

## **Income Inequality and Poverty in OECD Countries: How Does Japan Compare?**

**Marco Mira d'Ercole**<sup>1</sup>

### **1. Introduction**

Cross-country comparisons of performance are essential tools for analysis of social and economic policies: they provide a point of reference for judging the performance of any given country and an opportunity to assess the effects of national policies and conditions on the magnitudes of cross-country differences. To this end, the OECD has long aimed to collect better comparative data covering various aspects of social development in its periodical compendium of social indicators (OECD, 2005a). One specific area of such efforts relates to information on the distribution of household income and poverty, an area where OECD involvement dates back to the 1970s.<sup>2</sup>

Not everyone may share the attention given to income inequality as a goal for policy. On one view, income inequalities are simply the counterpart of better incentives to work and save, i.e. a requirement for better economic performance.<sup>3</sup> Others, conversely, may consider such inequalities as conflicting with shared norms of fairness, social justice and equality of opportunities. Whatever the position taken in this debate, however, no one is completely indifferent to the distributive outcomes of a market economy. Even when greater inequalities in the distribution of household income are required to improve economic performance, they could exceed their "optimal" level and have undesired side-effects, such as increasing support for policies that harm economic performance. For these reasons, income inequality and poverty are essential dimensions for comparing social performance across countries and for understanding how a better combination of policies might allow achieving better results.

### **2. Some stylised facts**

Statistical information about the distribution of household income is subject to several types of uncertainties, which affect cross-country comparisons of both the levels of different indicators and their evolution over time. While the data used by the OECD for its comparative analysis overcome some of the most obvious elements that limit cross-country and inter-temporal comparability (e.g. use of a common adjustment for differences in household size - the square root elasticity -, exclusion of non-cash components,

treatment of negative income) they remain affected by other aspects that escape standardisations: for example, household surveys differ in terms of their frequency, whether data collection is undertaken at a special time or spread out over the year, and whether only one or all household members are interviewed. Most of these issues are not sufficiently understood in an international context to admit uncontroversial solutions. Because of these limits, OECD countries can be ranked in their levels of income inequality and poverty only in the presence of reasonably substantial differences in the levels of the various indicators. On the other hand, the OECD dataset aim to ensure temporal consistency of its data within countries by using dataset based on the same statistical source or by chain linking different indicators when different sources are used.<sup>4</sup>

### ***Is income inequality in Japan higher than in other OECD countries?***

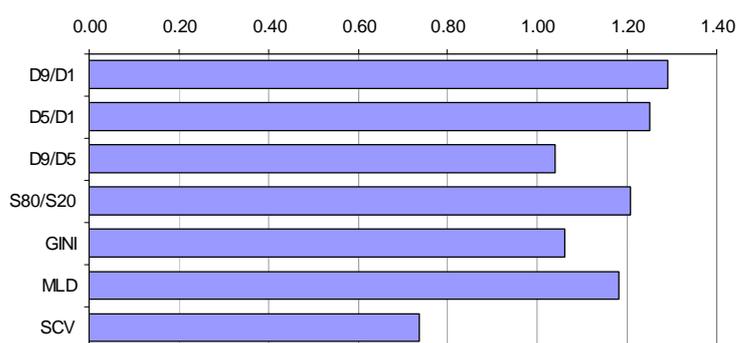
The response to the question of whether income inequality in Japan is high or low partly depends on which countries are taken as terms of comparisons and on the method used to compare distributions between countries. With respect to the first issue, two countries (Turkey and Mexico) stand out from other OECD countries for their relatively low income per capita and much larger inequality in the distribution of household income (inequality which is, however, rapidly converging to the OECD average).<sup>5</sup> For this reason, they are excluded from most of the comparisons undertaken in this article. With respect to the second issue, comparisons of distributions of household income can be based on either the distribution of household income (standardised Lorenz curve<sup>6</sup>) or on summary measures of inequality drawn from them, which however rely on value judgments (i.e. they give more importance to some parts of the distribution relative to others). Based on the first approach, a comparison of the distribution for Japan with that of other OECD countries shows that household income is unambiguously more unequally distributed in Japan (i.e. Japan's Lorenz curve lies inside that of the other countries at all points of the distribution) than in 13 OECD countries (Australia, Austria, the Czech Republic, Denmark, Finland, France, Germany, Ireland, Luxembourg,

Netherlands, Sweden and Switzerland), that it is more equally distributed than in the United States (as well as Mexico, Turkey) and that results are ambiguous with respect to ten remaining countries.<sup>7</sup>

These country-by-country comparisons show whether income inequality in Japan is higher or lower than in other countries but do not inform about the size of these differences. A second way of comparing countries is through indexes that aim to summarise the entire distribution. Figure 1 compares several summary indices of household income inequality for Japan to an OECD average that excludes Mexico and Turkey. Most inequality measures are higher in Japan than in the OECD average. The inter-decile ratio (i.e. the ratio between the upper limit of the 9th decile of the distribution and that of the 1st one) is about 30% higher in Japan than in the OECD average, with most of this difference reflecting the large difference between the median and the bottom

decile (25% higher than in the OECD average). Similarly, the share of (equivalised) household disposable income accruing to the top quintile is almost 6 times that of the bottom quintile, around 20% more than in the OECD average. Both the Gini coefficient (an inequality measure that is especially sensitive to the middle of the distribution)<sup>8</sup> and the mean log deviation (an inequality measure that is more sensitive to the bottom tail of the distribution)<sup>9</sup> are above the OECD average, particularly in the second case. The only summary indicator of income inequality that is below the OECD average is the squared coefficient of variation<sup>10</sup>; however, as this measure is very sensitive to what happens at the top end of the distribution, this result is likely to reflect the "truncation" of the top 1% of Japanese respondents from the data used by the OECD - a truncation that applies only to the Japanese data available to the OECD and not to those from other countries.

**Figure 1. Summary measures of inequality in the distribution of household disposable income in Japan relative to the OECD average**



Note. Values above 1 indicate that the summary measure of inequality in the distribution of household disposable income in Japan is above the average values across 23 OECD countries (excluding Turkey and Mexico). Data refer to the year 2000 in all countries except 1999 for Australia, Austria and Greece; 2001 for Germany, Luxembourg, New Zealand and Switzerland; and 2002 for the Czech Republic.

Source. OECD questionnaire on income distribution and poverty. For details see Förster, M. and M. Mira d'Ercole (2005), "Income Distribution and Poverty in OECD Countries in the Second Half of the 1990s", OECD Social, Employment and Migration Working Papers No. 22, OECD, Paris.

