GROWING INEQUALITIES AND THEIR IMPACTS IN JAPAN

Fumio Ohtake
Miki Kohara
Naoko Okuyama
Katsunori Yamada

Country Report for Japan
April 2013
# Table of Contents

1. General Background to Macro and Structural Indicators in Japan, 1980-2010 .................................. 5

2. The Nature of Inequality and its Development over Time .......................................................... 8
   2.1. Has Inequality Grown? ........................................................................................................... 8
      2.1.1. Income Inequality and Consumption Inequality .......................................................... 11
      2.1.2. Wealth Inequality ........................................................................................................ 13
      2.1.3. Poverty ......................................................................................................................... 14
      2.1.4. Public Assistance (Public Livelihood Aid) for Poor Families ................................... 16
      2.1.5. Educational Inequality ............................................................................................... 17
      2.1.6. Labour Market Inequality ........................................................................................... 19
   2.2. Whom has it Affected? ......................................................................................................... 29
      2.2.1. Wage Inequality between Different Education Groups is Stable, but Wage Inequality within Groups is Increasing ................................................................. 29
      2.2.2. Inequality Increases as Population Ages ....................................................................... 32
      2.2.3 Who are Poor? .............................................................................................................. 34
      2.2.4 Who Receives Public Income Assistance? .................................................................... 38
   2.3. Chapter Conclusion: Why has Inequality Grown? ................................................................. 40

3. Social Impacts of Inequality ......................................................................................................... 43
   3.1. Introduction ......................................................................................................................... 43
   3.2. Cumulative Disadvantage and Multidimensional Measures of Poverty ............................. 43
      3.2.1. Material Deprivation ..................................................................................................... 43
      3.2.2. Changes in Number of Homeless ................................................................................ 44
   3.3. Family Formation and Breakdown, Lone Parenthood, and Fertility .................................... 46
      3.3.1. Changes in Family Type ............................................................................................... 46
      3.3.2. Rates of Marriage, Divorces, and Fertility .................................................................. 48
   3.4. Housing Tenure .................................................................................................................. 50
   3.5. Crime and Punishment ....................................................................................................... 52
      3.5.1. Changes in Crime Rates ............................................................................................... 52
3.5.2. Who Commits Crimes? ........................................................................................................54
3.5.3. Youth Crime ..................................................................................................................56
3.6. Health inequalities ..............................................................................................................58
  3.6.1. Historical Changes in Health .......................................................................................58
  3.6.2. Causes of Death ...........................................................................................................60
3.7. Subjective Measures of Well-being, Satisfaction, and Happiness ........................................64
3.8. Chapter Conclusion: Social Impacts of Inequality ...............................................................67

4. Political and Cultural Impacts ..............................................................................................69
  4.1. Introduction ......................................................................................................................69
  4.2. Political and Civic Participation .......................................................................................69
  4.3. Unionized Workforce ......................................................................................................72
  4.4. Trust in Others and in Institutions ..................................................................................73
  4.5. Political Values and Legitimacy .......................................................................................76
  4.6. Values Related to Social Policy and Welfare State ............................................................78
  4.7. Chapter Conclusion: Appraisal of the Interdependence and the National Story of Inequality
      Drivers and their Cultural and Political Impacts .................................................................80

5. Effectiveness of Policies for Combating Inequality .................................................................83
  5.1 Introduction ......................................................................................................................83
  5.2 Minimum Wage ...............................................................................................................85
  5.3 Taxes ..................................................................................................................................87
  5.4 Public Social Expenditure ...............................................................................................89
    5.4.1 Levels and Trends .......................................................................................................89
    5.4.2 Social Assistance for Families with Children ..............................................................90
    5.4.3 Active Labor Market Policy .......................................................................................91
  5.5. Education .......................................................................................................................92
  5.6 Conclusion .......................................................................................................................93

References ..................................................................................................................................95

Appendix .....................................................................................................................................97
List of Tables

Table 2.1 Mean years of education

Table 2.2 Employment rate
List of Figures

Figure 1.1 Historical changes in Japan’s GDP growth rates.

