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The Structure of Income in Elderly Households and Relative Poverty Rates in Japan from the Viewpoint of International Comparisons

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SUMMARY

We examine the poverty rates and the income configurations among Japan and the LIS countries. The LIS countries are Germany, Italy, the UK, Denmark, the US, and Taiwan. We divide household including elderly into five types: living alone, couples only, living with their married children, living with their unmarried children, and other. There is more elderly living with their children in Asian countries than Western countries. However, elderly living with their married children are decreasing recently in Japan. In Japan and Taiwan even in households cohabiting with children, the poverty rates and income configurations differ depending on the marital status of the children. Poverty rates are higher in case of cohabiting with unmarried children. With regard to the income configuration of poor single and married couple households, the lower percentage of market income shows that those households focus on social insurance benefits regardless of the income configuration patterns of the non-poor in each country.

Introduction

Purpose of this Research

This research analyzes poverty among the elderly by household type using international comparative data from the viewpoint of gender. Elderly lifestyles in Japan are maintained by income from a variety of sources, but as in with other developed countries, the core is the public pensions system for the aged. The latest discussions of the pensions system concentrate on the makeup of a pension policy that meets the needs of an aging population, but this research is concerned with whether the public pension system for the aged is sufficiently fulfilling its functions as an income guarantee. This research examines whether other sources of income besides public pensions benefits for the aged, which support the elderly lifestyle, save the elderly from poverty.

Within this topic, our research focus is gender, and is an analysis by household type. Focusing on gender is an important element of long-term membership and contributions in the case of the Japanese public pensions system for the aged. To satisfy these elements, a long-term stable employment history is necessary. Differing from men, however, the employment history of Japanese women is sporadic. Even if women are employed for a comparatively long period of time, the majority of employment is irregular employment, which is excluded from the social security system. Further, it was in the middle of the 1980s that the right to an independent pension was established for unemployed married women, and so that history too is short. Given these conditions, income maintenance for elderly women is predictably different from that of men.

In the analysis of elderly poverty by household type, a high percentage of the elderly in Japan until now have cohabited with their children as compared with the number of elderly cohabiting with children in the West. As a consequence support for elderly parents by their children has been emphasized, but this does not necessarily investigate the correlation with poverty. Moreover, how the fall in households in which three generations cohabit, which is a recent trend, and the increase in single-occupancy and married couple only elderly households, affect the income configuration of the elderly, and in what way the poverty conditions of the elderly are changing due to these changes in household type is not necessarily clear.

In this research, due to concern about these problems, we will examine elderly poverty using the National Survey of Family Income and Expenditure, which is managed by the Statistics Bureau, Ministry of Internal Affairs and Communications. We will compare income data for six countries collated by the Luxembourg Income Study (LIS). The six countries are Germany, Italy, the UK, Denmark, the US, and Taiwan. There is more than one reason why these countries were selected. From a regional viewpoint, Taiwan, which is also in Asia, is an indispensable comparator country. From the viewpoint of household type, Italy, which is believed to have greater numbers of households than other countries in Europe in which elderly parents live with their children in the same house, is a good comparator country with Japan. Further, the six countries (excluding Taiwan) can be

classified into three different groups based on Western European pensions systems¹⁾. The first group is Italy and Germany, the second group is the UK and Denmark, and the third group is Japan and the US. In this way, comparisons of the seven countries including Japan are thought to be significant from the viewpoints of regionality, household type, and makeup of the pensions system.

Research Methods and Configuration

In this research, four main analyses are performed. One is an examination of the types of elderly households in the seven countries. There are five household types: living alone, couples only, living with their married children, living with their unmarried children, and other. The reason for focusing on the marital status of children living together with their elderly parents is because in Japan in recent years there has been a marked increase in the number of unmarried and late marriages, and the meaning of children living together with their elderly parents has changed. Elderly households in which the children are living together with their spouses, however, includes unmarried children living with their parents. Living in the same house with unmarried children means living alone with their unmarried children.

Such household types are classified from the viewpoint of making clear with whom the elderly person is living. Generally, household classifications nearly always use configurations of the relationship between the head of the household and the others in the household, but the household types in this research are different on this point. The results are analyzed in Section 1 below.

Secondly, we examined relative poverty rates. Although there are no international standards for measuring poverty, poverty measurement by international bodies, starting with LIS and including the United Nations Children's Fund (UNICEF), the United Nations Human Development Report (UNHDR), OECD (the Organization for Economic Cooperation and Development), and the European Statistical Office are based on relative concepts. The poverty standard used by these bodies defines the poverty threshold as one-half of national median income based on a broader definition of income for the entire population³⁾. The broad concept of income includes items equivalent to cash such as food stamps in addition to disposable income (including transferrable income such as housing allowances and cash refund tax credits, and other such resources). Japanese poverty rates, however, cannot help but standardize yearly income due to data controls described below.

The relative poverty rates estimated in this research are in units by individual person, using the following methods. Namely, this is a method of measuring poverty rates by converting the totals of the various incomes gathered by the household into income per person using the equivalent scale. There are a number of theories for which equivalent scale to use²⁾, but here the equivalent scale of elasticity 0.5 per household member is used. The results are analyzed in Section 2 below.

Thirdly, we examined the total income configuration in elderly households. The Japanese "National Survey of Family Income and Expenditure" understands in detail the income of

working and unemployed households, but stops at the income of self-employed households. Consequently, this research, which targets all elderly households including the self-employed, classifies overall income into five categories by adjusting the Japanese and LIS income classifications. First is market income; for example, this includes wages and salaries, self-employed farming income, non-farming self-employment income, homework income, interest, and cash dividends. Second is the private occupational pensions (in Japan, these are private and company pension insurance proceeds), and third is the social insurance benefits, which mainly comprise public pension benefits. Fourthly, the classification of Japanese yearly income is unclear, but is means-tested cash benefits, and fifth is other income, including remittances. These overall household incomes are literal meanings, and not overall household income per person according to the equivalent scale of elasticity. The results are analyzed in Section 3 below.

Fourthly, we examined how income sources function in reducing poverty rates or escaping poverty. This examination was performed using estimates of poverty rates per income source. The first stage is poverty rates at the market income level, the second stage is poverty rates at the income level when private occupational pensions have been added to the market income, and the third stage is poverty rates at the income level when social insurance benefits have been added to the second-stage income. Finally is the poverty rates at the disposable income level when means-tested cash benefits and remittances from relatives have been added to the stage three incomes. Due to Japanese data restrictions, however, the final poverty rates are the levels of yearly income.

We are attempting to clarify the nature of income that manifests its effects when poverty rates are reduced or poverty escaped due to by what extent poverty rates are reduced at each level from stages one through four. The results are analyzed in Section 4 below. We want to make clear through the analysis described above the income configuration and relative poverty rates in elderly Japanese households. Further, in this research, all diagrams describe elderly males and females separately with the objective of focusing on gender.

Advance Research

Analytical research of poverty among Japan's elderly using international comparative data has only started recently, and so is still in its infancy. For example, there is the research by Atsuhiko Yamada, who performed a comparative analysis using the Comprehensive Survey of Living Condition of the People on Health and Welfare from Japan, and OECD survey data into the distribution of household incomes (in Canada, US, UK, Italy, Germany, Netherlands, Finland, and Sweden). This research made clear that particularly in Japan, approximately 80% of single-occupancy female households aged 75 or over are in a low income bracket, and that common to all countries, the possibility of women aged 75 or over falling into low incomes is in the following order: Single occupancy households, married couples, unmarried elderly females who are not the head of the household living together with others, and households in which the elderly female is the

head of the household⁴). Further, Sawako Shirahase also made clear the high relative poverty rates of single-occupancy female households in Japan by comparing data from the Japanese Comprehensive Survey of Living Condition of the People on Health and Welfare and LIS data (US, UK, Germany, Italy, Sweden, and Taiwan)⁵).

This research references the results of this profitable former research, but the survey data and household classifications are different. Consequently comparisons between both research results were not made. To reiterate, the characteristics of this research are to classify households by focusing on not only single-occupancy and married couple only households, but also on the marital status of children cohabiting with the elderly, and to describe the totaled results by gender and by household type, and to make clear the similarities and differences between the genders.