***Is high income inequality a long-term trait of Japanese society?***

The answer to this question seems to be "no". In the mid-1970s, when Malcom Sawyer provided his comparative analysis of income inequality for the OECD, Japan figured among the OECD countries with the lowest level of inequality among the 12 countries considered - not much higher than Sweden and Norway - although this result may have reflected the quality of the underlying data.<sup>11</sup> The data for Japan used by the OECD in its recent analysis show unambiguous increases in inequality

since 1985 (the Lorenz curve dominance condition is satisfied, indicating that inequality clearly increased). While in 1985 most inequality indicators for Japan were still below the OECD average (slightly above in the case of the D5/D1 and of the mean log deviation) this changed in the following years. The increase in income inequality was continuous over time, with its pace quickening in the second half of the 1990s as the recession deepened.<sup>12</sup>

This upward trend in inequality does not reflect idiosyncratic features of the data used by

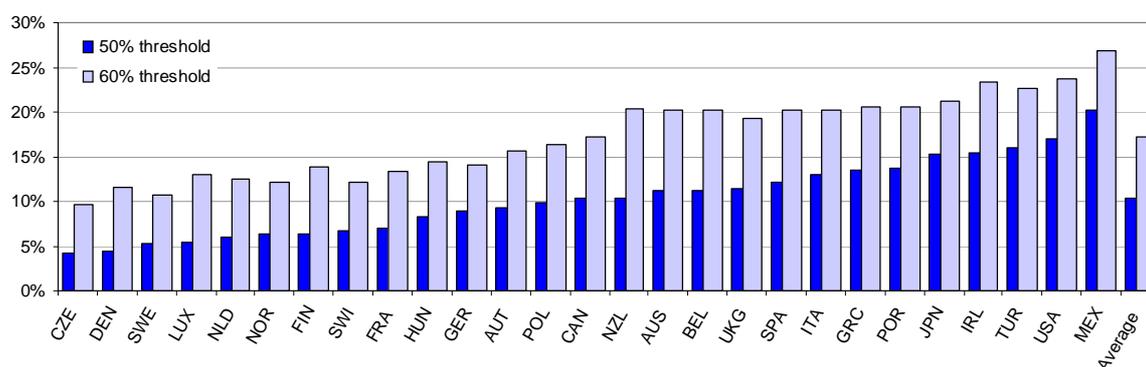
the OECD. Indeed, different Japanese surveys point to similar increases, although differing in the pace of the rise and, more significantly, in the absolute size of such inequalities. The Income Redistribution Survey, which is conducted by the Ministry of Health and Welfare every three years, shows an increase in the Gini coefficient for net household income of 11% between the mid-1980s and 2000, only slightly less than the 13% increase reported in the OECD database on income distribution (which relies on the Comprehensive Survey). Data from the Family Expenditure Survey, which is run monthly by the Japanese Statistical Office but whose sample is not representative of the entire population, show a rise in the Gini coefficient for disposable income of around 6%, between the average value recorded in 1984-86 and that of 2002-04. Finally, the National Income and Expenditure Survey, which is also conducted by the Japanese Statistical Office every five years (and which was used by the OECD in the past) shows a rise of the Gini coefficient of around 8% between 1984 and 1999.<sup>13</sup> Both of these last two surveys show significantly smaller levels of most inequality indicators than the OECD database, while the Survey on the Redistribution of Income reports Gini coefficients that are significantly higher. These different results reflect both different ways of analysing the data (e.g. equivalence scales) and differences in the underlying samples.

***Are these inequalities reflected in higher poverty?***

The measurement of poverty is especially difficult in an international context, as it involves different

concepts and value judgements. Poverty measures can be classified along two dimensions. A first distinction is that between monetary and non-monetary measures: most comparative studies refer to the former, and rely on income as the yardstick for comparing "material living standards" across countries. A second distinction is based on the threshold that is used to separate the "poor" from the "non poor" population, and which can be either "relative" or "absolute". The data collected by the OECD take the median equivalised household disposable income as a proxy of the typical living standards prevailing in each country, and measure income poverty through different cut-off points relative to that standard. When measured using a threshold set at half of the median, the relative poverty rate in Japan (i.e. the share of the Japanese population with income below the poverty line) was around 15% in 2000, around 50% higher than in the OECD average (Figure 2); when using a 60% threshold, the Japanese poverty rate is 21%, around 25% more than in the OECD average. Not only is low-income more prevalent in Japan than in most other OECD countries but its intensity is also higher; the gap between the average income of the poor and the poverty line was close to 36% in Japan in 2000, as compared to 28% in the OECD average (excluding Mexico and Turkey). A composite measure of poverty (i.e. the poverty rate times the poverty gap, when both are based on a threshold set at half of the median household disposable income) ranks Japan as the second highest among OECD countries, just behind the United States (Förster and Mira d'Ercole, 2005).

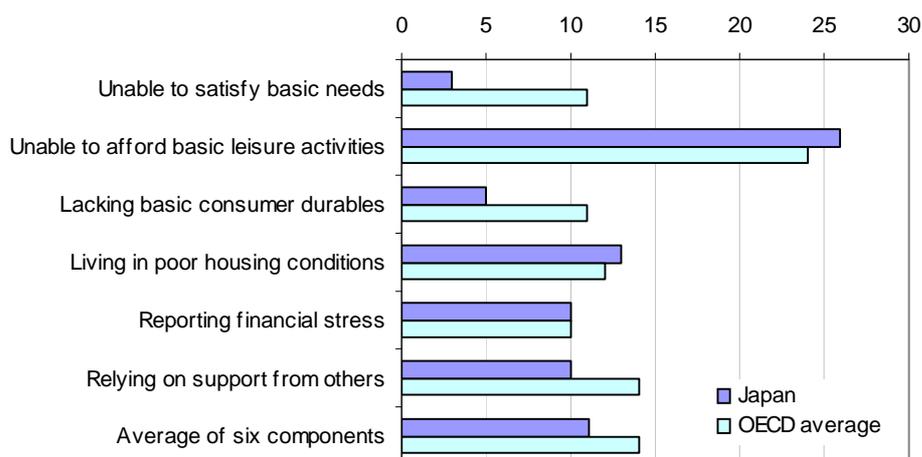
**Figure 2 Relative income poverty in OECD countries, around 2000**



Note. Relative poverty rates are measured with respect to two thresholds: 50% and 60% of median equivalised household disposable income. Countries are ranked, from left to right, in increasing order of the relative poverty rate based on a threshold of half of median income. Data refer to the year 2000 in all countries except 1999 for Australia, Austria and Greece; 2001 for Germany, Luxembourg, New Zealand and Switzerland; and 2002 for the Czech Republic, Mexico and Turkey.

Source. OECD questionnaire on income distribution and poverty. For details see Förster, M. and M. Mira d'Ercole (2005), "Income Distribution and Poverty in OECD Countries in the Second Half of the 1990s", OECD Social, Employment and Migration Working Papers No. 22, OECD, Paris.

**Figure 3 Share of households reporting different types of material deprivation**



Note. The data for the six main components of material deprivation are computed as a simple average across different survey questions; the number of items included in the average may differ across countries (e.g. the measures for households "unable to afford basic leisure activities" and "relying on support from others" shown in the figure for Japan refer to only one survey question in each case). Cross-country comparability is also affected by differences in the wording of the survey questions.

Source. Data for Japan are based on the "Survey on Living Conditions" (Shakai Seikatsu Chousa), an experimental survey designed by the National Institute of Population and Social Security Research in Tokyo and run in the context of a three year research project funded by Ministry of Health, Labour and Welfare. Data are drawn from Boarini R. and M. Mira d'Ercole (2006), "Measures of Material Deprivation in OECD Countries", forthcoming, Labour Market and Social Policy Occasional Papers, OECD, Paris.

Compared to other OECD countries, the increase in the risk of poverty recorded in Japan since the mid-1980s has been especially sharp among people of working age, in particular youths aged 18 to 25, while people above the age of 65 have recorded decreases.<sup>14</sup> The U-shaped age pattern of relative income poverty in Japan is similar to that prevailing in most other OECD countries, but changes at both ends of the age spectrum (i.e. higher poverty among youths and lower poverty in old age) have been sharper than elsewhere.

