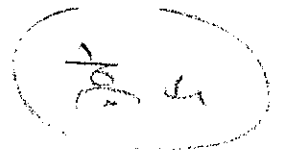


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THE DISTRIBUTION OF ASSETS IN JAPAN*

I. What are the Issues?

The economic growth of postwar Japan has been examined and analyzed from a number of perspectives. Among the most recent studies are some that critically review the growth-first policy in connection with the question of equitable distribution of income.

There is a common theme that attracts our attention in the studies of postwar economic growth from the viewpoint of the equity of distribution, i.e., whether or not economic growth has contributed to reducing distributional inequality. This theme requires empirical verification. A number of economists have conducted fairly detailed surveys of the topic (e.g., Mizoguchi [6], Shotoku Bumpai ni kansuru Kenkyūkai [3], Takayama [4], and Mizoguchi, Takayama, and Terasaki [7]).

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Their studies have led to a common finding that, insofar as the 1960s are concerned, economic growth contributed to equalizing income. This finding is believed to support the well-known Kuznets hypothesis, based on Western experiences, that economic growth and distributional equity become compatible at a certain point in time in the process of economic growth. In other words, this hypothesis implies a judgment that it is not appropriate to criticize economic growth on the ground that it aggravates income inequalities.

While I do not think that emotional criticisms against growth make any sense unless factually substantiated, I also feel it would be rash to take up only one set of facts as if it were the whole truth. In particular, the reduction of income inequality in the 1960s has been verified from income data exclusive of capital gains. Therefore we need one further step in order to correctly identify the facts. Without that step, it is premature to give whole-hearted approval to Japan's postwar economic growth.

This has motivated me to conduct an empirical analysis of the asset distribution in postwar Japan. However, there my effort was handicapped from the very beginning by the limited availability of statistical materials. As a matter of fact, there are no reliable statistics on the nation-wide distribution of assets covering both financial and real assets. This is why there are few studies of asset distribution while there are a fair number of studies of income distribution in Japan.

What can we do under the circumstances? We may try to piece together a few statistical sources that provide partial asset distribution, namely, the Chochiku Dōkō Chōsa Hōkoku [Family Saving Survey] and the Zenkoku Shōhi Jittai Chōsa Hokoku [National Survey of Family Income and Expenditure], both from the Statistics Bureau of the Prime Minister's Office, and the Nōka Keizai Chōsa Hōkoku [Farm Household Economy Survey] of the Ministry of Agriculture, Forestry, and Fisheries.

We concentrate on the following three questions:

a) How have farm and nonfarm households accumulated their assets in the process of economic growth? How have they differed?

b) How has economic growth affected the gap between farm and nonfarm households in asset holdings?

c) How has the equalization of income distribution affected asset distribution?

It goes without saying that my limited study leaves out many important questions such as the relative share of assets held by the top decile wealth-owners, which is often examined in the Western countries. Furthermore, the data limitation prevents us from examining real asset holdings of woodland owners and self-employed nonfarm households such as merchants, craftsmen, business owners, doctors, lawyers, and so on. In what follows, we examine financial assets, land, and dwellings. We exclude jewelry, paintings, antiques, and durable consumer goods such as automobiles, air conditioners, and pianos.

It is generally believed that the Japanese income level is by now favorably comparable with those of leading nations in the world, but, when we move from flows to stocks, the Japanese level of wealth is still very poor. It is quite interesting to ascertain if such a belief is well-founded. However, since the data at our disposal is not robust enough to support such an international comparison, I cannot attempt to answer that question in this paper. What we do below is to comment on the conventional view that farmers are poor in comparison with worker households.

II. The Distribution of Assets among Nonfarm Households

1. Financial Assets

To begin with, let me review nonfarm households' holdings of financial assets. Table 1 shows that the balance of financial assets held by worker households and "all households" (which are almost entirely nonfarm multi-person households, since farm households and single-person households are excluded) increased notably in the period of rapid growth according to the Chochiku Dōkō Chōsa Hōkoku [Family Saving Survey] of the Statistics Bureau of the Prime Minister's Office.