I. Aged Ratios and Household Configurations

First, when the percentages of the elderly aged 65 or over in the total populations of each of the seven countries are examined, they appear in the following order (highest first): Italy (19.1%), Japan (19.8%), Germany (17.1%), the UK (15.1%), Denmark (14.8%), the US (11.9%), and Taiwan (10.7%). Of these seven countries, the first four have percentages of the elderly in excess of 15%. The percentage of the elderly aged 75 or over is between 5% and 8% in six of the countries, with the exception being Taiwan at 3.6% (see Table 1).

Table1 Proportion of the population aged 65 or over

	U.S.	U.K.	Denmark	Germany	Italy	Taiwan	Japan
Year used for the analysis	2000	1999	2000	2000	2000	2000	2004
Proportion of the population aged 65 or over							
65 or over	11.9%	15.1%	14.8%	17.1%	19.1%	10.7%	19.8%
65—74	6.5%	8.6%	7.7%	10.0%	11.0%	7.2%	12.3%
75 or over	5.5%	6.5%	7.0%	7.1%	8.2%	3.6%	7.6%

Source : Calculated from "National Survey of Family Income and Expenditure"(Japan) and Luxembourg Income Study(Other countries).

Considerable differences by gender can be seen in the configuration of elderly households. In the case of elderly men, in six countries but excluding Taiwan, whereas married couple households comprise the majority, in the case of elderly women, the percentage of married couple households is considerably lower, and these are often single-occupant households. This is because average life expectancy for women is much greater than for men, and in many cases the husband has predeceased the women. Excluding this point, two patterns for men and three patterns for women can be observed.

In the case of elderly men, the first is a Western pattern, which excludes Italy, and the other is the pattern in Italy, Taiwan, and Japan. With the former, the percentage is actually quite low, and after married couple households, the next household configuration is single occupancy. Elderly male households in No. 2, Italy, Taiwan, and Japan are, after married couple households, predominantly households in which elderly male living together with married or unmarried children. In Italy's case, however, whereas the

majority are households in which elderly males are living with their unmarried children, in the cases of Japan and Taiwan, the percentages are the same regardless of whether or not the children are married.

In the case of elderly women, the first pattern is that of the UK, the US, and Denmark, in which single occupancy dominates the No. 1 spot, and the second pattern is that of Japan and Taiwan, in which 40% to 60% are women living with their married or unmarried children, and the percentages of those living alone are low. The third pattern combines the characteristics of both No. 1 and No. 2, such as the Italian case, in which the percentages of elderly women living alone and elderly women living with their children are almost equal (see Table

2).

Table 2 Family composition among people aged 65 or over (%)

	single	couple	with married children	with unmarried children	other	total
male						
U.S.	17.5	61.6	2.1	12.2	6.7	100.0
U.K.	22.2	64.0	1.3	9.6	2.9	100.0
Denmark	28.0	65.2	0.1	2.9	3.8	100.0
Germany	18.5	72.7	0.3	5.1	3.4	100.0
Italy	13.8	54.4	2.7	24.3	4.8	100.0
Taiwan	10.7	32.8	26.3	25.9	4.3	100.0
Japan	12.1	51.0	16.3	16.5	4.1	100.0
female						
U.S.	40.5	36.2	2.9	13.5	6.9	100.0
U.K.	47.4	37.3	2.5	9.6	3.2	100.0
Denmark	58.7	35.5	0.1	1.9	3.7	100.0
Germany	56.0	35.3	0.4	3.5	4.8	100.0
Italy	33.8	32.2	3.7	21.6	8.7	100.0
Taiwan	12.1	24.5	37.0	22.8	3.6	100.0
Japan	24.6	30.2	28.4	13.2	3.7	100.0
total						
U.S.	30.6	47.1	2.6	12.9	6.8	100.0
U.K.	36.7	48.7	2.0	9.6	3.1	100.0
Denmark	45.9	48.0	0.1	2.4	3.7	100.0
Germany	41.6	49.6	0.4	4.1	4.3	100.0
Italy	25.4	41.5	3.3	22.8	7.1	100.0
Taiwan	11.4	28.9	31.3	24.5	3.9	100.0
Japan	19.1	39.3	23.0	14.7	3.9	100.0

Source : "National Survey of Family Income and Expenditure"(Japan)
and Luxembourg Income Study(Other countries).

According to the above, the percentage of elderly Japanese, both men and women, living alone is low compared to the western nations, and the percentage living with their children is high. Compared to Taiwan, which is in the same Asian region, the percentage of elderly Japanese living with their spouses is high, and the percentage living together with their children is low. Focusing on Japan, what distinguishes the difference in household configurations by gender is one more point besides those already described above (i.e., in

the case of elderly men, the percentage of married couple households is great, and the percentage of single occupancy households is low). Whereas, in the case of elderly men, the percentage living with children is the same at 16% regardless of whether or not the child is married, in the case of elderly women, the percentage living with married children is 28.1%, and the percentage living with unmarried children is 13.5%, so the percentage living with married children is 15% higher. This difference is conspicuous.

Compared to women in Taiwan, the configuration of Japanese female households is characterized by the point that the percentage living with married children (28.1%) and the percentage living on their own (24.5%) are almost identical. When measured from these points, elderly Japanese women evidently live in married couple households while their husbands are alive, and after their husbands die, branch into two, either living alone, or together with their married children. In contrast, for the Taiwanese elderly, among whom the percentage of married households is low, the predominant pattern is evidently to start cohabiting with their children from the period when the elderly couple are both alive. The survey data on this occasion is the collation and average of a temporary point, and although the data cannot be called easy the survey data could also perhaps be perceived in this way.

Changes in Elderly Japanese Household

Compared to Western countries, Japan has high percentages of the elderly, both men and women, living together with both their married and unmarried children. The percentage living with their children, however, has dramatically declined in the past 15 years. The changes in household configuration according to "the National Survey of Family Income and Expenditure" in 1989, 1999, and 2004 are shown in Table 3. As can be seen from this diagram, during these 15 years the percentage of both men and women living with their married children has fallen by almost 30%, and the number of married and single occupant households has risen greatly, and the percentage living with their unmarried children has somewhat increased. For all elderly

Table3 Change in the family composition among people aged 65 or over in Japan

	man			women			total		
	1989	1999	2004	1989	1999	2004	1989	1999	2004
single	6.1	10.8	12.1	19.6	23.4	24.6	14.2	17.9	19.1
couple	35.9	48.2	51.0	14.4	26.2	30.2	23.1	35.8	39.3
with married children	44.4	23.0	16.3	54.3	34.2	28.4	50.3	29.4	23.0
with unmarried children	10.2	14.3	16.5	7.3	12.2	13.2	8.5	13.1	14.7
other	3.3	3.7	4.1	4.3	4.0	3.7	3.9	3.8	3.9
total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source : "National Survey of Family Income and Expenditure"(Japan) and Luxembourg Income Study(Other countries).

(both male and female) in 2004, people living alone made up 19.1% and married couples accounted for 39.3%; people living with their married children constituted 23.0% and people living with their unmarried children made up 14.7%. Elderly single-person and couple households account for approximately 60%, while those living with their children account for approximately 40%. The living pattern was the exact opposite of the situation

15 years ago.

How do these serious changes affect relative poverty rates and income configuration? This question will be examined below.

II. Relative Poverty Rates

In estimating the relative poverty rates, rates in Japan were based on yearly income due to data restrictions while the other six countries were based on disposable income. Consequently, in the case of Japan, there is a high possibility that the relative poverty rate was over-evaluated without the effects of taxation and social insurance on income being considered. We would like to proceed in the discussion with this point in mind. First, when relative poverty rates are estimated by dividing the population into two groups, the elderly aged 65 or over and the non-elderly aged under 65, the elderly group is higher in all seven countries (see Table 4). Two countries, Taiwan (25.6%) and the US (24.5%), are particularly high. The relative poverty rates of the elderly groups in these countries are approximately twice to nearly three times those of the non-elderly groups. When these figures are examined, it becomes clear that poverty among the elderly has not been eradicated even in the developed world. The poverty rate of the elderly Japanese is 14.5% and comes in the middle of the seven countries. With a focus on the poverty rates of the two age groups (the elderly and the non-elderly) and the whole population, Japan ranks fourth from the top of the rankings. In contrast, Taiwan shows a different tendency in the relative poverty rates between the two groups. That is, the poverty rates of the elderly in Taiwan are at the top of the seven countries, but those of the non-elderly are second from the bottom. Italy shows the exact opposite of Taiwan's rates and Denmark shows lower rates in all categories.

