtain savings on the flow base (see Tables 4-5).

Saving Flows = Disposable Income – Yearly Consumption (3)

Saving rate is defined as the ratio between saving flows and disposable income (see Table 6).

Saving Rate = Saving Flows / Disposable Income (4)

When we calculate the saving rates for different age group, income class, home ownership (see Table 7), and employment status, we use the following definition for the mean saving rate (see Table 8-13).

Mean Saving Rate for Group i = Σ_i(Saving Flow) / Σ_i (Disposable Income) (5)

If the distributions of disposable income and saving flow are skewed, the mean and median saving rates would differ. We use the following definition for the median saving rate.

Median Saving Rate for Group i = (median saving in i)/(median disposable income in i) (6)

2.4. Net Worth

Net worth is calculated as a sum of net financial assets, net housing assets, and consumer durables (i.e., total durables minus golf club membership certificates) (see Table 14-16).

Net Financial Assets = Financial Assets – (Total Debt – Debt for Housing Assets) (7)

Net Housing Assets = Housing Assets – Debt for Housing Assets (8)

Where housing assets include only the primary house, excluding the other houses such as summerhouses.

Net Worth = Financial Assets – Total Debt + Housing Assets + (Durables – Golf Club Membership Certificates) (9)

It is worth noting that the NSFIE reports much lower per-household financial assets than do the Flow of Funds Accounts (FFA) and the Annual Report on National

Accounts (SNA). In 1984, the FFA estimated 10.35 million yen on average, and the SNA 8.8 million yen, while the NSFIE reported 6.2 million yen. In 1989, the FFA reported 16.45 million yen, the SNA 16.90 million yen, and the NSFIE 10.30 million yen. The gap between the FFA and the SNA is relatively small (i.e., SNA/FFA was 0.850 in 1984 and 1.027 in 1989), compared with that between the NSFIE and the FFA (or between the NSFIE and the SNA) (i.e., NSFIE/FFA was 0.600 in 1984 and 0.626 in 1989; NSFIE/SNA was 0.705 in 1984 and 0.609 in 1989). These facts imply that, although the gap between the SNA and the FFA (less than 15 percent) can be explained in terms of differences in statistical coverage (e.g., private non-profit institutions and health insurance funds are included in the FFA but not in the SNA), the approximately 40 percent difference between the NSFIE and the FFA (or between the NSFIE and the SNA) must go beyond the usual explanations of differences in statistical coverage and reporting months. Three explanations can be made: First, as was discussed above, there exists a sample selection bias due to refusals among wealthier households to participate in the survey. Consequently, the mean asset holdings in the NSFIE are lower than in the SNA or the FFA. Second, the difference may be affected by underreporting by self-employed households. Although both the NSFIE and the FFA (and the SNA) include self-employed households, those in the NSFIE seem to report

financial assets only for personal use and exclude those for business purposes. Third, it should be noted that the SNA data are constructed from value added in the production sector and that, with the commodity flow method, the household sector is treated as a residual. Thus, in general, household sector accounts (e.g., savings) are subject to statistical (measurement) errors[8].

3. Age Profile of Savings

The age-income, the age-consumption and the age-saving profiles are shown in Figures 1, 2 and 3 respectively. Disposable income, consumption expenditure, and saving increase its nominal values in all age-profiles over time. As before, the age-income, the age-consumption, and the age-saving profiles are hump-shaped, reaching its peaks at ages 50-54.

To put these data together, the age-saving rate profile is shown in Figure 4. The saving rates over life-cycle follow, more or less, the same pattern over time, i.e. the saving rate as a whole keeps rising over the age-profile. Figure 5 shows an alternative age-saving rate profile for the median household. Compared with Figure 4, the pattern

[8] A statistical error could occur when inventories of consumer goods pile up or when these are

is almost identical until age 55-59. After age 60, the saving rates of the median household go down steadily.

As far as flow data in Figures 1-4 are concerned, no strong signs of behavioral change after the burst of the bubble economy in the early 1990s is found. In retrospect, economic recession did not penetrate enough into the daily life of the households in 1994. The worse came later in 1997-98 when a series of large bankruptcies occurred in various industries. We have to wait the 1999 NSFIE to examine the impacts of economic recession in 1997-98.

4. Saving Rates by Income Class

The average saving rates in all households by quartile income class are shown in Table 6 and Figures 6-9. Throughout the sample period, the poorest quarter of the households (I) experiences negative saving rates usually in their 60s of age and after, while the other quarters of the households (II-IV) keep positive saving rates steadily over life-cycle.

To be more precise, for the second and third quarters of households (II-III), the

---

increasingly consumed by other sectors of the economy (e.g., the corporate sector).

age profiles of saving rates are, more or less, hump-shape over the age-profile. For the richest quarter (IV), the age profile of saving rates is somewhat different from those of the other quarters. It keeps rising and ends with a very high rate (easily above 40%) over age 80.

The acquisition of a house is probably the most significant consumption decision each household makes over the life cycle. Therefore, saving behavior is quite likely to be affected by the housing purchase decision (see Hayashi, Ito and Slemrod (1988)). Table 7 presents the age-profile of the home-ownership rate. Regardless of the survey years, the rate starts rising at around ages 30-34 and reaches a steady-state level (i.e. about 90%) at ages 55-59, just before retirement. This steady-state level seems quite high by international standards.

Table 8 presents the saving rates of households that own their homes. This table shows that it is income class that mainly differentiates saving rates. Home-owning households with little, if any, saving motivation for housing purchase keep high savings, except for the very poor elderly households.

Table 9 shows the saving rates of tenant households are, in general, lower than those of home-owning households. It is the poorest quarter (I) that dissaves throughout the age-profile.

The general pictures in Table 10 of households with a working head overlap with those in Table 6. Table 11 shows that the saving rate goes down substantially when the household head is not working. Only the richest quarter (IV) has positive saving rates throughout the age-profile.

Tables 12-13 compare the saving rates between employee and self-employed households. In general, the saving rates of poorer quarters (I-III) are higher in the employee households, while those of the richest quarter (IV) are higher in the self-employed households. Income flows of the employee households remain stable over the age-profile and thus income distribution among them is more equal than that among the self-employed households.

5. Cohort Analysis

The mean saving rates by cohort are shown in Figure 10, constructed from Table 6. A general pattern of the saving rates remains the same as in Figure 4, that is, even the elderly households keep saving at a substantial margin.

Figure 11 shows the median saving rates by cohort. A general pattern of the saving rates remains the same as in Figure 5, that is, the households after age 60 reduce

their saving rates steadily.

Among many cohorts, the baby boomer cohort (birth year 1945-49)[9] deserves a special attention because it comprises the largest demographic cohort. As Figure 10 shows, the baby boomer cohort in their 40s reduces their saving rates from 1989 to 1994, while most neighboring cohorts raised their saving rates in 1994. Kitamura, Takayama and Arita (2001) conducted analysis of variance (ANOVA) for this cohort data and found a statistical evidence that the baby-boomer generation indeed started behaving differently as early as in their 40s in 1989.

Why this happened? As the hump shapes are observed in Figures 1-2, both the disposable income and consumption reach its peaks around the mid 50s of age, with accelerating increases in consumption expenditure in the 40s of age. The baby boomer cohort happened to be their 40s in 1994. As discussed before, consumption expenditure increases steadily from 1989 to 1994, and especially so for the baby boomer cohort. That results in a drop in saving rates. It is noteworthy that in the U.S.A., the unprecedented economic boom in the 1990s has enabled the boomer generation to accumulate their wealth (see Sterling and Waite (1998)) in the forms of

[9] We have to be careful about the conceptual differences of the baby-boomer generations in the U.S.A. and in Japan. In the U.S.A., the baby-boomer includes those who were born from 1946 to 1968, while in Japan, it usually includes only those who were born from 1947 to 1949.

real estate, pension funds, and stocks. Conversely, the protracted Japanese economic recession in the 1990s has made very little room for the baby-boomers to accumulate their wealth for after-retirement by themselves and through firms' retirement severance pay funds.

Generational accounting results from Japan (see Takayama, Kitamura and Yoshida (1999) and Takayama and Kitamura (1999)) also indicate that we cannot afford to provide generous public pension benefits to the boomer cohort and that further public pension reforms would be inevitable, if the public pension scheme is to be kept running.

6. Age-Wealth Profile

Net worth (financial and housing assets) increases over all the age-profile without a substantial decrease after retirement (see Figures 12-14). With a closer scrutiny, however, net housing assets in 1994 became slightly lower for the younger households than those in 1989. It means that the younger households could not purchase the housing assets in 1994 as much as those in 1989. Net financial assets, on the other hand, are higher than those in the previous period. As housing assets accounted for 66% of total net worth in 1994 (see Tables 14-16), over all net worth in 1994 remains

the same as in 1989. It should be noted, therefore, that as far as the household worth is concerned, net worth does not drop even after the burst of the bubble in the early 1990s[10].

Wealth distribution became unequal in the 1990s. In particular, net worth holdings became increasingly distorted between home owners and tenants (see Table 14).

Figures 15-16 indicate net worth and net financial assets held by cohorts over the period of 1979-1994. Net worth increases substantially in the bubble period (i.e. 1984-1989). It is surprising to find that net financial assets increase even after the collapse of the stock market in Japan. Net financial assets reach its peak at ages 60-64 because of lump-sum retirement severance payments at around age 60. As Takayama and Kitamura (1994) show, intergenerational transfers might be made from the elderly cohorts to the younger cohorts. However, from the net worth and financial assets holding by cohorts in Figures 15-16, no strong evidence of transfers can be observed, in particular, for the baby boomer cohorts to receive.

[10] This is partly because the officially evaluated land prices (koji-chi-ka) in 1994 do not reflect fully a

7. Wealth Distribution

So far, we observe household savings and wealth holdings over the age profile. In this section, we add another dimension of income and wealth distribution over the age profile.

Table 17 shows the percentage of negative savers by income class over the age profile in 1994. This table confirms our earlier finding that within variation of percentage of negative savers in the same income class is smaller than between variation of different income classes and that variation of negative savers in the same age profile is much larger than that in the same income class. In short, it is income distribution that determines mostly the saving behavior. Tables18-19 examines the same aspect from a slightly different perspective (namely counting the number of households holding financial assets less than 3 million yen in 1994).

Tables 20-22 indicates wealth distribution over its own decile or over income decile. Table 20 reveals that distributions of net worth and financial assets are equally skewed. Comparing Tables 21 and 22, wealth distribution over own dicile is much skewed than that over income decile. It reveals implicitly that wealth is much unevenly distributed than income. To confirm this conjecture, the Gini coefficient of

---

sharp drop in market land prices after the burst of the bubble economy.

income distribution in Japan has been the range of 0.3-0.4 in 1979-1994 while the Gini coefficient of *net worth* was 0.519 in 1984 and 0.562 in 1994.

Table 23 and its graphical expressions of Figures 17-18 reveal a three dimensional picture of wealth distribution. These pictures show variance of wealth distribution within the same income decile is larger than that within the same wealth decile. This implies those who belong to a lower income decile might have a substantially large amount of wealth while those who belong to a lower wealth decile is less likely to earn a substantially high income. In other words, it may be misleading to observe wealth distribution over income decile because income is not a good indicator of wealth holding.

Takayama (1992a) reports the decomposition of net worth distribution by means of decomposable measure of inequality for the 1984 NSFIE. He uses so called the Toyoda Measure of Inequality (see Toyoda (1980)) that is essentially based on the analysis of variance (ANOVA)[11]. By construction, the Toyoda measure T is decomposable such that,

[11] More precisely, Toyoda measure T is defined as $T=(\sigma/\mu)^2/2 = \sigma^2/(2\mu^2)$, where σ = standard deviation of the sample, μ = mean of the sample, σ/μ is the coefficient of variation, and σ^2 = variance of the sample.

$$T = T_b + \sum w_j T_w(j) \tag{10}$$

where T_b= the Toyoda measure between group, $T_w(j)$= the Toyoda measure within group, w(j) = a weight = the net worth share of each group in total net worth.

Table 24 reports the results. Takayama decomposes net worth distribution over home ownership, age profile, region, employment status, and income class for the 1984 NSFIE. Home ownership explains 12.2% of overall wealth inequality. Age profile, region, employment status explain as little as 2-8%. Income class, here again, plays the major role in explaining the wealth inequality by 15.9%. Nevertheless, the Toyoda measure shows that within group variance easily exceeds between group variance.

Table 25 replicates the same approach to the 1994 NSFIE. The general pattern remains the same as that in 1984, namely homeownership, age profile, region, employment status, and income class explain as little as 1.5-8.4% of overall inequality. In other words, the Toyoda measure shows that within group variance exceeds between group variance. However, note that, in 1994, within group variances became larger than those in 1984.

Take age profile, within group variances for the younger cohorts became two to

three times larger than before. It also implies that intra-generational inequality gets more relevant than intergenerational inequality. It is noteworthy that within group variance for the baby boomer cohort was much smaller than that for the neighbor cohorts in 1994.

8. Construction of Social Security Wealth

Another important issue in household saving is to identify whether or not the social security system affects household saving. This question was originally raised by Feldstein (1974) and extended by many authors. In case of Japan, Takayama (1992a,b) conducted an econometric estimation of consumption expenditure, using the present value of public pension benefits (GSSW) as one of the explanatory variables in the 1979 and 1984 NSFIE. Estimated values of the parameter for GSSW are significantly positive. For workers' households, the figures are about 1.2% in 1979 and 2.4% in 1984, implying that the presence of social security wealth caused annual consumption expenditure to increase 1.2% and 2.4% of GSSW in 1979 and 1984 respectively.

The model can be refined by allowing the effect of human capital variables to vary by age. The presence of social security wealth is estimated to increase 1984

consumption expenditures of workers' households by about 1.5% of GSSW. This increase in consumption expenditure would be equivalent to 13.9% and 12.0% of disposable income in 1979 and 1984 respectively.

The Japanese public pension program increases working households' propensity to consume, viz., the evidence confirms the hypothesis that social security wealth discourages personal savings in Japan.

Note, however, that the public pension system has been changed many times and will be reformed again and again in the future. Benefits and contributions will be more closely balanced; the social security wealth of each individual will also be reduced in the near future by raising the normal retirement age to 65 or more and by decreasing real levels of monthly benefits. The future prospects of these reforms might have encouraged household savings[12].

According to our framework, the following identity is defined.

Income – (tax and social security contributions) = disposable income

= consumption and savings (11)

[12] Although we have not conducted a similar econometric analysis using the 1989 and 1994 NSFIE, high saving rates among those aged above 55, might be evidence of precautionary savings due to uncertainty in the public pension system. See Takayama (2001) for the latest public pension reform.

Social security contributions are further divided into public pension contributions and health insurance. Let us define discretionary savings as savings in the RHS of eq. (11) and mandatory savings as (public pension contributions – public pension benefits + contributions to the severance pay fund + interests from social security wealth + interests from accumulated severance pay). For statistical simplicity, here we take mandatory savings simply as public pension contributions minus public pension benefits (i.e. net public pension contributions), and ignore contributions to the severance pay fund, interests from social security wealth, and interests from accumulated severance pay. Then, it is obvious from construction of eq.(11) that discretionary savings are negatively correlated with mandatory savings. In addition, we calculate the crude ratio between mandatory savings and discretionary savings for different age groups. The results are given in Table 26.

It is apparent that the ratio becomes significantly negative for those aged above 60, i.e. cohorts 1-3. Cohort 1 in 1994 shows a substantially high positive value, which is because saving itself is negative, so that the ratio becomes positive. There is no surprise in the fact that cohort 1 in 1994 receives rather large net benefits. That is, mandatory savings do matter with the old households. The ratio becomes negative in

overall average in 1989 and 1994. This implies that the balance of public pension system as a whole becomes negative.

In the near future, generous public pension benefits in Japan are to be reduced, while the contribution rate may be permanently frozen at the current level or be reduced through a partial shift of funding to a consumption-based tax. At the same time, we should encourage private initiatives including a private, personal saving account for retirement, through the use of powerful tax-incentives[13].

To construct social security wealth (SSW) as a measure for mandatory savings, we need to use the baseline equation as follows,

$$SSW_{t+1} = (1+\rho)SSW_t + \tau_t - b_t \tag{12}$$

where SSW = social security wealth, ρ =internal rate of return, τ_t = public pension contribution, b_t = public pension benefits.

First, the stream of public pension contributions can be calculated from age-income profile multiplied by historical public pension contribution rates over the period of 1960-1999. Second, the stream of public pension benefits is to be adjusted

[13] A Japanese version of 401k plan started in October 2001. See Takayama (2001).

annually with inflation and is added up to the average life expectancy (from 2000 to 2022). Third, we have to set $SSW_{t+R} = 0$ such that the internal rate of return equates two streams; public pension contributions and benefits under the Pay-As-You-Go system. At the age of retirement, 60 in year 2000, *SSW* in Japan is estimated to equal 34.21million yen (218 thousand Euro (1998 constant) as 1 Euro = 159.57 yen in 1998) and the nominal internal rate of return is 8.7% per year.

Given the average net financial assets (excluding *SSW*) for age 60-64 in 1994 was 20.42 million yen (131 thousand Euro (1998 constant)), the estimated *SSW* 34.21 million (218 thousand Euro (1998 constant)) is very large indeed, although the actual *SSW* is expected to be even larger than the estimated *SSW*.

As is obvious, the *SSW* includes a component of intergenerational transfers. If we assume that the market rate of return from investment was 5.5% in nominal terms per annum, and that the discount rate for the future *SSW* will be 4.0%, then, the estimated *SSW* will go up to 50.92 million yen (324 thousand Euro (1998 constant)). This figure is rather common to the Japanese. Consequently, the component of intergenerational transfers in the *SSW* will turn out to be as much as 29.13 million yen (185.6 thousand Euro (1998 constant)), in this case (see Figure. 19).

9. Conclusion

This paper confirms that most findings in Takayama and Kitamura (1994) are still valid. These include (1) variations in saving behavior across different income classes are much wider than those over the age profile within the same income class, (2) as income grows and wealth accumulation increases, richer households save at increasingly high rates over the age profile, (3) diversity of saving behavior among elderly households is much greater than among younger households, as their employment status, home ownership, and financial asset holdings differ substantially. The richer elderly households keep saving at significantly positive rates.

In this sense, the bottom line of the household saving behavior remains the same after the burst of the bubble economy in the early 1990s.