Table 1
 Nonfarm Households' (Gross) Holdings of Financial Assets (in ¥000)

Decile	All households					Worker households				
	1962	1964	1969	1974	1974	1962	1964	1969	1969	1974
I	11	29	88	189	189	13	31	94	94	206
II	41	90	233	492	492	45	90	228	228	483
III	75	144	337	775	775	75	139	335	335	766
IV	121	217	499	1,107	1,107	123	208	486	486	1,073
V	170	272	681	1,308	1,308	168	253	651	651	1,231
VI	250	366	854	1,749	1,749	244	350	791	791	1,687
VII	328	500	1,177	2,345	2,345	307	446	1,032	1,032	2,060
VIII	461	700	1,540	3,199	3,199	417	612	1,385	1,385	2,732
IX	705	1,148	2,588	4,753	4,753	602	988	2,020	2,020	3,812
X	2,193	3,316	6,187	11,130	11,130	1,635	2,279	4,273	4,273	8,471
Average	436	678	1,417	2,705	2,705	363	540	1,130	1,130	2,252
Gini coefficient	0.6179	0.6005	0.5621	0.5345	0.5345	0.5739	0.5503	0.5062	0.5062	0.4925

Source: Statistics Bureau, Prime Minister's Office, Chochiku Dōkō Chōsa Hōkoku [Family Saving Survey].

We note that the average holding of financial assets of all nonfarm households increased by 6.2 times nominally (2.6 times in real terms) from 1962 to 1974. At the same time, the inter-household spread tended to decrease. The relative share of the top decile worker households declined from 45% to a little below 38%. The Gini coefficient, which indicates the degree of inequality in income distribution, also attests to the above tendency.

What contributed to the substantial increase in the balance of financial assets was rapid economic growth in the 1960s. Wages rose substantially year after year. The tight labor market, rising educational attainments, and the emergence of nuclear families contributed to significant narrowings of income differentials among households (see Mizoguchi, Takayama, and Terasaki [7] for further details). Furthermore, the propensity to save was not very low even among low-income households (Table 2). It is thus clear that the inequality in the distribution of financial assets decreased in the period of rapid growth owing to the rising income level, the narrowing income differentials, and the small inter-class difference in the propensity to save. As far as the distribution of financial assets is concerned, the rapid growth of the postwar Japanese economy contributed to reducing inequality in the asset distribution. This point should clearly be kept in mind in evaluating the effects of the rapid economic growth.

Table 2

The Average Propensity to Save (Worker Households)

Income quintile	I	II	III	IV	V
Income (yen/mo.)	93,990	136,733	166,539	202,702	295,481
Saving (yen/mo.)	16,262	27,376	36,137	48,615	89,916
Average propensity to save (%)	17.3	20.0	21.7	24.0	30.4

Source: Prime Minister's Office, Zenkoku Shōhi Jittai Chōsa Hōkoku [National Survey of Family Income and Expenditure], 1974.

The figures in Table 1 are not differentiated by age of the household head. Are one million yen held by a 20 year old and one million yen owned by a 60 year old the same in asset value? The answer is, no.

Table 3

Inter- and Intragenerational Inequality in the
Financial Asset Distribution (Theil Coefficient)

Overall (a)	Intergenerational (b)	a/b	Intragenerational (weighted average)
0.6010	0.0708	11.8%	0.5302

Source: Prime Minister's Office, Chochiku Dōkō Chōsa Hōkoku [Family Saving Survey], 1973 (nonfarm households).

The young householder's assets are the principal for his asset formation. One million yen at age 20 can be increased to 10.36 million yen in 40 years at the compound interest rate of 6% per annum. Therefore, in examining the distribution of assets, it is necessary to look at lifetime potential wealth holdings, which require corrections for age differences. Table 3 shows the effect of the age factor on the inequality of the financial asset distribution. The Theil coefficient indicates that the effect is only a little over 10%. (See Takayama [5] for the Gini coefficient and the Theil coefficient as inequality measures.)

This means that the inequality in the distribution of financial assets is largely attributable to the intragenerational inequality, which is given in Table 4. This table indicates that the inequality tends to decrease up to ages 35-39, but increases rapidly after age 40. It should be noted that this observation is purely cross-sectional. The long-term statistics on the age cohort are unavailable.