Table 4 Relative poverty rates of the population aged 65 and over and under aged 65

	U.S.	U.K.	Denmark	Germany	Italy	Taiwan	Japan
elderly							
males	19.1%	13.7%	10.1%	6.0%	10.9%	24.7%	11.6%
females	28.7%	20.2%	13.5%	13.1%	16.8%	26.7%	16.8%
total	24.5%	17.4%	12.1%	10.4%	14.3%	25.6%	14.5%
non-elderly							
males	14.8%	10.6%	4.1%	7.2%	11.9%	6.8%	7.7%
females	16.9%	12.1%	4.1%	8.6%	12.9%	7.3%	9.5%
total	15.9%	11.4%	4.1%	7.9%	12.4%	7.1%	8.4%
the entire population	16.9%	12.3%	5.3%	8.4%	12.8%	9.1%	9.8%

Source : "National Survey of Family Income and Expenditure"(Japan)
and Luxembourg Income Study(Other countries).

When the elderly groups are divided by gender, poverty rates among women are higher in all seven countries. In particular, the total poverty rate for elderly women in the US

(28.7%) is almost 10 points higher than for men overall (19.1%), and the difference in poverty rates by gender is striking. The highest poverty rates for women overall after the US are Taiwan (26.7%) and the UK (20.2%). The gender difference in poverty rates in Taiwan, however, is low, and the relative poverty rates for the elderly are high among both men and women. Conversely, in Denmark, the relative poverty rates are low, and the gender difference in these poverty rates is extremely small. The poverty rate of all Japanese women is 16.8%, following the UK.

The following can be understood by viewing relative poverty rates by household configuration (see Table 5). Firstly, the highest relative poverty rate for both men and women in all countries is the single-occupant household. Of these, the highest are women living alone in Taiwan, the US, and Japan at between 30% and 60%. Elderly women in both Japan and Taiwan have extremely high relative poverty rates despite the percentage of such women living alone being low compared to other countries.

Secondly, with married couple households, the relative poverty rates are low for both men and women, and when married children are added, the relative poverty rates are further reduced (for six countries, excluding men and women in Italy). This fact shows a tendency where the risk of poverty is lower in cohabited than in single-occupancy households. This trend is particularly striking among elderly women in Asia, where relative poverty rates are high for the elderly living alone. For elderly Japanese women, the relative poverty rate (36.7%) for those living alone is higher than that of married couples by 25.5 percentage points and is higher than that of people living with their married children by 30 percentage points.

	single	couple	with married children	with unmarried children	other	total
male						
U.S.	34.9	16.8	11.3	13.0	12.3	19.1
U.K.	21.1	13.2	0.0	4.4	4.4	13.7
Denmark	23.2	5.2	0.0	1.9	3.4	10.1
Germany	9.3	5.6	0.0	3.3	0.0	6.0
Italy	15.6	10.1	13.6	11.6	0.6	10.9
Taiwan	42.9	39.8	8.7	13.5	29.2	24.7
Japan	22.0	10.9	5.3	12.4	11.3	11.6
female						
U.S.	45.7	17.3	6.7	18.1	17.7	28.7
U.K.	28.8	15.0	3.8	6.1	7.1	20.2
Denmark	19.1	6.0	0.0	3.5	2.3	13.5
Germany	19.6	5.3	0.7	6.9	1.3	13.1
Italy	29.1	8.8	17.2	13.8	5.3	16.8
Taiwan	62.6	43.3	9.3	17.3	32.9	26.7
Japan	36.7	11.2	6.1	16.7	13.0	16.8
total						
U.S.	43.1	17.0	8.4	16.0	15.4	24.5
U.K.	26.9	14.0	2.7	5.4	6.1	17.4
Denmark	20.2	5.5	0.0	2.6	2.8	12.1
Germany	17.8	5.5	0.5	5.2	0.9	10.4
Italy	26.0	9.5	15.9	12.9	4.0	14.3
Taiwan	52.7	41.2	9.0	15.2	30.8	25.6
Japan	32.6	11.0	5.9	14.6	12.2	14.5

Source : Calculated from "National Survey of Family Income and Expenditure"(Japan) and Luxembourg Income Study(Other countries).

In this way, the economic welfare situation of elderly Japanese women is strikingly different depending on whether they live on their own or with either a husband or married children (or both). This situation simply shows the economic distress of women living on their own.

Changes in Relative Japanese Poverty Rates

Although limited to Japan, when the changes in relative poverty rates are examined (see Table 6), the non-elderly aged under 65, for both male and female, show upward trends, but the elderly aged 65 or over, for both male and female, show downward trends. The relative poverty rate of the elderly peaked in

1989 in the middle of the bubble economy, but the figure fell in 1999, when the economy became worse, and this tendency has continued until now. This study cannot draw correct answers as to what caused these changes, but this tendency is worth attention in relation to the change in income configuration of the elderly, which this paper examines in the following section.

In addition, with a focus on the elderly aged 65 or over by household pattern, all households, for both male and female, show downward trends in the poverty rates in comparison with the 1989 level. However, compared with 1999, in 2004, elderly men living with their unmarried children and elderly women living with their married children showed moderate upward trends. In the meantime, people living alone and married couples, both male and female, showed a remarkable decline in the relative poverty rates. In particular, the poverty rates dropped by the largest margin of 17% with men living alone from 39% in 1989 to 22% in 2004. Married women also showed particularly large decreases with the rates dropping by 11.8 percentage points in 2004 compared with 1989. As noted above, noticeable declines in the poverty rates vary by gender. Women living alone continue to be the highest in the rates.

III. Income Configuration among the Poor and the Non-Poor

Table 7 shows the income configurations of elderly households in each country divided into the poor and non-poor. Here, the word "poor" describes those with less than 50% of the median equivalence income, and "non-poor" indicates those with 50% or more of the median equivalence income. All income is included in the median equivalence income, and in the case of the elderly living with their children, describes the percentage of incomes that comprise the overall income, including the children's incomes. The Japanese data, however, could not tally the means-tested cash benefits independently, and so is not shown.

As can be understood from these diagrams, the income configuration of the elderly differs considerably between the poor and non-poor, and between household types. From the point

	man			women			total			(%)
	1989	1999	2004	1989	1999	2004	1989	1999	2004	
non-elderly	6	7.2	7.7	7.5	9	9.5	6.8	8.1	8.6	
elderly	14	11.9	11.6	18.3	18.7	16.8	16.5	15.7	14.5	
elderly;by household type										
single	39.0	23.5	22.0	48.2	45.4	36.7	46.6	39.6	32.6	
couple	19.4	12.8	10.9	23.0	13.9	11.2	20.7	13.3	11.0	
with married children	6.4	5.0	5.3	5.8	5.1	6.1	6.0	5.1	5.9	
with unmarried children	10.9	10.4	12.4	20.8	16.2	16.7	16.0	13.5	14.6	
other	20.4	13.0	11.3	19.4	18.6	13.0	19.8	16.3	12.2	
total	14.0	11.9	11.6	18.3	18.7	16.8	16.5	15.7	14.5	

Source : Calculated from "National Survey of Family Income and Expenditure"(Japan) and Luxembourg Income Study(Other countries).

of view of a conclusion, whereas the income configurations of the non-poor comprise multiple sources of income in all countries, the poor in six countries excluding Taiwan are concentrated in social security benefits, and both show a contrastive configuration. The income configurations for the two groups are described below by household configuration.