Our new findings are as follows. (1) The cohort analysis indicates that the saving behavior follows, more or less, the same pattern of that of cross section observations in respective years. The saving rates of younger cohorts are stable, but this dose not imply homogeneity of younger cohorts, but the degree of heterogeneity is more or less the same amongst the younger cohorts. (2) However, according to the 1989 and 1994 NSFIE, The baby-boomer cohort (age 40-44 in 1989 and 45-49 in 1994)

has deviated from other younger cohorts. This phenomenon did not exist in the 1984 NSFIE when the baby-boomer cohort was age 35-39. (3) Estimated social security wealth (*SSW*) under the Japanese environment, is as much as 50.92 million yen (324 thousand Euro) at the age of retirement. The share of intergenerational transfers in the *SSW* is also very large.

The first point may be explained by the fact that increase in heterogeneity after age 55 (especially after 60) is mostly due to differences in lump-sum retirement severance payments or social security wealth. Variability of these benefits is much wider than that of regular monthly salaries as the firms' economic performances, welfare plans for retirement severance pay funds, and unions' bargaining powers differ substantially among firms and organizations.

The second point is important because the baby-boomer cohort consists of the largest demographic group. Hence, their behavior significantly affects macroeconomic variables such as aggregate consumption, investment and income distribution.

This leads to the third point. When the baby-boomer generation reaches their late 50s and early 60s, variability of retirement severance payments, of social security wealth and of intergenerational transfers will be much wider than now. Intergenerational equity issue will inevitably be focused on the baby-boomer generation.

It is quite crucial to set up institutional arrangements concerning intergenerational equity (e.g. public and private pension schemes) before the baby-boomer generation reaches their retirement age. This task is left to our future research project.

References

Barthold, T. and Ito, T.(1991) "Bequest taxes and accumulation of household wealth: U.S.-Japan comparison", in Ito, T. and Kruger, A.(eds) *The Political Economy of Tax Reform*, Chicago: The University of Chicago Press, pp. 235-90.

Feldstein, M.(1974) "Social Security, Induced Retirement and Aggregate Capital Accumulation", *Journal of Political Economy*, 82(5), pp.905-26.

Hayashi, F.(1997) *Understanding Saving*, Cambridge: The MIT Press.

Hayashi, F., Ando, A. and Ferris, R.(1988) "Life cycle and bequest savings: A study of Japanese and U.S. households based on data from the 1984 NSFIE and the 1983 Survey of Consumer Finance", *Journal of the Japanese and International Economies*, 2, pp.450-91.

Hayashi, F., Ito, T., and Slemrod, J. (1988) "Housing finance imperfections, taxation, and private saving: A comparative simulation analysis of the United States and Japan", *Journal of the Japanese and International Economies*, 2, pp.215-38.

Horioka, C.Y.(1990) "Why is Japan's saving so high? A literature survey", *Journal of the Japanese and International Economies*, 4, pp.49-92.

Horioka, C.Y.(1993) "Savings in Japan", in Heertje, A.(ed) *World Savings: An International survey*, Oxford: Blackwell.

Horioka, C.Y. and Watanabe, W.(1997) "Why do people save? A micro-analysis of motives for household saving in Japan", *Economic Journal*, 107, pp.537-552.

Kitamura, Y., Takayama, N. and Arita, F. (2001) "Household savings in Japan revisited", *Research in Economics*, 55(2), pp.135-153.

Ohtake, F.(1991) "Bequest motives of aged households in Japan", *Ricerche Economiche*, 45(2/3), pp.283-306.

Ohtake, F. and Horioka, C.Y.(forthcoming) "Saving motives in Japan", in Ishikawa, T.(ed) *The Distribution of Income and Wealth in Japan*, Oxford: Oxford University Press.

Sterling, W. and Waite, S.(1998) *Boomernomics*, New York: Balantine Books.

Takayama, N. (ed)(1992a) *The Stock Economy* (in Japanese), Tokyo: Toyo-Keizai.

Takayama, N. (1992b) *The Greying of Japan: An Economic Perspective on Public Pensions*, Tokyo: Kinokuniya and Oxford: Oxford University Press.

Takayama, N. (1998) *The Morning After in Japan: Its Declining Population, Too Generous Pensions and a Weakened Economy*, Tokyo: Maruzen.

Takayama, N. (2000) "An Outline of the Defined-contribution Pension Plan: Japan's Version of the 401(k) Plan", *JETRO Investment News*, no.21., available on the

website (http://www.ier.hit-u.ac.jp/~takayama.index.html).

Takayama, N. (2001) “Pension Reform in Japan at turn of the century”, *Geneva Papers on Risk and Insurance*, October 2001.

Takayama, N., Funaoka, F., Ohtake, F., Sekiguchi, M. and Shibuya, T.(1989) “Household Assets and The Saving Rate in Japan”, *Keizai Bunseki*, no.116 (in Japanese).

Takayama, N. and Kitamura,Y. (1994) “Household Saving Behavior in Japan”, in Poterba, J.M.(ed) *International Comparisons of Household Saving*, Chicago: The University of Chicago Press. pp. 125-167.

Takayama, N., Kitamura, Y. and Yoshida, H. (1999) “Generational Accounting in Japan”, in Auerbach, Alan J., Kotlikoff, Laurence J. and Leibfritz, Willi. (eds) *Generational Accounting Around The World*, Chicago: The University of Chicago Press. pp. 447-469.

Takayama, N. and Kitamura, Y. (1999) “Lessons from Generational Accounting in Japan”, *American Economic Review*, 89 (2), pp.171-175.

Toyoda, K.(1980) “Decomposability of Inequality Measures”, *Economic Studies Quarterly*, 31(3), pp. 207-216.

Table 1 Disposable Income

(10,000 yen)

Year	Age	All Household		Employees Households		Self-Employed Households	
		mean	median	mean	median	mean	median
1979	-24	243	223	241	221	273	257
	25-	283	257	284	258	268	236
	30-	307	287	307	290	304	268
	35-	347	323	349	330	340	287
	40-	379	353	384	363	366	310
	45-	410	384	420	398	387	336
	50-	448	420	454	435	434	378
	55-	427	391	455	429	395	338
	60-	366	319	406	377	348	288
	65-	359	295	421	386	340	259
	70-	350	263	411	347	342	252
	75-	273	214	321	260	271	209
	80+	274	176	375	414	273	174
	Average	367	331	370	341	361	300
1984	-24	275	256	279	260	242	221
	25-	336	315	341	317	294	275
	30-	383	359	388	364	362	320
	35-	431	407	444	420	392	342
	40-	475	453	492	471	430	370
	45-	508	486	532	514	463	402
	50-	535	508	574	555	483	422
	55-	528	491	587	559	496	425
	60-	467	403	502	456	509	441
	65-	413	339	466	433	482	402
	70-	378	314	511	407	440	381
	75-	366	297	486	393	469	372
	80+	300	229	183	183	460	386
	Average	458	419	476	442	456	387
1989	-24	320	302	318	298	412	421
	25-	384	350	381	349	433	374
	30-	446	409	442	409	483	411
	35-	508	471	506	474	526	455
	40-	562	527	563	533	560	487
	45-	631	601	629	612	643	559
	50-	685	646	693	673	680	597
	55-	658	618	684	653	660	589
	60-	538	467	578	530	614	538
	65-	482	394	595	508	577	482
	70-	463	356	539	503	604	512
	75-	428	309	491	421	653	513
	80+	385	289	512	380	567	499
	Average	558	506	564	522	610	524
1994	-24	352	343	356	349	292	266
	25-	444	415	442	415	471	415
	30-	510	479	514	484	465	413
	35-	591	557	595	561	555	499
	40-	660	626	668	635	607	557
	45-	735	702	752	720	643	594
	50-	801	769	830	794	674	624
	55-	777	730	823	784	621	550
	60-	605	520	698	615	524	436
	65-	523	427	692	594	463	383
	70-	469	382	738	646	431	365
	75-	433	358	768	595	406	345
	80+	486	351	842	595	461	340
	Average	642	587	683	628	530	448

Note: Figures for jobless households are included in those for self-employed households only for 1979.

Table 2 Month-to-Year Consumption Conversion Ratio

Items	1979/1984	1989	1994
1. Foods	12.240	12.028	12.289
2. Housing	12.252	11.845	11.994
3. Fuel, Light & Water Charges	13.476	12.790	12.972
4. Housing Furniture & Household Appliances	11.952	11.328	12.349
5. Clothes and Footwear	12.960	12.361	13.469
6. Medical Care	11.808	11.948	12.312
7. Transportation & Communication	12.120	12.173	11.848
8. Education	12.900	11.942	12.193
9. Recreation	13.008	12.914	13.341
10. Others	13.092	13.511	12.973

Note: For the 1979 and 1984 adjustments, the conversion ratios are calculated from the 1984 FIES.
Source: The 1984, 1989 and 1994 FIES.

Table 3 Consumption Expenditure

(10,000 yen)

Year	Age	All Household		Employees Households		Self-Employed Households	
		mean	median	mean	median	mean	median
1979	-24	211	186	208	186	249	195
	25-	228	209	228	211	227	198
	30-	241	219	241	221	241	212
	35-	261	243	260	244	267	235
	40-	287	265	284	266	296	261
	45-	324	291	324	295	321	279
	50-	339	299	345	309	327	275
	55-	306	265	316	280	295	240
	60-	265	219	279	234	258	212
	65-	239	201	252	216	236	197
	70-	234	188	248	219	232	183
	75-	191	168	223	153	190	168
	80+	179	137	247	166	178	133
	Average	279	248	279	251	278	236
1984	-24	236	211	236	215	261	174
	25-	267	249	268	250	265	234
	30-	286	266	287	271	280	249
	35-	310	289	315	293	295	271
	40-	343	321	346	325	334	305
	45-	381	346	394	361	359	313
	50-	394	350	421	380	357	302
	55-	374	314	409	359	346	272
	60-	323	268	360	297	325	268
	65-	283	241	310	267	305	256
	70-	268	222	317	284	296	245
	75-	239	206	322	240	282	249
	80+	223	173	608	608	306	249
	Average	333	297	344	310	328	280
1989	-24	277	239	277	236	295	274
	25-	299	266	299	266	296	268
	30-	324	294	326	297	308	265
	35-	346	322	350	327	331	296
	40-	383	354	387	359	372	329
	45-	451	407	459	419	435	375
	50-	469	405	487	430	438	351
	55-	431	365	456	388	405	331
	60-	368	310	397	335	370	306
	65-	328	276	385	324	333	280
	70-	307	254	349	289	340	288
	75-	295	310	277	219	400	301
	80+	262	194	192	232	354	251
	Average	385	335	397	350	384	320
1994	-24	282	258	285	258	240	226
	25-	331	300	331	300	340	302
	30-	358	331	360	333	330	296
	35-	387	360	391	364	351	329
	40-	433	400	437	404	411	375
	45-	517	463	527	470	466	412
	50-	532	474	551	492	451	386
	55-	500	423	531	451	397	323
	60-	426	355	472	396	387	327
	65-	368	324	445	385	341	304
	70-	341	289	445	373	327	279
	75-	299	251	432	314	289	245
	80+	291	238	393	352	284	235
	Average	436	381	459	402	374	321

Note: Figures of jobless households are included in those of self-employed households only for 1979. Consumer durables are included.

Table 4 Savings (I)

(10,000 yen)

Year	Age	All Household Households		Employees Households		Self-Employed Households	
		mean	median	mean	median	mean	median
1979	-24	32	33	33	33	23	25
	25-	55	53	56	54	41	39
	30-	66	66	67	68	64	43
	35-	85	79	89	84	73	45
	40-	92	85	100	93	70	43
	45-	87	86	95	95	66	48
	50-	109	105	110	116	107	79
	55-	121	104	139	123	100	76
	60-	101	77	127	102	90	63
	65-	119	73	169	165	105	57
	70-	116	68	163	130	109	61
	75-	82	36	98	54	81	33
	80+	95	32	127	249	95	32
	Average	89	77	91	84	83	54
1984	-24	38	37	43	39	-19	-33
	25-	69	66	74	70	29	23
	30-	97	89	101	93	82	59
	35-	122	114	129	122	97	73
	40-	132	127	146	142	96	68
	45-	127	122	139	137	104	82
	50-	140	139	153	156	127	110
	55-	154	144	178	177	150	124
	60-	144	112	142	128	184	144
	65-	130	88	156	146	177	129
	70-	110	74	194	129	144	105
	75-	127	74	164	168	187	117
	80+	77	34	122	122	155	104
	Average	125	111	132	123	128	97
1989	-24	43	58	40	57	117	118
	25-	85	86	82	86	137	82
	30-	122	112	116	111	175	136
	35-	162	147	156	147	194	146
	40-	179	170	176	173	188	153
	45-	180	172	171	176	208	155
	50-	216	206	206	207	242	213
	55-	227	212	228	225	254	221
	60-	170	132	181	162	244	200
	65-	154	107	210	172	244	168
	70-	156	99	190	214	264	191
	75-	133	66	214	263	254	205
	80+	123	90	320	148	213	197
	Average	173	150	167	157	226	177
1994	-24	70	76	71	82	52	3
	25-	112	109	111	110	131	107
	30-	152	142	154	145	135	89
	35-	204	189	204	192	204	144
	40-	226	218	231	223	196	185
	45-	218	216	225	223	176	152
	50-	269	256	279	267	223	194
	55-	277	257	293	279	224	191
	60-	178	139	226	192	137	94
	65-	155	109	247	202	123	86
	70-	128	89	294	234	104	78
	75-	133	104	336	202	117	95
	80+	194	99	449	322	176	92
	Average	206	183	225	205	157	113

Note: Figures of jobless households are included in those of self-employed households only for 1979.

Table 5 Savings (II)

(10,000 yen)

Year	Age	Home Owning		Tenant		Hh Head Working		Hh Head Non-working	
		mean	median	mean	median	mean	median	mean	median
1979	-24	62	63	24	25	32	33	131	131
	25-	91	79	37	42	55	53	1	29
	30-	90	85	45	50	66	66	35	30
	35-	101	94	57	57	86	79	38	18
	40-	104	96	62	57	92	85	-7	-5
	45-	94	95	59	55	88	87	-12	-4
	50-	116	116	73	69	111	108	-9	11
	55-	127	111	82	80	133	116	-12	-2
	60-	107	87	67	37	128	105	18	20
	65-	129	89	63	28	173	133	25	21
	70-	127	75	28	23	177	123	40	27
	75-	90	46	22	25	111	70	56	32
	80+	113	54	25	15	185	74	29	15
	Average	105	94	53	50	92	80	21	19
1984	-24	87	78	25	30	39	38	4	-22
	25-	109	107	52	53	70	67	-24	-27
	30-	130	123	66	65	98	90	-14	-12
	35-	145	138	75	74	122	115	-23	-31
	40-	148	144	78	78	133	128	-56	-40
	45-	137	134	77	69	128	123	-13	-19
	50-	150	150	83	79	142	140	-34	-32
	55-	161	153	87	81	165	155	17	20
	60-	154	124	58	45	170	135	48	46
	65-	140	100	54	38	173	133	41	36
	70-	118	80	30	30	150	110	44	40
	75-	137	86	43	13	186	124	66	33
	80+	85	44	15	8	154	112	26	15
	Average	144	133	69	66	131	117	38	32
1989	-24	39	109	44	50	43	58	33	-30
	25-	138	135	66	73	86	86	42	47
	30-	170	152	83	82	122	112	31	72
	35-	191	177	108	104	162	147	94	41
	40-	200	190	111	108	179	170	210	241
	45-	196	189	99	95	180	173	135	48
	50-	227	223	148	120	217	208	119	98
	55-	237	225	140	119	238	223	52	40
	60-	178	141	88	67	218	182	53	50
	65-	160	113	98	52	235	170	43	43
	70-	161	103	106	47	252	197	59	47
	75-	144	80	59	10	251	205	52	36
	80+	128	102	84	64	215	197	73	64
	Average	196	177	99	91	184	161	58	47
1994	-24	128	112	58	73	71	80	6	-11
	25-	166	160	97	100	112	109	86	82
	30-	204	190	120	122	153	142	108	71
	35-	247	234	141	136	204	189	195	169
	40-	253	243	151	139	228	218	86	201
	45-	238	237	124	118	218	217	154	138
	50-	239	270	189	165	272	259	72	25
	55-	283	278	169	149	289	268	26	45
	60-	294	149	85	51	240	193	43	45
	65-	189	116	97	57	251	197	77	69
	70-	162	93	72	52	262	192	66	66
	75-	134	109	75	50	278	214	84	75
	80+	142	117	28	17	383	322	127	67
	Average	234	214	129	120	226	202	71	65

Table 6 Saving Rates of All Households by Income Class

(%)

Year	Age	Income Class				
		I	II	III	IV	mean
1979	-24	-14.0	5.0	15.3	26.1	13.2
	25-	-5.8	13.4	17.8	33.5	19.4
	30-	-1.4	15.7	22.5	33.4	21.6
	35-	2.2	17.2	25.2	36.6	24.6
	40-	-0.8	17.7	24.3	36.7	24.2
	45-	-2.4	14.5	21.8	31.9	21.1
	50-	-1.0	17.6	23.8	35.8	24.3
	55-	-8.7	18.3	27.2	41.7	28.3
	60-	-16.9	12.6	26.4	44.0	27.7
	65-	-18.6	10.3	30.6	41.1	33.2
	70-	-32.8	12.2	23.2	53.0	33.0
	75-	7.0	11.4	16.8	47.1	30.0
	80+	-4.6	-1.3	29.4	49.6	34.7
	Average	-2.7	16.3	23.5	36.6	24.1
1984	-24	-13.8	12.3	15.8	23.6	13.9
	25-	-1.2	14.4	22.0	31.8	20.5
	30-	2.7	18.3	25.6	38.0	25.4
	35-	5.9	21.6	29.3	39.7	28.2
	40-	1.6	23.1	29.6	38.7	27.8
	45-	-1.7	19.7	26.3	35.5	24.9
	50-	-2.0	21.5	27.1	36.3	26.3
	55-	-3.3	21.5	30.8	39.3	29.1
	60-	-3.6	17.7	30.7	43.7	30.8
	65-	-5.8	12.6	28.6	47.1	31.4
	70-	-1.4	12.1	25.5	42.6	29.1
	75-	-2.3	20.1	27.7	48.8	34.7
	80+	-6.9	-3.6	19.4	41.1	25.8
	Average	-0.6	19.4	28.5	38.1	27.2
1989	-24	-14.2	1.6	16.1	30.4	13.5
	25-	1.7	12.7	22.8	37.1	22.3
	30-	7.9	18.1	26.5	41.0	27.4
	35-	10.2	25.3	31.3	44.4	31.8
	40-	11.5	25.7	32.5	42.6	31.8
	45-	9.3	23.0	27.5	39.3	28.5
	50-	11.0	26.9	32.3	39.9	31.5
	55-	1.4	29.6	37.9	43.3	34.5
	60-	-3.5	14.9	32.1	46.2	31.7
	65-	-8.3	15.5	29.1	48.5	32.0
	70-	-4.3	10.1	30.2	50.8	33.8
	75-	-15.2	13.7	18.4	49.4	31.1
	80+	-23.4	23.2	34.8	42.3	31.9
	Average	4.6	22.9	31.5	42.1	31.0
1994	-24	4.2	14.8	16.2	31.7	19.8
	25-	6.8	18.7	26.3	36.7	25.3
	30-	11.1	26.3	28.5	41.1	29.9
	35-	18.8	29.7	33.4	44.6	34.4
	40-	14.8	29.8	35.9	43.4	34.3
	45-	10.7	25.2	30.0	38.8	29.6
	50-	16.5	26.9	31.7	44.4	33.6
	55-	11.7	30.4	37.3	44.0	35.6
	60-	-7.7	14.6	27.5	45.7	29.5
	65-	0.5	12.0	27.6	45.4	29.7
	70-	-4.1	13.3	18.7	45.4	27.2
	75-	-8.0	20.0	25.7	47.0	30.8
	80+	6.5	18.6	34.5	54.7	40.0
	Average	8.1	25.7	32.3	45.1	32.1

Note: Income classes I-IV are yearly income quartile groups.