Figure 2.1 International comparison of Gini coefficients in the mid-2000s

Figure 2.2 Gini coefficients based on the three data sets.

Figure 2.3 Gini coefficient for income and consumption

Figure 2.4 Gini coefficient for financial asset holdings

Figure 2.5: Poverty rates according to the NSFIE

Figure 2.6: Changes in the number of households living on welfare

Figure 2.7: Educational inequality among age groups

Figure 2.8: Log wage differences for men between the 90th and 50th percentiles

Figure 2.9: Log wage differences for men between the 50th and 10th

Figure 2.10: Log wage differences for women between the 90th and 50th

Figure 2.11: Log wage differences for women between the 50th and 10th percentiles

Figure 2.12: Unemployment rate

Figure 2.13: Unemployment rate by age group and gender

Figure 2.14: Employment rate by age group and gender

Figure 2.15: Proportion of non-standard workers among all employees

Figure 2.16: Proportion of hourly wage for part-time workers compared with full-time workers

Figure 2.17: Wage differential between college and high school graduates
Figure 2.18: Log wage difference for male college graduates between the 90th and 10th percentiles

Figure 2.19: Male-female wage differential by educational group

Figure 2.20: Gini coefficient before-tax income by age group

Figure 2.21: Gini coefficient of consumption expenditure by age group

Figure 2.22: Gini coefficient of financial asset holdings by age group

Figure 2.23: Poverty rates calculated by disposable income

Figure 2.24: Poverty rates calculated by consumption

Figure 2.25: Age distribution of the poor: percentage of poor within age group

Figure 2.26: Welfare recipients by family type (monthly average)

Figure 2.27: Welfare recipients by age group

Figure 3.1: Financial difficulty meeting everyday expenses (2000)

Figure 3.2: Number of homeless

Figure 3.3: Number of households by family type

Figure 3.5: Marriage rates (number of couples per 1000 persons

Figure 3.4: Share of households by nuclear family type (detailed split of nuclear families)

Figure 3.6: Divorce rates (number of couples per 1000 persons)

Figure 3.7: Total fertility rates

Figure 3.8: Changes in residential land prices from previous year (% change)

Figure 3.9: Rates of homeownership

Figure 3.10: Crime rates
Figure 3.11: New prisoners

Figure 3.12: New prisoners by education level

Figure 3.13: New juvenile prisoners by age

Figure 3.14: New juvenile prisoners by household economic classes

Figure 3.15: Life expectancy at birth by gender

Figure 3.16: Subjective health status by educational attainments (2010)

Figure 3.17: Deaths by suicide

Figure 3.18: Deaths by homicide

Figure 3.19: Rates of deaths by suicide

Figure 3.20: Living conditions

Figure 3.21: Living conditions by income quintiles

Figure 3.22: Living conditions by age of household head

Figure 3.23: Living conditions by household head's employment status

Figure 4.1: Percentage of total electorate turnout at general elections

Figure 4.2: Percentage point differences in voting rates (most recent election)

Panel A: Between people with high and low education levels

Panel B: Between those aged 55+ years and those aged 16–35 years

Figure 4.3: Percentage of workforce unionized

Figure 4.4: Rates of participation in civic activities

Figure 4.5: Percentage of people expressing high level of trust in others
Figure 4.6: Average annual percentage point change in “Trust in Others”

Figure 4.7: Political views: conservative vs. progressive

Figure 4.8: Political views: “the left” vs. “the right”

Figure 4.9: Percentage of people who support “Immigrants should be increased”

Figure 4.10: Percentage of people who agree that “inequalities are too large in the country

Figure 4.11: Percentage of people who agree that the “poor are lazy”

Figure 4.12: Percentage of people who agree that the “government should redistribute wealth/income”

Figure 5.1: Real GDP per capita in Japan

Figure 5.2: Consumer Price Index for all items (index 2005=100)

Figure 5.3: Government Debt as a % of GDP

Figure 5.4: Changes in prefectural minimum wage

Figure 5.5: Kaitz index

Figure 5.6: Tax Revenue as a % of real GDP

Figure 5.7: Changes in top 1% wage income share and marginal tax rate

Figure 5.8: Ratio of social security benefits by functional category to Annual Real GDP (%)

