

Income Distribution and Retirement Income in Japan*

Tetsuo Fukawa

Abstract

Income distribution and redistribution through taxes and social security has been a topic of great concern for many years in Japan. The belief that Japan is an equal society in terms of income distribution has been challenged recently, and more in-depth studies are needed.

Some important observations on income distribution come to light based on the analysis of the 1996 Survey on the Redistribution of Income. The Gini coefficient of disposable income for total households decreased from 0.37 to 0.34 by family size adjustment. Family size adjustment was especially necessary for households with older household head and three-generation households. Equivalised earnings of employee households were reduced by 17 percent on average through taxes and social security contributions. As for the shares of different income sources of the elderly households (single or couple-only aged 65+) by income quintile of equivalised gross income, the share of earnings was more than one third for the fifth quintile. The proportion of disposable income to original income for total households was quite similar between Japan and the United Kingdom. However, the degree of redistribution of income through taxes and benefits was much higher in the United Kingdom.

Key words: income redistribution, disposable income, equivalence scale, income quintile, household structure

1. Introduction

The reform of the welfare state is among the priority issues in many developed countries, and the functions of income redistribution and risk pooling performed by the social security system have been reexamined under the circumstances of persistent low fertility, aging of the population, and global competition. In view of the financial difficulties of sustaining social security, trimming of public programs; and expansion of private arrangements have been discussed in many countries. Political discontent has emerged in recent years in many industrialized countries due to a perceived notion that income inequality has been increasing while the middle class has been shrinking (Duncan, Smeeding and Rodgers, 1993). According to Table 1, inequality of original income has been increasing in Japan since 1981. The effect of income redistribution through social security seems to have been rising since the mid 1980s, but it is explained to some extent by the increase in the number of elderly households, especially single households, receiving retirement benefits.

The burden of income tax and social insurance contribution in Japan was smaller than the burdens in other countries at the lowest quintile, and larger than the burdens in most other countries except that of the United

States at the highest quintile (OECD, 1995). Concerning the distribution of disposable income, the share of the lowest quintile was small in Japan (only in the United States and France did the lowest quintile have smaller shares than it did in Japan), but distribution in Japan was rather similar to that in the United Kingdom, and the Gini coefficient was almost the same in both countries (OECD, 1995).

Japan was considered as an equal society in terms of income distribution, but this belief has been challenged recently, and the income equality level in Japan might be as low as that in the United Kingdom. According to Smeeding (1997), the Gini coefficients of adjusted disposable income in the first half of 1990s were low in Sweden at 0.23, Denmark at 0.24, the Netherlands at 0.25; and the figures for the G7 countries were as follows: Germany and Italy at 0.26, France and Canada at 0.29, Japan at 0.32, and the United Kingdom and the United States at 0.34. Eurostat (1998) also showed that income equality was high in Denmark, Sweden, the Netherlands, and low in the United Kingdom.

Income distribution and redistribution in Japan needs more research work, and an in-depth study is necessary to compare Japanese income equality level to other

countries. The purposes of this paper are i) to analyze income distribution in Japan according to household structure, especially focusing on employee households and households including elderly, by using the micro data of the 1996 Survey on the Redistribution of Income, and ii) to argue the similarities and differences in terms of income redistribution between Japan and the United Kingdom. show that income redistribution through taxes and transfers could be quite different even if overall Gini coefficients are similar by Japan-UK comparison on income distribution.

2. Data and method

(1) Data

The Survey on the Redistribution of Income has been conducted in Japan every three years by the Ministry of Health and Welfare (now the Ministry of Health, Labour and Welfare) since 1962. Table 1 shows a summary of the results of these surveys published by the Ministry without any adjustments of family size. This paper draws on data from the 1996 survey that are the latest available micro data. As for the household structure, the same category is used in the survey: living-alone, couple-only, couple-with-children, lone-parent, three-generation, and other households.

(2) Definition of income

Original income is the sum of I1) wages and salaries, I2) self-employed income, I3) asset income, I4) occupational pensions and retirement allowance from companies, and

I5) private remittance received, payment from life and non-life insurances. Only direct taxes are considered in the survey, and the following taxes were included in the direct taxes : national as well as local income taxes, fixed property tax, and automobile tax. Social security systems here refer to the public pension system, the public health insurance and social welfare programs. Although the above-mentioned survey in-cludes social security benefits in-kind, most of which are health services, health services have been excluded from social security benefits. In sum, disposable income was defined as follows:

$$\text{Gross income} = \text{Original income} + \text{Social security benefits excluding health services}$$

$$\text{Disposable income} = \text{Gross income} - (\text{Direct taxes and social security contributions})$$

Deduction rate is defined here as the proportion of direct taxes and social security contributions to the gross income.