Table 7 Age Profile of Home Ownership Rate

Age	1979	1984	1989	1994
-24	20.8	20.6	15.9	17.0
25-29	33.0	29.5	27.1	21.7
30-34	47.5	48.9	45.0	38.3
35-39	64.1	66.1	64.6	59.1
40-44	71.4	76.7	76.5	73.5
45-49	79.1	82.9	83.2	81.4
50-54	83.9	85.3	85.6	85.3
55-59	85.5	90.4	89.1	86.1
60-64	85.7	89.0	91.3	89.9
65-69	85.2	88.1	90.4	89.9
70-74	88.2	90.3	90.4	90.3
75-79	87.3	89.2	86.9	87.6
80+	80.0	88.5	88.0	87.0
Average	68.3	74.2	75.6	73.8

Source: The 1979, 1984, 1989 and 1994 NSFIE.

Table 8 Saving Rates of Home-Owing Households by Income Class

(%)

Year	Age	Income Class				
		I	II	III	IV	mean
1979	-24	5.5	3.3	22.7	29.2	19.4
	25-	3.7	20.6	28.6	39.7	28
	30-	5.1	20.8	26	38.3	26.6
	35-	6.4	21.8	28.3	38.5	27.6
	40-	2.7	20.5	25.9	37.9	26.1
	45-	-2.7	16.5	24	32.1	22
	50-	0.4	17.9	25.3	36.2	24.9
	55-	-6	20.3	27.1	42.3	28.8
	60-	-15.5	14.5	26.5	44.5	28.2
	65-	-21.5	11.5	33.7	52.1	34.1
	70-	-26.9	12.8	23.5	54.5	34.5
	75-	7.2	7.8	23.5	47.1	31.2
	80+	-8.5	-5.3	29.2	54.9	37.7
	Average	0.1	19.5	25.8	38.2	26.4
1984	-24	5.4	13	19.4	44.2	26.8
	25-	5.1	22.9	31	39.6	29
	30-	11	23.4	31.3	42.2	31
	35-	11.6	25.3	33.2	42	31.7
	40-	6.5	25	31.4	40.2	29.9
	45-	1.9	21.3	27.4	36.1	26.1
	50-	0	22.9	28.5	36.6	27.3
	55-	-4.2	22.4	31.5	40.1	29.7
	60-	-3.1	19.8	32.4	44.4	31.9
	65-	-2.7	13.4	31.7	47.3	32.6
	70-	0.6	14	26.2	44.5	30.5
	75-	0.4	21.3	29.2	49.6	35.7
	80+	-13.9	7.2	19.1	41.6	27.1
	Average	3.2	23.3	30.5	39.5	29.5
1989	-24	20.9	-58.6	13	37.1	10.3
	25-	3.6	26.2	35.3	41.4	31.2
	30-	14.9	30.2	35.7	44.1	34.7
	35-	15.8	28.4	34.8	47.1	35.2
	40-	16	28.5	34.5	43.8	34
	45-	12.5	24.6	29.3	40	30
	50-	11.9	28.6	33.4	39.8	32.2
	55-	2.6	31.1	38.2	43.8	35.2
	60-	-3.6	15.7	34.1	46.3	32.2
	65-	-7.7	15.7	29.6	48.9	32.3
	70-	-4.9	11.5	29.7	51.2	33.9
	75-	-13.1	19	21.1	48.4	32
	80+	-21	27.7	32.3	42.3	31.9
	Average	7.9	26.3	33.8	43.1	33
1994	-24	-10.3	15	38.2	46.9	32.5
	25-	13.4	27	36	46.1	34.5
	30-	20.7	33.2	35.1	47	36.9
	35-	26.5	34.7	37.9	48.4	39.3
	40-	20.2	33.7	37.6	44.1	36.6
	45-	14.5	26.6	30.6	40.7	31.2
	50-	16.9	28.2	33.5	44.5	34.3
	55-	16	31.3	37.8	44.3	36.5
	60-	-6.9	15.8	29.4	46.3	30.5
	65-	2.5	11.9	27.3	46.3	30.1
	70-	2.9	12.9	18.9	45.7	27.8
	75-	-4.8	17.4	27.8	47.9	31.7
	80+	14.2	22.1	35.6	56.8	42.5
	Average	10.3	28.5	34.2	43.9	34.1

Note: Income classes I-IV are yearly income quartile groups.

Table 9 Saving Rates of Tenant Households by Income Class

(%)

Year	Age	Income Class				
		I	II	III	IV	mean
1979	-24	-18.6	2.3	16.8	23.6	10.9
	25-	-6.8	8.5	14.8	26.2	14.2
	30-	-7.0	10.5	18.3	27.3	16.1
	35-	-2.9	12.2	18.9	31.0	18.4
	40-	-5.6	11.8	19.3	31.6	18.6
	45-	-8.5	13.1	16.1	28.5	16.9
	50-	-9.1	12.9	24.1	30.3	20.2
	55-	-17.0	17.5	20.5	38.7	24.2
	60-	-22.3	1.1	22.2	43.5	23.6
	65-	-18.2	-1.2	21.4	44.0	25.3
	70-	-39.6	0.7	5.7	29.0	13.6
	75-	-23.4	19.2	5.0	28.6	14.4
	80+	-0.5	21.6	n.a.	13.1	14.2
	Average	-8.9	11.0	17.9	30.3	15.6
1984	-24	-17.3	9.5	19.3	13.1	9.7
	25-	-7.5	12.4	18.8	26.6	16.3
	30-	-4.4	15.1	19.6	30.4	19.0
	35-	-1.6	14.2	20.1	31.4	19.8
	40-	-9.9	14.6	22.5	30.3	19.4
	45-	-16.3	10.2	19.1	31.0	18.0
	50-	-7.4	8.9	21.8	29.5	19.0
	55-	-5.5	12.7	18.0	34.4	21.4
	60-	-10.9	7.1	16.7	30.9	17.9
	65-	-34.9	6.7	19.9	33.3	18.3
	70-	-29.4	10.0	19.9	13.6	10.9
	75-	-27.5	16.5	1.5	38.4	19.8
	80+	-50.6	-2.0	10.9	23.4	8.0
	Average	-7.3	11.7	19.4	29.9	18.7
1989	-24	-16.2	4.9	17.3	30.2	14.2
	25-	-2.9	11.8	18.8	31.2	18.2
	30-	3.6	12.3	18.5	34.5	20.2
	35-	3.4	18.4	26.7	36.2	24.3
	40-	-0.7	16.7	26.6	33.9	23.1
	45-	-3.4	15.4	18.4	29.1	19.1
	50-	10.0	16.7	24.8	37.8	26.6
	55-	-12.3	23.4	29.0	37.7	27.3
	60-	-9.0	16.0	19.9	35.9	22.7
	65-	-4.6	8.9	28.3	43.4	27.4
	70-	-12.5	8.9	29.4	51.6	32.2
	75-	-37.4	-11.9	17.8	48.1	22.1
	80+	-90.5	12.8	28.9	55.1	31.7
	Average	0.0	15.0	22.5	33.9	22.4
1994	-24	8.3	12.6	14.4	25.3	16.8
	25-	5.3	19.7	21.0	33.1	22.5
	30-	7.1	21.8	26.0	34.1	24.9
	35-	10.7	21.9	27.4	34.8	26.3
	40-	6.8	19.2	27.4	38.4	26.7
	45-	-2.0	16.1	24.3	28.7	20.7
	50-	7.3	23.3	25.9	39.2	28.4
	55-	-7.1	21.7	30.5	40.4	28.5
	60-	-21.1	13.0	14.1	30.9	17.7
	65-	-10.6	7.0	20.8	41.9	24.1
	70-	-46.0	4.2	25.1	40.3	19.9
	75-	-25.5	9.8	33.7	35.3	22.8
	80+	-58.3	20.2	27.1	25.6	9.8
	Average	3.3	19.6	25.6	34.6	24.8

Note: Income classes I-IV are yearly income quartile groups.

Table 10 Saving Rates of Households with Working Head by Income Class

(%)

Year	Age	Income Class				
		I	II	III	IV	mean
1979	-24	-14.2	5.0	15.3	26.0	13.2
	25-	-5.9	13.5	17.9	33.5	19.5
	30-	-1.2	15.6	22.6	33.4	21.6
	35-	2.3	17.2	25.2	36.5	24.7
	40-	-0.4	18.1	24.3	36.6	24.3
	45-	-1.6	14.6	21.9	32.0	21.3
	50-	0.3	18.3	24.6	35.8	24.6
	55-	-1.8	21.6	28.6	42.6	29.9
	60-	-6.2	20.4	29.1	46.7	31.8
	65-	-1.4	25.8	40.2	52.9	39.8
	70-	-39.4	28.1	28.1	58.7	39.6
	75-	4.9	9.1	12.1	54.8	31.6
	80+	-7.1	27.1	22.0	66.3	46.5
	Average	-0.1	16.9	24.0	36.7	24.6
1984	-24	-11.1	11.4	15.8	23.6	14.1
	25-	0.2	14.4	22.1	31.8	20.8
	30-	2.9	18.3	25.7	38.1	25.5
	35-	6.7	21.5	29.2	39.9	28.3
	40-	2.3	23.4	29.6	38.7	28.0
	45-	-1.0	19.4	26.6	35.5	25.0
	50-	-1.1	21.9	27.3	36.3	26.5
	55-	2.8	22.2	32.3	39.8	30.3
	60-	3.5	22.0	34.5	45.0	33.6
	65-	-0.5	23.8	36.3	48.4	36.1
	70-	11.9	14.9	31.5	45.3	33.4
	75-	20.4	20.6	37.1	51.1	39.5
	80+	3.7	21.8	21.8	49.3	33.7
	Average	2.7	20.7	28.8	38.3	27.8
1989	-24	-13.9	1.6	15.8	30.4	13.5
	25-	0.1	12.7	22.8	37.1	22.3
	30-	8.3	18.2	26.5	41.0	27.4
	35-	10.6	25.3	31.2	44.4	31.9
	40-	11.9	25.6	32.4	42.4	31.8
	45-	9.8	22.9	27.4	39.2	28.5
	50-	11.7	26.9	32.3	39.8	31.6
	55-	6.4	31.1	38.0	43.5	35.3
	60-	6.5	25.1	36.0	48.7	36.4
	65-	13.9	28.3	38.2	52.6	40.5
	70-	9.7	29.4	40.4	55.4	42.5
	75-	0.1	11.5	40.5	54.4	39.1
	80+	-11.0	31.8	32.3	50.7	38.0
	Average	8.5	24.6	32.3	42.3	31.9
1994	-24	5.9	14.9	16.1	31.8	19.9
	25-	7.1	18.6	26.3	36.7	25.3
	30-	11.0	26.4	28.7	41.1	29.9
	35-	19.0	29.6	33.4	44.4	34.4
	40-	16.8	29.7	35.9	43.4	34.6
	45-	11.5	25.0	30.1	38.8	29.7
	50-	17.7	27.3	31.9	44.5	33.8
	55-	16.5	31.8	37.5	44.1	36.4
	60-	11.4	22.4	33.9	47.8	35.3
	65-	14.2	24.0	35.2	51.9	38.1
	70-	12.0	22.7	44.3	51.3	40.3
	75-	8.8	33.5	42.4	56.6	43.9
	80+	38.4	38.3	35.2	66.7	51.0
	Average	14.2	27.7	32.9	43.0	33.5

Note: Income classes I-IV are yearly income quartile groups.

Table 11 Saving Rates of Households with Non-Working Head by Income Class

(%)

Year	Age	Income Class				
		I	II	III	IV	mean
1979	-24	37.3	n.a.	n.a.	n.a.	37.3
	25-	-104.2	-0.3	22.7	9.8	1.1
	30-	-48.6	15.7	24.1	24.2	16.2
	35-	-13.2	8.8	9.4	34.1	18.4
	40-	-160.8	-22.3	16.2	21.5	-3.9
	45-	-73.9	-3.5	11.9	-4.0	-5.6
	50-	-55.5	-14.6	-24.4	21.6	-4.3
	55-	-52.2	-31.9	7.6	8.0	-5.0
	60-	-35.2	-2.6	1.3	25.6	7.3
	65-	-25.7	-13.8	3.7	33.0	11.0
	70-	-22.4	4.4	15.0	32.4	17.3
	75-	-2.8	12.6	17.8	44.9	27.5
	80+	-3.6	-7.6	22.5	25.4	16.0
	Average	-26.7	-10.5	5.6	27.1	9.2
1984	-24	n.a.	n.a.	-15.4	22.1	2.7
	25-	-0.4	-74.1	-38.4	-10.2	-22.9
	30-	-100.9	-11.9	-21.1	11.8	-9.3
	35-	-103.6	-28.9	-3.0	4.6	-16.8
	40-	-135.3	-56.3	-46.1	5.2	-31.3
	45-	-92.1	-6.7	-17.0	19.4	-6.2
	50-	-46.1	-52.1	-10.0	5.6	-14.4
	55-	-63.7	-15.1	4.9	28.5	5.5
	60-	-10.9	0.6	11.0	29.3	14.8
	65-	-13.8	8.9	8.2	28.5	14.6
	70-	-9.2	7.3	11.2	32.1	16.9
	75-	-20.9	11.1	19.8	43.3	25.4
	80+	-5.1	-31.7	25.2	28.3	13.5
	Average	-21.5	2.7	9.7	28.1	13.4
1989	-24	-101.0	-33.7	41.1	n.a.	16.9
	25-	19.0	-45.6	20.0	62.4	18.7
	30-	-288.8	20.4	25.0	60.7	9.6
	35-	-120.9	-2.3	43.7	48.6	25.3
	40-	-116.4	16.1	55.8	50.3	39.2
	45-	-80.4	-17.8	28.9	51.2	28.4
	50-	-74.1	16.8	20.0	47.5	27.1
	55-	-50.3	-9.2	4.3	39.4	13.4
	60-	-11.1	-4.5	10.1	30.9	13.7
	65-	-27.9	1.3	10.9	30.9	12.5
	70-	-7.0	9.5	2.5	36.7	18.0
	75-	-12.8	5.0	17.6	34.2	18.6
	80+	-26.2	18.9	36.4	34.5	25.5
	Average	-22.0	3.0	9.7	34.9	16.2
1994	-24	-340.1	0.4	1.4	18.6	3.8
	25-	-73.0	-50.0	38.8	37.4	22.6
	30-	-34.2	-3.3	37.6	45.8	28.6
	35-	-0.9	19.3	43.1	53.9	38.1
	40-	-111.2	-28.6	42.2	40.1	14.4
	45-	-71.4	13.2	20.4	44.5	25.2
	50-	-60.0	-10.7	4.4	37.8	12.5
	55-	-47.3	-13.1	3.9	27.8	5.9
	60-	-32.8	-5.6	5.3	31.5	10.0
	65-	-1.9	4.8	14.2	34.7	18.6
	70-	-9.2	13.6	13.1	30.6	17.1
	75-	-8.6	16.3	20.0	37.3	23.0
	80+	4.4	13.2	24.9	47.4	32.5
	Average	-15.1	5.4	11.4	34.5	17.0

Note: Income classes I-IV are yearly income quartile groups.