While monetary measures of low income suggest that poverty is more prevalent and severe in Japan than in the rest of the OECD, the conclusion is partly different when looking at non-monetary indicators. While the comparative evidence is more limited - and of lower quality than in the case of monetary measures - Figure 3 suggests that the share of Japanese households that declared having experienced different forms of material deprivation is below the OECD average.<sup>15</sup> This is especially the case when looking at the capacity of Japanese households to satisfy basic needs (such as health care, heating and clothing) and to afford basic consumer durables (such as cars, telephones and personal computers); conversely, material deprivation seems to be higher in Japan

than in the OECD average when considering housing conditions and basic leisure activities.<sup>16</sup> Overall - when combining the six types of material deprivation into a summary index - material deprivation is around 1/5 lower in Japan than in the OECD average. This pattern reflects Japan's comparatively high per capita income, and the tendency for the simple measures of material deprivation reported in Figure 3 to capture both the absolute and relative aspects of poverty.

***Is higher inequality offset by a stronger pace of income growth?***

One criticism often levied on measures of income distribution and relative poverty is that they do not reflect the absolute pace of income growth for those at the bottom of the income ladder. This can lead to a biased assessment of countries' performance. For example, relative income-poverty may increase over time even if the pace of income growth for those at the bottom of the distribution is higher than before; in other words, income distribution statistics only inform about changes in the position of different individuals relative to the median, irrespectively of how that median is changing over time.

The argument is important for several OECD countries. In Australia and the United Kingdom,

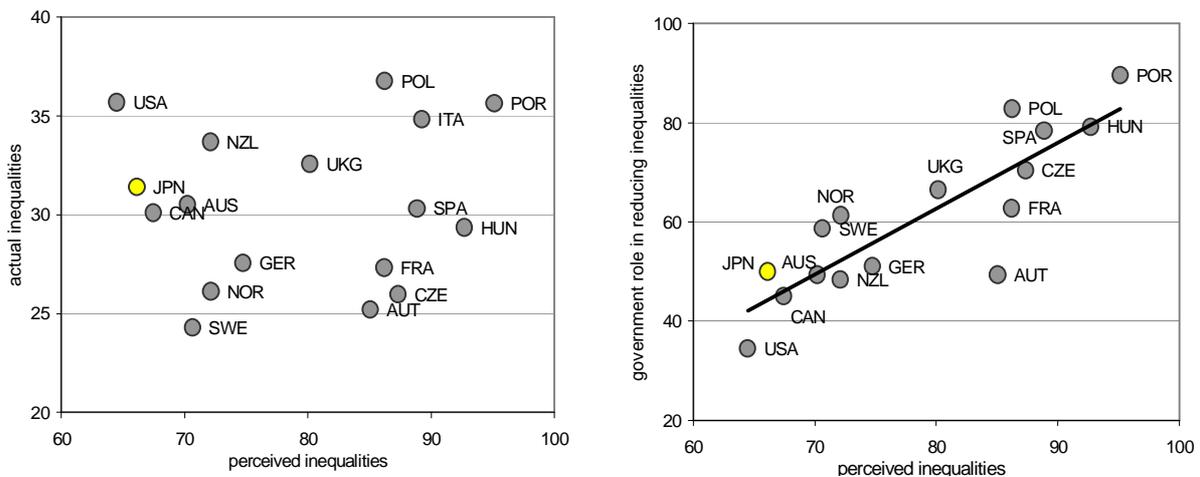
for example, the pace of income growth for people at the bottom of the distribution quickened in the second half of the 1990s, at the same time as their relative poverty rates increased. In the case of Japan, however, the recession of the 1990s implied an absolute decline in living standards (in terms of both average and median income) and this decline has been especially sharp at the bottom of the distribution (Förster and Mira d'Ercole). In other terms, not only relative poverty increased in Japan over this period, but real income growth at the bottom of the distribution also fell by more than the average. This pattern contrasts with the quickening in the pace of income growth at the bottom of the distribution that is recorded over the second half of the 1990s in several OECD countries.<sup>17</sup>

**Do these stylised facts conform to perceptions?**

This characterisation of Japan as a high-inequality society departs significantly from subjective perceptions, at least until recent years. This can be illustrated by comparing the OECD data on income

distribution to survey data on public perceptions on inequalities, as collected in the context of the International Social Science Programme of 1999. Overall, there is no clear correlation across OECD countries between objective measures of income inequalities and subjective perceptions about them. When individuals are asked about whether inequalities are too large in their country, a relatively low share of Japanese people responded affirmatively, despite the comparatively high value of the Gini coefficient of income inequality reported in our data (Figure 4, left-hand panel). The same pattern, of low perceived inequalities despite comparatively high levels of actual inequality, is evident in North America and Oceania, while in European countries the relation between the two variables is positive. Conversely, across OECD countries, the relation between perceived inequalities and support for policies aimed at reducing them is significantly positive. In Japan, where income inequalities are perceived to be low, support for a greater government role was also lower than elsewhere.<sup>18</sup>

**Figure 4 Actual and perceived inequalities in income distribution and views about government roles in reducing them in selected OECD countries**



Note: Actual inequalities are measured by the Gini coefficient of inequality in 2000 (1995 in the case of Italy). Perceived inequalities are measured by the share of respondents who agree or strongly agree with the statement "differences in income are too large". Views on government role in reducing inequalities are measured by the share of respondents who agree or strongly agree that "It is the responsibility of government to reduce inequalities". Survey data on "perceived inequalities" and on "government role in reducing inequalities" refer to 1998 (1992 for Italy).

Source: 1999 wave of the International Social Science Programme and the OECD questionnaire on income distribution and poverty.

These patterns suggest that, beyond its actual level, judgements about whether income inequalities are perceived as "too high" or "too low" also reflect views about the factors causing poverty and inequality. Data from the 1995 wave of the World Values Survey confirm this view. According

to this survey, a majority of Japanese respondents believed that poverty was mainly "chosen" rather than the outcome of external events over which individuals had little control.<sup>19</sup> In this respect, Japanese society seems to be more similar to the United States than to most countries in continental

Europe. Unfortunately, it is not possible to assess whether this view has survived the deep economic recession of the mid-1990s.

### **3. What are the driving factors?**

No single factor explains the patterns highlighted above. This section describes some of the most important factors that have been at work, without trying to assess their relative importance.