Income Configurations of Non-Poor Single Households and Couple-Only Households

Firstly, when the income configurations of non-poor single households and couple-only households are examined, four different patterns emerge. Firstly, there is the "social insurance-centered" income configuration pattern, such as in Italy or Germany, in which approximately 70% to 80% of overall income is in the form of social insurance benefits, and 10% to 20% are market incomes, so social insurance benefits are decisively the most important source of income. The second pattern, such as in the UK and Denmark, is the

Table 7 Configuration of the total gross income in poor and non-poor households (%)

U.S.		factor income		private occupational pensions		social insurance benefits		means-tested cash benefits		other cash income		total gross income	
		men	women	men	women	men	women	men	women	men	women	men	women
single	non-poor	47.2	37.1	14.4	14.9	37.9	46.7	0.3	0.4	0.2	0.9	100.0	100.0
	poor	5.6	5.9	1.2	3.6	88.7	85.2	4.5	4.9	0.1	0.4	100.0	100.0
couple	non-poor	47.0	41.1	13.3	14.4	39.4	44.2	0.2	0.1	0.1	0.1	100.0	100.0
	poor	9.8	7.1	3.7	3.4	82.1	85.5	4.1	3.7	0.3	0.2	100.0	100.0
with married children	non-poor	76.8	81.2	4.1	2.7	17.4	14.6	1.3	1.5	0.3	0.1	100.0	100.0
	poor	42.1	49.8	0.0	0.5	47.1	38.6	9.7	9.9	1.1	1.1	100.0	100.0
with unmarried children	non-poor	67.2	64.7	6.6	5.9	24.1	27.1	1.5	1.6	0.5	0.7	100.0	100.0
	poor	30.5	25.3	5.0	2.3	52.1	59.1	11.5	11.9	0.9	1.3	100.0	100.0
other	non-poor	61.5	65.5	8.4	6.5	28.4	26.1	1.2	1.7	0.5	0.3	100.0	100.0
	poor	20.3	28.0	1.3	1.4	68.3	62.8	10.0	6.5	0.2	1.3	100.0	100.0

U.K.		factor income		private occupational pensions		social insurance benefits		means-tested cash benefits		other cash income		total gross income	
		men	women	men	women	men	women	men	women	men	women	men	women
single	non-poor	19.0	10.8	31.0	23.1	40.5	48.0	9.1	17.2	0.3	1.1	100.0	100.0
	poor	7.3	6.1	8.0	8.8	79.1	78.8	5.3	6.0	0.3	0.3	100.0	100.0
couple	non-poor	23.7	20.5	32.1	32.4	41.8	44.4	2.1	2.4	0.3	0.3	100.0	100.0
	poor	6.6	5.9	7.1	8.2	83.9	83.1	2.3	2.8	0.0	0.0	100.0	100.0
with married children	non-poor	71.0	70.5	7.7	9.2	18.1	17.7	3.1	2.1	0.0	0.5	100.0	100.0
	poor	0.0	25.4	0.0	4.1	0.0	31.0	0.0	39.5	0.0	0.0	0.0	100.0
with unmarried children	non-poor	53.8	53.8	14.6	9.5	26.7	29.3	4.7	6.9	0.2	0.5	100.0	100.0
	poor	9.7	11.9	10.8	5.3	61.0	61.9	18.5	21.0	0.0	0.0	100.0	100.0
other	non-poor	30.9	31.4	18.8	21.2	45.2	42.2	4.6	4.7	0.5	0.5	100.0	100.0
	poor	4.1	2.5	1.3	9.3	94.6	81.6	0.0	6.5	0.0	0.0	100.0	100.0

Denmark		factor income		private occupational pensions		social insurance benefits		means-tested cash benefits		other cash income		total gross income	
		men	women	men	women	men	women	men	women	men	women	men	women
single	non-poor	16.0	10.9	23.5	21.2	52.2	58.3	5.8	8.5	2.4	1.2	100.0	100.0
	poor	2.3	2.4	0.3	0.4	96.1	95.6	1.0	1.4	0.3	0.1	100.0	100.0
couple	non-poor	25.0	18.5	23.4	25.9	49.5	53.3	1.1	1.3	1.1	1.0	100.0	100.0
	poor	1.8	0.3	1.3	1.2	96.5	98.2	0.6	0.4	-0.2	-0.1	100.0	100.0
with married children	non-poor	49.8	53.2	9.2	9.0	37.5	32.6	2.8	3.0	0.6	2.3	100.0	100.0
	poor	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
with unmarried children	non-poor	56.4	49.0	10.1	8.6	29.8	38.4	2.6	3.0	1.2	1.0	100.0	100.0
	poor	21.7	15.5	0.0	0.4	62.1	81.9	15.8	1.6	0.4	0.5	100.0	100.0
other	non-poor	49.3	46.4	9.4	10.5	37.8	38.8	2.6	2.8	0.9	1.4	100.0	100.0
	poor	22.4	4.0	2.6	1.5	61.4	76.5	12.3	16.1	1.3	1.9	100.0	100.0

(Continued)

Table 7 continued

Germany		factor income		private occupational pensions		social insurance benefits		means-tested cash benefits		other cash income		total gross income	
		men	women	men	women	men	women	men	women	men	women	men	women
single	non-poor	14.4	14.5	5.1	3.8	80.3	80.5	0.1	0.5	0.1	0.6	100.0	100.0
	poor	2.8	6.2	0.0	0.5	95.4	90.5	1.8	2.5	0.0	0.3	100.0	100.0
couple	non-poor	23.1	19.6	5.2	5.0	71.3	75.0	0.2	0.2	0.2	0.2	100.0	100.0
	poor	7.5	4.1	0.8	1.1	87.5	91.1	4.0	3.6	0.1	0.2	100.0	100.0
with married children	non-poor	59.5	56.0	0.0	0.2	40.0	42.9	0.4	0.8	0.0	0.2	100.0	100.0
	poor	0.0	32.3	0.0	0.0	0.0	67.7	0.0	0.0	0.0	0.0	0.0	100.0
with unmarried children	non-poor	56.4	57.7	1.8	1.9	41.0	39.4	0.5	1.0	0.4	0.1	100.0	100.0
	poor	2.0	2.0	0.0	0.0	98.0	62.2	0.0	35.8	0.0	0.0	100.0	100.0
other	non-poor	27.1	49.6	1.3	0.9	71.4	48.6	0.2	0.5	0.0	0.4	100.0	100.0
	poor	0.0	5.3	0.0	0.0	0.0	94.7	0.0	0.0	0.0	0.0	0.0	100.0

Italy		factor income		private occupational pensions		social insurance benefits		means-tested cash benefits		other cash income		total gross income	
		men	women	men	women	men	women	men	women	men	women	men	women
single	non-poor	25.3	9.4	0.5	1.9	71.9	85.3	2.1	2.8	0.1	0.6	100.0	100.0
	poor	4.8	2.0	0.8	0.6	88.1	76.7	6.3	20.6	0.0	0.0	100.0	100.0
couple	non-poor	25.9	19.5	1.0	1.1	69.3	74.8	3.3	4.1	0.4	0.5	100.0	100.0
	poor	4.1	5.2	3.9	4.4	76.6	71.4	14.5	18.7	0.9	0.3	100.0	100.0
with married children	non-poor	58.5	58.1	0.0	1.1	40.0	38.0	1.4	2.6	0.0	0.2	100.0	100.0
	poor	14.6	11.4	0.0	0.0	70.6	38.9	14.8	49.7	0.0	0.0	100.0	100.0
with unmarried children	non-poor	57.0	53.5	0.9	0.8	40.6	43.8	1.5	1.9	0.1	0.1	100.0	100.0
	poor	6.3	5.6	1.9	1.5	86.3	81.4	5.5	10.5	0.0	0.9	100.0	100.0
other	non-poor	38.1	42.5	0.5	0.7	59.7	53.1	1.1	3.3	0.5	0.3	100.0	100.0
	poor	0.0	4.6	0.0	0.0	100.0	76.9	0.0	18.6	0.0	0.0	100.0	100.0

Taiwan		factor income		private occupational pensions		social insurance benefits		means-tested cash benefits		other cash income		total gross income	
		men	women	men	women	men	women	men	women	men	women	men	women
single	non-poor	33.6	34.6	27.3	5.9	0.5	0.5	22.0	12.5	16.6	46.5	100.0	100.0
	poor	14.0	15.7	1.2	0.0	2.2	2.8	54.0	26.3	28.6	55.1	100.0	100.0
couple	non-poor	46.4	42.9	24.3	20.6	1.3	1.1	7.7	9.5	20.4	25.9	100.0	100.0
	poor	26.8	26.2	1.9	1.4	3.8	3.9	28.9	30.3	38.6	38.1	100.0	100.0
with married children	non-poor	87.7	89.0	2.7	1.6	2.4	3.0	2.8	2.0	4.5	4.3	100.0	100.0
	poor	74.4	70.3	0.0	0.0	4.9	4.6	11.2	12.8	9.4	12.3	100.0	100.0
with unmarried children	non-poor	75.0	80.8	12.0	2.9	2.5	2.2	4.5	4.7	6.0	9.4	100.0	100.0
	poor	49.0	55.4	3.7	0.0	2.7	2.9	23.9	17.7	20.7	24.0	100.0	100.0
other	non-poor	63.6	59.4	12.8	10.3	2.2	2.5	7.7	6.2	13.7	21.5	100.0	100.0
	poor	27.2	35.7	0.0	0.0	3.5	3.5	32.4	31.4	36.9	29.5	100.0	100.0