(3) Adjustment for household size

Since households differ in size and in composition, it is necessary to adjust income to account for differences in need. Equivalence scales were designed to accomplish this. The following two equivalence scales are used in adjusting family size and age of children.

Scale a :

$$\begin{aligned} \text{first adult (15+)} &= 1.0; \\ \text{additional adults} &= 0.5 ; \\ \text{children (0-14)} &= 0.3 \end{aligned}$$

Scale b :

$$\begin{aligned} \text{first adult (18+)} &= 1.0; \\ \text{second adult} &= 0.7 ; \\ \text{additional adults} &= 0.5; \end{aligned}$$

Table 1. Gini coefficient for original income and disposable income of Japanese households : 1962-1996

Survey year	Original income	Disposable income (%)	Income after taxes (%)	Income after social security (%)
1962	0.390	0.344	12	-
1967	0.375	0.328	13	0.361 4
1972	0.354	0.314	11	0.338 5
1975	0.375	0.346	8	0.364 3
1978	0.365	0.338	7	0.352 4
1981	0.349	0.314	10	0.330 5
1984	0.398	0.343	14	0.382 4
1987	0.405	0.338	16	0.388 4
1990	0.433	0.364	16	0.421 3
1993	0.439	0.365	17	0.426 3
1996	0.441	0.361	18	0.434 2

Note : Percent (%) shows the degree of improvement in Gini coefficient from that of Original income.

Source : Ministry of Health and Welfare. Income Redistribution Survey, each year.

children (0-17) = 0.5

The choice of equivalence scales affects the ranking of countries and OECD (1995) updated such analysis.

(4) Measures of inequality

The ratio of the top to bottom quintile/decile in terms of average income is referred to as the quintile/decile ratio. Comparisons of income distributions are more frequently based on the cumulative distribution of income compared to the cumulative distribution of households (i. e. the Lorenz curve). The Gini coefficient is used as a summary measure of inequality in this paper (Note 1). All summary measures imply some a priori value judgments about the distribution itself, and the Gini coefficient is most sensitive to inequality changes around the median.

3. Results

3.1 Income distribution of total households

(1)By income quintile

Table 2 shows average gross income and average disposable income by gross income quintile. The change of quintile ratios from gross income to disposable income were as follows: 8.6 – 8.2 (no adjustment), 6.3 – 6.0 (scale a) and 6.4 – 6.1 (scale b).

(2)Disposable income by age group of household head and household structure

Average disposable income was highest in the age group 40-49 for living-alone and couple-only households, and highest in the age group 50-59 for the other households (Table 3). Within the same age group, couple-only households tended to have higher average disposable income for age groups below 60, and couple-with-children households had the highest average disposable income for the age group 60-69. Average disposable income for living-

alone households decreased remarkably after age 60, but three-generation households had relatively stable average disposable income by age group of household head. Gini coefficients of disposable income were higher for living-alone households aged 40 or over and couple-only households aged 60 or over, and lower for younger households and three-generation households. Family size adjustment had little effect on the Gini coefficients of disposable income except in the case of three-generation households.

3.2 Income distribution of employee households

This section focused on those households where gross income = initial income = wages and salaries (II). About 43 percent of total households surveyed are included in the employee households category. Eighty one percent of employee households had a household head aged 30-59, and 89 percent of employee households were couple-with-children, living-alone, or couple-only households.

(1)Average earnings

Average earnings were highest in the age group 50-59 except in the case of living-alone households (Table 4). Within the same age group, couple-only households had the highest average earnings for age groups below 60, and couple-with-children households had the highest average earnings for the age group 60-69. The Gini coefficients of earnings were smaller than those shown in Table 3, but income inequality was high in the living-alone households aged 50-59 and the households aged 60-69.

(2)Deduction rate

Figure 1 shows the proportions of direct taxes, health insurance contribution, and pension insurance contribution to earnings by earnings class. On the one hand the progressiveness of direct taxes can be confirmed; on the other hand social security contribution (employees part only) decreased slightly with earnings increase. This could be partly explained by the fact that the contribution rate ap-

Table2. Average gross income and disposable income by gross income quintile

(In 10,000 yen per year)

Gross income quintile	Number of households	Gross income			Disposable income		
		No adjustment	Scale a	Scale b	No adjustment	Scale a	Scale b
Total	8131	683.4	354.8	317.1	574.1	299.0	267.2
1	1626	172.3	116.6	104.4	149.1	100.2	89.5
2	1626	376.2	216.8	189.9	325.5	189.6	166.1
3	1627	569.7	298.8	262.7	489.7	257.6	226.8
4	1626	810.9	404.6	360.3	687.8	343.9	306.3
5	1626	1487.8	737.2	668.0	1218.5	603.6	547.6

Table3. Disposable income by age group of household head and household structure

(1) Average disposable income (In 10,000 yen per year)

