An Analysis of the Joint Distribution of Income and Wealth over the Life Cycle

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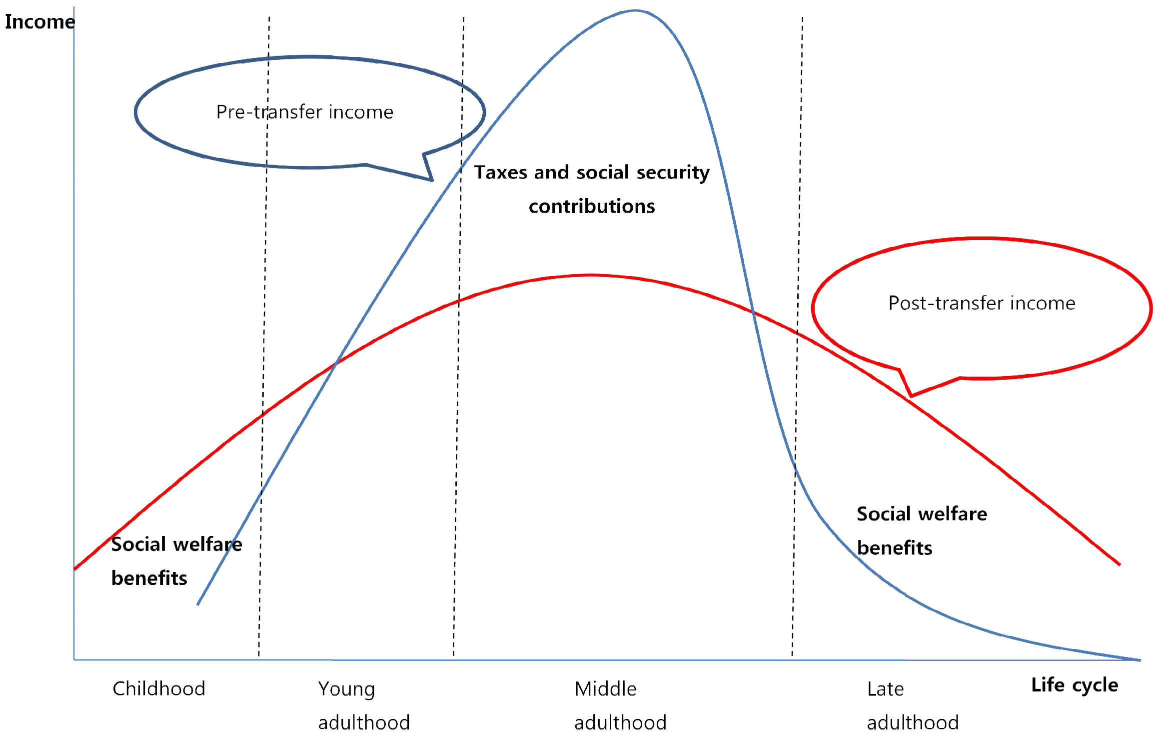
Income and wealth are distinct types of economic condition. Yet they impact the economic well-being of individuals and households in an interrelated way. Thus, when considered and analyzed in combination, they enable us to better understand the levels and distribution of household welfare.

Also, it may be meaningful to analyze household welfare in the framework of life cycle. The importance of taking a life cycle approach to household welfare studies lies in the fact that not only income levels and sources but also the impact of public transfer can vary across different life course stages. One of the key features of social welfare is that, with its redistributive function, it helps people smooth consumption over their life cycle. Therefore, the focus of social welfare is not only on social transfers between income classes, but also on providing income protection for those in the early (children and youth) or late (the elderly) of their lives, as suggested by Figure 1.