#### ***Population ageing***

Trends in income inequality and poverty are partly driven by population ageing. While the process of population ageing is common to all OECD countries, it is especially sharp in Japan, where the old-age dependency ratio, at around 25% in 2000, is the 5th highest in the OECD - and is projected to reach a value of around 72% by 2050, the highest in the OECD area.<sup>20</sup> Population ageing affects income inequality through two separate channels. First, the elderly have a lower disposable income than the population of working age: when the share of the elderly in the total population rises, inequality will tend to widen because of larger between-group income differences. The second effect relates to how income inequality among the elderly compares to that of the total population. In most OECD countries, disposable income is more equally distributed among the elderly than among the working-age population, and this will dampen the increase in aggregate inequality. In Japan, however, the two factors work in the same direction: the income of the elderly is lower than that of people of working age while their inequality is higher (and rising, Förster and Mira d'Ercole, 2005). While both factors mainly reflect the comparatively high labour force participation rate of older people, their combined effect is to increase income inequality as the share of the elderly population rises.<sup>21</sup>

Population ageing is however only part of the story. In terms of income inequality, the increase in the Gini coefficient for disposable income between the mid-1980s and 2000 is only marginally lower for the population of working age (18 to 65 years old) than for the total population (a cumulative increase of 3.4 points in the first case and of 3.6 points in the second). When looking at poverty rates measured using a threshold of half of the median, changes in the age-structure of the population between 1985 and 2000 (based on seven age groups available in the OECD database) account for only one fourth of the total rise in the poverty rate; in other terms, had the age-distribution of the Japanese population remained unchanged as in 1985, relative-income poverty would have increased by 2.5 points (i.e by 21%) as compared

to an actual increase of 3.3 points (i.e. 28%).

To the extent that higher income inequality reflects population ageing, the observed increase may be less of a cause of concern in Japan than in other OECD countries. Disposable income is an incomplete proxy of the living standard of the elderly, as it neglects government services provided in-kind, lower work-related and housing expenses, and higher leisure time (Casey and Yamada, 2002). In addition, elderly people have generally accumulated significant stocks of wealth (housing and financial) during their working life, which they can draw upon during retirement. While comparative information on these stocks is limited, data referring to the mid-1990s showed that Japanese households with a head aged 67 or above had a stock of marketable asset of around 9 times the value of their annual disposable income in the case of singles, and 3.6 times higher in the case of couples (Disney et al., 1998). In both cases, these wealth-to-income ratios were more than twice those of households with a head below age 55 and significantly higher than those for the (eight) other OECD countries included in the analysis. These assets provide a buffer to sustain living standard in old-age but are much more unequally distributed than income. They also imply risks in the case of sharp drops in asset prices - as those experienced by Japan in the 1990s.<sup>22</sup>

#### ***Changes in household structures***

Households are key institutions governing the well-being of individuals and the sharing of economic resources among individuals. Traditionally, they have played an especially important role in Japan (as well as in other Asian and Southern European countries) because of a combination of strong family ties, high proportions of elderly living with their children<sup>23</sup> and expectation that the extended family will support persons in need before these can rely on public programmes.

Ways in which changes in household structures have affected the distribution of income in Japan differ in important ways from those that have characterised many other OECD countries. In the United States and many other English-speaking countries, the main concerns have been the growth in lone parenthood, divorces and non-intact families. In Japan, all of these phenomena continue to be less important than in most other OECD countries: the share of the population living in lone-parent households (1.3%) is less than half of the OECD average and much lower the levels prevailing in the United Kingdom and Sweden (where it is close to 8%), while the divorce rate is well below the OECD average (OECD, 2005a).<sup>24</sup>

However, Japan has recorded strong increases in the share of two-couple households with no children (the highest in the OECD) and, in particular, of those where both partners are working. The diffusion of the two-earner norms, by raising median income, may have contributed to wider income inequalities and increased the risk of (relative) poverty among those with lower attachment to the labour market.

The second important change in household structure is the strong increase in the share of people living alone, without the support provided by other co-residents (from 3.5% of the Japanese population in 1985 to 6.8% in 2000). While in the case of people of working age this may simply reflect more youths moving away from their parents' home to study, the increase in the share of people living alone has been especially sharp among the elderly (from 1% to close to 3% of the total population). Also, because of the falling likelihood that the elderly live with their children, the share of the population living in household with a head aged 65 and above has grown more rapidly than the share of the elderly population.

Overall, these changes in household structures have been more important for the rise of income-poverty than population ageing per se: when the total poverty rate is computed by keeping the household structure of the population as in 1985 (based on the fifteen categories available in the OECD classification), while allowing the poverty rates of each household type to vary, the increase in poverty rates is reduced by close to half.<sup>25</sup> The most important factor accounting for the higher rate of relative income poverty in Japan remain, however, the higher poverty for each of the various household categories, a conclusion that is

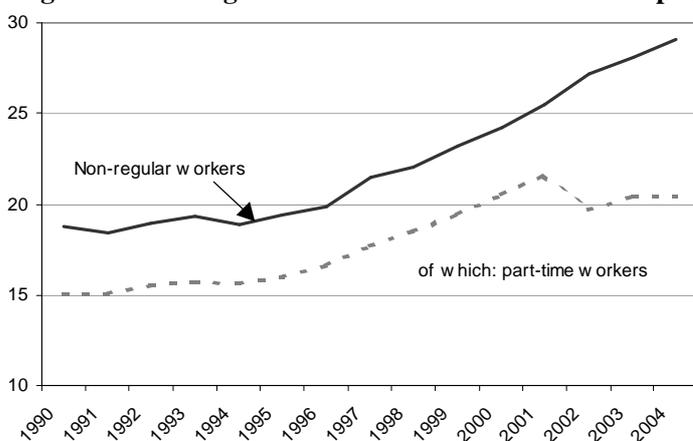
strengthened when considering separately persons of working and retirement age (Förster and Mira d'Ercole, 2005).

### **Labour markets trends**

Changes in labour markets have played a key role in the increasing inequality in the distribution of income but in forms that differ from those that have characterised several other OECD countries. Despite a decade-long recession, the Japanese labour market has continued to feature comparatively low unemployment (among individuals) and joblessness (at the household level).<sup>26</sup> The unemployment rate, at 5% in 2005, compared favourably to other OECD countries while the share of individuals living in jobless households with a head of working-age (at 2.8% in 2000) was the lowest in the OECD area. Similarly, earnings inequalities among full-time workers have traditionally been small in Japan - mainly reflecting the prevalence of seniority rules that linked wage progression to employees' age and tenure. Earnings inequality in Japan declined moderately in the 1990s - by close to 5% in the 13 years to 2003 when comparing workers in the first decile to median earnings, and by around 3% when looking at the upper part of the earnings distribution<sup>27</sup> - in contrast to the increases recorded in several OECD countries.

The main channel through which the labour market has shaped trends in income distribution in Japan has been the increasing dualisms of employment (OECD, 2006). This is evident in the rising importance of non-regular workers, which account today for close to 30% of dependent employment as compared to less than 20% in 1994 (Figure 5). Relative to other employees, non-

**Figure 5 Non-regular workers as a share of total employment in Japan**



Note. The significant fall in the number of part-time workers in 2002 and the rise in other categories of non-regular workers is thought to be due to changes in the questionnaire.

Source. Ministry of Internal Affairs and Communications.

regular workers - young people on temporary contracts, married people working part-time and older persons who are rehired by their former company on a fixed term contract - are generally older (by around three to four years), predominantly women (the share of women in non-regular jobs is twice that of men), less educated (only 12% have a university degree, as compared to 31% for regular workers), work fewer hours (30 hours a week, on average, as compared to 40 hours for regular workers) and have a shorter job-tenure. The hourly earnings of part-time workers - which account for 2/3 of all non-regular workers - are only 40% of that of regular workers. In addition, as most of them are paid on an hourly or daily basis, they do not receive semi-annual bonuses that are part of the remuneration package of regular workers. Finally, many non-regular workers do not benefit from employers-sponsored social insurance schemes: only about a third is covered by the Employees' Pension Scheme and health insurance and about half by employment insurance.