Age group	No adjustment						Scale a					
	Total	Living alone	Couple		Lone parent	Three-generation	Total	Living alone	Couple		Lone parent	Three-generation
			N	C					N	C		
Total	574	264	494	675	428	829	299	264	329	307	262	285
-29	341	243	449	393	...	...	242	243	300	209	...	...
30-39	514	345	565	533	...	...	284	345	376	261	...	...
40-49	629	405	591	668	378	769	300	405	394	295	226	264
50-59	724	352	588	842	521	897	356	352	392	366	314	318
60-69	579	224	500	744	...	853	313	224	333	351	...	293
70+	424	163	377	...	...	874	234	163	251	...	...	281

Age group	Scale b					
	Total	Living alone	Couple		Lone parent	Three-generation
			N	C		
Total	267	264	291	265	232	252
-29	221	243	264	169	...	...
30-39	240	345	332	206	...	...
40-49	262	405	348	250	203	231
50-59	325	352	346	334	280	291
60-69	283	224	294	320	...	256
70+	213	163	222	...	...	251

(2) Gini coefficient

Age group	No adjustment						Scale a					
	Total	Living alone	Couple		Lone parent	Three-generation	Total	Living alone	Couple		Lone parent	Three-generation
			N	C					N	C		
Total	0.37	0.41	0.36	0.29	0.38	0.28	0.34	0.41	0.36	0.29	0.38	0.30
-29	0.30	0.27	0.24	0.23	...	...	0.27	0.27	0.24	0.24	...	...
30-39	0.25	0.24	0.18	0.22	...	...	0.25	0.24	0.18	0.22	...	...
40-49	0.29	0.40	0.28	0.25	0.36	0.24	0.29	0.40	0.28	0.25	0.36	0.25
50-59	0.33	0.43	0.33	0.26	0.36	0.28	0.32	0.43	0.33	0.28	0.35	0.30
60-69	0.42	0.42	0.39	0.35	...	0.28	0.39	0.42	0.39	0.37	...	0.31
70+	0.48	0.40	0.39	...	...	0.31	0.40	0.40	0.39	...	...	0.34

Note : N=No children, C=With children

Figure 1. Proportions of direct taxes, health insurance contribution, and pension insurance contribution to earnings by earnings class : Employee households

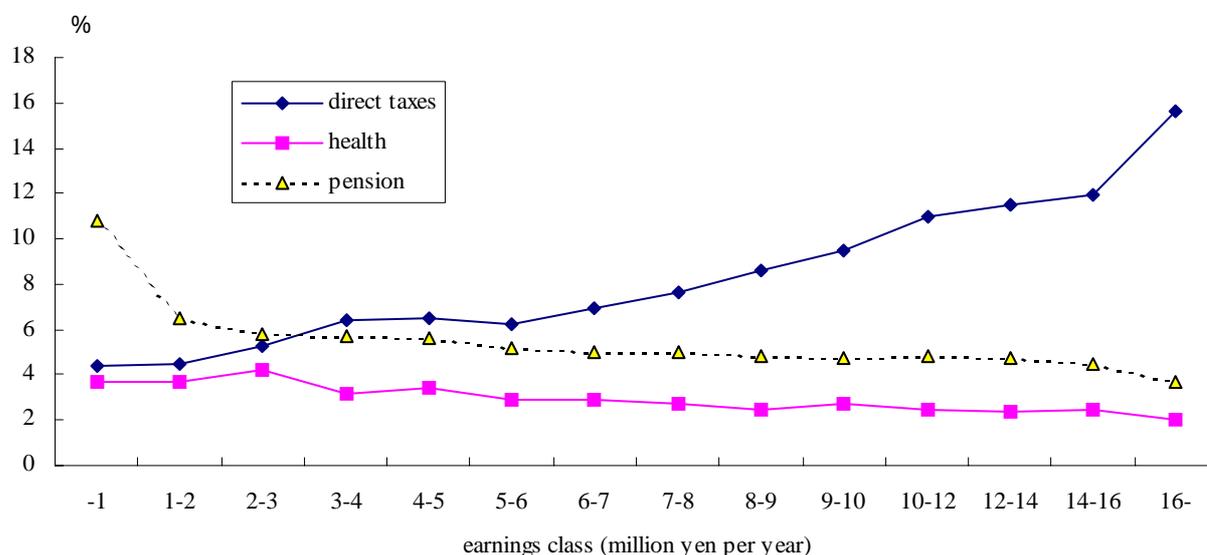


Figure2. Proportion of pension insurance contribution to earnings by age group of household head and household structure : Employee households