Table 12 Saving Rates of Employee Households by Income Class

(%)

Year	Age	Income Class				
		I	II	III	IV	mean
1979	-24	-14.1	4.3	17.4	26.6	13.6
	25-	-2.1	14.1	18.5	33.1	19.9
	30-	2.9	15.9	22.9	32.5	21.7
	35-	9.4	20.2	26.3	35.3	25.5
	40-	9.9	20.8	25.8	36.0	26.0
	45-	7.4	17.9	23.1	31.3	22.7
	50-	9.0	19.2	24.1	32.6	24.1
	55-	9.7	25.6	30.0	39.8	30.5
	60-	3.6	27.7	28.0	42.6	31.3
	65-	17.6	35.9	42.1	46.5	40.1
	70-	-9.1	25.6	34.6	54.2	39.6
	75-	24.9	30.8	31.4	30.9	30.5
	80+	n.a.	-3.7	n.a.	60.0	34.0
	Average	6.0	19.9	24.8	33.9	24.6
1984	-24	-9.2	11.7	17.3	25.2	15.4
	25-	1.2	14.9	22.2	33.1	21.6
	30-	7.3	19.6	25.4	37.8	25.9
	35-	13.4	23.3	29.8	38.7	29.1
	40-	13.8	26.4	31.0	37.6	29.7
	45-	10.7	23.9	26.5	33.2	26.1
	50-	13.3	23.6	27.7	32.4	26.6
	55-	17.8	22.4	31.5	38.1	30.3
	60-	14.1	19.7	27.0	37.5	28.3
	65-	16.6	31.6	33.9	39.4	33.5
	70-	36.3	18.1	39.1	45.0	38.0
	75-	34.5	-2.8	49.2	37.3	33.7
	80+	n.a.	n.a.	n.a.	66.8	66.8
	Average	11.4	23.1	29.0	35.2	27.7
1989	-24	-13.6	1.6	16.2	28.7	12.7
	25-	0.5	12.8	23.6	35.1	21.6
	30-	9.2	17.6	26.6	38.9	26.3
	35-	14.0	26.1	30.3	41.7	30.8
	40-	16.8	26.4	32.4	39.8	31.3
	45-	15.3	23.4	26.3	35.3	27.2
	50-	15.6	26.6	30.5	36.4	29.8
	55-	14.4	31.1	36.8	38.2	33.3
	60-	9.6	21.5	33.6	41.1	31.4
	65-	21.1	32.3	31.4	43.2	35.4
	70-	31.0	37.3	33.3	37.7	35.3
	75-	1.8	54.3	42.3	49.9	43.5
	80+	38.9	n.a.	83.2	n.a.	62.5
	Average	12.1	24.9	30.8	37.4	29.6
1994	-24	6.5	16.8	15.9	30.5	19.9
	25-	6.8	18.9	27.1	35.9	25.1
	30-	12.5	26.7	28.6	40.7	29.9
	35-	20.6	30.3	33.0	43.5	34.2
	40-	19.7	30.1	35.8	42.6	34.6
	45-	16.1	25.5	29.9	38.1	30.0
	50-	21.3	26.3	32.5	43.4	33.7
	55-	19.7	31.3	36.4	42.4	35.6
	60-	12.1	20.6	33.5	42.7	32.3
	65-	7.9	27.2	30.9	49.6	35.7
	70-	8.7	28.4	42.4	50.9	39.8
	75-	20.4	16.0	50.1	54.5	43.7
	80+	8.0	64.8	50.1	65.6	53.4
	Average	16.9	28.0	32.3	41.2	32.9

Note: Income classes I-IV are yearly income quartile groups.

Table 13 Saving Rates of Self-Employed Households by Income Class

(%)

Year	Age	Income Class				
		I	II	III	IV	mean
1979	-24	-17.2	14.3	3.6	17.0	8.6
	25-	-28.8	2.0	11.4	35.8	15.2
	30-	-27.2	6.1	16.6	42.6	20.9
	35-	-24.3	4.2	17.9	41.4	21.4
	40-	-24.8	3.0	15.8	38.7	19.1
	45-	-29.5	0.3	18.5	33.3	17.0
	50-	-24.3	8.0	23.1	42.0	24.6
	55-	-30.8	8.1	24.4	42.7	25.3
	60-	-23.0	1.8	24.8	44.9	25.7
	65-	-25.3	2.3	23.9	51.3	30.7
	70-	-33.1	10.1	24.0	51.0	32.0
	75-	5.5	11.5	16.1	47.7	30.0
	80+	-6.8	-0.1	26.8	50.6	34.7
	Average	-25.1	5.1	19.3	41.7	23.0
1984	-24	-26.3	-15.4	-12.3	1.8	-7.7
	25-	-26.2	7.7	13.5	18.0	9.8
	30-	-21.4	7.4	23.9	40.2	22.6
	35-	-19.7	9.8	23.9	44.2	24.8
	40-	-26.7	7.2	22.0	41.6	22.3
	45-	-28.5	9.6	22.3	40.1	22.4
	50-	-19.8	13.4	26.6	41.8	26.2
	55-	-16.1	18.9	34.6	41.3	30.3
	60-	-4.5	24.9	37.3	48.6	36.2
	65-	-7.0	21.1	36.6	50.9	36.8
	70-	9.3	13.6	32.8	43.9	32.6
	75-	19.5	22.1	36.0	52.2	39.9
	80+	0.5	21.8	21.8	49.3	33.6
	Average	-16.7	12.8	28.6	43.6	28.0
1989	-24	-23.0	8.9	43.0	56.3	28.4
	25-	-8.3	13.8	20.2	60.4	31.6
	30-	1.6	23.7	33.2	53.5	36.3
	35-	-7.3	20.2	37.5	54.9	37.0
	40-	-5.6	21.0	32.1	50.6	33.5
	45-	-8.8	20.4	30.6	48.4	32.3
	50-	1.0	25.9	39.5	45.7	35.6
	55-	-6.4	29.1	40.5	51.4	38.6
	60-	3.6	27.8	39.3	52.3	39.7
	65-	12.6	25.8	41.3	55.3	42.3
	70-	5.5	27.0	42.2	57.6	43.7
	75-	2.0	7.9	40.3	54.9	38.8
	80+	-11.0	31.5	32.3	50.1	37.6
	Average	-0.7	22.9	37.5	51.1	37.1
1994	-24	-16.8	-15.0	-4.6	50.9	17.9
	25-	-19.3	29.0	24.5	40.3	27.9
	30-	-15.0	18.5	29.4	45.6	29.0
	35-	0.1	22.0	37.1	53.7	36.8
	40-	-13.6	18.0	35.9	49.1	32.2
	45-	-20.0	16.0	30.7	43.2	27.5
	50-	-10.5	18.9	33.4	50.6	33.1
	55-	-11.8	20.4	35.3	53.3	36.0
	60-	-21.1	4.3	20.8	48.8	26.2
	65-	0.6	9.4	20.1	44.7	26.5
	70-	-5.8	12.4	14.7	43.2	24.2
	75-	-9.4	18.3	23.5	46.2	28.9
	80+	4.6	17.4	36.7	51.4	38.3
	Average	-9.8	12.0	26.5	47.7	29.5

Note: Income classes I-IV are yearly income quartile groups. Figures for Jobless households are included in 1979.

Table 14Net Worth by Home Ownership

(10,000 yen)

Year	Age	Total		Home Owning		Tenant	
		mean	median	mean	median	mean	median
1979	-24	438	201	1,379	1	190	166
	25-	636	355	1,373	1,213	273	237
	30-	899	559	1,538	1,343	320	286
	35-	1,177	961	1,625	1,427	375	321
	40-	1,399	1,152	1,790	1,500	422	352
	45-	1,687	1,368	2,017	1,645	434	369
	50-	1,995	1,607	2,276	1,835	526	419
	55-	2,192	1,732	2,458	1,988	624	469
	60-	2,269	1,804	2,543	1,986	631	415
	65-	2,310	1,856	2,630	2,138	473	334
	70-	2,495	1,769	2,759	2,030	516	292
	75-	2,365	1,715	2,654	2,004	381	242
	80+	2,103	1,629	2,559	2,155	285	227
	Average	1,483	1,142	1,994	1,610	378	303
1984	-24	625	243	2,174	1,806	223	196
	25-	845	407	2,055	1,826	339	304
	30-	1,352	798	2,319	2,004	428	368
	35-	1,804	1,361	2,496	2,102	453	405
	40-	2,211	1,832	2,731	2,286	494	422
	45-	2,543	2,097	2,946	2,430	592	473
	50-	2,870	2,379	3,253	2,695	649	492
	55-	3,478	2,813	3,775	3,034	691	473
	60-	3,807	3,041	4,192	3,395	681	504
	65-	3,772	3,095	4,185	3,440	723	543
	70-	3,569	2,944	3,882	3,257	658	457
	75-	3,656	2,953	4,044	3,173	459	384
	80+	3,683	2,777	4,071	3,041	705	330
	Average	2,456	1,916	3,141	2,537	483	388
1989	-24	726	242	3,128	2,073	271	203
	25-	1,283	442	3,761	2,368	361	328
	30-	1,964	804	3,786	2,441	485	419
	35-	2,747	1,544	3,939	2,565	578	476
	40-	3,431	2,149	4,288	2,831	650	496
	45-	4,070	2,641	4,747	3,213	723	504
	50-	4,569	2,913	5,203	3,455	829	520
	55-	5,366	3,306	5,894	3,740	954	594
	60-	5,829	3,746	6,287	4,093	993	648
	65-	5,799	3,574	6,326	4,022	913	566
	70-	6,148	3,591	6,730	3,926	764	643
	75-	7,079	3,789	8,046	4,847	782	505
	80+	6,548	4,171	7,364	4,868	691	334
	Average	4,025	2,349	5,129	3,262	611	444
1994	-24	696	218	2,888	2,332	245	183
	25-	1,104	469	3,484	2,600	446	385
	30-	1,795	796	3,744	2,487	584	505
	35-	2,474	1,474	3,679	2,650	732	644
	40-	3,398	2,215	4,315	2,981	860	684
	45-	4,069	2,892	4,795	3,484	887	673
	50-	4,699	3,389	5,325	3,871	1,055	761
	55-	5,565	3,903	6,276	4,539	1,156	727
	60-	6,705	4,555	7,316	5,033	1,245	768
	65-	6,595	4,837	7,206	5,338	1,156	743
	70-	6,823	5,013	7,400	5,359	1,477	901
	75-	7,013	4,677	7,823	5,251	1,274	759
	80+	9,167	4,877	10,309	5,771	1,556	901
	Average	4,291	2,733	5,533	3,790	785	577

Table 15 Net Financial Assets by Home Ownership

(10,000 yen)

Year	Age	Total		Home Owning		Tenant	
		mean	median	mean	median	mean	median
1979	-24	137	70	296	150	95	62
	25-	203	133	260	159	175	126
	30-	272	195	305	212	243	178
	35-	340	249	357	260	308	225
	40-	425	300	449	320	364	254
	45-	527	360	566	380	378	270
	50-	640	433	674	455	466	332
	55-	778	507	816	525	555	401
	60-	772	492	810	522	549	316
	65-	759	479	823	521	390	250
	70-	871	485	929	530	442	220
	75-	761	421	825	470	324	201
	80+	677	310	785	377	245	200
	Average	470	291	546	342	305	204
1984	-24	157	82	396	167	95	70
	25-	226	159	287	200	200	143
	30-	353	247	397	275	311	223
	35-	447	315	483	339	375	277
	40-	544	380	575	401	442	308
	45-	640	430	667	445	509	360
	50-	747	485	780	500	554	388
	55-	979	609	1,018	637	607	393
	60-	1,066	681	1,124	727	600	405
	65-	987	643	1,035	670	633	430
	70-	932	598	969	607	590	380
	75-	913	509	978	590	380	300
	80+	876	500	910	578	620	269
	Average	620	390	728	449	388	252
1989	-24	194	70	458	163	144	60
	25-	326	201	512	283	257	170
	30-	464	329	532	356	409	310
	35-	626	438	666	456	553	402
	40-	778	534	820	560	641	440
	45-	975	635	1,029	671	709	455
	50-	1,091	675	1,135	713	834	452
	55-	1,359	829	1,412	890	920	546
	60-	1,660	1,040	1,725	1,097	968	588
	65-	1,659	1,000	1,743	1,090	882	530
	70-	1,631	910	1,728	967	729	594
	75-	1,466	830	1,574	939	759	490
	80+	1,561	840	1,687	966	662	315
	Average	999	580	1,139	670	568	360
1994	-24	171	79	373	150	130	67
	25-	393	245	595	300	337	235
	30-	553	390	657	420	488	368
	35-	752	550	795	562	688	530
	40-	956	670	1,002	700	827	595
	45-	1,170	790	1,245	850	840	565
	50-	1,316	900	1,365	960	1,030	690
	55-	1,682	1,098	1,770	1,182	1,135	622
	60-	2,042	1,430	2,138	1,520	1,178	705
	65-	2,169	1,440	2,288	1,588	1,104	751
	70-	2,197	1,450	2,281	1,535	1,415	873
	75-	1,897	1,250	1,993	1,392	1,214	688
	80+	2,358	1,250	2,485	1,491	1,511	865
	Average	1,279	765	1,476	910	724	466

Table 16 Net Housing Assets

(10,000 yen)

Year	Age	Total		Home Owning	
		mean	median	mean	median
1979	-24	188	0	929	772
	25-	303	0	954	842
	30-	487	0	1,069	912
	35-	688	528	1,103	937
	40-	820	658	1,173	956
	45-	999	790	1,279	1,002
	50-	1,186	929	1,424	1,103
	55-	1,250	982	1,468	1,148
	60-	1,347	1,008	1,574	1,195
	65-	1,421	1,062	1,669	1,266
	70-	1,502	1,056	1,702	1,227
	75-	1,493	1,048	1,710	1,214
	80+	1,335	1,066	1,670	1,303
	Average	862	638	1,282	1,012
1984	-24	325	0	1,592	1,312
	25-	445	0	1,547	1,291
	30-	815	0	1,708	1,447
	35-	1,163	807	1,796	1,457
	40-	1,467	1,194	1,941	1,576
	45-	1,691	1,371	2,054	1,658
	50-	1,902	1,544	2,239	1,801
	55-	2,274	1,783	2,522	1,956
	60-	2,544	1,951	2,862	2,193
	65-	2,614	2,106	2,969	2,352
	70-	2,482	1,944	2,751	2,194
	75-	2,604	2,038	2,921	2,274
	80+	2,673	1,980	3,020	2,193
	Average	1,616	1,235	2,197	1,725
1989	-24	385	0	2,487	1,699
	25-	801	0	3,057	1,657
	30-	1,359	0	3,092	1,758
	35-	1,987	844	3,124	1,787
	40-	2,519	1,321	3,323	1,925
	45-	2,950	1,668	3,564	2,123
	50-	3,326	1,814	3,907	2,277
	55-	3,859	1,982	4,327	2,301
	60-	4,045	2,103	4,433	2,386
	65-	4,041	2,160	4,480	2,430
	70-	4,428	2,182	4,907	2,561
	75-	5,538	2,361	6,391	3,086
	80+	4,919	2,365	5,604	3,167
	Average	2,890	1,407	3,846	2,124
1994	-24	385	0	2,323	1,952
	25-	539	0	2,662	1,905
	30-	1,069	0	2,870	1,713
	35-	1,533	422	2,664	1,687
	40-	2,250	1,176	3,097	1,854
	45-	2,701	1,694	3,338	2,138
	50-	3,170	2,027	3,734	2,442
	55-	3,681	2,250	4,291	2,689
	60-	4,487	2,506	4,993	2,847
	65-	4,278	2,651	4,762	2,967
	70-	4,504	2,776	4,990	3,106
	75-	5,019	2,595	5,726	3,140
	80+	6,711	2,768	7,717	3,462
	Average	2,828	1,512	3,856	2,343

Table 17 Share of Dissavers (Negative Savers) by Income Class

(%)

Year and Age	Income Class				
	I	II	III	IV	mean
1994					
-24	38.3	27.8	21.2	13.6	25.2
25-	34.4	15.4	10.8	6.2	16.7
30-	29.2	10.5	7.3	5.6	13.1
35-	20.8	7.3	5.7	3.8	9.4
40-	24.5	8.1	5.1	4.2	10.5
45-	30.2	14.3	11.6	7.3	15.8
50-	26.9	15.2	12.4	5.0	14.9
55-	29.7	12.5	8.2	6.3	14.2
60-	43.5	25.0	16.1	5.8	22.6
65-	38.1	29.1	14.0	6.7	22.0
70-	38.5	24.1	18.3	10.4	22.8
75-	46.6	16.3	18.6	7.7	22.3
80+	34.7	17.0	8.3	9.9	17.4
Average	31.9	12.9	9.7	6.6	15.1

Table 18 Share of Small Savers

Income Decile	Financial Assets Less than 3 Million Yen (%)
I	41.5
II	32.2
III	26.2
IV	21.6
V	16.9
VI	13.1
VII	10.6
VIII	8.5
IX	4.6
X	3.0

Table 19 Share of Small Savers

Age	Financial Assets Less than 3 Million Yen (%)
-24	82.1
25-	52.9
30-	34.6
35-	23.2
40-	17.5
45-	13.9
50-	12.3
55-	9.9
60-	10.1
65-	8.5
70-	9.8
75-	12.9
80+	12.7

Table 20 Distribution of Wealth (1994)

(10,000 YEN)

	Net Worth	Net Financial Assets
Top 1%	27,126	8,095
5%	13,039	4,266
50%	2,733	765

Source: 1994 NSFIE.

Table 21 Distribution of Net Worth in Decile Group (1994)

(10,000 YEN)

Net Worth Decile	Net Worth Mean
I	247
II	639
III	1,147
IV	1,767
V	2,448
VI	3,212
VII	4,134
VIII	5,416
IX	7,561
X	17,509

Source: 1994 NSFIE.

Table 22 Distribution of Wealth over Income Decile (1994)

(10,000 YEN)

Income Decile	Net Worth		Net Financial Assets	
	Mean	Median	Mean	Median
I	2,824	1,445	757	365
II	2,996	1,656	843	464
III	2,952	1,698	897	524
IV	3,517	1,945	989	620
V	3,582	2,244	1,122	674
VI	3,827	2,533	1,145	773
VII	4,344	3,040	1,275	864
VIII	5,096	3,369	1,458	1,000
IX	5,884	4,162	1,801	1,274
X	7,887	5,699	2,505	1,789

Source: 1994 NSFIE.

Table 23 Percentiles of Wealth Distribution by Income Decile

Percentile Point of Net Worth (10,000 YEN)

	Income in Decile Group										
	All	I	II	III	IV	V	VI	VII	VIII	IX	X
10	366.8	135.3	217.9	261.6	342.5	419.9	515.7	687.1	802.5	1,240.1	1,822.0
20	778.1	286.8	382.7	482.8	592.1	735.8	947.4	1,228.1	1,504.8	2,076.1	2,910.9
30	1,354.5	501.0	607.4	740.6	890.8	1,133.8	1,426.3	1,804.7	2,114.4	2,709.9	3,759.0
40	2,016.9	907.5	1,020.8	1,132.7	1,337.9	1,649.7	1,907.7	2,391.6	2,736.2	3,441.8	4,661.1
50	2,732.6	1,445.3	1,656.4	1,698.2	1,944.7	2,243.7	2,532.5	3,039.6	3,368.8	4,162.0	5,698.9
60	3,556.1	2,078.5	2,395.1	2,400.5	2,703.7	3,034.2	3,249.3	3,760.3	4,168.2	5,054.0	6,935.5
70	4,634.6	2,916.0	3,355.7	3,257.9	3,605.4	3,877.9	4,178.5	4,776.2	5,088.2	6,130.7	8,456.6
80	6,159.8	4,019.1	4,569.6	4,472.9	5,001.3	5,329.6	5,560.3	6,069.2	6,599.4	7,893.1	10,945.7
90	9,213.8	6,588.4	7,286.0	7,033.5	7,394.8	7,824.4	7,923.9	8,713.1	9,679.5	11,289.5	16,067.2

Percentile Point of Net Financial Assets (10,000 YEN)

	Income in Decile Group										
	All	I	II	III	IV	V	VI	VII	VIII	IX	X
10	125	26	58	85	120	142	200	204	250	354	470
20	277	92	155	199	240	289	340	390	433	585	790
30	424	165	248	300	350	410	480	543	600	790	1,090
40	584	252	350	405	480	532	617	690	792	1,024	1,394
50	765	365	464	524	620	674	773	864	1,000	1,274	1,789
60	1,000	510	618	674	760	845	960	1,062	1,216	1,582	2,200
70	1,336	732	855	900	980	1,094	1,230	1,351	1,568	1,982	2,843
80	1,900	1,054	1,294	1,286	1,358	1,550	1,650	1,850	2,130	2,651	3,786
90	2,994	1,740	2,130	2,192	2,234	2,571	2,450	2,720	3,200	3,898	5,472

Source: 1994 NSFIE.