Figure 5.9: Long-term care payments as a % of real GDP

Figure 5.10: Child allowance and child-related government expenditure as a % of GDP

Figure 5.11: Government expenditure on job training as % of GDP

Figure 5.12: National and local government expenditure on education
**Executive Summary**

Inequality has widened continuously since the 1980s in Japan. The widening gap between the haves and have-nots has been driven by different factors in each given period. Ohtake and Saito (1998) argue that inequality in the 1980s and 1990s can be explained mainly by population aging. Dispersions of income, consumption expenditure, and wealth within the age group increase among the elderly, so an increase in older people leads to a rise in income inequality across the entire country.

The growing income and wealth inequalities observed in the UK and the US since the 1980s are characterized by a widening income gap due to educational attainment and an increase in the incomes of higher income groups (Autor, Katz, and Kenney, 2006; Lemieux, 2006; Piketty and Saez, 2006). In contrast, in Japan, wage inequality due to educational attainment has remained relatively stable over the period 1980-1990. This does not mean that skill-based technological change (SBTC) has not substantially affected Japan over time. Kawaguchi and Mori (2008) showed that both the demand and supply for skilled workers have increased because of the SBTC, a rise in the number of college-educated workers induced by educational policy changes, and the aging of the population. Because the shifts in demand and supply are similar, the effects of the shifts on the skill price were canceled out. Thus, the skill price has been stable. They pointed out that the industries that experienced rapid computerization also experienced an upgrading of the skills of workers.

Another characteristic of Japan’s income inequality is that the widening income differences among higher income groups were rarely observed at least until the late 1990s. Moriguchi and Saez (2008), who analyzed historical changes of the Japanese top income share, stated that the top wage income shares in Japan have remained relatively stable, unlike the sharp increase in wage income inequality observed in the United States since 1970.
The increases in inequality since the late 1990s are also attributed to the long-term trends of population aging effects. In addition to these aging effects, however, growing gaps within generation and educational groups have contributed to the increase in Japan’s inequality since the late 1990s. Kambayashi, Kawaguchi, and Yokoyama (2008) explained that increases in the within-age and within-education group variances contributed to wage inequality in the late 1990s. Sudo, Suzuki, and Yamada (2012) described how the income levels of lower income groups started to decline from the mid-1990s; accordingly, the income gap has grown significantly since the early 2000s. They explained that the widening gap observed in the 2000s can be attributed to changes in family structure and employment type. In Japan, single households and single-parent families have been increasing over time, and unemployed people and non-standard workers have increased, especially since the late 1990s. Kohara and Ohtake (2006) also pointed out that the growing income gap in the late 1990s in Japan is associated with an increase in income and consumption inequality within the unemployed, especially among those aged 45 and over.

Since the late 1990s, the male employment rate of the working-age population has declined and male non-standard employment has increased. The male employment rate of those aged 25-34 was about 95% in the early 1990s, but declined to about 90% in the 2000s. Even among the employed, the ratio of non-standard employees such as part-time workers, contract workers, and casualized workers to total workers has increased over the last three decades in Japan. The share of non-standard employees was 15.3 percent in 1984 and reached 35.1 percent in 2012. Among males, a dramatic change in the ratio of non-standard employees occurred around the mid-1990s. Before 1995, the non-standard ratio for males was stable at roughly 8 percent. The ratio started to increase after 1996, and reached about 18 percent in 2005. This change is prominent even among prime-age men. For the male age group 25 to 34, the ratio of non-standard employees started to increase in 1996, reaching 13 percent in 2005. The ratio for the age group 35 to 54 started to increase in 2000, reaching about 8 percent by the mid-2000s.
The increase in the rate of male non-standard employees is due to employment adjustments that started in earnest from 1995 after the asset inflation-fed economic bubble burst. In Japan, full-time permanent employees benefit from a high level of job security, whereas employment adjustments targeting non-standard workers are carried out relatively easily. In response to economic recessions, many Japanese companies avoided employing full-time employees in favor of part-time employees, contract employees, and casualized employees, because of the sizable cost of employment adjustments. Because these non-standard employees’ average earnings are lower than those of full-time employees, increasing non-standard employment and labor market segmentation have led to a widening income gap.