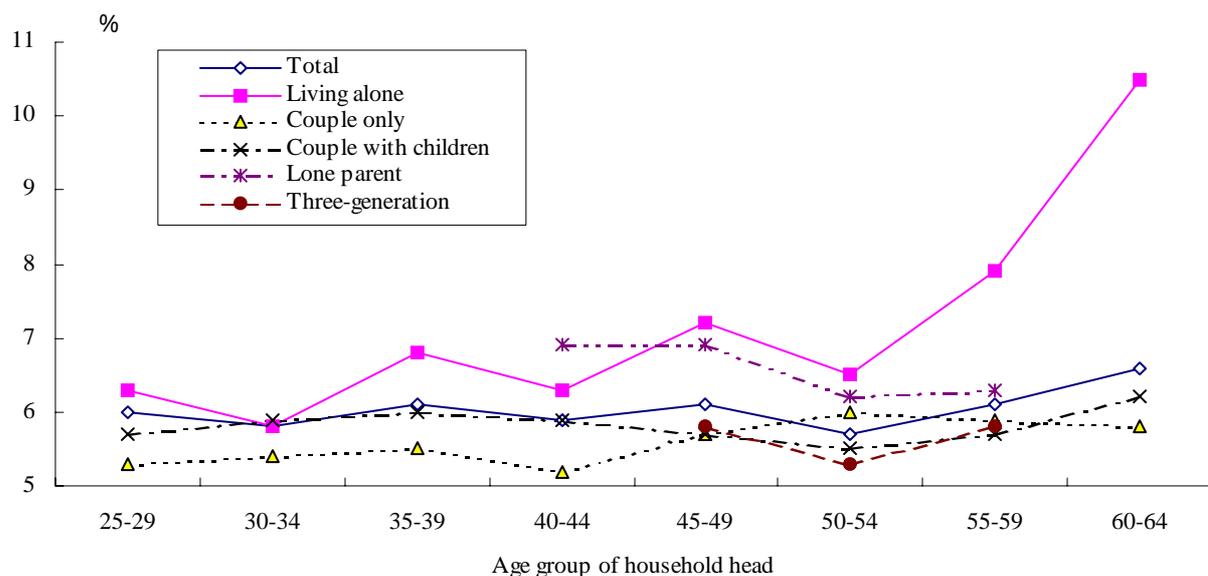


Table4. Employee households

(1) Average earnings (In 10,000 yen per year)

Age group	Scale a						Scale b					
	Total	Living alone	Couple		Lone parent	Three-generation	Total	Living alone	Couple		Lone parent	Three-generation
			N	C					N	C		
Total	373	385	441	363	290	340	332	385	389	311	259	299
-29	296	307	339	252	...	...	273	307	299	204	...	...
30-39	344	414	451	307	...	...	294	414	398	243	...	...
40-49	374	476	479	363	245	299	327	476	423	307	220	260
50-59	430	425	486	432	338	405	393	425	429	393	302	365
60-69	378	238	385	424	...	...	343	238	340	387	...	...

(2) Gini coefficient of earnings

Age group	Scale a						Scale b					
	Total	Living alone	Couple		Lone parent	Three-generation	Total	Living alone	Couple		Lone parent	Three-generation
			N	C					N	C		
Total	0.27	0.30	0.26	0.25	0.30	0.32	0.28	0.30	0.26	0.26	0.30	0.33
-29	0.23	0.21	0.20	0.23	...	...	0.24	0.21	0.20	0.24	...	...
30-39	0.23	0.22	0.19	0.19	...	...	0.25	0.22	0.19	0.20	...	...
40-49	0.27	0.30	0.27	0.24	0.34	0.22	0.28	0.30	0.27	0.24	0.33	0.23
50-59	0.27	0.39	0.26	0.23	0.27	0.25	0.27	0.39	0.26	0.23	0.27	0.25
60-69	0.36	0.34	0.31	0.35	...	...	0.36	0.34	0.31	0.35	...	...

(3) Deduction rate

(In percent)

Age group	Scale a						Scale b					
	Total	Living alone	Couple		Lone parent	Three-generation	Total	Living alone	Couple		Lone parent	Three-generation
			N	C					N	C		
Total	17.0	17.0	17.6	17.0	15.2	16.2	17.0	17.0	17.6	17.0	15.2	16.2
-29	15.3	15.8	15.4	14.5	...	...	15.4	15.8	15.4	14.5	...	...
30-39	16.0	15.8	16.4	16.0	...	...	15.9	15.8	16.4	16.1	...	...
40-49	17.4	18.1	18.2	17.3	15.7	17.3	17.4	18.1	18.2	17.3	15.7	17.3
50-59	17.8	18.7	18.7	17.6	16.0	17.1	17.8	18.7	18.7	17.5	15.9	17.1
60-69	16.8	15.6	18.4	17.3	...	...	16.7	15.6	18.4	17.3	...	...

plied to bonuses is much lower than that for monthly earnings(Note 2).