The inequality in the financial asset distribution is larger than those in the income and saving distributions. The Gini coefficients are 0.5048, 0.1974, and 0.3479 respectively (com-

Table 4
 Intragenerational Inequality in the Financial Asset Distribution
 (Theil Coefficient)

Age	Theil coefficient	Weight (%)	Age	Theil coefficient	Weight (%)
--24	0.5354	(0.3)	45-49	0.4981	(16)
25-29	0.5201	(3)	50-54	0.5316	(14)
30-34	0.4969	(8)	55-59	0.5909	(11)
35-39	0.4486	(12)	60-64	0.5547	(10)
40-44	0.4752	(15)	65--	0.6901	(11)

Source: Prime Minister's Office, Chochiku Dōkō Chōsa Hōkoku [Family Saving Survey], 1973 (nonfarm households).

puted from the quintile data in Statistics Bureau, Prime Minister's Office, Zenkoku Shōhi Jittai Chōsa Hōkoku [National Survey of Family Income and Expenditure], 1974) The inequality is higher with respect to saving than income because the income elasticity of saving is larger than 1, that is, the marginal propensity to save tends to rise as income rises. Accordingly, the Lorenz curve of saving is always located outside that of income (see Kakwani [1]).

The inequality is higher with respect to financial assets than saving for two reasons. First, the rate of return tends to rise as holdings of financial assets rise. At the same time, this tendency increases the inequality in the asset distribution in the long run. This is because the rich hold proportionately more in corporate and public bonds and corporate shares than in saving accounts and life insurance (see Table 5). Secondly, the richer a household is, the more bequests and gifts it is likely to receive.

In Table 1, financial assets are not net of debt. In postwar Japan, the inequality is greater in the distribution of net holdings of financial assets (i.e., net of debt) than in the distribution of gross holdings of financial assets (Table 6), owing to the fact that debt accounts for a relatively large proportion of gross holdings of financial assets among small wealth holders. (Accordingly, with respect to debt, its Lorenz curve lies above the 45-degree line on the left-hand side, so that the pseudo Gini coefficient takes a negative value.) However, since most debt is contracted for the acquisition of land and dwellings, there must be real assets that correspond to debt. This fact implies that we should not be too concerned with the high inequality in the distribution of net holdings of financial assets (as shown in Table 6, the Gini coefficient is about 0.85).

2. Land and Dwellings

There are virtually no reliable statistical sources that give information on the distribution of land and dwellings among nonfarm households by income class, except for the 1955

Table 5
Composition of Financial Assets
(Worker Households)

	I	II	III	IV	V
Income quintile					
Income (¥1,000)	1,688	2,414	2,991	3,799	5,747
Financial assets (¥1,000)	1,313	2,107	2,593	3,520	6,270
Currency and demand deposits (%)	18.4	14.6	15.1	12.6	10.7
Time deposits (%)	44.0	47.6	45.6	42.9	41.9
Life insurance (%)	26.6	22.2	19.6	18.0	13.5
Securities (%)	8.1	10.4	12.6	18.8	27.4
Others (%)	2.8	5.2	7.1	7.8	6.5

Source: Prime Minister's Office, Chochiku Dōkō Chōsa Hōkoku [Family Saving Survey], 1974.

Table 6
 Inequality in the Distributions of Financial Assets
 (Gini Coefficient)

Year	Gross holding	Net holding (weight)	Debt (weight)
1969	0.5277	0.6787* (77.4%)	0.0098* (22.6%)
1974	0.5152	0.8497* (64.2%)	-0.0857* (35.7%)

*Pseudo Gini coefficient.

Source: Prime Minister's Office, Zenkoku Shōhi Jittai Chōsa Hōkoku [National Survey of Family Income and Expenditure]. (Worker households owning dwellings.)

Kokufu Chōsa [National Census of Wealth]. Mizoguchi [6] utilized this source to obtain the Gini coefficient, 0.27, a figure far lower than generally expected. The explanation is that Mizoguchi obtained the Gini coefficient from the distribution of assets by income class rather than by asset class. Can we not obtain data on the distribution of assets within each income class? The Census of Wealth published no such data. Not only that, but the Census of Wealth has carried no data on the land and dwellings owned by households since 1955.