#### **4. What policy responses?**

Because of the range of factors contributing to higher income inequality, an appropriate policy need to be multi-faceted and informed about the specific features of Japanese experience - in particular the shift in poverty towards persons of working age. Such policy response also needs to take into account the current difficult budgetary context. While, across OECD countries, there is a strong negative relation between the amount of social spending directed to people of working age and the relative income-poverty of the same group, the scope for significant increases in social spending in Japan is limited by the high level of public debt and its projected increase in the future. This shifts the focus to policies aimed at increasing the returns from work and at better targeting existing programmes. The Japanese welfare system has traditionally been more limited than in other OECD countries, as social support have been relying more on families and business firms, particularly large corporations, to provide welfare services (Tachibanaki, 2005). It has also been more biased towards the elderly and less redistributive towards the poor.<sup>28</sup> As the nature of poverty has changed - from a predominantly rural phenomenon, to one that affects urban households with less obvious barriers to paid work - this system has become less effective in securing desirable distributive outcomes.

#### ***Increasing the returns from paid work***

Assuring the integration into the paid labour market

is the best insurance against the risk of poverty and low-income. Social policies can favour labour market integration through two main channels (OECD, 2005b). The first is by providing a more solid foothold in the labour market to groups that are currently at its margin. In the case of Japan, the two main groups are youths and women with young children. With respect to the first, the employment rate of young adults compares favourably to that of other OECD countries but more than 1/5 of all youths aged 15 to 24 are neither at school nor in paid employment (OECD, 2005a). Reducing this rate calls for measure to increase the retention and graduation rates in the educational system and to ease the transition of youths from school to work. Access to paid employment is also limited for women with a young child: in 2002, Japan ranked as the OECD country with the 4th lowest employment rates for mothers with a child aged under six (35%, around half of the OECD average) and this rate has declined since 1990. While several factors have contributed to this outcome, an important one is the high tax rate that is applied to second earners at low earnings levels.<sup>29</sup> OECD (2003b) provides a comprehensive blueprint for reforms to help parents better reconcile work and family responsibilities in Japan.<sup>30</sup>

Second, it is important to consider ways of reducing poverty among those in work. Over 90% of Japanese people in relative income-poverty lived in 2000 in household where at least one of its members has a paid job, and close to 50% in households with two or more workers.<sup>31</sup> The ranks of these low-income people are likely to include not only persons working part-time or for only part of the year, but also many workers working full-time and full-year. Avoiding the risks of poverty for these individuals and their families may require some form of employment-conditional benefits targeted to low-paid working families, as introduced in several OECD countries in recent years, supported by minimum wages set at an appropriate level.

#### ***Better targeting of existing social programmes***

The second element of a strategy to reduce income inequality in Japan is axed at reforming some of the features of its social protection system. The main planks of the Japanese welfare systems are insurance-based programmes providing health coverage and old-age pensions (introduced in the 1960s and generalised in the early 1970s) and long-term care to the frail elderly (since 2000). One feature of these programmes is that they redistribute very little towards families with children and those with less income. Japan spends less in social

protection than other OECD countries, and this spending is heavily tilted towards old-age pension and health which disproportionately benefit the elderly population.<sup>32</sup>

Beyond their size, most public transfers towards families - and the taxes levied on them - achieve little redistribution. This is highlighted in Table 1. The 1st panel refers to cash benefits paid by the government to households and shows the average size of these payments, as a ratio of equalised household disposable income (column A); the share of these benefits paid to the bottom quintile of the population, as a percentage of all benefits (column B); and the product of the first two columns, i.e. the overall redistribution towards people in the two bottom deciles achieved by the benefit system (column C). The second panel shows the same data for direct taxes and social security contributions paid by households. Finally, the last panel shows an overall measure of redistribution towards those at the bottom of the income scale, i.e. the size of net transfers (net of taxes paid) towards people in the two bottom deciles of the distribution. This table suggests three main features:

— On the benefit side, Japan is below the OECD average in terms of both the average size of these benefits and of the extent their targeting. When

looking at the combined effect of size and targeting of public cash transfers, Japan has the 2nd lowest effect (after the United States).

— On the tax side, the share of direct taxes and social security contributions paid by households is well below the average but those paid by people in the bottom quintile are well-above average. The combined effect of size and targeting makes for a pro-poor bias of the tax system that is largest in Australia (0.1) and lowest in Switzerland (4.3), with Japan slightly below the average.<sup>33</sup>

— When looking at the combined effect of both taxes and benefits, Japan records the lowest redistribution towards those at the bottom of the income scale (a value of 1.4).

### ***Programmes targeted to poor people of working age***

While Japan's social security system started with programmes targeted to the poor, these programmes have become smaller as the main insurance programmes matured. The public assistance law, revised in 1950, still provide the backbone of interventions: social assistance is provided following application and after careful examination of the application, with rigorous means and assets tests, and proof of non-support from family members - who are required by Civil Law to

**Table 1 Distribution of public transfers in cash and of direct taxes and social security contributions in selected OECD countries around 2000**

	<i>Government cash transfers paid to households</i>			<i>Direct taxes and social security contributions paid by households</i>			<i>G. Net transfers to lowest quintile (C-F)</i>
	<i>A. Ratio of household disposable income</i>	<i>B. Share of transfers paid to lowest quintile</i>	<i>C. Transfers to lowest quintile (A*B/100)</i>	<i>D. Ratio of household disposable income</i>	<i>E. Share of taxes paid by lowest quintile</i>	<i>F. Taxes paid by lowest quintile (D*E/100)</i>	
Australia	15.1	40.6	6.1	24.8	0.4	0.1	6.0
Canada	14.7	26.3	3.9	28.8	3.6	1.0	2.9
Czech	23.9	25.1	6.0	19.6	3.1	0.6	5.4
Denmark	25.5	35.9	9.1	53.3	6.0	3.2	5.9
Finland	15.6	32.6	5.1	32.6	4.0	1.3	3.8
France	30.1	19.6	5.9	9.2	7.7	0.7	5.2
Germany	26.9	20.2	5.4	38.3	3.0	1.1	4.3
Ireland	14.9	33.5	5.0	17.3	1.2	0.2	4.8
Italy	28.0	11.7	3.3	28.9	2.7	0.8	2.5
Japan	17.0	15.7	2.7	18.2	7.4	1.3	1.4
Netherlands	19.0	32.5	6.2	34.5	5.2	1.8	4.4
New Zealand	13.6	33.3	4.5	27.7	0.7	0.2	4.3
Norway	20.6	30.7	6.3	34.2	4.3	1.5	4.8
Portugal	19.5	16.8	3.3	17.2	3.5	0.6	2.7
Sweden	32.2	25.8	8.3	46.3	5.5	2.5	5.8
Switzerland	20.8	20.8	4.3	34.0	12.6	4.3	0.0
United	16.8	33.7	5.7	21.5	1.8	0.4	5.3
United States	7.4	25.5	1.9	32.1	1.4	0.4	1.5
<i>Average</i>	<i>20.1</i>	<i>26.7</i>	<i>5.4</i>	<i>28.8</i>	<i>4.1</i>	<i>1.2</i>	<i>4.2</i>

Note: Data from the OECD questionnaire on income distribution and poverty.