Japan		factor income		private and company pension		public pension benefits		means-tested cash benefits		other cash income		yearly income	
		men	women	men	women	men	women	men	women	men	women	men	women
single	non-poor	18.5	20.8	7.7	8.8	71.3	65.7	-	-	2.5	5.0	100.0	100.0
	poor	8.7	4.9	3.4	6.2	74.0	79.1	-	-	14.0	9.8	100.0	100.0
couple	non-poor	30.1	28.1	7.6	6.8	60.7	63.6	-	-	1.5	1.5	100.0	100.0
	poor	12.6	8.4	6.5	6.7	77.1	80.9	-	-	3.8	4.1	100.0	100.0
with married children	non-poor	81.4	82.1	1.7	2.0	15.8	14.9	-	-	1.1	1.0	100.0	100.0
	poor	58.4	57.8	5.0	4.0	33.4	36.3	-	-	3.2	1.9	100.0	100.0
with unmarried children	non-poor	56.2	58.5	4.9	3.7	36.7	33.2	-	-	2.3	4.6	100.0	100.0
	poor	19.5	25.5	8.5	5.5	69.6	63.3	-	-	2.5	5.6	100.0	100.0
other	non-poor	47.8	52.6	5.9	4.9	44.7	40.9	-	-	1.6	1.6	100.0	100.0
	poor	21.7	21.0	4.7	3.3	69.7	71.3	-	-	3.8	4.4	100.0	100.0

Source : Calculated from "National Survey of Family Income and Expenditure"(Japan) and Luxembourg Income Study(Other countries)

"multiple pensions model" income configuration pattern, whereby 40% to 50% of total income is in the form of social insurance benefits, 20% to 30% are private occupational pensions, and 10% to 20% are market income, and these three income sources support the elderly. The third pattern, as in the US, is the "employment-plus-pension model" income configuration pattern, in which there is a fixed percentage of private occupational pensions, but nearly 30% to 50% of total income is market income and 30% to 40% is in the form of social insurance benefits, and these two income sources support the elderly. With all these patterns, the percentage of social insurance benefits as part of total income is considerably higher among women, and the percentage of market income, and private occupational

pensions, is considerably higher among men.

The fourth pattern strikingly differs from the three patterns described above, and shows that a social security system is not provided, with the percentage of social insurance benefits in total income to be absolutely low at approximately 1%. This pattern is seen in Taiwan. In this country, market income (30% to 40%), means-tested cash benefits, and other cash income including remittances from relatives (approximately 20% to 40%) are important sources of income for the elderly. In single-occupancy male households, however, the percentage of means-tested cash benefits is high (22%), and other cash income is high for women living alone (46.5%), so the main sources of income differ by gender.

Of the four patterns described above, both the first pattern, which centers on social insurance benefits, and the second pattern of multiple pensions have low percentages of market incomes, whereas the third and fourth patterns have high percentages of market incomes. That is, with income maintenance among the elderly, whereas in the first pattern (Germany and Italy) social insurance benefits occupy a decisively important position, in the second (the UK and Denmark) and third patterns (the US and Japan), there is another important source of income equal to social insurance benefits. The former is private occupational pensions, and the latter is market income. In income configuration of the non-poor living alone or in married couple households is different among the six countries, but in all cases they share the common point of having multiple sources of income.

Next, the study examines the pattern of income configuration of non-poor single households and couple-only households in Japan with a focus on the comparison of seven countries (see Table 7) and changes in the 15 years from 1989 to 2004 (see Table 8). These figures show that income patterns dramatically changed during the 15 years from 1989 to 2004.

More specifically, with regard to single male households, the market income constituted 48.8% of their yearly income in 1989 and their public pension benefits made up 48.3%, both of which are almost the same percentage. Alternatively, single female households scored just 31.2% with the market income in 1989, with 17 percentage points lower than that of men, and they showed 61.6% with public pension benefits, 13 percentage points higher than those of men. In the case of couple-only households in 1989, their income configuration was similar to that of single male households. That is, the employment-plus-pension-benefits model (the third pattern) was the norm for both cases in 1989.

Table 8 Changes in the configurations of total gross income among poor and non-poor households in Japan (%)

men		factor income			private and company pension insurance proceeds			public pension benefits			other cash income			yearly income		
		1989	1999	2004	1989	1999	2004	1989	1999	2004	1989	1999	2004	1989	1999	2004
single	non-poor	48.9	21.5	18.5	-	3.3	7.7	48.3	72.5	71.3	2.8	2.7	2.5	100.0	100.0	100.0
	poor	5.3	11.3	8.7	-	6.1	3.4	74.6	72.0	74.0	20.1	10.6	14.0	100.0	100.0	100.0
couple	non-poor	46.0	32.0	30.1	-	5.2	7.6	50.9	60.5	60.7	3.1	2.3	1.5	100.0	100.0	100.0
	poor	17.1	12.8	12.6	-	2.9	6.5	77.3	80.2	77.1	5.7	4.0	3.8	100.0	100.0	100.0
with married children	non-poor	85.9	84.1	81.4	-	1.0	1.7	12.8	13.6	15.8	1.3	1.3	1.1	100.0	100.0	100.0
	poor	78.6	72.3	58.4	-	1.5	5.0	18.7	24.0	33.4	2.7	2.2	3.2	100.0	100.0	100.0
with unmarried children	non-poor	68.5	60.8	56.2	-	3.3	4.9	28.7	33.4	36.7	2.8	2.5	2.3	100.0	100.0	100.0
	poor	41.7	27.2	19.5	-	3.3	8.5	55.8	67.8	69.6	2.6	1.7	2.5	100.0	100.0	100.0
other	non-poor	57.3	43.0	47.8	-	3.7	5.9	39.6	50.0	44.7	3.1	3.4	1.6	100.0	100.0	100.0
	poor	36.6	19.2	21.7	-	5.6	4.7	57.9	72.5	69.7	5.5	2.6	3.8	100.0	100.0	100.0
total	non-poor	68.5	51.5	45.0	-	3.5	5.9	29.3	42.9	47.5	2.2	2.1	1.6	100.0	100.0	100.0
	poor	31.9	20.9	17.1	-	3.6	6.0	61.2	70.9	71.3	6.9	4.7	5.7	100.0	100.0	100.0

women		factor income			private and company pension insurance proceeds			public pension benefits			other cash income			yearly income		
		1989	1999	2004	1989	1999	2004	1989	1999	2004	1989	1999	2004	1989	1999	2004
single	non-poor	31.2	25.9	20.8	-	4.1	8.8	61.6	66.4	65.4	7.2	3.6	5.0	100.0	100.0	100.0
	poor	11.8	7.8	4.9	-	4.2	6.2	74.2	79.8	79.1	14.0	8.2	9.8	100.0	100.0	100.0
couple	non-poor	44.7	27.4	28.1	-	4.5	6.8	52.2	65.9	63.6	3.1	2.2	1.5	100.0	100.0	100.0
	poor	15.8	10.3	8.4	-	2.8	6.7	78.1	82.9	80.9	6.1	4.0	4.1	100.0	100.0	100.0
with married children	non-poor	88.5	84.5	82.1	-	1.0	2.0	10.2	12.9	14.9	1.3	1.5	1.0	100.0	100.0	100.0
	poor	76.0	68.6	57.8	-	2.0	4.0	21.5	24.7	36.3	2.4	4.7	1.9	100.0	100.0	100.0
with unmarried children	non-poor	71.7	60.5	58.5	-	2.4	3.7	25.9	31.5	33.2	2.4	5.6	4.6	100.0	100.0	100.0
	poor	38.0	27.6	25.5	-	2.8	5.5	55.9	63.2	63.3	6.1	6.3	5.6	100.0	100.0	100.0
other	non-poor	73.9	53.7	52.6	-	2.4	4.9	23.3	40.4	40.9	2.7	3.5	1.6	100.0	100.0	100.0
	poor	50.2	22.3	21.0	-	3.2	3.3	44.0	67.1	71.3	5.8	7.3	4.4	100.0	100.0	100.0
total	non-poor	75.9	59.1	52.7	-	2.5	4.7	21.9	35.9	40.3	2.2	2.5	2.3	100.0	100.0	100.0
	poor	28.9	17.3	15.0	-	3.5	5.9	61.9	72.4	72.2	9.3	6.7	7.0	100.0	100.0	100.0

Source: Calculated from "National Survey of Family Income and Expenditure"(Japan) and Luxembourg Income Study(Other countries)

However, in 2004, the market income of non-poor single households and couple-only households varied from near 20% level to a 30% level and their public pension benefits increased to a range of 60% to 70%. This suggests that during the 15 years, the income configuration of non-poor single households and couple-only households in Japan has changed to the first pattern, in which public pension benefits played an increasingly important role although they earned some market income.