<Figure 1> Life-cycle income distribution



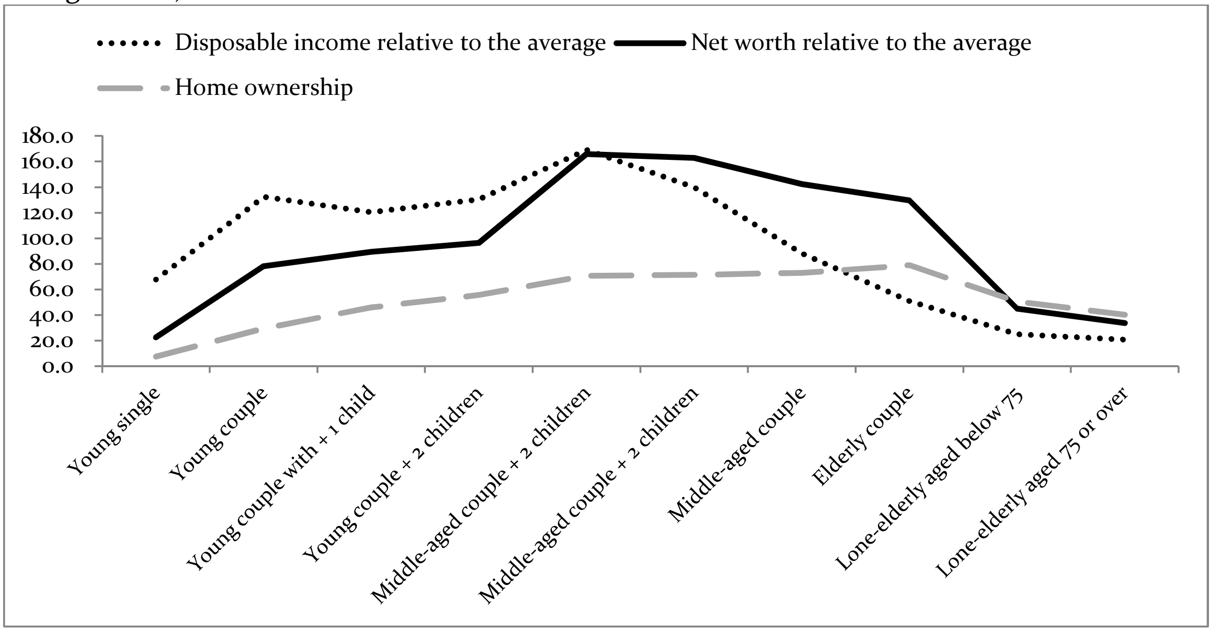
This study analyzed the life cycle distribution of income and wealth in Korean households, using data collected from the National Survey of Living Conditions (Korea Institute for Health and Social Affairs, 2003, 2005, 2009, 2011). For our analysis, we divided the sample population into 12 reference groups, which are households of: young singles (aged below 35); young couples (with the head aged below 45); young couples with a child; young couples with two children;

middle-aged couples with two children (with the head aged between 45 and 65); middle-aged couples with a child; middle-aged couples; elderly couples (with the head aged 65 and over), lone-elderly individuals aged between 65 and 75; lone-elderly individuals aged 75 and over); single parents; and others.

2. Life course distribution of income and wealth

As shown in Figure 2, disposable income levels, having risen steeply across young couple households, underwent moderate ups and downs until before reaching their highest in households of middle-aged couples with two children. Wealth distribution revealed a similar pattern, except that while the net wealth level of elderly couple households was as high as 129.7 percent of the average, that of lone-elderly households was as low as one-third of the average.

<Figure 2> Relative-to-average income and wealth levels, by household type (2011, average=100.0)



Source: *National Survey of Living Conditions 2011*, KIHASA

Elderly households, and lone-elderly households in particular, had low income levels, as shown in Figure 2. One in every three elderly-couple households (34.0 percent) were found to belong to both the bottom 40 percent of the income distribution and the top 40 percent of the wealth distribution, while only 14.0 percent of the elderly living alone aged less than 75 years and 10.5 percent of those living alone aged 75 and over were in the same categories (see Table 1).