The Income Distribution Study Group [3] estimated the distribution of land and dwellings from data on real estate taxes paid by households as reported in original survey returns of Keisei Chōsa Nempō [Annual Report of the Family Income and Expenditure Survey] of the Statistics Bureau of the Prime Minister's Office. Its report gives the Gini coefficient of 0.67 for the year 1973 with respect to the distribution of real assets among nonfarm households. This estimate contrasts with the Gini coefficient of 0.21 computed from the distribution by income class. Thus, this report greatly helped to improve our knowledge in this area. The Study Group deserves our high appreciation in that it estimated the distribution of real assets by going to original returns of the Keisei Chōsa Nempō. However, it is unfortunate that its exercise is limited to 1970 and 1973, due probably to its limited time and funding.

I have utilized another data source to attempt a similar estimation in order to supplement the Study Group's Report [3]. The 1969 and 1974 reports of the Zenkoku Shōhi Jittai Chōsa Hōkoku [National Survey of Family Income and Expenditure] of the Statistics Bureau of the Prime Minister's Office publish estimates of imputed rent for owner-occupied dwellings. It seems that we can use the distribution of imputed rent for estimating the distribution of dwellings. This approach can be justified if house rents for housing services of the same quality are assumed to rise at a constant rate and are discounted at a constant rate. It may also be noted that house rents in Japan usually cover a substantial amount of land rent. Therefore, for the sake of simplicity, let us suppose that the land rent is

totally included in the house rent. Then, the asset value of land and dwellings is equal to the present discounted value of rents to accrue in the future. Noting that the land rent will accrue forever, we can derive the following equation:

$$(1) V = R(1 + d)/(d - g)$$

where V represents the asset value of land and a dwelling, R the house rent, d the discount rate, and g the annual rate of increase in the house rent. When d and g remain constant, V is in proportion to R . Thus, the distribution of V can be estimated from the distribution of R . In other words, by accepting a few strong assumptions, we can estimate the distribution of real assets, including land and dwellings, from that of house rents.

Table 7 shows the inequality in this distribution with respect to worker households. This table indicates that the inequality

Table 7

Inequality in the Distribution of Real Assets
(Gini Coefficient)

Year	Inequality		
	Overall	Between house-owning and house-renting households	Among house-owning households (weight)
1969	0.5208	0.4893	0.0616 (0.5107)
1974	0.4517	0.4214	0.0524 (0.5786)

Source: Prime Minister's Office, Zenkoku Shōhi Jittai Chōsa Hōkoku [National Survey of Family Income and Expenditure] (worker households by income class).

is very small among those households that own their dwellings; the Gini coefficient is below 0.1. This is perhaps due to the fact that our estimation is based on the distribution of imputed

house rent by income class. (Unfortunately, there are no other data available.) Since it neglects the distribution of imputed house rent within each income class, the inequality in the distribution of real assets held by house-owning households is clearly underestimated. We may compare our estimate with those of the Income Distribution Study Group, namely the Gini coefficient of 0.12 (by income class) and 0.44 (by asset class) for the year 1973. Therefore, in interpreting our inequality measure, we must keep in mind that it is considerably underestimated. According to Table 7, the overall inequality in the distribution of real assets is represented by the Gini coefficient of around 0.5. It is almost entirely explained by the inequality between house-owners and nonhouse-owners). In other words, the inequality in asset holdings is not the relative inequality among asset holders but the absolute inequality between the Have's and the Have-not's. This is the message that Table 7 conveys to us. It may be noted that the inequality decreased from 1969 to 1974. This is because the proportion of house-owners rose from 51.5% to 57.9% of all households.

3. The Inequality in the Distribution of All Assets

At present, we have no data that enable us to estimate the size distribution of all assets covering both financial and real assets. However, let us attempt one such estimation on the following strong assumptions: (a) Those households that rent houses possess no real assets; (b) House-owning households possess more assets than do any of the house-renting households. These two assumptions enable us to compute the Gini coefficient for the overall distribution. Note that assumption (a) leads to an overestimation of the Gini coefficient between house-owning and house-renting households, while assumption (b) leads to an underestimation of the weighted Gini coefficients within house-owning households and house-renting households respectively. Furthermore, as observed earlier, the inequality among house-owning households is seriously underestimated. As a whole, therefore, the inequality to be

estimated below is underestimated.