Table 24 Decomposition of Net Worth Distribution in 1984

Household Characteristics		Household Share(%)	Wealth Share(%)	T_w	$w_j \cdot T_w(j)$	T_b
All		100.0	100.0	0.923	-	-
Home Owner		74.2	95.0	0.656	0.798	0.113
Tenants		25.8	5.0	1.256	0.013	(12.2)
	-24	0.7	0.2	1.400	0.000	
	25-	4.7	1.5	0.890	0.004	
	30-	11.9	6.0	0.704	0.021	
	35-	16.2	11.4	0.771	0.062	
	40-	15.4	13.5	0.642	0.076	
Age	45-	13.4	13.9	0.643	0.093	0.077
	50-	12.0	14.1	0.587	0.097	(8.3)
	55-	10.4	15.1	0.701	0.154	
	60-	6.7	10.6	0.592	0.099	
	65-	4.5	7.5	0.513	0.189	
	70-	2.6	4.0	0.528	0.033	
	75+	1.5	2.4	0.558	0.021	
	Keihin area (Tokyo area)	24.5	32.3	0.933	0.397	0.021
Region	Chukyo-Kinki area (Nagoya-Osaka area)	21.6	23.1	1.189	0.294	(2.3)
	Other area	53.9	44.6	0.574	0.212	
Employers		63.2	48.9	0.611	0.231	0.047
Self-Employee		30.9	44.7	0.953	0.616	(5.1)
Non-working		5.9	6.4	0.424	0.029	
	-2	5.1	2.9	0.580	0.009	
Income	2-	27.8	17.7	0.659	0.074	
(million yen)	4-	33.5	27.1	0.488	0.107	0.147
	6-	18.1	20.3	0.424	0.097	(15.9)
	8-	8.5	12.8	0.392	0.076	
	10+	7.0	19.2	0.788	0.414	

Note: ( ) is the ratio Tb/T (%).

Table 25 Decomposition of Net Worth Distribution in 1994

Household Characteristics		Household	Wealth Share(%)	T_w	$w_j \cdot T_w(j)$	T_b
All		100.0	100.0	1.412	-	-
Home Owner		73.8	95.2	1.047	1.286	0.118
Tenants		26.2	4.8	0.868	0.008	(8.4)
	-24	0.7	0.1	2.286	0.000	
	25-	3.9	1.0	2.244	0.006	
	30-	9.0	3.8	3.516	0.055	
	35-	11.8	6.8	2.125	0.083	
	40-	14.4	11.4	1.376	0.124	
Age	45-	14.4	13.6	0.860	0.111	0.086
	50-	13.1	14.3	0.971	0.152	(6.1)
	55-	10.7	13.8	1.419	0.254	
	60-	8.8	13.8	1.236	0.266	
	65-	7.3	11.2	0.928	0.160	
	70-	3.5	5.5	0.552	0.048	
	75+	2.6	4.7	0.760	0.065	
	Keihin area (Tokyo area)	27.0	35.9	1.368	0.653	0.028
Region	Chukyo-Kinki area (Nagoya-Osaka area)	22.3	24.6	1.568	0.426	(2.0)
	Other area	50.7	39.5	0.990	0.304	
Employers		73.2	64.1	1.430	0.802	0.022
Self-Employee		14.4	18.5	1.818	0.434	(1.5)
Non-working		12.4	17.4	0.631	0.154	
	-2	2.1	1.4	1.520	0.015	
Income	2-	13.2	10.7	0.978	0.085	
(million yen)	4-	23.6	17.3	1.905	0.242	0.046
	6-	22.0	18.1	1.121	0.167	(3.3)
	8-	15.9	17.2	2.327	0.435	
	10+	23.2	35.2	0.790	0.421	

Note: ( ) is the ratio Tb/T (%).

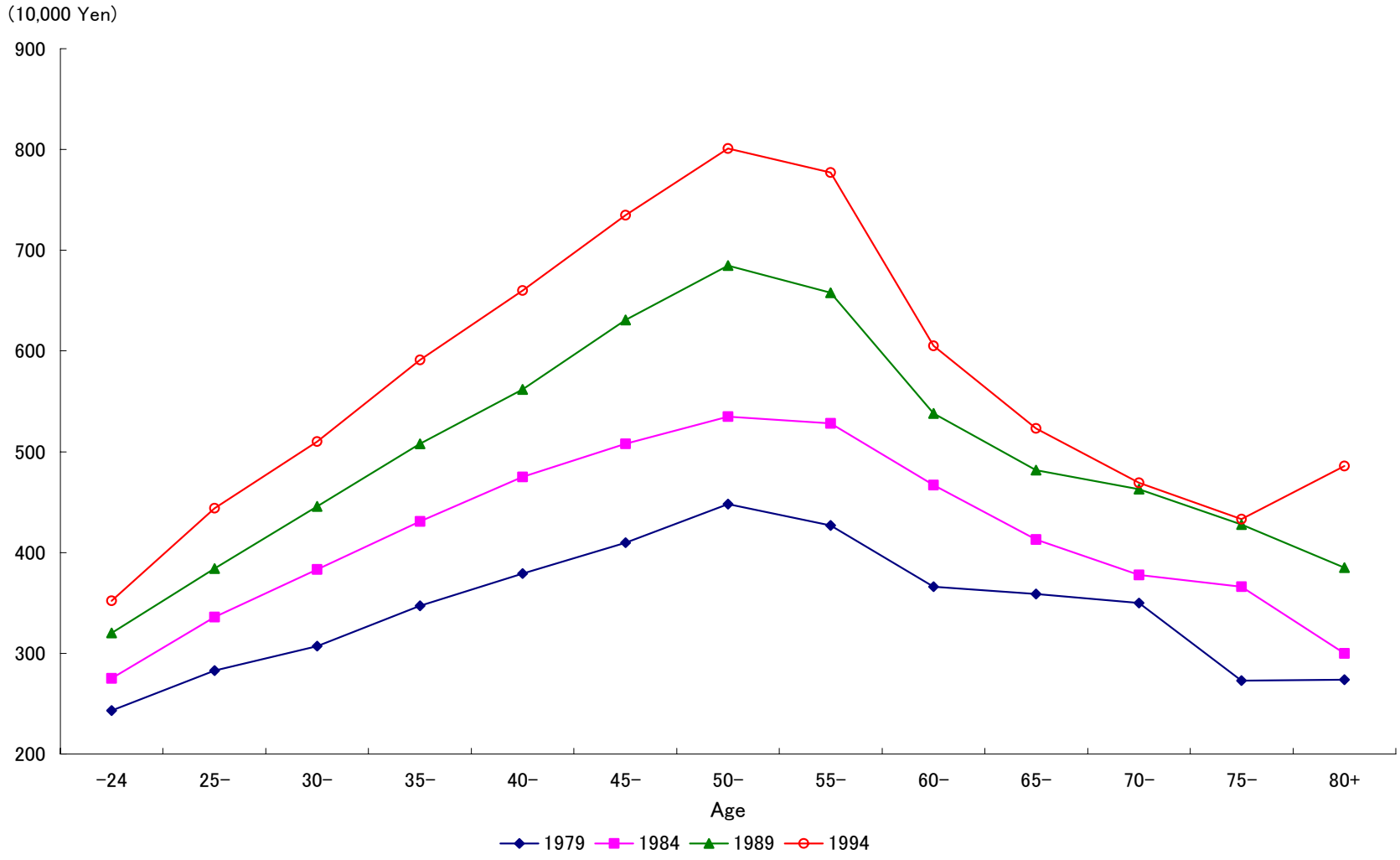
Table 26 The Crude Ratio between Mandatory and Discretionary Savings

(%)

		1984	1989	1994	1984-94
Cohort 1	(1920-24)	-315.55	-434.00	6,510.88	-779.95
Cohort 2	(1925-29)	-30.14	-277.11	-1,646.01	-264.71
Cohort 3	(1930-34)	25.82	-7.42	-270.87	-48.25
Cohort 4	(1935-39)	32.34	24.55	14.92	21.34
Cohort 5	(1940-44)	26.96	31.95	27.34	28.48
Cohort 6	(1945-49)	25.24	22.81	32.68	27.36
Cohort 7	(1950-54)	25.57	21.81	24.12	23.56
Cohort 8	(1955-59)	32.54	26.57	23.37	24.88
Cohort 9	(1960-64)	11.79	31.98	28.09	28.38
Average		8.66	-9.20	-14.36	-7.79

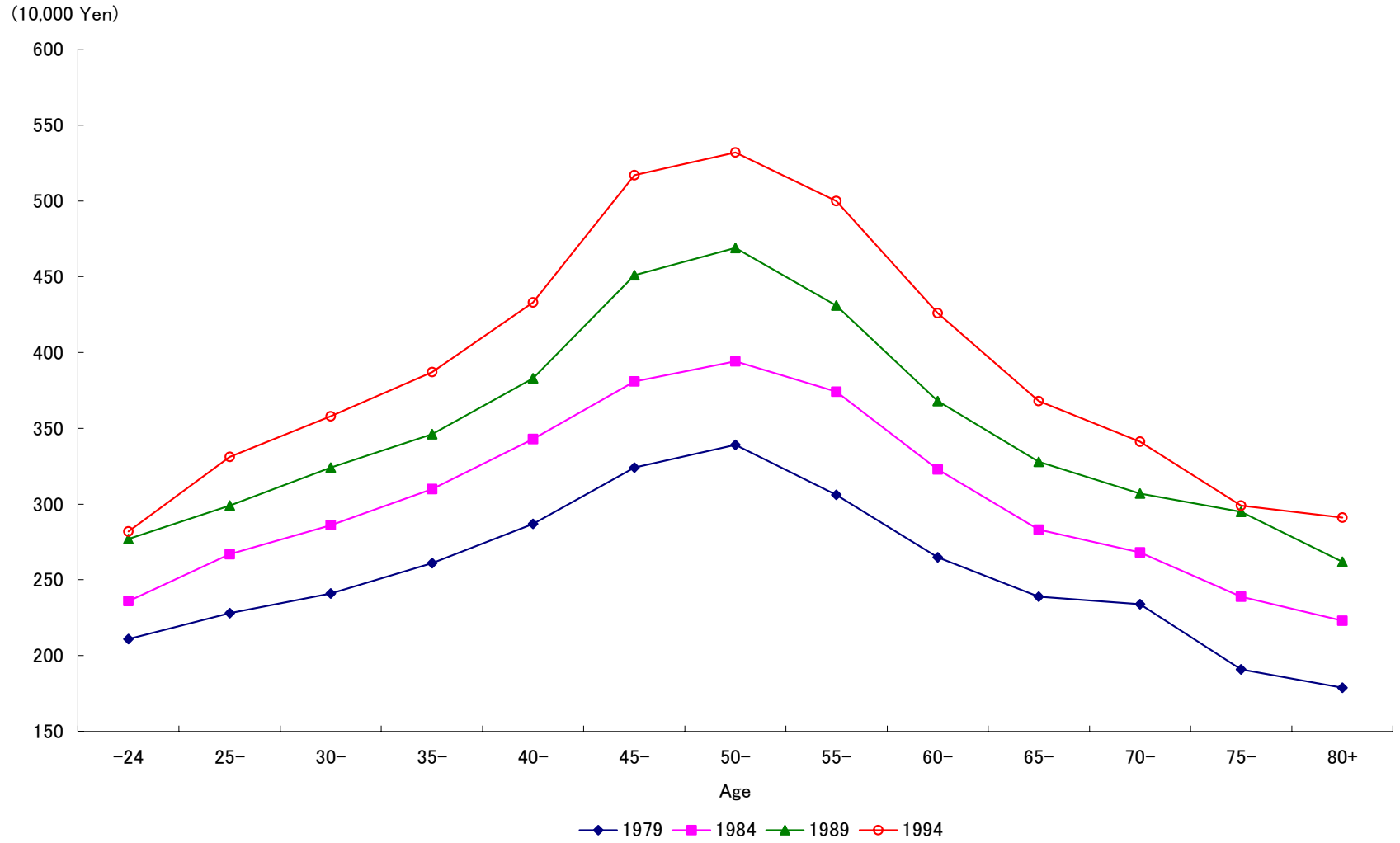
Source: National Survey of Family Income and Expenditure, 1984, 1989 and 1994.
Note: The mandatory savings are defined as a difference between public pension contributions and its benefits, i.e. net public pension contributions. Those aged above 60 receive public pension benefits so that mandatory savings become negative.

Fig.1 Age profile of disposable income (for all households)



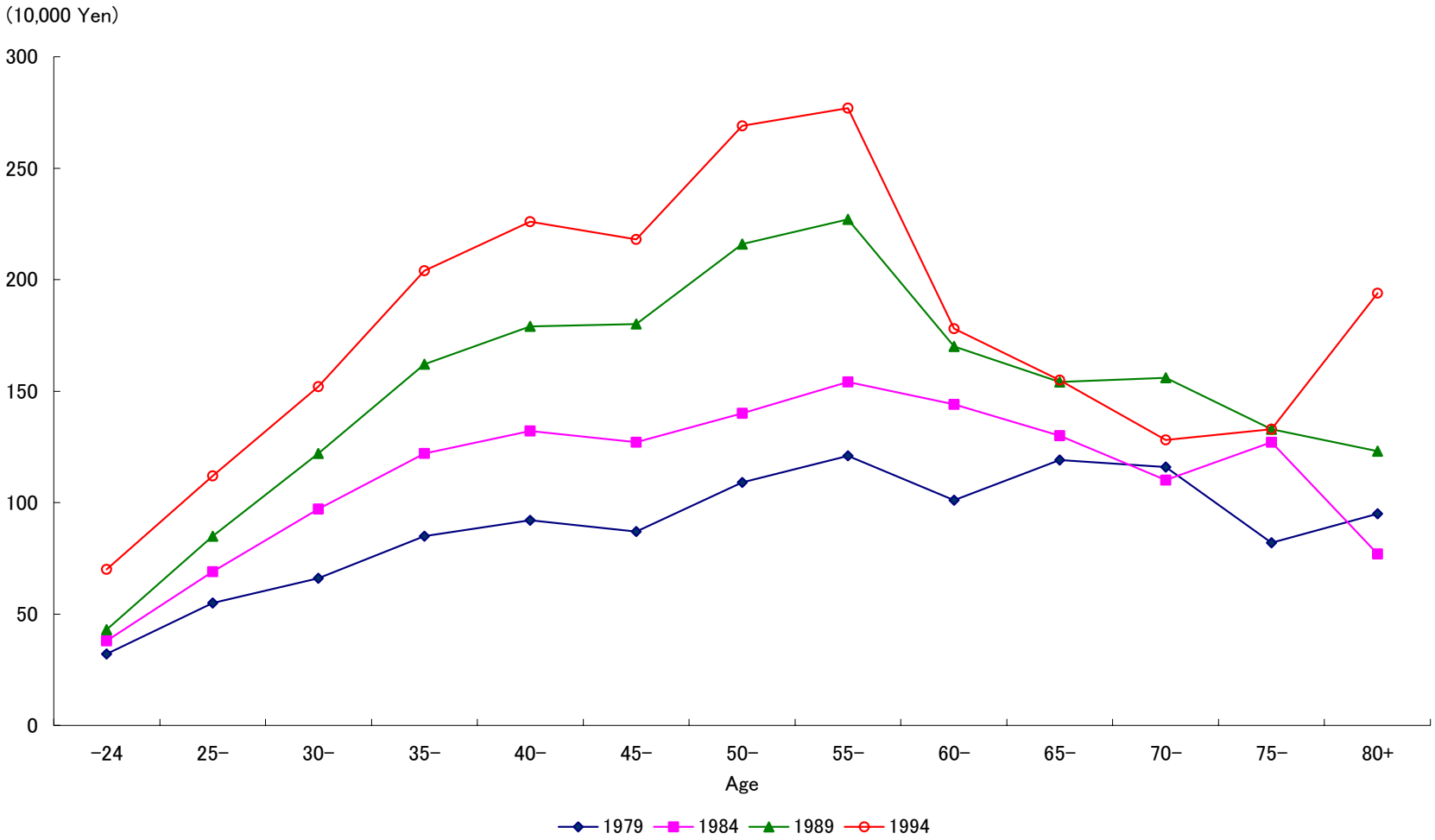
Source: NSFIE for 1979, 1984, 1989 and 1994.