Source: Adapted from P. Whiteford, "The Welfare Expenditure Debate: 'Economic Myths of the Left and the Right' Revisited", in *The Economic and Labour Relations Review*, forthcoming

support the person in need (Abe, 2003). Because of stigma, inaccessibility of welfare offices and strict application of "self-help" principle, these programmes mainly serve households headed by a single mother, those composed by only elderly persons, and those containing a disabled or sick person. These same households account for the large majority of clients of public housing programmes targeted to the poor. In this setting, poor households including a work-capable adult are left at the margin of these programmes.

The limited effect of the tax and benefit system in lifting people of working age out of poverty seems mainly to reflect the limited coverage and take up of existing programmes rather than low benefits paid to those entitled to social assistance. OECD tax benefit model shows that the disposable income of a Japanese family relying on social assistance for the full year is only marginally below the 50% poverty threshold for married couples with two children, and slightly above that level for lone parents with two children (OECD, 2005a).<sup>34</sup> Conversely, the share of persons of working age that are reported as relying on earnings-replacing benefits, at 10% in 1999, was the lowest in the OECD (OECD, 2003a); for social assistance narrowly defined, this share was 0.3% - as compared to a level of 2.1% across 15 other OECD countries - although it has increased sharply since that year. Estimates of take up rates for programmes providing social assistance (at around 10%) and public housing (at about 8%) are also well below the levels typically observed for other OECD countries, mainly reflecting the high stigma associated to them.<sup>35</sup> One consequence of these arrangements is that most social assistance clients never quit the system: Abe (2003) reports that death is the main reason for leaving the welfare roll.

#### ***Old-age pensions and other programmes targeted to the elderly***

Old-age pension is the oldest and most developed component of the Japanese social protection system. The Japanese public pension system has two tiers: a basic, flat rate scheme, paid from age 65 with a minimum of 25 years of contribution, and an earnings-related plan that, in the case of the Employees' Pension Scheme, combines a flat-rate and an earnings-related component. In addition, workers in large companies that contributed more to their employees' schemes than the legal minimum, as well as those employed in public sector, typically receive higher old-age pensions. Current public-pension spending is around the OECD average, but was projected (until recently) to rise rapidly in the future.

To limit such growth in old-age spending, reforms introduced in 2004 have combined higher contribution rates and lower pension benefits. On the revenue side, the contribution rate to the Employees' Pension Insurance was raised from 13.6 to 18.3% by 2017. On the benefit side, the reforms significantly reduced the net replacement rate provided by old-pensions, from 59% in the pre-reform system to around 50% in the reformed-one. Based on the post-reform regulations, the OECD calculates that the net replacement rate for an average worker is around 55% of the OECD average and slightly higher (at around 57%) for low wage earners (Figure 6).

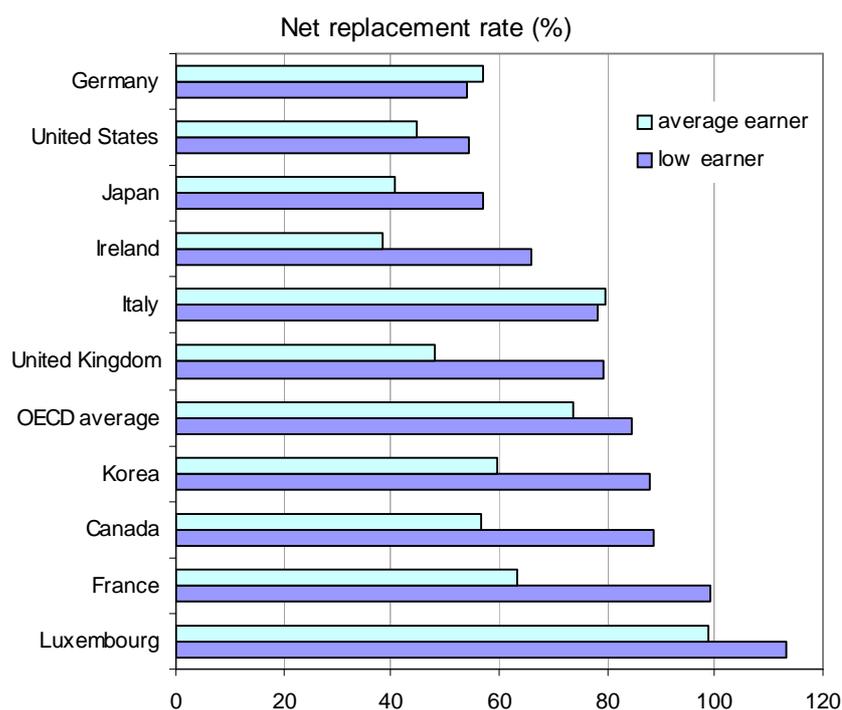
Because most elderly people have traditionally combined old-age pensions and work, the income of elderly people, relatively to that of persons of working age, is higher in Japan than in most OECD countries. But the minimum pension floors embodied in the pension system are below the poverty line used by the OECD, and those that do not have access to jobs are exposed to high risks of poverty. In addition, some individuals are "exempted" from pension contributions (either because relying on social assistance or disability benefits, or because of temporary financial difficulties) or may simply choose to default on their contributions (Abe, 2003). Both of these factors (whose importance seems to have become more significant over time), as well as the minimum contributory requirement needed to qualify for the National Pension (25 years), reduce the perspective pension benefits for new entrants into the labour market, compounding their risk of poverty in old age.

#### **5. Conclusions**

Any comprehensive assessment of well-being would need to rely on a variety of indicators rather than on measure of the distribution of money income alone. Japan is a country with high income per capita, huge economic assets, widely available and good quality public services, low crime and joblessness. It is also described as an overwhelmingly homogeneous society, with little diversification in terms of race and ethnicity, and little conflicts between groups. Yet, the comparatively high and rising income inequalities highlighted in this article seem to have been, until recently, a relatively unnoticed feature in Japanese' performance and one which, arguably, may have weighted negatively on the well-being of its citizens.

While this article does not describe all the elements of a comprehensive response to the

**Figure 6 Old-age pensions, net replacement rates at different earnings levels**



Note. Countries are ranked, from the lowest to the highest, in terms of increasing values of the old-age pension replacement rate. This replacement rate is the ratio between the expected pension entitlement of a full-career, single worker in the private sector, entering the labour market at age 20, and his or her pre-retirement earnings. The replacement rate is "net", i.e. it takes into account of the taxes and social security contributions paid on earnings when working and on pension when retired. The earnings levels used in the calculation are those on an average worker and of a worker earning half of that level. This indicator, which takes account of all rules and parameters that have been legislated in 2004, includes all mandatory parts of the pension system, both public and private, while excluding voluntary pensions, which are important in some countries. A standard set of economic assumptions is used for each country.

Source. OECD (2006), *Pensions at a Glance - Public Policies across OECD countries*, forthcoming, OECD, Paris.

problem of income inequalities in Japan, it has highlighted some of them. In a context where the scope for raising the total amount of welfare spending is limited, a combination of interventions aimed at increasing the rewards from work and the targeting of existing programmes could go a long way in lessening concerns about rising inequalities in Japan. Such a strategy holds the promise of improving social outcomes in ways that do not hamper the economic prospects of Japan as it emerges from a decade-long recession.