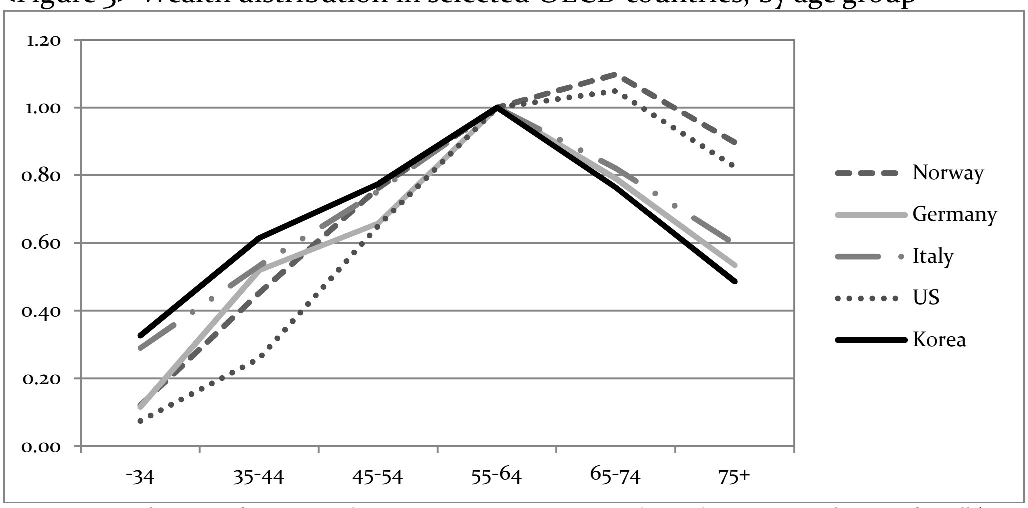
<Table 1> Income and wealth distribution in elderly households (2011)

Elderly couples	1st income quintile	2nd income quintile	3rd income quintile	4th income quintile	5th income quintile	Total
1st wealth quintile	8.1	2.0	0.2	0.0	0.0	10.3
2nd wealth quintile	11.0	5.1	0.9	0.0	0.0	17.0
3rd wealth quintile	11.7	9.5	2.7	0.0	0.0	24.2
4th wealth quintile	8.9	10.2	3.0	1.0	1.0	23.7
5th wealth quintile	6.3	8.6	5.1	1.9	1.9	24.8
Total	45.8	35.4	11.8	2.9	2.9	100.0
Lone elderly (<75)	1st income quintile	2nd income quintile	3rd income quintile	4th income quintile	5th income quintile	Total
1st wealth quintile	36.1	1.8	0.0	0.0	0.0	38.0
2nd wealth quintile	23.4	1.9	0.1	0.0	0.0	25.7
3rd wealth quintile	18.9	2.0	0.0	0.0	0.0	21.2
4th wealth quintile	5.8	1.8	0.0	0.0	0.0	7.8
5th wealth quintile	4.3	2.1	0.4	0.0	0.0	7.3
Total	88.5	9.5	0.5	0.0	0.0	100.0
Lone elderly (>=75)	1st income quintile	2nd income quintile	3rd income quintile	4th income quintile	5th income quintile	Total
1st wealth quintile	50.6	0.8	0.0	0.0	0.0	51.5
2nd wealth quintile	25.5	1.1	0.0	0.0	0.0	26.8
3rd wealth quintile	9.0	1.4	0.0	0.0	0.0	10.5
4th wealth quintile	5.9	0.3	0.0	0.0	0.0	6.3
5th wealth quintile	3.3	1.0	0.1	0.0	0.0	4.8
Total	94.4	4.6	0.1	0.0	0.0	100.0

Source: *National Survey of Living Conditions 2011*, KIHASA

Such a result may be attributable in part to the influence of assets being increasingly used by older Koreans to supplement their dwindling income. In a country like Korea where there still remains a strong tradition of intra-family wealth transfer, this can also be considered traceable to an increasing number of cases of intergenerational wealth transfers from older Koreans to their grown-up children. The asset distribution by age group in Korea is of a similar pattern to that in Italy and other southern European countries, where household asset levels are much lower in young cohorts than in older cohorts. On the other hand, the relative-to-average wealth levels of young adults aged below 35 in Norway (a democratic socialist country) and the United States (a liberal democracy) were very low compared to those of elderly people.