Fig.2 Age profile of consumption (for all households)



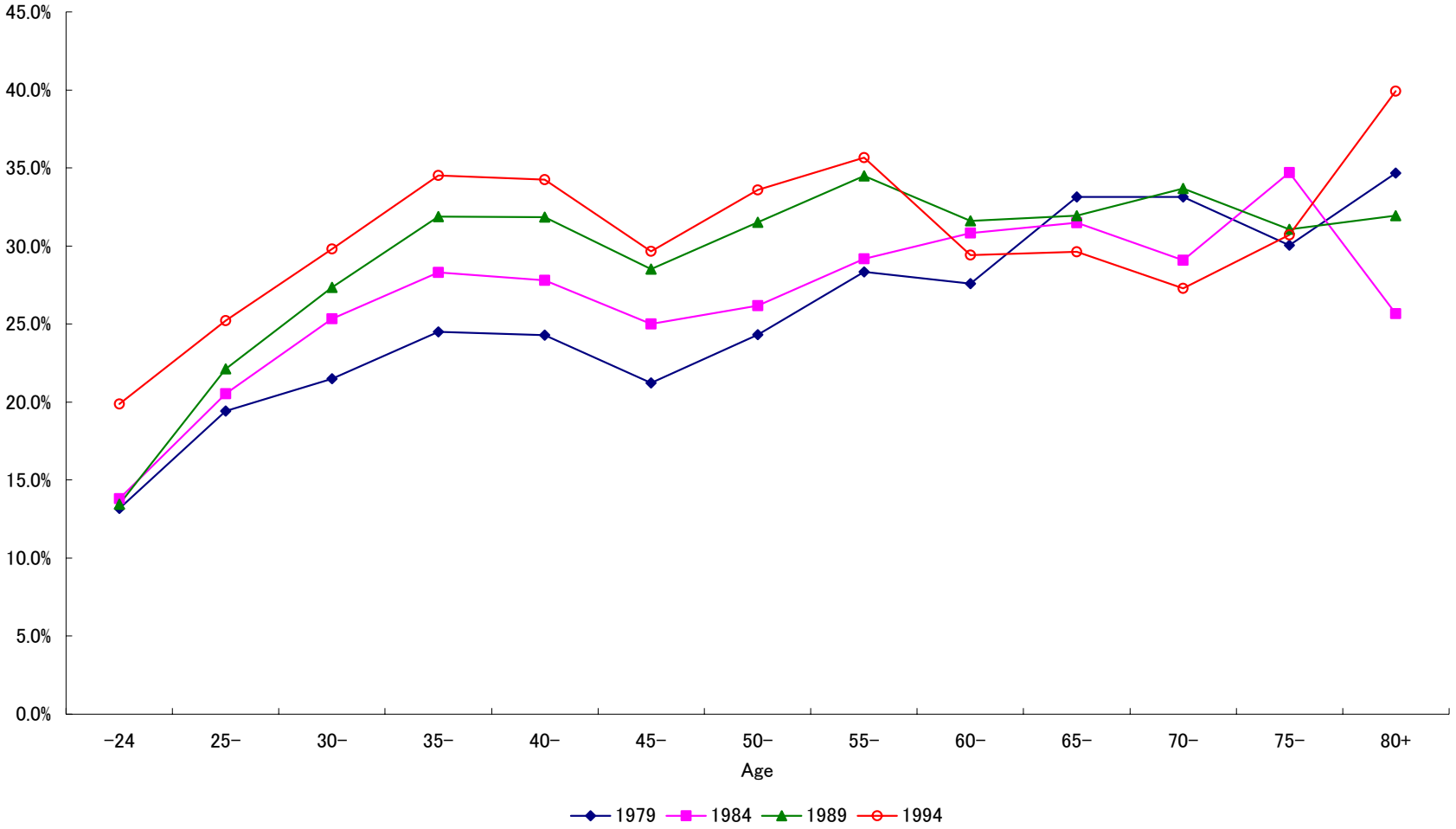
Source: NSFIE for 1979, 1984, 1989 and 1994.

Fig.3 Age profile of saving (for all households)



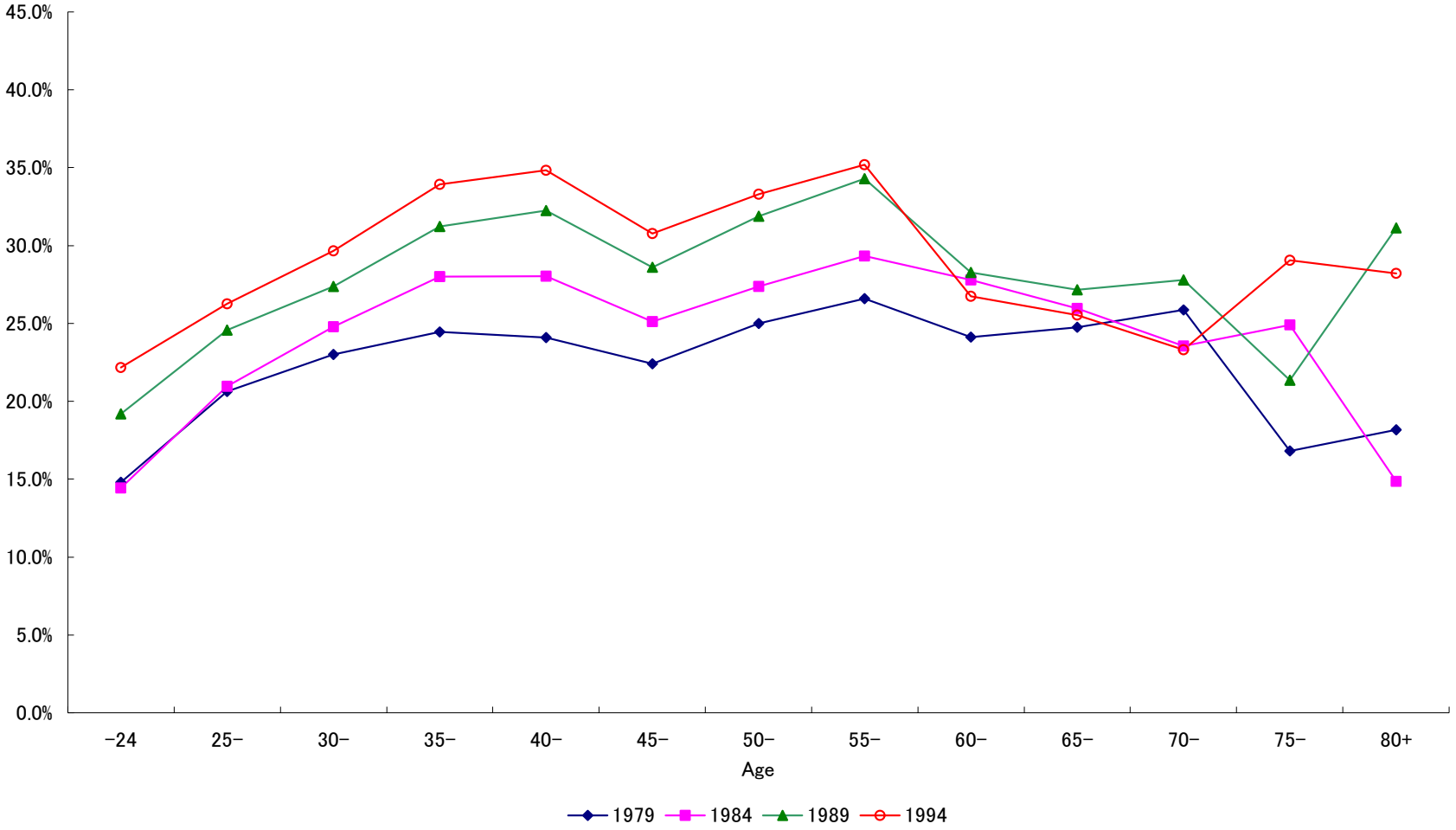
Source: NSFIE for 1979, 1984, 1989 and 1994.

Fig.4 Age profile of mean saving rates (for all households)



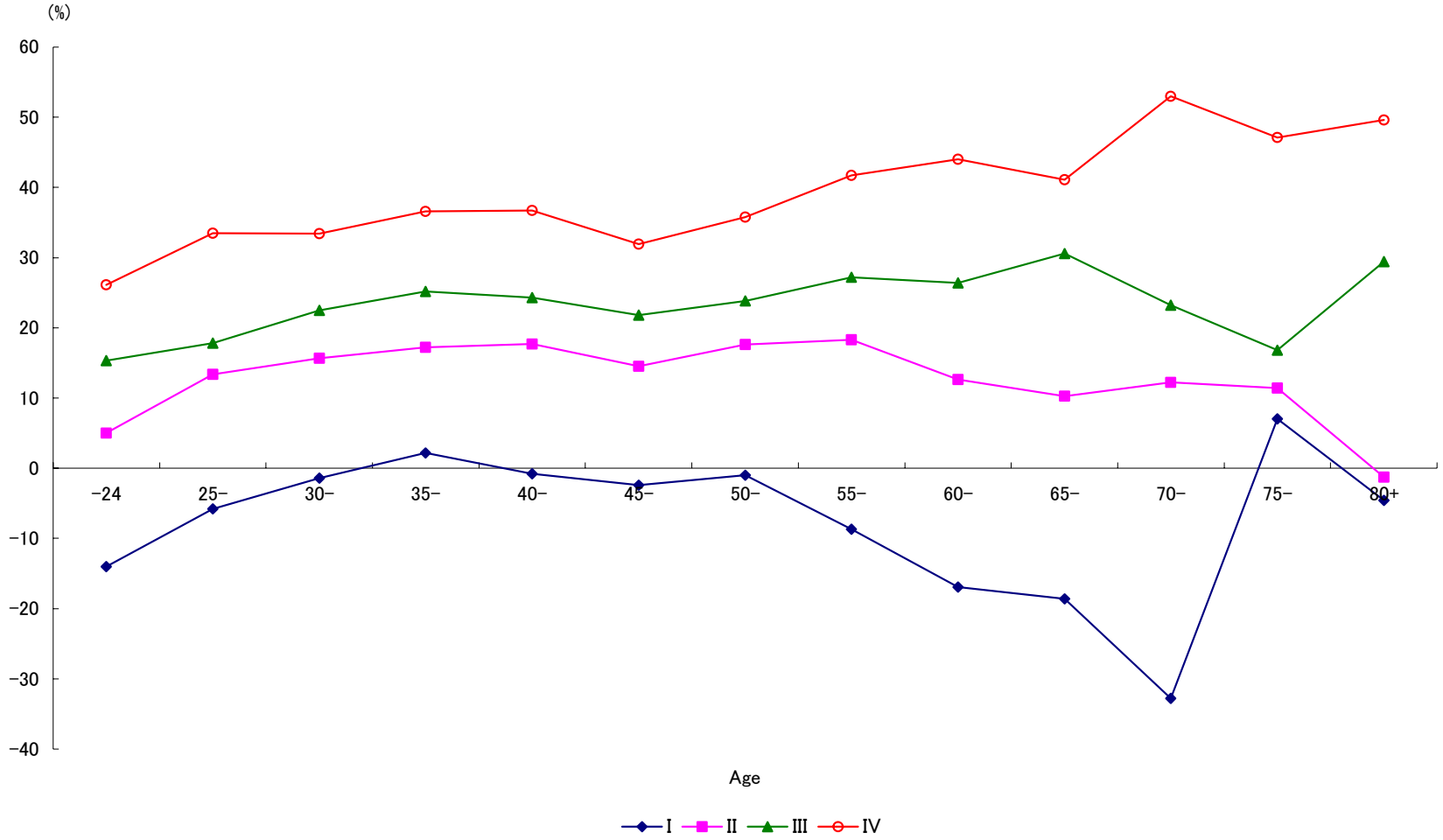
Source: NSFIE for 1979, 1984, 1989 and 1994.

Fig.5 Age profile of median saving rates (for all households)



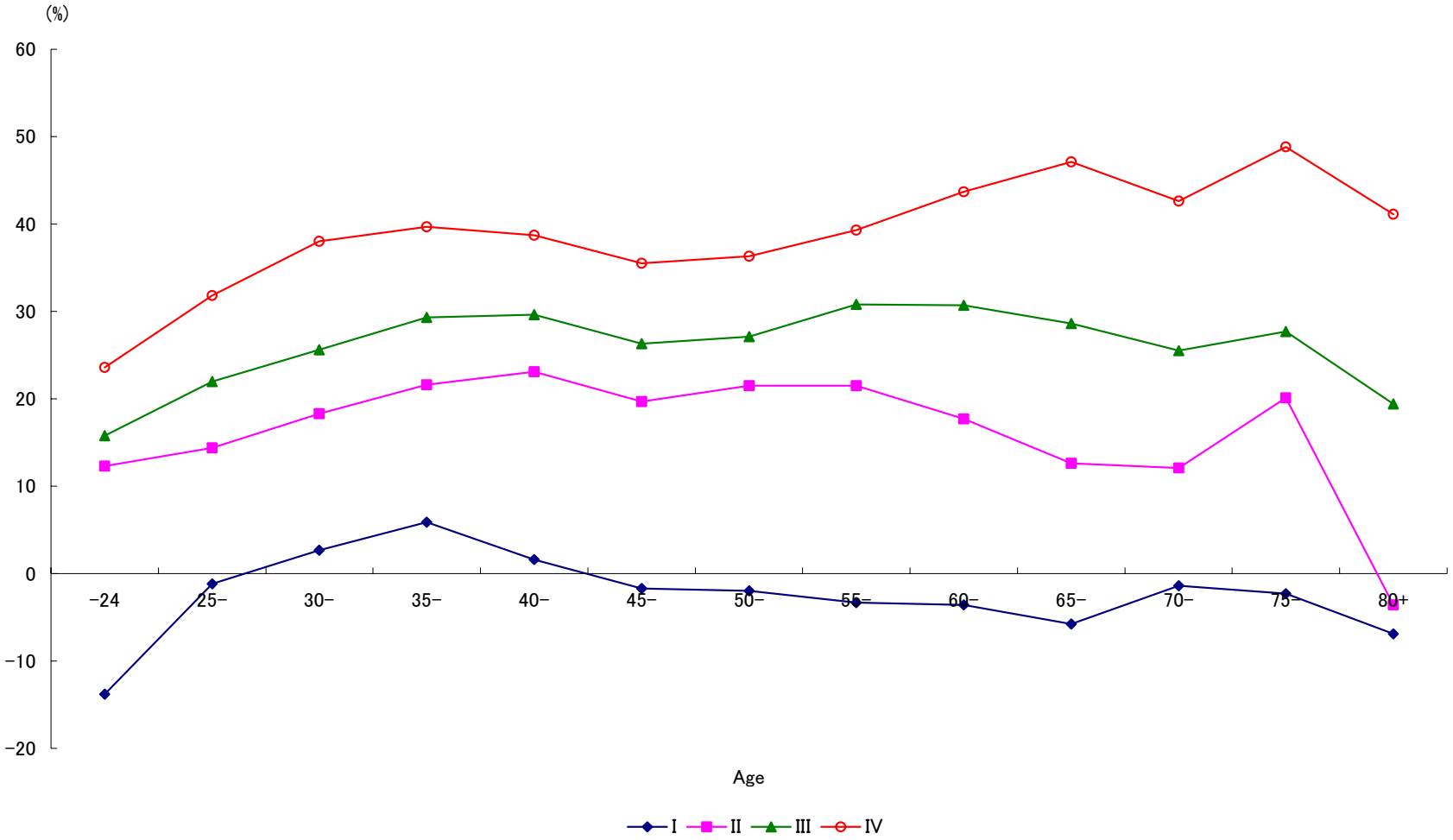
Source: NSFIE for 1979, 1984, 1989 and 1994.

Fig.6 Age profile of saving rates by income class in 1979



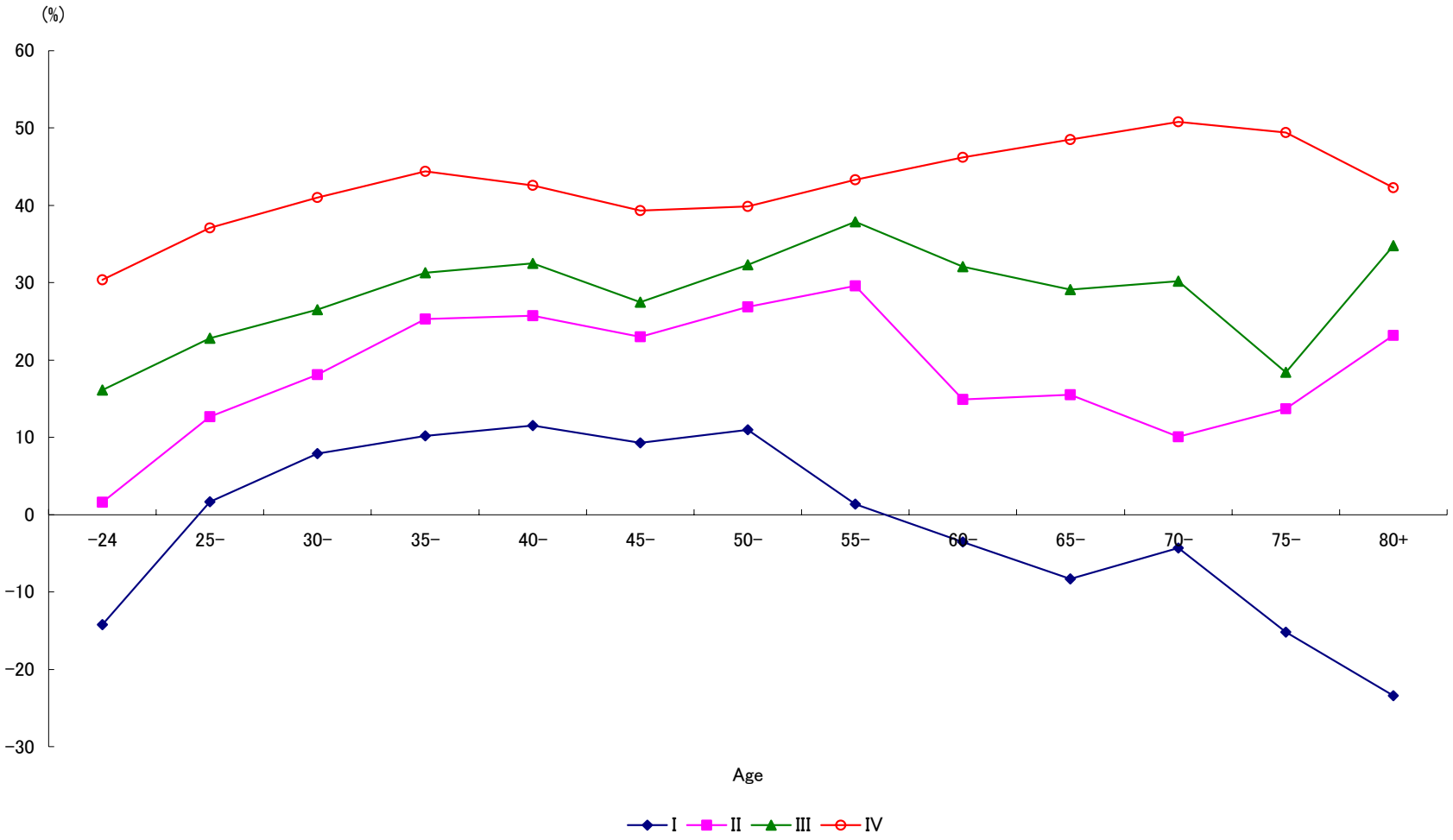
Source: NSFIE for 1979.