Table 4 (3) shows deduction rate by age group of household head and household structure. The deduction rate for employee households as a whole was 17 percent while lone-parent households and households aged below 40 had a lower deduction rate. In other respects, the deduction rates were rather similar by age group and household structure. Figure 2 shows the proportion of pension insurance contribution (employees part only) to earnings by age group of household head and household structure. The proportion tended to be higher for living-alone households and lower for couple-only households. However, the proportion remained rather stable by age group of household head.

3.3 Income distribution of households including elderly (65+)

Apart from employees households, this section focused on those households in which elderly people aged 65 or

over were included. About 34 percent of total households surveyed corresponded to this category of households. The breakdown by age group of household head was as follows: 40-49=13 percent, 50-59=11 percent, 60-69= 32 percent, and 70+=42 percent. Viewed by household structure, the share of three-generation households was the highest at 32 percent and couple-only households came in second highest at 27 percent.

(1) Disposable income by household structure

Average disposable income of couple households, both couple-only and couple-with-children, was higher than that of living-alone households, but relatively similar to that of three-generation households (Table 5). The Gini coefficients of disposable income were higher for non-co-resident elderly (namely, living-alone households and couple-only households). The deduction rate increased in the following order: living-alone < couple-only < three-generation.

Table5. Households including elderly (65+)

(1) Average disposable income					(In 10,000 yen per year)							
Age Group	No adjustment				Scale a			Scale b				
	Living alone	Couple		Three-generation	Living alone	Couple		Three-generation	Living alone	Couple		Three-generation
		N	C			N	C			N	C	
40-49	-	-	...	774	-	-	...	266	-	-	...	233
50-59	-	...	...	919	-	...	...	329	-	...	...	305
60-69	218	450	644	875	218	300	303	303	218	265	277	268
70-	167	381	597	874	167	254	284	281	167	224	259	251

(2) Gini coefficient of disposable income												
Age Group	No adjustment				Scale a			Scale b				
	Living alone	Couple		Three-generation	Living alone	Couple		Three-generation	Living alone	Couple		Three-generation
		N	C			N	C			N	C	
40-49	-	-	...	0.23	-	-	...	0.24	-	-	...	0.24
50-59	-	...	...	0.27	-	...	...	0.30	-	...	...	0.30
60-69	0.39	0.35	0.32	0.28	0.39	0.35	0.32	0.32	0.39	0.35	0.32	0.33
70-	0.39	0.39	0.32	0.31	0.39	0.39	0.31	0.34	0.39	0.38	0.31	0.34

(3) Deduction rate					(In percent)							
Age Group	No adjustment				Scale a			Scale b				
	Living alone	Couple		Three-generation	Living alone	Couple		Three-generation	Living alone	Couple		Three-generation
		N	C			N	C			N	C	
40-49	-	-	...	15.4	-	-	...	15.4	-	-	...	15.4
50-59	-	...	...	17.4	-	...	...	17.4	-	...	...	17.4
60-69	8.3	12.8	15.3	14.7	8.3	12.8	15.1	14.3	8.3	12.8	15.2	14.4
70-	7.4	12.3	13.8	15.0	7.4	12.3	13.9	15.0	7.4	12.3	13.9	15.0

Note : N=No children, C=With children

(2) Income sources of non-co-resident elderly

Table 6 shows the shares of different income sources of non-co-resident elderly (65+). The share of earnings decreased with age, and the share of public pension increased in return. Average gross income of couple-only households was between 1.4 to 1.7 times that of living-alone households, except in the case of age group 85+ for which the sample size was small. Viewed by income quintile of gross income, the share of public pension was about 80 percent or more for the first to fourth quintiles, and it decreased to 40 percent for the fifth quintile. But, average pension benefit was higher for higher quintiles: first quintile 0.6 million yen per year, second 1.1 million yen per year, third 1.8 million yen per year, fourth 2.1 million yen per year, and fifth 2.0 million yen per year. The share of earnings was more than one third for the fifth quintile. The deduction rate was around 7 percent for the middle three quintiles and higher for the first and the fifth quintiles.

tribution

Table 7 compares income redistribution through taxes and transfers between Japan and the United Kingdom. In order to make the comparison more realistic, the same McClements equivalence scales for Japanese data are used in Table 7 (Note 32). The proportion of direct taxes and social insurance contributions (employees part only) to the average gross income was 15 percent in Japan compared with 21 percent in the United Kingdom. The proportion increased to 37 percent in the United Kingdom, if indirect taxes were also added. Among benefits in-kind, there was little difference in the proportion of health care to the disposable income: 10 percent in both Japan and the United Kingdom. There was, however, a difference in the proportion of transfer to the average original income (14 percent in Japan compared with 19 percent in the United Kingdom), and the difference was especially large for the lowest income quintiles between the two countries. Reflecting income redistribution through taxes and

4. Japan-UK comparison on income dis-

Table 6. Shares of different income sources of the elderly households (single or couple aged 65+)