In making use of equation (1), we make the following assumptions on d and g : The discount rate (d) is represented by the average rate of return on corporate stocks, which are substitutes for land and dwellings. The rate is assumed to be 20% per annum (the average rate of return from 1954 to 1974 in Kabuka Shūeki-ritsu [Rate of Return on Corporate Stocks], reported by the Nihon Shōken Kenkyūjo [The Japan Securities Research Institute]). As for the annual rate of increase in imputed rent, three alternative values — 10%, 15%, and 17% — are taken in correspondence to the annual rate of increase in private house and room rents (annual average from 1959 to 1974, as given in Shōhisha Bukka Shisū Nempō [Annual Report on the Consumer Price Index] by the Prime Minister's Office) and the annual rate of increase in urban land prices (15% for 1964 to 1969 and 17% for 1964 to 1974, according to the data published by Nihon Fudōsan Kenkyūjo [the Japan Real Estate Research Institute]).

Let me caution the reader that great care and reservations must be brought to bear in reading Table 8, which reports on estimates based upon these strong assumptions.

What we can discern from Table 8 are the following three points:

- (i) The Gini coefficient for asset holdings of worker households around 1970 is estimated to be 0.5 or more.
- (ii) The inequality between house-owning and house-renting households is consistently large, accounting for 70 percent of the overall inequality.
- (iii) The inequality expanded in the early 1970s with respect to house-renting households' holdings of financial assets and house-owning households' holdings of assets.

III. The Distribution of Assets among Farm Households

The Nōka Keizai Chōsa [Farm Household Economy Survey] of the Ministry of Agriculture, Forestry, and Fisheries publishes annual statistics on the asset distribution of farm house-

Table 8
The Inequality in the Distribution of All Assets
(Gini Coefficient)

	Inequality				
	Overall (a)	Between house-owning and house-renting households (b)	b/a (%)	In house-renting households' holdings of financial assets	In house-owning households' holdings of assets
(g = 0.10)	0.4758	0.2943	61.9	0.6491 (9.5)	0.2914 (41.1)
1969 (g = 0.15)	0.4896	0.3593	73.4	0.6491 (6.4)	0.1999 (44.4)
(g = 0.17)	0.4975	0.3993	80.3	0.6491 (4.4)	0.1497 (46.5)
(g = 0.10)	0.4952	0.2904	58.6	0.7683 (5.5)	0.3231 (50.3)
1974 (g = 0.15)	0.4754	0.3374	71.0	0.7683 (3.5)	0.2097 (53.0)
(g = 0.17)	0.4644	0.3644	78.5	0.7683 (2.4)	0.1494 (54.6)

Notes: g is the annual rate of increase in imputed rent; figures in parentheses are weights (%).

Source: Prime Minister's Office, Zenkoku Shōhi Jittai Chōsa Hōkoku [National Survey of Family Income and Expenditure] (worker households, classified by the balance of accumulated savings).

holds by farm size (land area). However, there is a substantial difference in actual per acre land price between farmland in the Tokyo Area and those in rural areas. Therefore, the reported asset distribution by farm size does not necessarily represent that by asset size. However, there is no other reliable source.

In addition, this survey is deficient in that the land value is the appraised value for real estate tax assessment, which is generally believed to be substantially lower than the prevailing market value. This makes it necessary to make adjustments for the reported data. Fortunately, the survey reports, for reference, actual sales values of land and capital gains. Table 9 shows the appraised land values as percent of the actual sales values. This percentage has been 10 percent or less of the market value for the past 20 years.

Table 10 shows the inequality indexes for the distributions of land, dwellings, and net financial assets held by farm households. The following three points can be noted from this table:

(i) With respect to the distribution of land, inequality among prefectures has been widening ever since 1959. On the other hand, the inequality within prefectures has been contracting. The overall inequality among farm households has tended to increase through the postwar economic growth.

(ii) With respect to the distribution of dwellings, the inequality is considerably less. However, the inequality among prefectures widened in the 1960s, thereby contributing to expanding the overall inequality.

(iii) With respect to the distribution of net holdings of financial assets, the inequality varied from one year to another with no consistent trend over time. However, as far as the 1960s were concerned, the inequality was not much different from that of land.