Fig.7 Age profile of saving rates by income class in 1984



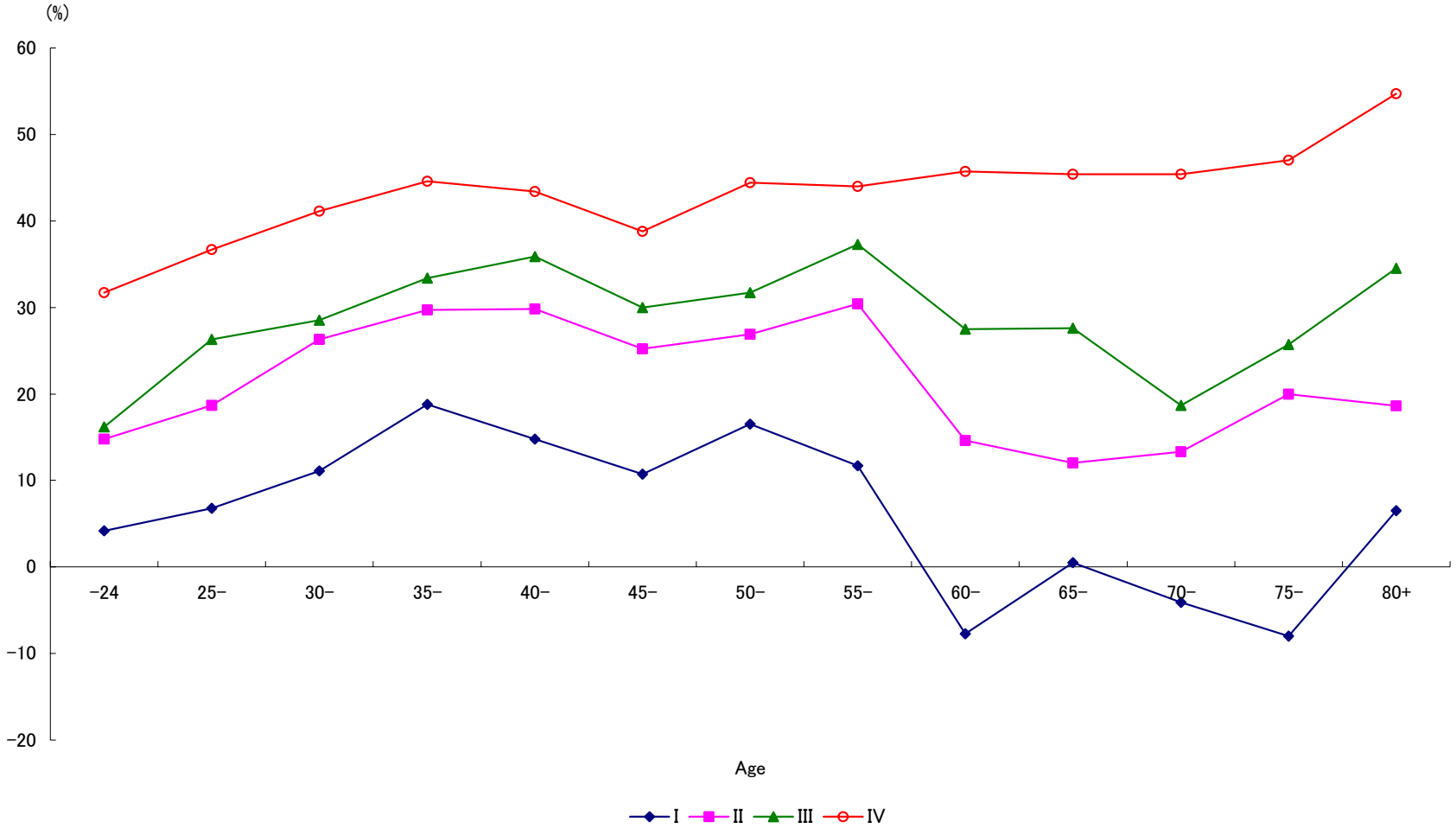
Source: NSFIE for 1984.

Fig.8 Age profile of saving rates by income class in 1989



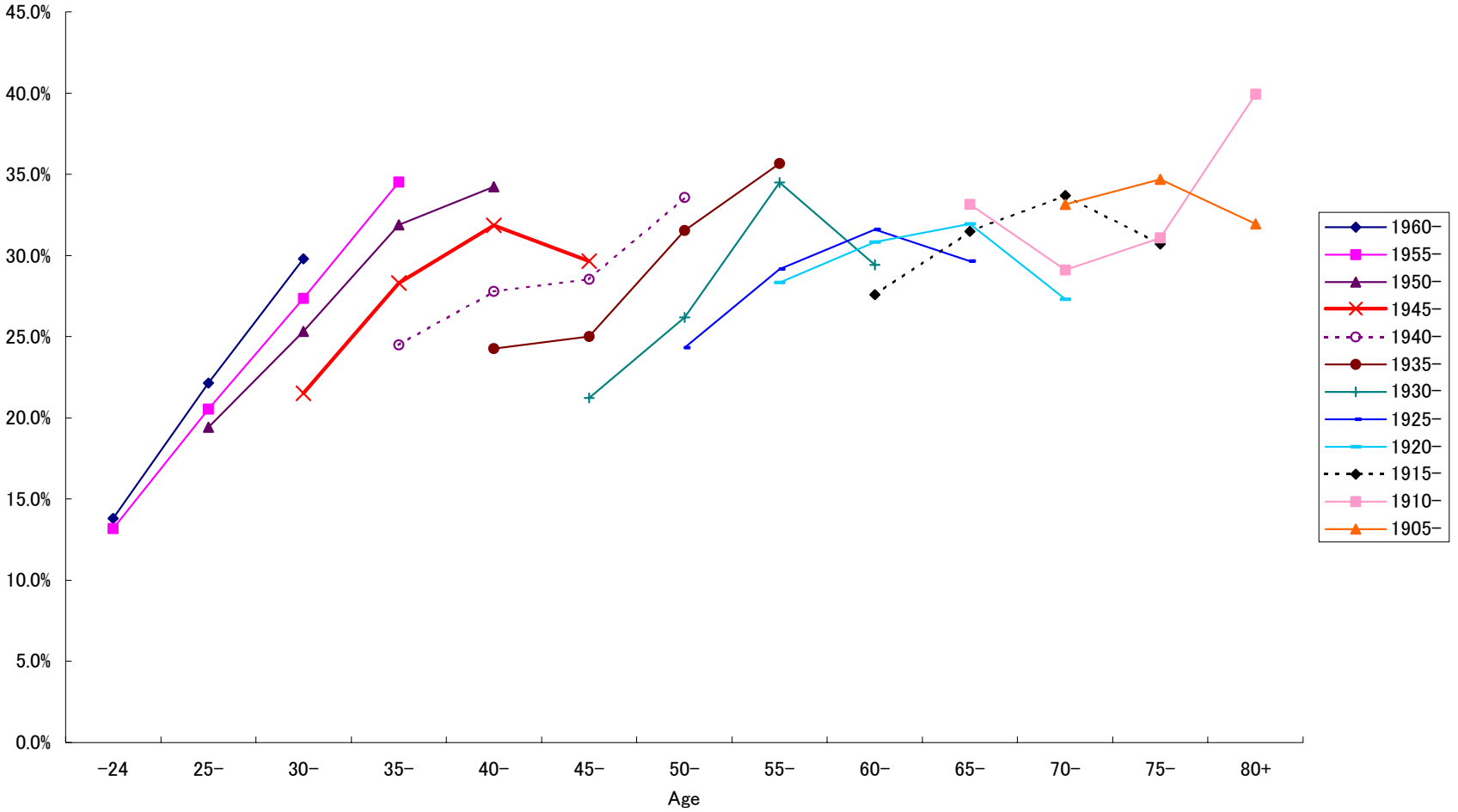
Source: NSFIE for 1989.

Fig.9 Age profile of saving rates by income class in 1994



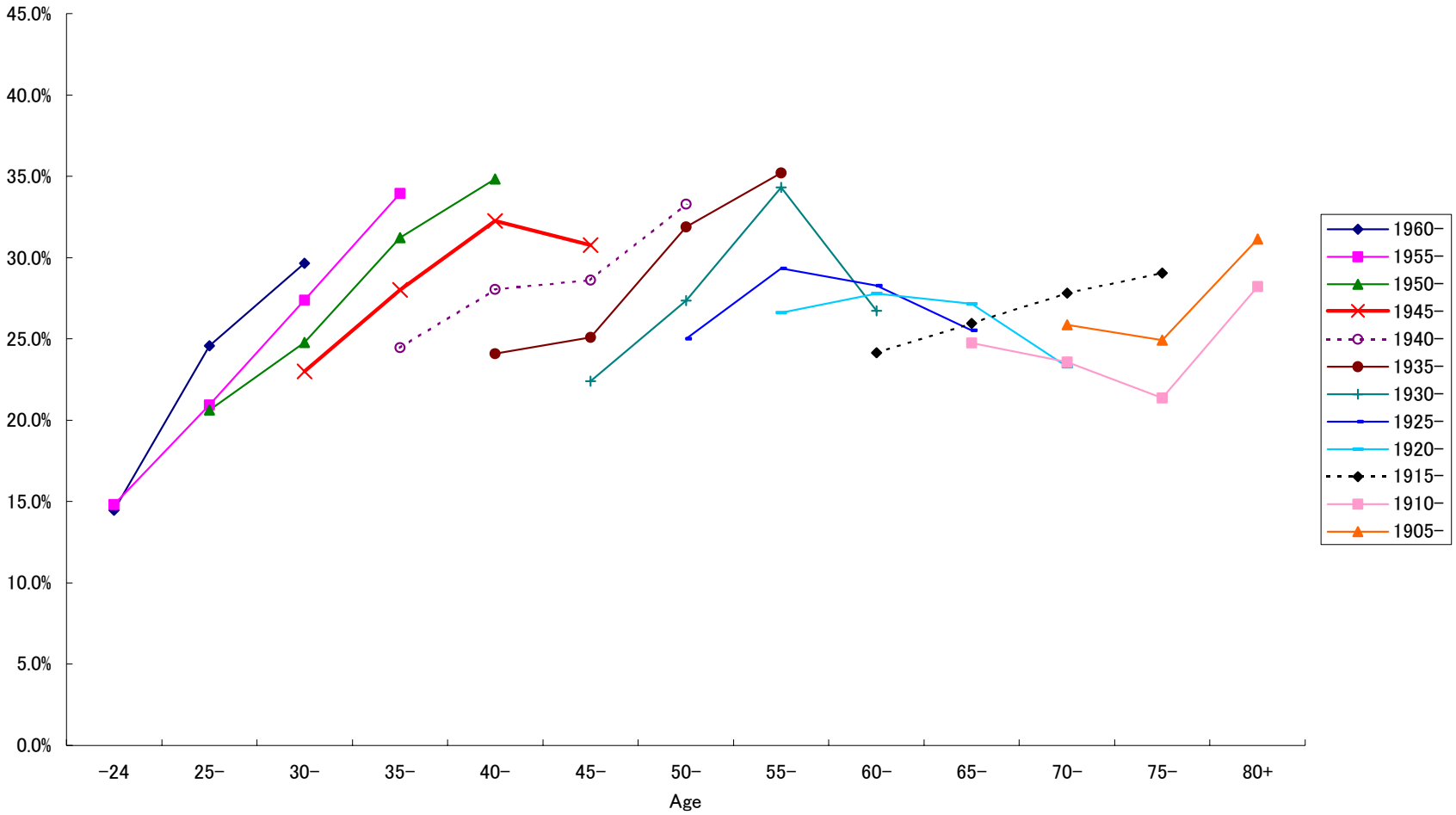
Source: NSFIE for 1994.

Fig.10 Saving rates by cohort (mean)



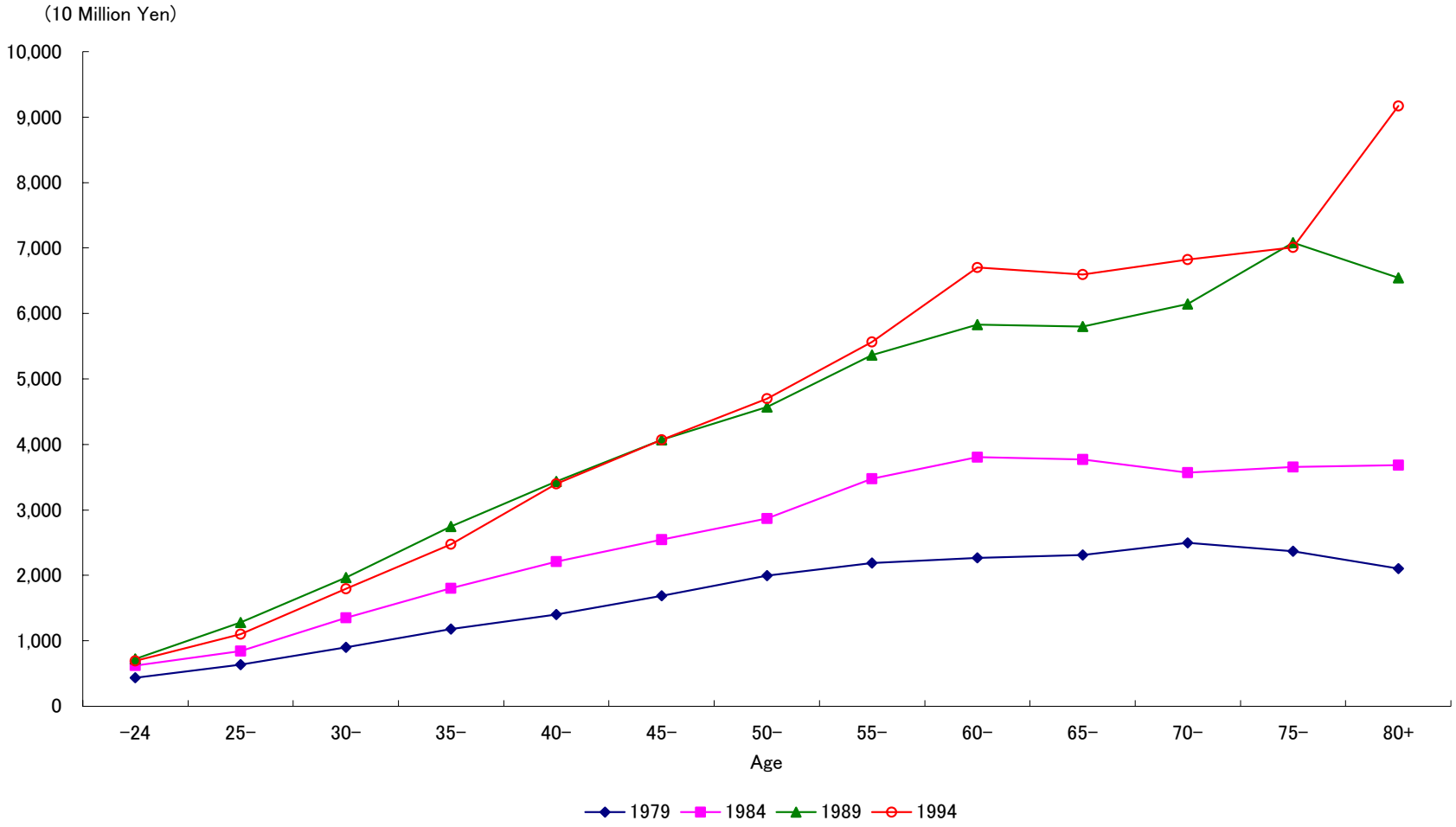
Source: NSFIE for 1979, 1984, 1989 and 1994.

Fig.11 Saving rates by cohort (median)



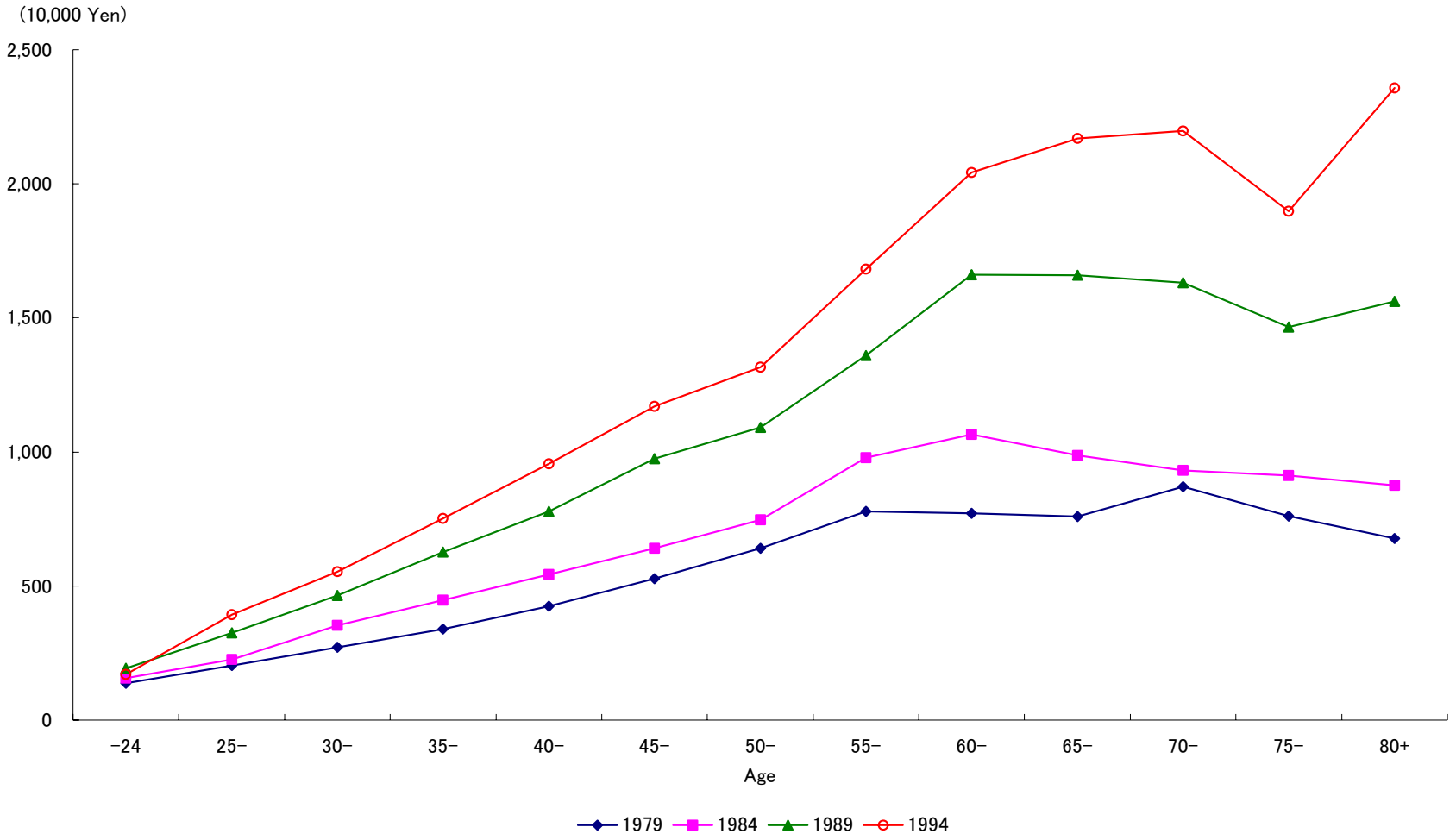
Source: NSFIE for 1979, 1984, 1989 and 1994.