(1) By age group (Scale a)													(In 10,000 yen per year, percent)					
	Living alone						Couple-only						Total					
	65	70	75	80	85	Total	65	70	75	80	85	Total	65	70	75	80	85	Total
Gross income	238	188	157	199	188	197	349	323	268	271	164	313	313	272	214	238	177	268
Share (%)																		
Earnings	18.1	8.7	4.7	4.0	1.8	9.6	28.3	16.9	11.5	11.4	2.4	20.4	25.0	13.8	8.2	8.0	2.0	16.2
Public pension	69.9	77.0	84.2	75.9	73.6	76.1	62.1	74.3	80.3	81.1	81.6	70.3	64.6	75.3	82.2	78.7	77.2	72.5
Occupational pension	0.9	0.0	0.1	0.1	0.0	0.3	1.6	1.0	0.5	0.0	2.4	1.1	1.4	0.6	0.3	0.0	1.1	0.8
Income from assets	2.9	2.6	2.2	7.6	8.9	3.7	3.9	3.7	3.7	5.3	4.7	4.0	3.6	3.3	2.9	6.4	7.0	3.9
Others	8.2	11.7	8.8	12.4	15.7	10.3	4.1	4.1	4.0	2.2	8.9	4.2	5.4	7.0	6.4	6.9	12.7	6.6
Disposable income	218	173	149	180	172	182	305	283	237	232	151	274	277	241	194	208	163	238
Deduction rate (%)	8.3	7.6	5.2	9.2	8.6	7.8	12.5	12.4	11.5	14.3	7.8	12.6	11.5	11.1	9.3	12.4	8.2	11.2
(2) By income quintile of gross income													(In 10,000 yen per year, percent)					
	No adjustment						Scale a						Scale b					
	1	2	3	4	5	Total	1	2	3	4	5	Total	1	2	3	4	5	Total
Gross income	84	171	271	376	911	364	72	144	205	275	641	268	68	135	188	252	582	246
Share (%)																		
Earnings	8.2	9.6	12.1	13.0	37.8	16.2	11.1	8.8	8.9	15.1	36.7	16.2	11.2	9.0	8.4	15.9	36.1	16.2
Public pension	81.9	81.2	80.7	78.4	40.8	72.5	82.3	78.4	86.0	75.9	40.3	72.5	82.5	79.1	85.5	75.3	40.6	72.5
Occupational pension	0.0	0.0	0.2	0.8	2.9	0.8	0.0	0.0	0.1	1.0	2.7	0.8	0.0	0.0	0.2	0.7	2.8	0.8
Income from assets	1.8	1.1	2.8	3.6	10.1	3.9	1.1	1.6	2.7	2.9	11.2	3.9	0.8	2.1	2.0	3.7	10.8	3.9
Others	8.1	8.1	4.2	4.2	8.4	6.6	5.5	11.2	2.3	5.1	9.1	6.6	5.5	9.8	3.9	4.4	9.7	6.6
Disposable income	76	159	251	349	769	322	65	135	191	255	543	238	61	126	175	233	494	218
Deduction rate (%)	9.3	6.9	7.2	7.3	15.6	11.6	10.5	6.3	7.0	7.5	15.3	11.2	10.5	6.5	6.7	7.4	15.1	11.0

transfers, the proportion of disposable income to the original income was especially high in the lowest quintile in the United Kingdom (256 percent) compared with 123 percent in Japan. Disposable income in the United Kingdom decreased by 6 percent on average from original income through taxes and transfers, and the decrease was 22.5 percent for the highest fifth quintile, whereas in Japan the effect of income redistribution was smaller, and disposable income decreased by only 12 percent from original income in the highest fifth quintile. The difference in average income between first and fifth quintiles (quintile ratio) was 8.7 in Japan and 17.0 in the United Kingdom for original income, but it dropped to 6.3 in Japan and 5.1 in the United Kingdom for disposable income.

Based on the analysis of the 1996 Survey on the Redistribution of Income the following observations can be made. First of all, the Gini coefficient of disposable income for the total households decreased from 0.37 to 0.34 by family size adjustment, and family size adjustment was especially necessary for households with older household head and three-generation households. Concerning employee households, couple-only households had the highest average equivalised earnings for age group below 60, and the deduction rates, 17 percent on average, did not change much by age group or household structure. Among those households including elderly (65+), average equivalised disposable income of couple-only households was similar to that of three-generation households, although the Gini coefficient of couple-only households was larger than

5. Discussion

Table 7. Redistribution of income through taxes and benefits according to quintile group of households