In addition, there are points to note with regard to the income configuration of non-poor single elderly female households in the Japan. Their market income rate was 20.8% in 2004 and the value was relatively higher than those of women in Germany (14.5%) and Italy (9.4%), where people put emphasis on social insurance benefits while including market income. The figure was also relatively higher than that of single elderly male households in Japan and Germany. In contrast, the rate (65.4%) of non-poor single elderly female households in Japan depending on pension benefits was lower. The changes in the rate of their market income and public pension benefits to the annual income were less remarkable when compared to those of men. In this way, the income configuration of non-poor Japanese households differs by gender.

Another remarkable change in the Japan is the increasing percentages of private and

company pension insurance proceeds. This, however, might be due to the fact that the "National Survey of Family Income and Expenditure" has classified "private and company pension insurance proceeds" separately since 1999. Japan's percentages of private and company pension insurance proceeds are larger than those of Germany and Italy, both of which constitute the income pattern based on social insurance benefits, but the percentages are lower than those of the UK and Denmark (multiple pensions-based income patterns comprised of social insurance benefits and corporate and individual pensions) and the US (the employment-plus-social-insurance model).

Income Configuration among the Non-Poor Cohabiting with their Children

Next, when the income configuration of the non-poor in Japan, Italy, and Taiwan is examined, where the percentage of elderly households cohabiting with either their married or unmarried children is great, the children's market income is added, and the percentage of market income in total income is thus high. Japan and Italy are lower than Taiwan in the market income rates with single and couple-only households, but the addition of the children's market income increases their market income rates from 50% to 80% for both male and female.

Differences arise, however, when Italy, Japan, and Taiwan are compared. The percentage of market incomes in Italy and Taiwan are not affected by the children's marital status, whereas in Japan, the percentage is. The percentage of market income in the total income of elderly households cohabiting with married children in Japan is 80%, whereas the percentage when cohabiting with unmarried children is approximately 60%, meaning that the latter is around 20% lower. This trend is the same regardless of the gender of the elderly person.

Income Configuration among the Poor

This time, with regard to the income configuration of poor single and married couples' households, the lower percentage of market income shows that those households focus on social insurance benefits regardless of the income configuration patterns of the non-poor in each country. This income configuration does not apply to Taiwan. For example, the income configurations in impoverished single-occupant and married couple households in the UK and Denmark, in which the income configuration among the non-poor is the multiple pensions model, whereas the percentage of social insurance benefits account for 80% to 90% for both men and women, the percentage of private occupational pensions is low. Alternatively, the income configuration in impoverished single-occupant and married households in the US, where the income configuration of the non-poor is the employment-plus-pension model, the relative importance of the social insurance benefits to both men and women is high, and accounts

for approximately 80% of total income. However, poor single Italian female and couple-only households show a different landscape from this tendency in their income configuration. They depend less on social insurance benefits than poor male households and more on means-tested cash benefit. The Italian means-tested cash benefit system is a significant source of income for poor women. As the following example of Taiwan suggests, the means-tested cash benefits system has a different meaning by gender in different countries.

For the poor in Taiwan, where public pensions are not provided, the percentage of other cash income including means-tested cash benefits and remittances is clearly a greater source of income than for the non-poor. However, other cash income including regular cash remittances (55.1%) are a major source of income for poor single female households in the country and means-tested cash benefits (54%) are significant for poor single male households. A major source of income greatly differs by gender.

In this way, the income configuration of impoverished single-occupant and married couple households in the six countries, excluding Taiwan, is concentrated on social insurance benefits for both men and women. This is in contrast to the situation in which the non-poor maintain their lifestyles through multiple sources of income.

A further point for consideration is that income configurations which focus on social insurance benefits to the poor also cover households cohabiting with children as well as single-occupancy and married couple households. For example, in Italy, 70% to 80% of the income in impoverished elderly households cohabited with their children is social insurance benefits, regardless of whether or not the children are married, except for elderly women cohabiting with their married children. In Japan, the income configuration depends on whether or not the children are married, and elderly households cohabited with unmarried children have up to 20% lower market incomes as part of their yearly income for both men and women, and the percentage of public pension benefits is up to 60% higher. Japan and Italy differ in this way depending on the marital status of the children, but it is evident that social insurance benefits to the elderly are the mainstay of household income among the impoverished elderly cohabiting with their children. That is, this hints at the fact that rather than the children economically supporting the elderly, the reverse is true.

Disposable Income and Payment of Taxes and Social Insurance in Total Gross Income

We would like to look more closely at the percentages of tax and social insurance in total gross income with relevance to the income configurations of the non-poor and the poor (see Table 9). The data for Japan and Italy are protected, so these percentages cannot be calculated. When the remaining five countries are examined, the following emerges:

(1) The burden of tax and social insurance differs considerably between the non-poor and the poor, and the burden for the non-poor is largest in the US. (2) Completely the reverse of the US, the burden for tax and social insurance among the poor is largest in

Taiwan. (3) The country where the gap between the non-poor and the poor is not great, and the burden of tax and social insurance is high at around 20% to 30% for both groups is Denmark. (4) The countries where the gap between the non-poor and the poor is not great, and the burden of tax and social insurance is not high, are Germany and the UK.

Table 9 Percentage of the taxes and social insurance contribution from total gross income (%)

		U.S.		U.K.		Denmark		Germany		Taiwan	
		men	women	men	women	men	women	men	women	men	women
single	non-poor	16.3	10.9	11.5	8.3	30.7	27.8	11.8	9.0	3.1	1.8
	poor	0.3	0.3	10.4	9.9	25.3	25.3	7.2	6.7	6.3	7.3
couple	non-poor	15.1	13.2	12.8	12.0	29.5	28.9	9.5	9.0	4.2	3.4
	poor	0.7	0.4	12.1	11.1	19.6	20.2	6.2	5.9	9.6	9.4
with married children	non-poor	17.6	19.8	16.4	18.3	28.4	30.5	20.8	19.9	9.7	9.9
	poor	3.6	4.5	0.0	14.6	0.0	0.0	0.0	9.4	15.7	15.1
with unmarried children	non-poor	17.9	15.1	16.1	14.6	31.1	30.8	19.5	21.4	7.9	8.0
	poor	9.6	3.1	7.7	7.5	16.3	23.3	6.1	4.0	13.9	13.1
other	non-poor	16.0	16.5	10.1	12.0	30.3	30.3	15.3	19.6	6.5	6.8
	poor	2.4	2.9	9.3	12.7	22.5	23.2	0.0	5.4	12.7	10.7

Source: Calculated from "National Survey of Family Income and Expenditure"(Japan) and Luxembourg Income Study(Other countries)