The reader's attention is called especially to (i). The income inequality between nonfarm and farm households tended to narrow in the period of rapid economic growth (Mizoguchi, Takayama, and Terasaki [7]). When the labor market in Japan became tighter in the early 1960s, the income distribution started to become less unequal. However, as the demand for land

rapidly increased in the process of economic growth, land became increasingly scarce in relation to other factors of production, and consequently land prices skyrocketed as shown in Table 11. In the course of the rapid economic growth, landowners in major cities and their suburbs acquired huge capital gains. This point is illustrated in Table 12 for the average farmer residing in the Tokyo metropolitan area. Though the average acreage of land per farm household tended to decrease slightly over time, its market value rapidly increased through the period of rapid growth to well over ¥1 billion per farm household, a stupendous amount that no worker could dream of accumulating, no matter how hard he may work. Tokyo farmers enjoyed these huge windfall gains only because their parents had happened to be farmers in Tokyo. Tokyo farmers may be an extreme case, but there is no denying the fact that the asset value of land held by farm households rapidly increased in the period of rapid growth. This has widened the inequality among farm households. Land accounts for nearly 90% of farm households' total assets (Table 13). Therefore, the inequality in the distribution of assets among farm households is unmistakably governed by the inequality in the distribution of land holdings. Economic growth contributed to equalizing income distribution but acted otherwise in the case of asset distribution. This is what Japanese farm households experienced in postwar Japan, a point to which the reader's attention is called.

In terms of the Gini coefficient, the inequality in the distribution of assets among farm households is 0.5 or more as of 1974. (See the figures in parentheses in Table 10, which represent the Gini coefficient.) It is not possible to decompose the Gini coefficient into those between groups and within groups (Takayama [5]). In other words, the sum of the two Gini coefficients is not equal to the overall Gini coefficient. Nonetheless, the latter was probably 0.5 or higher as of 1974.

We may note that the coefficient was much lower in 1959, probably because of the agrarian land reform in the late 1940s. As is well known, the land reform deprived large landed farmers of large chunks of their estates, to the benefit of tenant

Table 9

The Ratio of the Appraised Land Value to the Market Value

Year	%	Year	%	Year	%	Year	%
1959	13.3	1965	4.2	1969	3.6	1973	4.7
62	8.5	66	6.2	70	4.3	74	6.6
63	5.6	67	5.9	71	3.8	75	4.1
64	6.2	68	6.3	73	2.5	76	9.6

Source: Ministry of Agriculture, Forestry, and Fisheries, Nōka Keizai Chōsa Hōkoku [Farm Household Economy Survey] (national average).

Table 10
The Inequality in the Asset Distribution of Farm Households
(Theil Coefficient)

Asset type	Year	Inequality		
		Overall	Among prefectures	Within prefectures
Land	1959	0.1361	0.0140 (0.0939)	0.1221 (0.2705)
	64	0.1699	0.0483 (0.1581)	0.1216 (0.2741)
	69	0.1664	0.0706 (0.1665)	0.0958 (0.2414)
	74	0.4515	0.4297 (0.4003)	0.0218 (0.1109)
Dwellings	1959	0.0328	0.0171	0.0157
	64	0.0380	0.0197	0.0183
	69	0.0426	0.0301	0.0125
	74	0.0297	0.0215	0.0082
Financial assets (net of debt)	1959	0.1578	0.1102	0.0476
	64	0.1104	0.1103	0.0069
	69	0.1416	0.1396	0.0020
	74	0.0874	0.0847	0.0027

Notes: The inequality within prefectures is computed on an assumption that there are no differences among prefectures. Figures within parentheses are Gini coefficients.

Source: Ministry of Agriculture, Forestry, and Fisheries, Nōka Keizai Chōsa Hōkoku.