<sup>1</sup> This article elaborates on a presentation given at a seminar at the National Institute of Population and Social Security Research (IPSS) in Tokyo in December 2005. I wish to thank for their comments on previous drafts of this article: Michael Forster, Randall Jones and Mark Pearson from the OECD; Aya Abe from the IPSS; and the editors of this journal, Tetsuo Fukawa and Takashi Oshio. A

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<sup>2</sup> We may distinguish between three main phases of this work. The first is represented by Sawyer (1976), who reviewed the performance 12 OECD countries, including Japan, in the late 1960s and early 1970s; this study was based on national sources that allowed broad comparisons of trends over time but not of levels of income inequality across countries. The second phase is represented by Atkinson, Rainwater and Smeeding (1995), who relied on unit-record data available through the Luxembourg Income Study (LIS) database, a standardised data environment (which excludes Japan) that allows analysts to apply common definitions to micro records. The third phase is the

periodic data collection undertaken by the OECD since 1998 through a network of national experts who apply common conventions and definitions to unit record data from different national sources; for a description of results, see Forster and Mira d'Ercole (2005).

<sup>3</sup> Larger income inequalities may increase economic growth when they raise the incentives facing individuals to work, save and invest, while they may lower it when they reduce access by the poor to financial markets, generate social and political unrest, or lead to the adoption of policies that are inimical to economic growth. The results from the empirical research on this trade-off has moved back and forth: OECD analysis of this issue concluded that estimates of the impact of income inequalities explained so little of differences in GDP growth rates across countries and over time that very little, in fact, could be safely concluded (Arjona et al., 2001).

<sup>4</sup> The data for Japan included in the OECD database are drawn on the Comprehensive Survey of Living Conditions, based of special tabulations provided to the OECD by researchers at the National Institute for Population and Social Security Research. Every three years the Comprehensive Survey is based on a large nationally representative sample of around 32,000 households, with a response rate of around 80%. The results in the OECD database exclude households headed by persons aged less than 17 and all individuals whose age is not recorded. Differently from other countries, the Japanese data also exclude a small proportion of individuals with very high income (slightly more than 1% of the population in 2000): this lowers those inequality measures for Japan that are very sensitive to the high end of the distribution.

<sup>5</sup> Mexico and Turkey have a GDP per capita that is around half that of other OECD countries and an income inequality twice as high. The Kuznets hypothesis posits a systematic relation between countries' economic development and their income inequality - in the form of an inverted U.

<sup>6</sup> The Lorenz curve plots cumulative shares of the population, from the poorest to the richer, against the cumulative share of the income that they receive.

<sup>7</sup> The countries are Canada, Greece, Hungary, Italy, New Zealand, Norway, Poland, Portugal, Spain and the United Kingdom. For Canada, Hungary and Norway, however, only the income shares of the top 10% of the population are higher than that recorded in Japan, and the difference is 0.1 percentage points or less.

<sup>8</sup> The Gini coefficient is defined as the area between the Lorenz curve and the 45°, taken as a ratio of

the whole triangle. The values of the Gini coefficient range between 0 in the case of "perfect equality" (each share of the population gets the same share of income) and 1 in the case of "perfect inequality" (all income goes to the share of the population with the highest income).

<sup>9</sup> The mean log deviation is the average value of the natural logarithm of the ratio of mean income to the income of each decile; it has a lower value of 1 and no upper bound.

<sup>10</sup> This index is computed as the variance of average income of each decile, divided by the square of the average income of the entire population; it has a lower bound of 0 and no upper bound.

<sup>11</sup> The data for Japan used by Sawyer were mainly based on the Family Expenditure Survey, which excluded farmers and single households.

<sup>12</sup> Tachibanaki (2005) stressed the importance of the reforms that followed the end of World War II and the period of US occupation (land reform, anti-monopoly laws, tax provisions, the expansion of education and the diffusion of trade unions) as triggering the sharp reductions of income inequality in Japan (from very high levels) that continued until the early 1970s.

<sup>13</sup> Previous research on income distribution in Japan, summarised by Bauer and Mason (1992), concluded that data from the National Survey of Family Income and Expenditure were less suitable for cross-country comparisons than those provided by the Comprehensive Survey, because of the exclusion of households primary engaged in agriculture and of significant under-reporting of social security and property income.

<sup>14</sup> Relative income poverty (based on a thresholds set at 1/2 of median income) among people aged 18 to 64 increased in Japan from 11.9% in 1985 to 13.6% in 2000, while it was stable on average in other OECD countries; among youths aged 18 to 25, it increased from 10.4% to 16.6%, almost twice the increase recorded in other OECD countries. Over the same period, the poverty rate for persons aged 65 and over fell in Japan from 23% to 21.1%, more than twice the decline recorded in other OECD countries.

<sup>15</sup> Data on material deprivation for Japan are based on the "Survey on Living Conditions" (Shakai Seikatsu Chousa), an experimental survey designed by the National Institute of Population and Social Security Research in Tokyo and run in the context of a three year research project funded by Ministry of Health, Labour and Welfare. See Abe (2006) for details on the Japanese data and Boarini and Mira d'Ercole (2006) for comparative evidence.

<sup>16</sup> The comparatively high value of the measure of "poor housing conditions" for Japan shown in

Figure 3 reflect the large share of households reporting various forms of overcrowding, of living in accommodation needing repairs or exposed to noise and traffic nuisance, as opposed to low proportions reporting lack of basic indoor facilities. For "basic leisure activities", the data for Japan shown in Figure 3 refer to household declaring that they could not afford an overnight trip per year.

<sup>17</sup> As a result of these patterns, a proxy measure of "absolute" income-poverty - based on a threshold set at half of median income in 1985, and kept constant in real terms in later years - increases by 5% in Japan over the period from the mid-1980s to 2000, as compared to a fall of around 60% in 15 other OECD countries.

<sup>18</sup> Other factors may explain cross-country differences in support for greater government redistribution. Alesina and Glaezer (2004) stress in particular the role of racial heterogeneity in different societies, arguing that support for redistribution will be higher in countries where most of the poor have the same racial characteristics of the entire population (e.g. Europe) and lower in those where the majority of the poor have distinct features (e.g. the United States). However this explanation - which suggests that support for redistribution would decline with greater immigration - does not hold in Japan, where the population is strongly homogeneous.

<sup>19</sup> According to the 1995 wave of the World Values Survey, the share of respondents believing that "people are poor because of laziness or lack of will" was 57% in Japan, 61% in the United States and 49% in Australia and Korea, as compared to 25% or less in Finland, Spain, Sweden and Turkey. Similarly, the share of respondents believing that "people had a high chance of escaping poverty" was 80% in Japan and between 70% and 80% in Norway and the United States, but 30% or less in Germany, Poland and Spain.

<sup>20</sup> Old-age dependency is defined here as the ratio between the population aged 65 and over and that between 15 and 64. Population projections, as reported in OECD (2005a) are those established by the United Nation in 2003. National projections point to a smaller increase in the old-age dependency ratio, to a level of 63% by 2050 in the "medium variant" established by the NIPPR in "Population Projections for Japan: 2001-2050", January 2002.

<sup>21</sup> In 2005, the labour force participation of people aged 65 and over stood at 62% in Japan, 26 point above the OECD average. While comparatively high, this rate had fallen by more than 20 points since 1980, a decline driven by the maturing of the Japanese pension system.