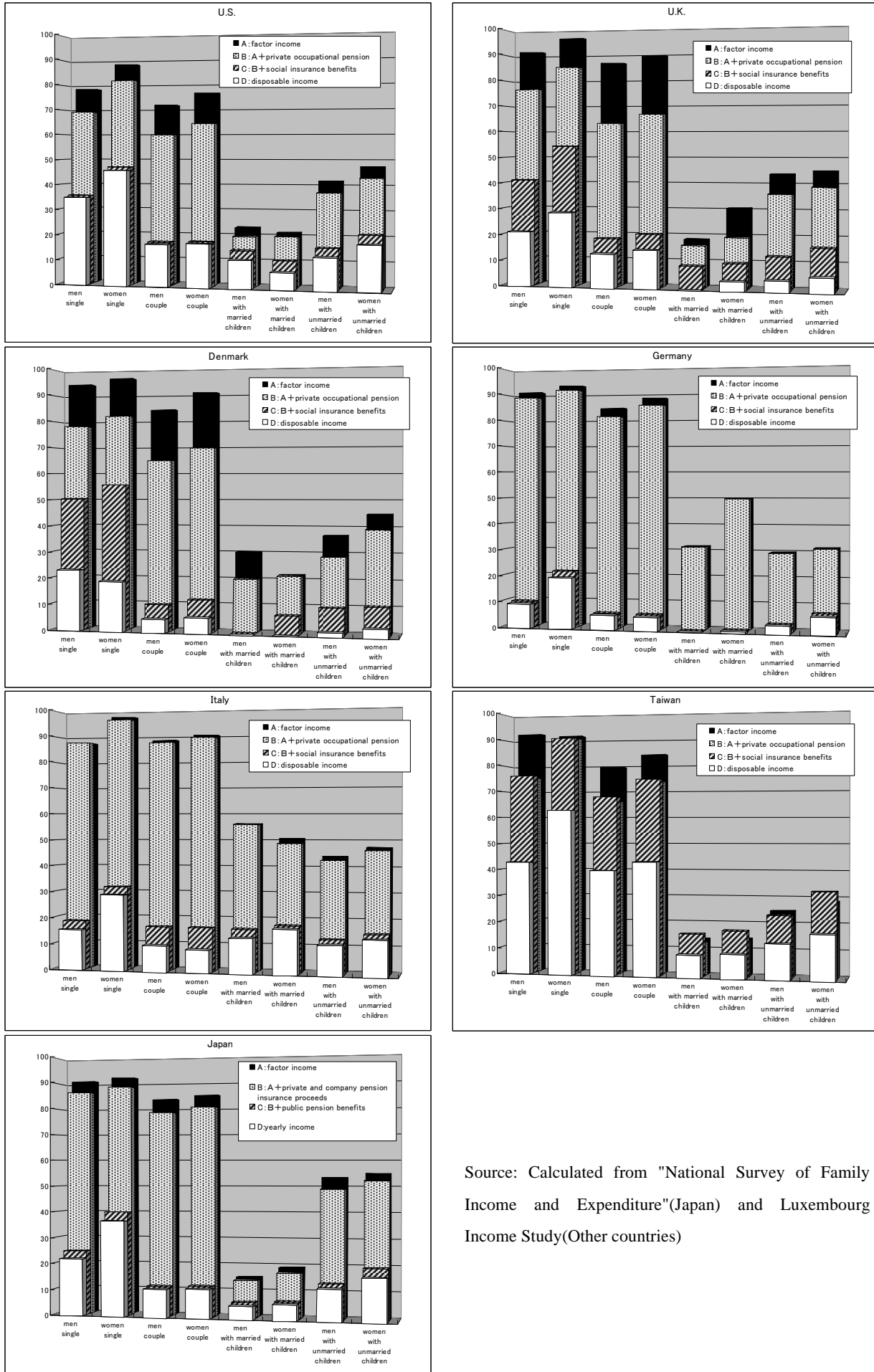
IV. The Structure of Income Sources that Contribute to Reducing Poverty Rates or Escaping Poverty

Consequently, changing the focus, what sources of income are effective in reducing relative poverty rates or in escaping poverty? To examine this question, we estimated the poverty rates for each income source in accordance with the procedures described in the research methods.

Poverty rates from first-stage market incomes to final disposable income differ considerably between households cohabiting with children and those that are not, and the poverty rates at each stage are considerably lower in households cohabiting with children. Here, households were divided into single occupancy and married couples, and those cohabiting with children, for examination.

The commonality between single-occupancy and married couple households in all countries was that poverty rates at the market income level were extremely high at between 70% and 90%. That is, the majority of these elderly households do not have sufficient self-generated income or income from assets (interest, rents, share options, or other sources) to avoid poverty as much as possible. Excluding this point, the status in each country can be broadly divided into four patterns. These patterns are similar to the income configuration patterns (see Figure 1).

Figure 1 Relative poverty rates by source of income



Source: Calculated from "National Survey of Family Income and Expenditure"(Japan) and Luxembourg Income Study(Other countries)

First is the pattern in which social insurance benefits play a decisively important role in reducing relative poverty rates, as in the cases of Germany and Italy. For example, in the case of single-occupancy male households in Germany, the first-stage (market income) poverty rate is 91.2%, and the second-stage (market income + private occupational pensions) poverty rate is 88.9%, and so the first and second-stage poverty rates are almost completely unchanged. Upon reaching Stage 3 (in which net social insurance benefits are added to Stage 2), however, the poverty rate falls to 9.9%. Poverty rates are reduced by 79% due to social insurance benefits. Further, in the case of single-occupant male households in Italy, poverty rates are reduced by 69% due to net social insurance benefits.

One more characteristic of this pattern is that the reduction in poverty rates due to social insurance benefits is approximately the same for both single-occupancy and married couple households. The poverty rates for women in these countries, however, are high at all stages when compared to men.

The second pattern is the effect of multiple sources of income up to the stages of social insurance benefits, private occupational pensions, and disposable income on reducing poverty rates, such as in the UK and Denmark. Additional income from Stage 3 income (market income + private occupational pensions + social insurance benefits) to disposable income includes means-tested cash benefits and remittances from relatives (i.e., private assistance). Private assistance, however, is clearly rather small even from the viewpoint of income configuration. Consequently, the remarkable reduction in poverty rates up to the disposable income stage should be considered as greatly affected by public assistance.

For example, in the case of single-occupancy male households in Denmark, the poverty rate at the first market income level is 94.5%, the poverty rate at Stage 2 (market income + private occupational pension) is 78%, the poverty rate at Stage 3 (market income + private occupational pensions + social insurance benefits) is 50.2%, and the poverty rate at the disposable income stage is 23.2%. The reduction in poverty rates for each stage from the poverty rate at the market income level to the disposable income level are 16.5%, 27.8%, and 27%, and the rates of reduction in Stages 3 and 4 are clearly close together. In the case of single-occupancy female households in the same country also, there have been similar trends in reduction (14.8%, 26.4%, and 36.5%), but the reduction in poverty rates at the disposable income stage has been more conspicuous than for men. This fact hints that the reduction in poverty rates due to public assistance has been much more effective for elderly women. Thanks to the effects of public assistance focused on elderly women, poverty rates for women living alone in this pattern are similar to the first pattern.

The third pattern occupies a position halfway between patterns 1 and 2, and is the case in the US. The effects in both countries of private occupational pensions are considerably higher than with the first pattern, but less than the effects in the second pattern and, further, the importance of social insurance benefits are less than with pattern 1, but greater than with pattern 2. This pattern is almost entirely unaffected by public assistance, which has proven highly effective for women in particular, as with pattern 2

and, differing from pattern 1, there have been differences in the reductions in poverty rates due to social insurance benefits between single-occupancy and married couple households. These various factors combine to make poverty rates among single-occupancy female households in this pattern extremely high.

The fourth pattern is that poverty rates are consistently high from market income (stage 1) to social insurance benefits (stage 3) and the values decrease only in the disposable income level including public and private support. Taiwan is an example of this pattern. It is noticeable that the poverty rates of single female households in Taiwan are almost 90% from level A to level C and that the figures show as high as 62.6% even in the disposable income level including private support.

Table 10 Change in the relative poverty rates by source of income, Japan

		A : factor income			B:A+private and company pension insurance proceeds			C:B+public pension benefits			yearly income		
		1989	1999	2004	1989	1999	2004	1989	1999	2004	1989	1999	2004
single	men	78.4	89.3	91.1	78.4	87.9	86.5	40.1	24.3	24.8	39.0	23.5	22.0
	women	91.6	92.1	92.4	91.6	90.4	88.4	54.3	48.1	40.0	48.2	45.4	36.7
	total	89.4	91.4	92.0	89.4	89.7	87.9	51.9	41.8	35.8	46.6	39.6	32.6
couple	men	75.4	81.8	83.7	75.4	78.9	78.3	21.3	13.8	11.6	19.4	12.8	10.9
	women	77.6	85.2	85.2	77.6	82.7	80.4	25.3	14.8	11.9	23.0	13.9	11.2
	total	76.3	83.2	84.4	76.3	80.3	79.2	22.8	14.2	11.7	20.7	13.3	11.0
with married children	men	13.4	13.1	14.8	13.4	12.4	14.0	7.5	6.0	6.2	6.4	5.0	5.3
	women	12.9	15.3	18.7	12.9	14.6	17.1	6.9	6.2	6.8	5.8	5.1	6.1
	total	13.1	14.6	17.5	13.1	13.9	16.1	7.1	6.2	6.6	6.0	5.1	5.9
with unmarried children	men	35.3	46.0	53.2	35.3	43.6	49.1	12.9	12.5	13.8	10.9	10.4	12.4
	women	44.4	48.8	54.8	44.4	47.3	52.3	22.9	20.1	19.8	20.8	16.2	16.7
	total	40.0	47.5	54.0	40.0	45.5	50.7	18.0	16.5	16.8	16.0	13.5	14.6
other	men	64.6	69.0	68.8	64.6	67.1	62.7	23.1	15.7	13.9	20.4	13.0	11.3
	women	40.9	62.0	61.1	40.9	60.8	56.0	21.8	21.4	15.5	19.4	18.6	13.0
	total	49.0	65.0	64.6	49.0	63.5	59.1	22.3	19.0	14.8	19.8	16.3	12.2
total	men	43.6	61.2	67.7	43.6	59.0	63.4	15.5	13.0	12.8	14.0	11.9	11.6
	women	41.2	57.5	63.2	41.2	56.0	59.8	20.6	20.5	18.5	18.3	18.7	16.8
	total	42.2	59.2	65.2	42.2	57.3	61.4	18.6	17.3	16.0	16.5	15.7	14.5

Source: Calculated from "National Survey of Family Income and Expenditure"(Japan) and Luxembourg Income Study(Other countries)

Further, in the case of Taiwan, poverty rates at stage 3 (market income + private occupational pensions + social insurance benefits) are considerably higher than poverty rates at stage 2 (market income + private occupational pensions). This is thought to be because the percentage of tax and social insurance that comprise total income among the poor are higher than among the non-poor, as described in the income configurations.