	UK (1995-96) in 1,000 pounds per year						Japan (1996) in 10,000 yen per year					
	Quintile of equivalised disposable income						Quintile of equivalised disposable income					
	1	2	3	4	5	Total	1	2	3	4	5	Total
Original income	2.43	6.09	13.79	22.45	41.26	17.20	72.1	143.2	221.5	323.4	628.2	277.7
Wages and salaries	1.39	4.05	10.39	17.61	29.81	12.65	49.7	122.7	197.7	287.1	485.9	228.6
Self-employment income	0.37	0.57	1.25	1.67	5.05	1.78	16.8	14.8	14.8	21.4	60.1	25.6
Occupational pensions	0.29	0.95	1.31	1.79	2.41	1.35	0.1	0.2	0.7	1.5	24.7	5.4
Investment income	0.20	0.34	0.58	0.83	2.64	0.92	1.1	1.6	2.7	6.4	21.0	6.5
Other income	0.18	0.19	0.27	0.54	1.35	0.51	4.4	3.9	5.5	6.9	36.6	11.5
Benefits in cash	4.91	4.66	3.36	2.13	1.20	3.25	33.5	47.0	41.8	37.2	36.0	39.1
Gross income	7.34	10.75	17.15	24.58	42.45	20.45	105.6	190.2	263.3	360.6	664.2	316.8
Direct taxes and SS contributions	1.13	1.52	3.13	5.18	10.48	4.28	17.3	23.9	35.8	52.7	112.0	48.3
Income tax and SSC	0.54	0.93	2.48	4.47	9.66	3.61	13.6	19.3	28.2	39.2	77.8	35.6
Local taxes	0.59	0.59	0.65	0.71	0.82	0.67	3.7	4.6	7.6	13.4	34.2	12.7
Disposable income	6.21	9.23	14.02	19.40	31.98	16.17	88.3	166.3	227.5	307.9	552.2	268.4
Indirect taxes	1.93	2.34	3.29	4.09	5.09	3.35						
Post-tax income	4.28	6.89	10.73	15.31	26.89	12.82						
Health care	1.89	1.83	1.73	1.52	1.33	1.66	32.6	30.0	24.6	23.0	22.2	26.5

	UK (1995-96) in percent						Japan (1996) in percent					
	Quintile of equivalised disposable income						Quintile of equivalised disposable income					
	1	2	3	4	5	Total	1	2	3	4	5	Total
Original income	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Gross income	302.1	176.5	124.4	109.5	102.9	118.9	146.5	132.8	118.9	111.5	105.7	114.1
Disposable income	255.6	151.6	101.7	86.4	77.5	94.0	122.5	116.1	102.7	95.2	87.9	96.7

Source : Social Trends 28 for the UK.

that of three-generation households, and the deduction rate of the latter was larger than that of the former.

As for the shares of different income sources of the elderly households (single or couple-only aged 65+) by income quintile of equivalised gross income, the share of public pension was about 80 percent or more for the first to fourth quintiles, and it decreased to 40 percent for the fifth quintile. The share of earnings was more than one third for the fifth quintile. The proportion of disposable income to original income for total households was quite similar between Japan and the United Kingdom: 97 percent in Japan, 94 percent in the United Kingdom. Viewed by income quintile, however, the degree of redistribution of income through taxes and benefit transfers was much higher in the United Kingdom. The quintile ratio of disposable income was fairly similar between the two countries. The burden of income tax and social insurance contribution in Japan was smaller than the burdens in other countries at the lowest quintile, and larger than the burdens in most other countries except that of the United States at the highest quintile (OECD, 1995). Concerning the distribution of disposable income, the share of the lowest quintile was small in Japan (only in the United States and France did the lowest quintile have smaller shares than it did in Japan), but distribution in Japan was rather similar to that in the United Kingdom, and the Gini coefficient was almost the same in both countries (OECD, 1995). Yet, the role of taxes and transfers is different between Japan and the United Kingdom. Lower inequality of household earnings is the main force behind lower inequality of disposable income of Japan compared to the United Kingdom; nevertheless, a higher degree of income redistribution through public transfers in the United Kingdom does not compensate for higher inequality of earnings between households in the United Kingdom (Jacobs, 2000).

The economic position of the elderly is one of the main concerns from the point of view of income redistribution. Public pension benefits are the most important income source for the elderly, especially for the low income class. As for the shares of different income sources of the elderly households (single or couple-only aged 65+) by income quintile of equivalised gross income, the share of public pension was about 80 percent or more for the first to fourth quintiles, and it decreased to 40 percent for the fifth quintile. The share of earnings was more than one third for the fifth quintile. Earnings are the second most important income source in Japan, whereas pensions

and annuities are the second most important in both the United Kingdom and the United States. The key challenge posed by an aging society is achieving a proper balance between the amount of time spent in work and in retirement (OECD, 2001). Employment is increasingly considered as an important alternative income source for older population in many developed countries, and how to create job opportunities for the older population is an issue.