<Figure 3> Wealth distribution in selected OECD countries, by age group



Source: *National Survey of Living Conditions 2011*, KIHASA; *In It Together: Why Less Inequality Benefits All* (p.258), OECD

Both income and wealth disparities have increased in the households of young singles aged below 35 and of young couples aged below 45. The relative-to-average income level of young single-person households declined from 71.6 percent in 2003 to 67.6 percent in 2011, while young-couple households saw over the same period a large increase in their relative-to-average income level from 108.2 percent to 132.3 percent. Also, the relative-to-average net asset level, while declining slightly from 23.0 percent to 22.4 percent for young single-person households, increased to a large extent from 52.9 percent to 78.1 percent for young couple households.

<Table 2> Relative-to-average income and wealth levels of young households (average=100)

		2003	2005	2009	2011
Disposable income	Young single	71.6	72.5	67.9	67.6
	Young couple	108.2	102.4	121.6	132.3
Equivalized disposable income per capita	Young single	125.5	125.3	116.0	111.0
	Young couple	134.1	125.1	146.9	153.7
Net wealth	Young single	23.0	19.8	24.3	22.4
	Young couple	52.9	62.0	63.1	78.1

Source: *National Survey of Living Conditions*, each year, KIHASA

Both poverty and inequality, measured in terms of disposable income, are found to have fallen over the years between 2003 and 2011. The general features of the distribution of earned income and net wealth remained more or less the same over the period.

<Table 3> Trends in household poverty rate (below 50% of the median) and inequality (Gini coefficients)

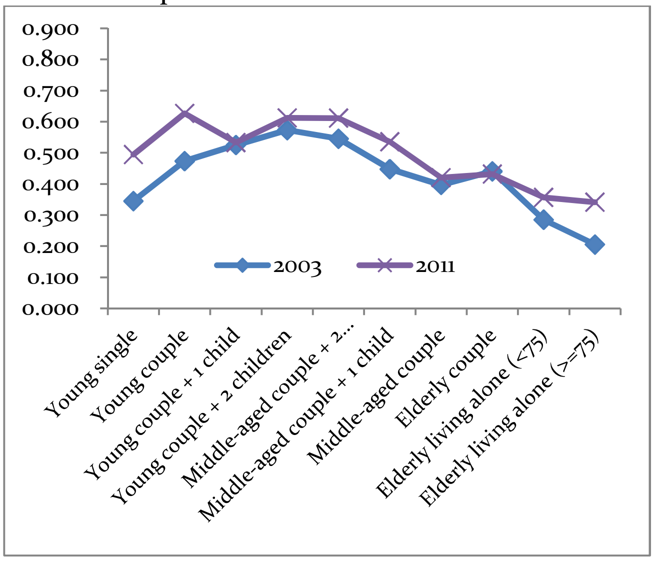
		2003	2005	2009	2011
Poverty rate	Earned income	27.2	26.7	28.6	27.1
	Disposable income	19.6	18.8	18.2	17.4
	Net wealth	33.4	33.6	33.6	22.3
Inequality	Earned income	0.473	0.468	0.495	0.472
	Disposable income	0.407	0.396	0.403	0.386
	Net wealth	0.655	0.705	0.657	0.623

Source: *National Survey of Living Conditions*, each year, KIHASA

Despite these trends, however, the rank coefficients of income-asset correlation have increased over the same period. The both tails of the life cycle distribution revealed an increasing level of association between income and wealth: between high income and high wealth and between low income and low wealth, as illustrated in Figure 4.

<Figure 4> Rank coefficients of correlation between disposable income and net wealth