This section looks at which category Japan can be grouped into. In Japan, changes occurred in the source of income that could lower the poverty rates (or prevent poverty) during the past 15 years. Figure 1 (comparison of seven countries) and Table10 (changes in Japan) illustrate that the poverty rate of single male households in Japan at the market income level was 78.4% in 1989 and that the value was 38.3 percentage points lower with the addition of public pension benefits. This tendency was also the case with single female households (37.3%). These situations in Japan in 1989 were quite similar to those in the US in 2000. The poverty rate of single male households in the US at the market income level was 78.4% and the value was lower by 33.4 percentage points with the addition of

social insurance benefits. In the case of single female households in the US, the figures were 88.4% and 34.6%, respectively. As these comparisons show, in 1989 Japan exhibited the same pattern as the US.

However, after 1999 Japan's pattern shifted to that of Germany and Italy. That is, the public pension system played a larger role in lowering the poverty rates (or in preventing poverty). For example, in 2004, the poverty rate of single male households at the market income level was 91.1%, which was 12.7 percentage points higher than in 1989. In addition, the poverty rate with the addition of public pension benefits was lower by 61.7 percentage points, which suggests that the level of pension benefits increased by 23.4 percentage points from 1989. However, in the case of single female households, public pension benefits are less effective for reducing the poverty rates and the figure still stands at 40%.

As noted above, a role that the public pension system plays in decreasing the poverty rates differs by gender with single and couple-only households in Japan. As the ratio of public pension benefits goes up, the poverty rates go down.

Next, when Italy, Japan, and Taiwan, where the percentages of the elderly cohabiting with either married or unmarried children are relatively high, are examined, the children's earned income is added, and the poverty rates of the market incomes are thus considerably reduced. There are differences, however, between the two Asian countries and Italy. In the Italian case, there is almost no connection to whether or not the children are married or to the gender of the elderly person. Poverty rates at the market income stage are between over 40% to 50%. However, poverty rates to which social insurance benefits have been added are reduced to approximately 30%, and poverty rates at the disposable income level are stuck at a little over 10%. That is, in households where the elderly cohabit with their children in this country, the greatest contribution to the reduction of poverty rates is social insurance benefits to the elderly in the same way as to single-occupancy and married couple households.

In contrast, poverty rates based on market income in Japan and Taiwan are higher among elderly households cohabiting with unmarried children than those living with married children. In Japan in particular, this difference exceeds 50% for both men and women, which is considerably higher than in Taiwan. The poverty rates of these households in our country decline by almost 30% with social insurance benefits, but the poverty rates at the annual income level are higher than couple-only households for both men and women.

The final poverty rate (at the disposable income level) in households where the elderly live with either their married or unmarried children in Taiwan is the lowest among the three countries (Italy, Japan, and Taiwan) for both men and women, whereas in the Japanese case the opposite results are revealed.

Conclusion: Effects Hinted from this Research

When the above results are ordered with the focus on Japan, four points emerge. First, a major change occurred in household patterns of elderly men and women during the past 15 years from the late 1980s to 2004. The number of households cohabiting with married and unmarried children drastically decreased and the total rate of men and women of single and couple-only households has reached approximately 60%.

However, the current household pattern differs considerably by gender. Couple-only households account for 50% or more of elderly men. In contrast, elderly women are not fixed in one particular household pattern. Their patterns are varied in the form of couple-only households (30.2%), cohabiting with married children (28.4%) and single households (24.6%). Elderly women also show higher percentages of living with married children and lower percentages of living with unmarried children.

Second, the income configuration of non-poor single and couple-only households also dramatically changed along with the changes in household patterns. That is, their income structure shifted from the employment-plus-pension model to a heavier dependence on the public pension system. In the meantime, the poor are consistently dependent on public pension benefits as a major source of income. To summarize, both poor and non-poor single and couple-only households are placing a stronger focus of attention on public pensions benefits.

However, with regard to the income configuration of non-poor elderly women and single female households in comparison with elderly men, it is notable that the rate of the market income to annual incomes was slightly higher in 1999 and 2004 and that the percentage of public pension benefits was lower in elderly women. This suggests that single elderly women still depend on market income supplement for pension benefits to maintain their non-poor living standards.

Third, the public pension system is playing an increasingly important role in reducing poverty rates or preventing poverty along with the changes in income configuration patterns. Amid the situation, the poverty rates of the whole elderly population are on the decrease. This trend is particularly remarkable with single and couple-only households.

However, the poverty rates of single households, for both male and female, were well beyond the average poverty rate (14.5%) of the whole elderly population as of 2004. The poverty rate of single female households was particularly high with 36.7%. Given the common denominators of the income configuration between men and women, and between the poor and the non-poor, this suggests that there are significant gaps in the level of public pension benefits among single households and by gender. This is also considered to affect the situation in which the public pension system is ineffective for lowering the poverty rates of single elderly women (or for preventing poverty).

Fourthly even in households cohabiting with children, poverty rates and income configurations differ depending on the marital status of the children. Poverty rates are higher when cohabiting with unmarried children. Further, the percentage of public pension benefits in poor elderly households that are cohabiting with their married children are low,

but in poor elderly households that are cohabiting with their unmarried children, the mainstay of household income for both men and women is public pension benefits, and a connection to children being maintained by their elderly parents has emerged.

At what do these results hint? Currently, the developed nations including Japan are in the middle of reforming their income support policies for the elderly, such as promoting employment and work for the aged and raising the age at which public pensions can be received. In the future, the income configuration of elderly households and relative poverty rates might change due to the development of these reforms. In Japan, however, where the employment rates of elderly men and women are already high⁵⁾, can any further rise in the employment rates be expected? In addition, as shown by the actual state of poverty rates by income source, the possibility of the elderly escaping poverty through market income is extremely small. Changing the focus, the elderly poor maintain their lifestyle through only public pension benefits, despite being poor. This is probably because, against this background, the reality is that finding employment to boost income is impossible even if desired.

When this point is considered, it is essential to deliberate social security, as well as promotional measures for elderly employment. Issues needing discussion through debate include whether the levels of public pensions paid to the elderly satisfy income standards that merely enable poverty to be avoided and the nature of public assistance targeted at the elderly who have fallen into relative poverty.

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Notes

1) Giuliano Bonoli and Toshimitsu Shinkawa, *Aging and Pension Reform around the World: Evidence from Eleven Countries*, Edward Elgar, 2004. (Japanese version, Minervashobo, 2004.)

2) The poverty standard for the European Statistical Office is 60% of the median equivalence income. Further, given that the public poverty line in the US in 1998 and 2002 was 42% of the median equivalence before tax income, in researching poverty in the US, two standards were used as the poverty standard of 40% and 50% of the median

equivalence income. Refer to Timothy M. Smeeding and Susanna Sandstrom, *Poverty and Income Maintenance in Old Age: a Cross-National View of Low Income Older Women*, LIS Working Paper 398, 2005.

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5) Sawako Shirahase, *Window Later in Life in Japan: Considering Social Security in the Aging Society*, LIS Working Paper No. 444, 2006.

6) OECD (eds.), Atsushi Seike (translation supervisor), Atsuhiko Yamada and Kim Myungjung (trans.), *Aging and Employment Policies, Japan*, Akashi Shoten Co., Ltd., Tokyo, 2005, p. 46.