Table 11
Rates of Price Rise (%)

Year	CPI	Urban land	Industrial land	Year	CPI	Urban land	Industrial land
1961	5.1	37.9	53.2	1969	5.2	19.8	14.5
62	6.9	26.4	31.2	70	7.7	22.6	16.9
63	7.5	15.6	19.0	71	6.1	17.7	15.0
64	3.9	13.8	15.8	72	4.5	14.4	14.3
65	6.6	14.6	12.2	73	11.7	29.0	24.6
66	5.1	6.2	3.1	74	24.5	26.1	23.1
67	4.0	10.0	4.6	75	12.4	- 4.0	- 5.3
68	5.3	6.5	10.3	76	9.3	1.5	0.3

Sources: Prime Minister's Office, Shōhisha Bukka Shisū Nempō [CPI Annual Report]; Nihon Fudōsan Kenkyūjo [Japan Real Estate Research Institute], Zenkoku Shigaiichi Kakaku Shisū [Urban Land Price Index].

Table 12
Average Land Holding per Farm Household in the Tokyo Area

Year	1959	1964	1972	1974
Acreage (are)	71.2	69.5	65.8	64.0
Estimated value (¥ million)	11.95	58.4	280.1	1,856.7
	9.56	46.7	224.0	1,485.4
	4.78	23.4	112.0	742.7

Note: b is the percentage of the appraised land value to the market value that is assumed.

Source: Ministry of Agriculture, Forestry, and Fisheries, Nōka Keizai Chōsa Hōkoku.

Table 13

Wealth Gap between Farm and Nonfarm Households (per household)

Asset type	Farm household	Worker household		Total
		Own house	Rent house	
Financial assets (net)	1.136 (3.108)	0.971 (1.565)	0.701 (1.147)	0.839 (1.389)
Dwellings	1.839 (2.451)	1.566 (2.842)*	0. (0.)	0.800 (1.644)*
Land	19.997(47.680)	3.132 (5.685)**		1.599 (2.806)**
		5.220 (9.474)***		2.666 (5.481)***
Total		2.537 (4.407)*		1.639 (3.033)*
	22.872 (53.239)	4.103 (7.250)**	0.701 (1.147)	2.438 (4.195)**
		6.191 (11.039)***		3.505 (6.870)***

Notes: Figures are outside parentheses for 1969 and within parentheses for 1974. Asset values are estimated for three alternative rates of increase in imputed rent — 10% (*), 15% (**), and 17% (***) .

Source: Ministry of Agriculture, Forestry, and Fisheries, Nōka Keizai Chōsa Hōkoku [Farm Household Economy Survey]; Prime Minister's Office, Zenkoku Shōhi Jittai Chōsa Hōkoku [National Survey of Family Income and Expenditure].

farmers who gained farmland virtually free of cost. Therefore, the asset distribution among farm households was quite equitable in the 1950s. Rapid economic growth led to a complete change.

IV. The Inequality in Asset Distribution between Farm and Nonfarm Households

Based on the observations given above, let us now compare the inequality in asset holdings between farm and nonfarm households. The following four assumptions are made: (1) the discount rate (d) is 20%. (2) Three alternative values are assigned to the rate of increase in imputed rent — 10%, 15%, and 17% (so the value of a dwelling together with its land is 12, 24, and 40 times its imputed rent, as is seen from equation 1.) (3) The Tax Office appraised value of land was 3.6% (1969) and 6.6% (1974) of its market value (Table 11). (4) House-renting householders have no real assets.

Table 13 is prepared upon these assumptions. As is clear, the average asset holding of a farm household was far in excess of that of a worker household. Moreover, in the early 1970s the average net holding of financial assets per household was ¥3.11 million for farm households and ¥1.56 million for house-owning worker households. As for real assets of land and dwellings, a worker household, on account of the far larger land holding of the average holding of a farm household is far larger than that of the former. As of 1974, the average holding of real assets per farm household was as high as ¥50 million, while that per house-owning worker household was only ¥9.5 million. These figures call for a reexamination of the economic position of farmers in Japanese society both in terms of income and wealth. The image of impoverished farmers still persists among the Japanese at large but it has lost ground in contemporary Japan. In reality, not only does the average annual income of farm households exceed that of worker households, but also the former's wealth is more than 5 times that of the latter.