Fig.12 Net worth by home ownership (for all households)



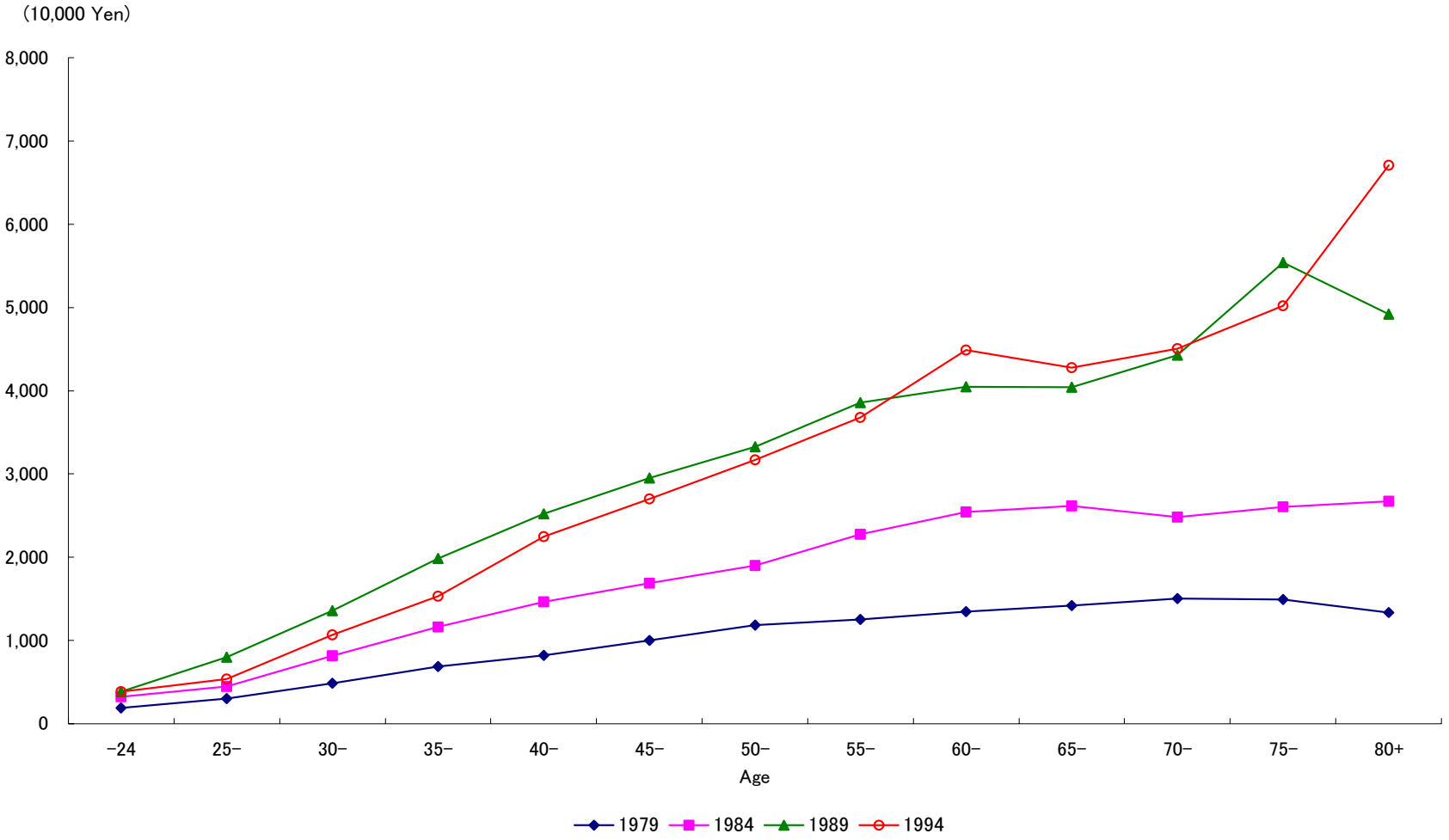
Source: NSFIE for 1979, 1984, 1989 and 1994.

Fig.13 Net financial assets by home ownership (for all households)



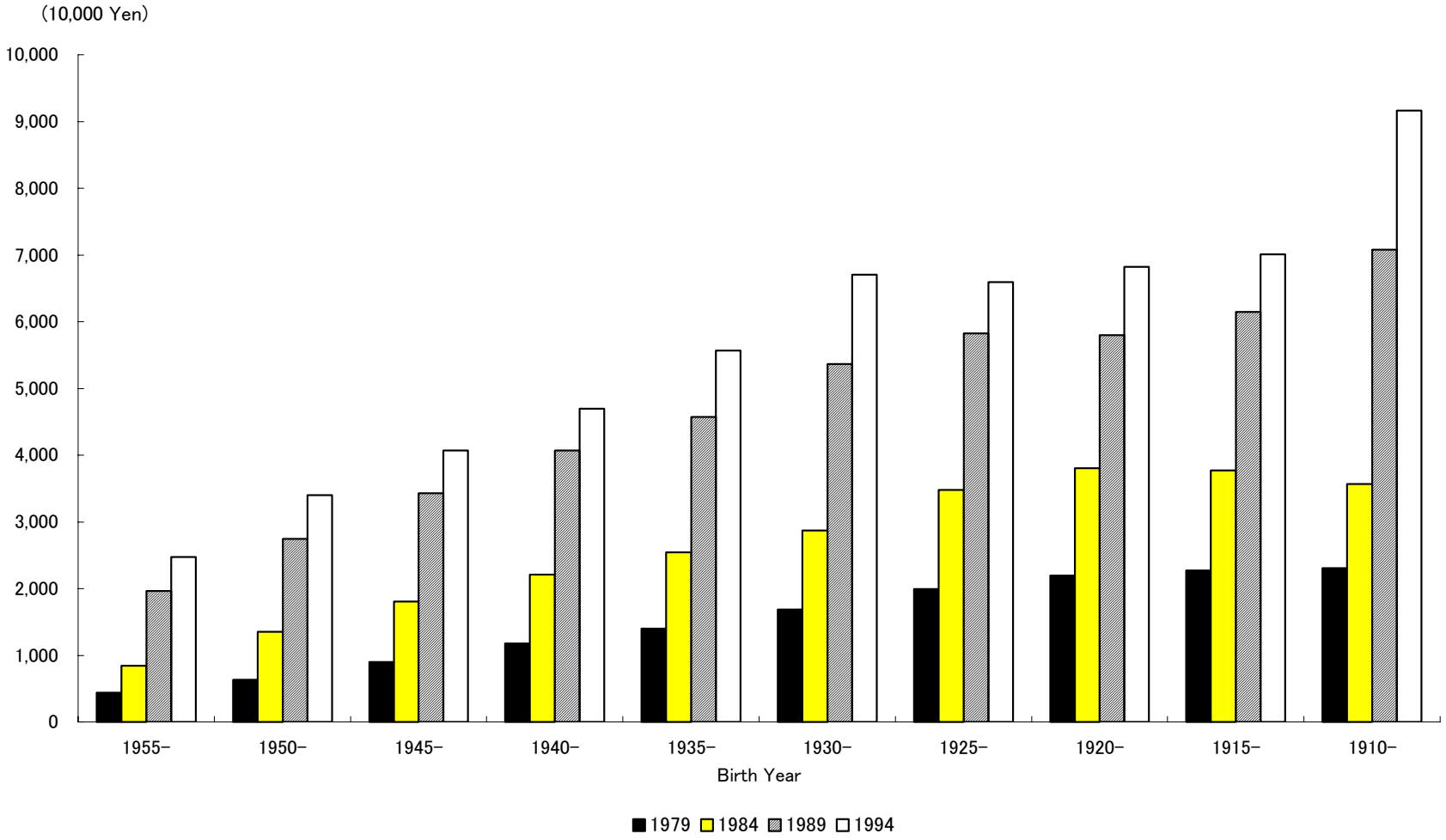
Source: NSFIE for 1979, 1984, 1989 and 1994.

Fig.14 Net housing assets (for all households)



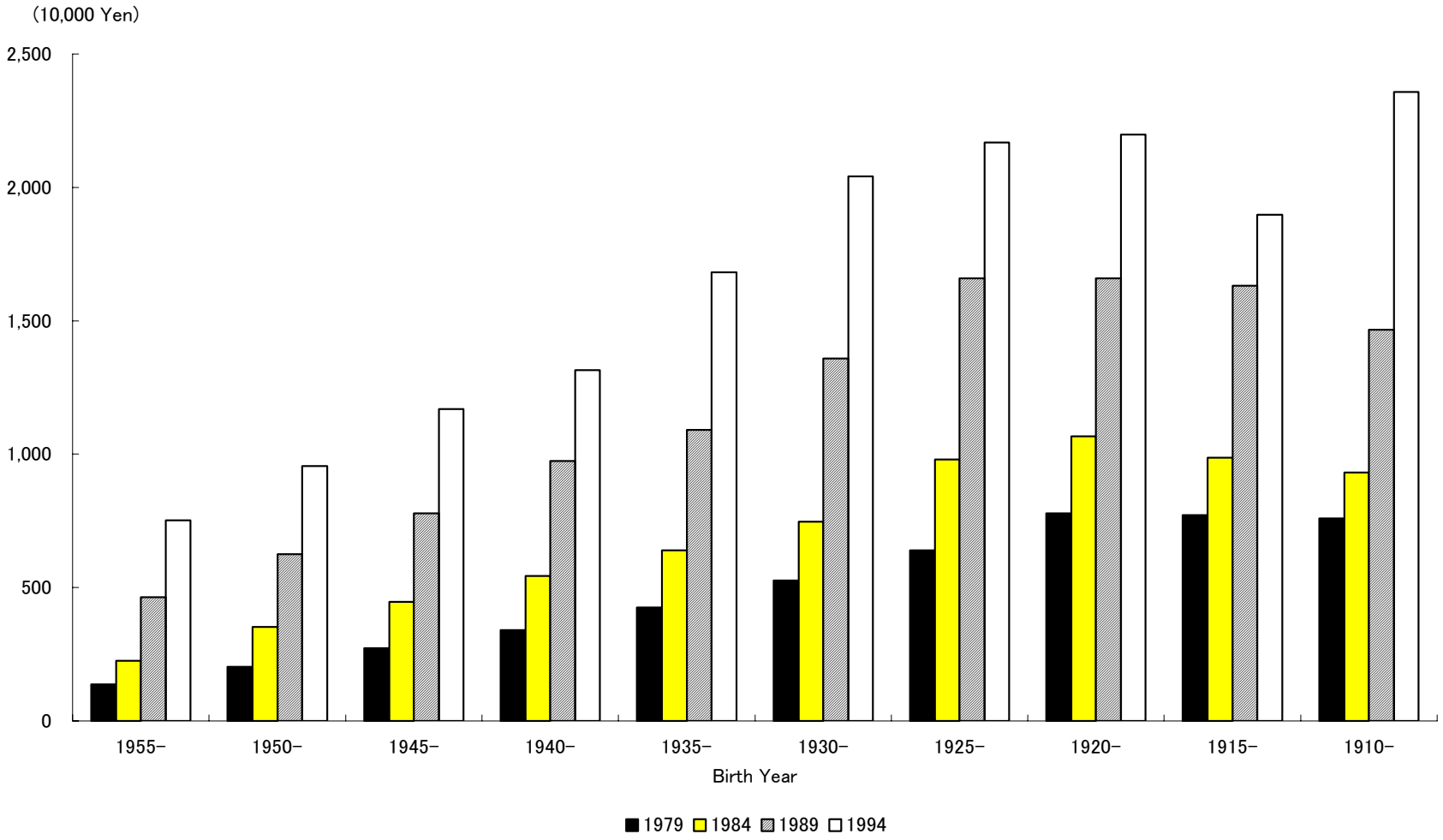
Source: NSFIE for 1979, 1984, 1989 and 1994.

Fig.15 Net worth by birth year (for all households)



Source: NSFIE for 1979, 1984, 1989 and 1994.

Fig.16 Net financial assets by birth year (for all households)



Source: NSFIE for 1979, 1984, 1989 and 1994.

Fig.17 Distribution of net worth (for all households)

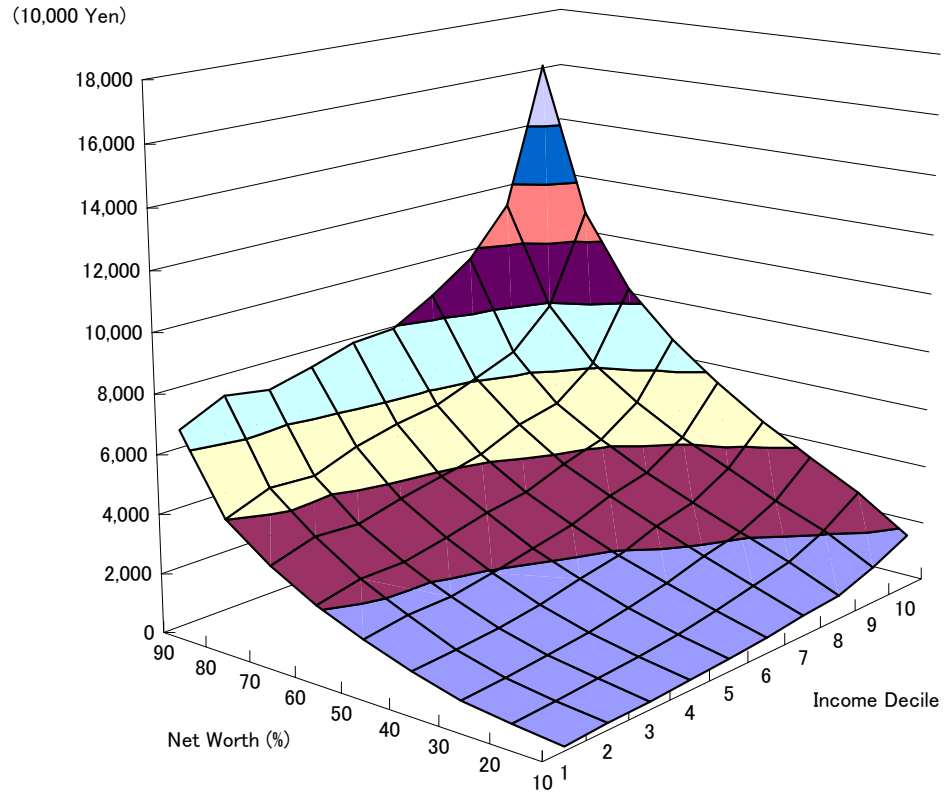


Fig.18 Distribution of financial assets (for all households)

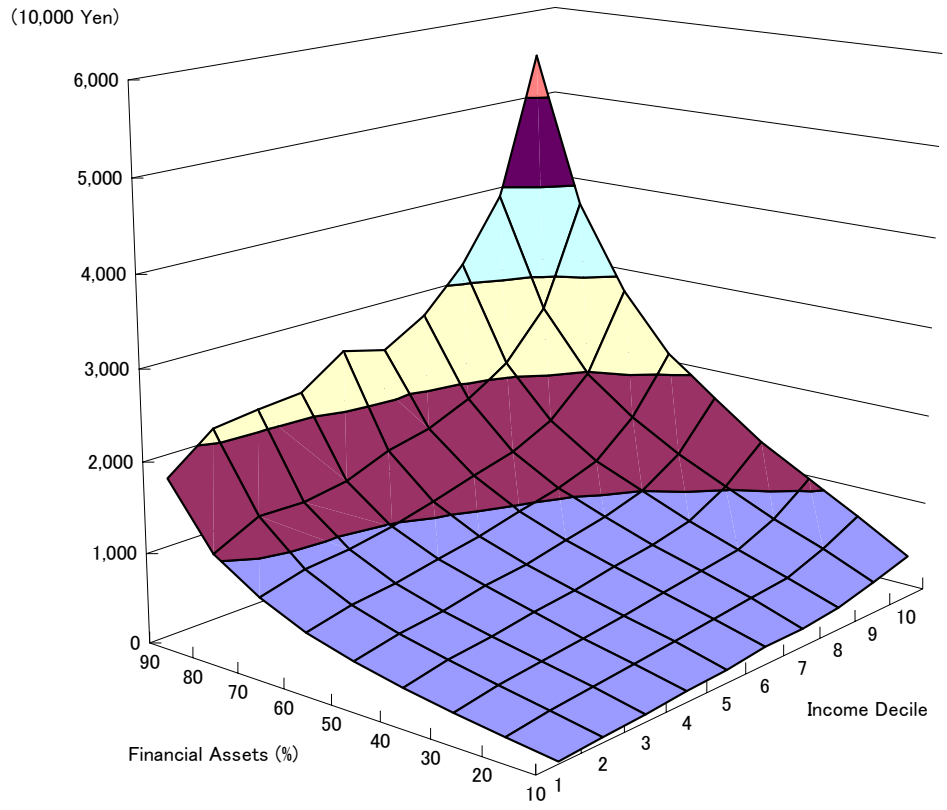


Fig.19 Social security wealth over life cycle