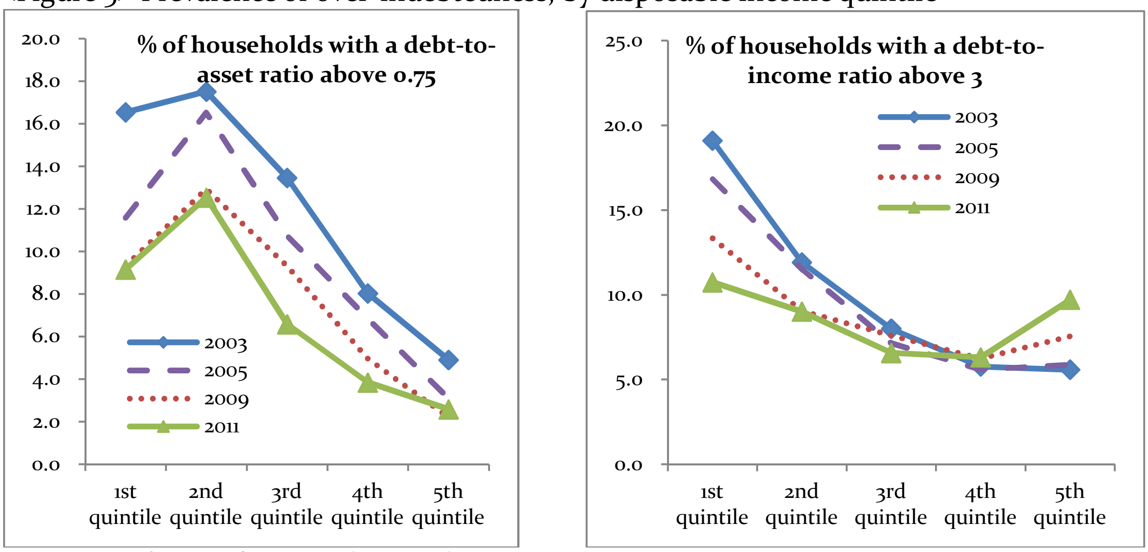
Household type	2003	2011
Young single	0.345	0.495
Young couple	0.473	0.627
Young couple + 1 child	0.525	0.533
Young couple + 2 children	0.573	0.613
Middle-aged couple + 2 children	0.545	0.612
Middle-age couple + 1 child	0.448	0.536
Middle-aged couple	0.397	0.420
Elderly couple	0.441	0.432
Elderly living alone (<75)	0.285	0.357
Elderly living alone (>=75)	0.205	0.342
Single parent	0.387	0.433
Others	0.544	0.520



Source: *National Survey of Living Conditions*, each year, KIHASA

While households with asset-based over-indebtedness (households with total liabilities exceeding 75 percent of their wealth) were concentrated in the 2nd wealth quintile, those over-indebted in terms of income (households whose total debt exceeds 300 percent of their annual disposable income) showed a tendency to increasingly disperse over time across all income quintiles. The share of over-indebted households has reduced to a large extent from 12.1 percent in 2003, when the last credit card crisis was at its height, to 6.9 percent in 2011. However, the prevalence of asset-based over-indebtedness remained high in low-income households: 12.5 percent for the 2nd income quintile and 9.2 percent for the 1st income quintile. Also, it was one of the typical characteristics of low income groups in 2003 to have a high prevalence of over-indebtedness relative to income. For instance, over-indebted (relative to income) households accounted for as much as 19.1 percent of the bottom income quintile, while only 5.6 percent of the top quintile were over-indebted. By 2011, however, the gap between the two extreme quintiles had dramatically reduced, with the prevalence of over-indebtedness falling to 10.7 percent in the bottom and rising to 9.7 percent in the top.

<Figure 5> Prevalence of over-indebtedness, by disposable income quintile



Source: *National Survey of Living Conditions*, each year, KIHASA

3. Policy implications

There has of late been an increasing effect of income redistribution, but social welfare programs' redistributive effect on life cycle income smoothing remains less than substantial. This is clearly attested to in the fact that the two extremes of life-cycle distribution of income and wealth, which to a large extent represent households of young singles and those of elderly living alone, respectively, are marked by low income and wealth levels and very high poverty rates. There is a strong need to strengthen income protection for these two cohorts through a combination of labor market and social protection policies. Although it is entirely possible for older adult groups with high income poverty rates to use their assets to supplement their income, the overall effect of this may not be all that significant, as these are groups that have low levels of asset holdings. Moreover, assuming the tacit intergenerational exchange of long-term care and inheritance between aged parents and their adult children, the effect of liquidating housing wealth for an elderly individual may well be a thinning of the income flow coming from his or her adult children.

The growing gap in both income and wealth between young single-person households and young couple households is a point that deserves policy attention. Specifically, a set of new policy tools will need to be devised to help young singles have stable jobs and accumulate assets. Also, as household debt in Korea is an issue concerning much more than low-income groups, more policy attention needs to be paid to the management of household debt.