The wealth gap between farm and nonfarm households notably expanded in the early 1970s. In the five years from 1969 to 1974, the average wealth per farm household increased 2.3 times while that per worker household rose 1.8 times. This phenomenon can be attributed to two factors — first, land is a predominant portion of farm households' assets; second, land prices rose much faster than all other prices. Land accounts for nearly 90% of all assets held by farm households. Real assets are 70 to 80% of all assets held by house-owning worker households, though the percentage has been on the increase. In either case, it should be noted that real assets account for an exceedingly high proportion of household wealth in Japan. This special feature should be kept in mind in conducting an international comparison. (In Western Europe the conventional wisdom has it that household wealth should be divided in three equal parts among real estate, riskless financial assets such as saving accounts and life insurance, and stocks and debentures.) Note that the land price in Japan increased from 1969 to 1974 by 2.4 times for urban residential land and 2.7 times for industrial land (Table 11).

Let me elaborate a little more as to why the "impoverished farmer" thesis ought to be reexamined. When we inspect farm assets in individual prefectures in 1974, the lowest figure is found in Kagoshima and Tottori Prefectures. But, even in these two prefectures, the average land value per farm household was ¥12 million, which was larger than the average wealth of house-owning worker households in the same year. Even the top 3 percentile of the latter had an average amount of wealth totaling only ¥26 million (see Zenkoku Shōhi Jittai Chōsa Hokoku, 1974). This again indicates that what determines the amount of household wealth is land ownership. Since this is the reality in contemporary Japan, it is self-evident that landed farm households are in a stronger position in wealth. Therefore, farm estate inheritances and the provisions of the Farmland Law concerning sales of land are important topics for further study. Their discussion is beyond the scope of the present paper.

V. Concluding Remarks

In this article, I have pieced together available statistical materials, despite their great limitations, in order to analyze the asset distributions in postwar Japan. I have derived two tentative conclusions from this analysis.

(i) Though postwar Japan's rapid economic growth contributed to equalizing income distribution in the 1960s, it also raised land prices dramatically, thereby widening the wealth gap between Have's and Have-not's in terms of land ownership.

(ii) The average wealth holding of farm households is far above that of worker households — more than 5 times in recent years.

Finding i requires us to reexamine Kuznets's inverted U hypothesis. In his presidential address [2] to the 1954 annual convention of the American Economic Association, Simon Kuznets, Nobel laureate, put forth what was to be known as Kuznets's inverted U hypothesis, according to which economic growth tends to increase inequality in income distribution at the initial stage, but after a certain point turns to reducing the inequality. The Kuznets hypothesis was tested for Japan by Mizoguchi, Takayama, and Terasaki [7] and was conditionally accepted. I say "conditionally" because the test was conducted on income data that did not include capital gains. It should also be noted that the turn to income equalization came in the 1960s, i.e., when the labor market became tight.

The present article was motivated by my wish to capture the effect of capital gains in asset data rather than income data. Though there are a number of limitations in the asset data, what I have discovered is a finding that contradicts the Kuznets hypothesis. Economic growth has functioned to widen the wealth inequality in, particularly, land. Therefore, it is not warranted to regard the Kuznets hypothesis as an unconditional historical law. It seems more appropriate to understand that the impact of economic growth upon income and asset distributions depends very much upon economic conditions and economic policy.

Finding ii calls for a reexamination of the "impoverished farmers" thesis, on the basis of which the Japanese policy authorities have continued to protect farmers (typically represented by the government's rice price support). Agricultural protectionism has survived in Japan always with a strong political backup but with no clear-cut rationale. But farmers today are no longer poor at all — at least not in terms of the average. The thesis of farmer poverty is no longer based on facts. Therefore, there is a substantial need for a reexamination of agricultural policy as a whole. This is the policy implication of finding ii. (Notwithstanding this fact, there are serious difficulties in securing successors to full-time farmers in many rural areas, thus suggesting that the advantages of being a full-time farmer are by no means great. Still, the majority of farmers today are far from impoverished.)

As I have repeatedly noted, these two conclusions are tentative in that they are based upon very limited statistical data. There may be other statistical sources that can be consulted. Since my research has not examined them fully, I may have been incorrect in my assessment of facts. I shall leave the matter for a future study.

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Editor's Note

For a fuller discussion of inequality in distributions of income and wealth in Japan, see the author's recent book, Noriyuki Takayama, Fubyōdo no Keizai Bunseki [Economic Analysis of Inequality] (Tokyo: Tōyō Keizai Shimpō Sha, April 1980).

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