<sup>22</sup> The data for Japan used by Disney et al. (1998) were drawn from the 1994 National Survey of Family Income and Expenditure and referred to elderly not living with descendants (rather than to all elderly persons as in the case of most other OECD countries).

<sup>23</sup> In the mid-1990s, 35% of single people aged 75 and over lived in households headed by another person in Japan, as compared to 7% in the average of eight other OECD countries; among people of the same age still living with their spouse in a household headed by another person the corresponding share was 10% in Japan and 1% in other OECD countries (Casey and Yamada, 2002).

<sup>24</sup> It should be noted, however, that the OECD data (which are expressed on a "household", rather than on a "family" basis) cannot identify either lone parents living with other adults or adults living with unrelated children. In the case of Japan, there is evidence of an increase since the early 1990s in the share of single mothers who are cohabitating with their parents.

<sup>25</sup> In other terms, had the household-distribution of the Japanese population remained as in 1985, relative-income poverty would have increased by 1.6 points as compared to an actual increase of 3.3 points. National studies seem to indicate a larger impact of changes in household structure and population aging on the increase in income inequality, but these are based on different concepts, sources and methodologies from those used here. According to the Report of the Income Redistribution Survey 2002 published by the Ministry of Health, Labour and Welfare, changes in the age of the household head and in household size account for 64% and 25% of the increase in the Gini coefficient for market income (i.e. before taxes and transfers) between 1999 and 2002.

<sup>26</sup> "Joblessness" is here defined as the share of individuals living in households where no one has a paid job (OECD, 2005a).

<sup>27</sup> The earnings statistics used by the OECD for Japan, however, cover only private firms with more than 10 employees; they are based on the Basic Survey on Wage Structure.

<sup>28</sup> In 2001, the latest year for which comparable data are currently available, gross public spending on social programmes represented 16.9% of Japanese GDP, as compared to 20.6% in the OECD average. Public spending on old-age and survivors pensions, at 7.6% of GDP, was also below the OECD average (8%); however, by 2003 public spending on old-age and survivors pensions had increased in Japan by more than 1 1/2 points, i.e. to a level that is above the OECD average.

<sup>29</sup> In the case of a low-income couple (with labour

income equal to 100% of the earnings of an average production worker) with two children, the "tax penalty" on the second earner (earning 33% of an average production worker) relative to a single at the same earning level is 39 points in Japan (i.e. the effective tax rate is 53% for the second earner and 14% for singles) as compared to 26 points in the OECD average (OECD, 2005b).

<sup>30</sup> These include measures to improve equity between regular and non-regular workers; to better enforce gender equity and equal-pay provisions; to reduce barriers to labour market re-entry for mothers; to reform health and pension insurance provisions to lower the disincentives to work facing spouses; to encourage employers and unions to reform employer-provided spousal allowances and to make workplaces more employment friendly; and to ensure a sufficient supply of high-quality childcare places (OECD, 2003b).

<sup>31</sup> These shares refer to persons living in households with a head of working age and to a poverty threshold set at half of the median.

<sup>32</sup> A simple measure of the age orientation of non-health social spending shows that Japan in 2001 devoted to each elderly persons (in the form of public old age pensions) an amount that was 17 times larger than that devoted to the non-elderly population (in the form of public outlays for unemployment, disability, family and active labour market programmes), twice as large as the OECD average (OECD, 2005b).

<sup>33</sup> Tax reforms have reduced the progressivity of income-taxes, moving from a schedule with 15 rates and a tax rate on high income of 70% in 1986, to a schedule with four rates and a top rate of 37% in 1999. This conclusion on the small redistributive character of taxation in Japan would, however, differ after considering indirect taxes - on account of Japan's low rate of indirect taxes on households (less than half of the OECD average in 2001) and of their regressive character.

<sup>34</sup> Among families without children, the net income of people depending on social assistance is somewhat lower than the half-of median-income threshold.

<sup>35</sup> Hernanz et al. (2004) report estimates of take-up rates in OECD countries in a range between 40% and 80% for means tested benefits and between 20% and 80% for public housing programmes.

## **Bibliography**

Abe A. K. (2003), "Low income people in Social Security Systems in Japan", *The Japanese Journal of Social Security Policy*, Vol. 2, No. 2, December.  
Abe A. K. (2006), "Empirical Analysis of Relative

Deprivation and Poverty in Japan", IPSS Discussion Paper Series No. 2005-7, National Institute of Population and Social Security Research, Tokyo.

Alesina A. and E. L. Glaezer (2004), *Fighting Poverty in the US and Europe - A World of Differences*, Oxford University Press, New York.

Arjona, R., M. Ladaique and M. Pearson (2001), "Growth, Inequality and Social Protection", Labour Market and Social Policy Occasional Papers No. 51, OECD, Paris.

Atkinson A. B., L. Rainwater and T. M. Smeeding (1995), *Income Distribution in OECD Countries*, OECD, Paris.

Bauer J. and A. Mason (1992), "The Distribution of Income and Wealth in Japan", *Review of Income and Wealth*, Series 28, No. 4, December.

Boarini R. and M. Mira d'Ercole (2006), "Measures of Material Deprivation in OECD Countries", forthcoming, Labour Market and Social Policy Occasional Papers, OECD, Paris.

Casey B. and A. Yamada (2002), "Getting Older, Getting Poorer? A Study of the Earnings, Pensions, Assets and Living Arrangements of Older People in Nine Countries", OECD Labour Market and Social Policy Occasional Papers, No. 60, OECD, Paris.

Disney R. M. Mira d'Ercole and P. Scherer (1998), "Resources during Retirement", OECD Ageing Working Papers, <http://www.oecd.org/dataoecd/21/42/2429182.pdf>.

Förster, M. and M. Mira d'Ercole (2005), "Income Distribution and Poverty in OECD Countries in the Second Half of the 1990s", *OECD Social, Employment and Migration Working Papers* No. 22, OECD, Paris.

Hernanz V., F. Malherbet and M. Pellizzari (2004), "Take-up of Welfare Benefits in OECD Countries: A Review of the Evidence", OECD Social, Employment and Migration Working papers, OECD, Paris.

OECD (2003a), "Benefits and Employment, Friend or Foe? Interactions Between Passive and Active Social Programmes", *OECD Employment Outlook*, OECD, Paris.

OECD (2003b), *Babies and Bosses: Reconciling Work and Family Life - Austria, Ireland and Japan*, vol.2, OECD, Paris.

OECD (2005a), *Society at a Glance - OECD Social Indicators*, OECD, Paris.

OECD (2005b), *Extending Opportunities - How Active Social Policy Can Benefit Us All*, OECD, Paris.

OECD (2005c), *Pensions at a Glance - Public Policies Across OECD Countries*, OECD, Paris.

OECD (2006), *OECD Economic Survey - Japan*, forthcoming, OECD, Paris.

Sawyer M. (1976), "Income Distribution in OECD Countries", *OECD Economic Outlook*, OECD, Paris.

Tachibanaki T. (2005), *Confronting Income*

*Inequality in Japan - A Comparative Analysis of Causes, Consequences, and Reform*, MIT Press.

Marco Mira d'Ercole (Principal Administrator at the OECD Social Policy Division)