The Survey on the Redistribution of Income offers such advantages as detailed data on benefits and contributions items, rich information about household structure, and good coverage of low income households. Conversely, the survey has the following shortcomings: its accuracy is inferior to that of the Family Income and Expenditure Survey; coverage of benefits in-kind including health services is weak; coverage of indirect taxes is also weak; and wealth is completely out of concern. Nevertheless, the survey results provide useful information. There is not a strong relationship between income and asset. The proportion of asset income to the total original income was relatively low, 10 percent at most, in Japan. Those who belong to the high income quintile have mostly high earnings. On the other hand, the inequality of assets is much larger than that of income, and wealth data as well as income data are necessary to analyze the economic position of the population. Household living arrangements, pooling of income among household members, play a role in risk adjustment, as families de-merge and remerge over the course of later life, and these mechanisms are particularly important in both Japan and Italy (OECD, 2001). Therefore, it is especially important to analyze the functions of social security in Japan according to the living arrangement of the elderly. In fact, about half of the elderly in Japan aged 65+ still live with their children.

Public assistance programs have a strong income redistribution function. However, the weight of public assistance has been reduced over time, and social security system in Japan today is assuming various functions including income redistribution. Health insurance, for example, was not originally designed to redistribute income, and it is necessary to analyze the functions of health insurance as well as long-term care insurance within a wider framework than income redistribution. How equal is the Japanese society in terms of income distribution is a question still to be answered, especially from the points of view of lifetime distribution and distribution through It is also necessary from the point of view of income redistribution to treat taxes and social insurance contributions

uniformly in a coherent manner.

Notes

*This paper was written for a project entitled Distribution of Income Project, which is a sub-project of Kosei Kagaku Kenkyu Hojokin Jigyo "International Cooperation Project on Reforms of Social Security" (1999-2001). The data used in this paper were made available to the author by the Ministry of Health, Labour and Welfare of Japan (SID No.117, 3 April 2001). The author is grateful for the comments from all participants of the workshop held on 12 July 2002

¹ The Gini coefficient is equal to the area between the Lorenz curve and the diagonal expressed as a proportion of the whole triangle. It is alternatively equal to the expected average difference in incomes, relative to the mean, between any two persons drawn at random from the population. All summary measures imply some a priori value judgments about the distribution itself, and the Gini coefficient is most sensitive to inequality changes around the median.

² The contribution rates of public pension insurance for private sector employees are 17.35 percent of monthly earnings and 1 percent of bonuses, both shared evenly by employers and employees, in 2002.

³ McClements equivalence scales (Before housing costs) used by The Office for National Statistics of the UK government: First adult (head)=0.61, Spouse of head=0.39, Other second adult=0.46, Third adult=0.42, Subsequent adults=0.36, Each dependent aged 0-1=0.09, 2-4=0.18, 5-7=0.21, 8-10=0.23, 11-12=0.25, 13-15=0.27, 16+=0.36.

⁴ About 40 percent of inequality in asset distribution is explained by the life-cycle effects.

References

- Clark R. (1992). *Economic Status of Older Persons in the United States and Current Issues Facing Social Security*.
- Duncan G., Smeeding T., and Rodgers W. (1993). "W(h)ither the Middle Class? A Dynamic View." in D. Papadimitriou and E. Wolff (eds), *Economic Inequality at the Close of the 20th Century*, Macmillan, New York.
- EBRI (1997). *EBRI Databook on Employee Benefits*, 4th edition.

- Eurostat (1998). *Social portrait of Europe*.
- Hills J. (1999). *The Welfare State in the UK: Evolution, Funding and Reform*.
- Jacobs D. (2000). *Low Inequality with Low Redistribution? An Analysis of Income Distribution in Japan, South Korea and Taiwan Compared to Britain*. Centre for Analysis of Social Exclusion No.33, London School of Economics.
- Johnson P. (1992). *Pension Reform in Britain: Problems and Possibilities*.
- OECD (1976). *Income Distribution in OECD Countries*. OECD Economic Outlook, Occasional Studies.
- OECD (1993). "Earnings Inequality: Changes in the 1980s." Chapter 5, *Employment Outlook*, OECD.
- OECD (1995). *Income Distribution in OECD Countries*, Social Policy Studies No.18.
- OECD (2001). *Ageing and Income: Financial Resources and Retirement in 9 OECD Countries*.
- Smeeding T.M. (1997). *US Income Inequality in a Cross-National Perspective: Why Are We So Different?* Luxembourg Income Study, Working Paper No.157.
- Smeeding T.M. (2002). The LIS Project: Overview and Recent Developments. *Journal of Population and Social Security (Web Journal)*, Special Issue.
- TSO (1998). *Social Trends 28*. Office for National Statistics, UK.
- World Bank (1990). *World Development Report 1990*.

(TETSUO FUKAWA

National Institute of Population and Social Security Research)