The growing share of male non-standard employees explained above caused an increase in the lower income group in Japan. Japan’s poverty rate has increased since the mid-1990s. In particular, a rise in the poverty rate is observed among people aged 20-39 and aged nine and under, which is distinctive of Japan’s poverty. The income and wealth gap has been becoming more serious recently among the young.

In the late 1990s, when income inequality widened mainly because of the increase in the population of lower income groups, Japanese society experienced several important social changes. First, the crime rate increased in the 2000s. In particular, the rate of violent offenses rose in the late 1990s. Ohtake and Kohara (2010) and Kawashima (2012) found that widening income inequality led to an increasing crime rate. Second, from the late 1990s, the suicide rate increased since the late 1990s and remained at a high level.

Japan’s income inequality has widened, but Japanese attitudes towards income redistribution policies did not change in the 2000s. Approximately 70% of Japanese think: “The poor are lazy.” The percentage of people who agree that “it is the responsibility of the government to reduce differences in income between families with high incomes and those with low incomes,” was about 50%, but
increased to 60%. Attitudes towards the government’s role in reducing income inequality have changed, although the changes do not seem to be overly dramatic.

As one of features of Japanese attitudes about political participation, there is a wide generational difference in voting rate. The voting rate of people aged 55 and above is 25% higher than that of people aged 35 and under. This high generational difference in the voting rate in Japan is remarkable among OECD countries. The higher absolute numbers of elderly people and the higher voting rate of the elderly increasingly strengthen their political power. This makes society pay more political attention to the elderly, which might bring undesirable results: in the past, many elderly people were in the lower income group, but at present, poverty is more prevalent among adults aged under 40 years and children aged ten years and under.

The increasing political power of the elderly and little change in attitudes towards income redistribution policies suggest that more efficient policies to reduce income inequality have not been implemented. Japan’s minimum wage rates have been rising consistently since 2007, but the increase in the minimum wage is thought to have only small effects on alleviating existing levels of income inequality (Kawaguchi and Mori, 2009). The impact of income redistribution policies through income tax has been smaller. This is because the maximum income tax rate has been cut and the progressiveness of income taxes as a whole was reduced in the late 1990s. The Japanese government has increased fiscal spending on social security for the elderly, but not on job training and education for the working population. Although there is an urgent need for policies that address lower income groups, which mainly consist of younger people, the government has failed to formulate and implement more efficient policies for financial and political reasons.
General Background to Macro and Structural Indicators in Japan, 1980-2010

Macroeconomic shocks that hit Japan from 1980 to 2010 are featured by an appreciation of the yen after the 1986 Plaza Accord, the asset inflation-fed bubble economy in the late 1980s and early 1990s, the non-performing loan problem and employment adjustments in the mid-1990s after the economic bubble burst, the economic recession that resulted from the 1998 financial crisis, the economic recovery in the early 2000s, and the economic declines that followed the collapse of Lehman Brothers.

Japan’s economy fell into recession temporarily due to the deteriorating profitability of exports that resulted from the appreciation of the yen after the 1986 Plaza Accord. Aiming to recover from the recession caused by the strong yen, Japan initiated expansionary financial policies. The government’s intervention led to an increase in asset prices such as stock and housing prices and a rise in real GDP growth from 4% in the early 1980s to 7.1% in 1988, which was followed by a real GDP growth rate of 5% growth on average until the 1990s. The unemployment rate rose from 2% in 1980 to 2.8% in 1987. During the period of the bubble economy, the unemployment rate declined to about 2% in 1990-1992; accordingly, Japan experienced a serious labor shortage. Japan also faced economic challenges such as a rapid rise in asset prices and overheating of economic activity, which led to the government tightening the money supply. As a result, stock prices dropped sharply in 1991 and house prices started to fall. This meant the eventual collapse of the bubble.

Due to the decline of stock prices, Japanese financial institutions faced the problem of non-performing loans. During the period of the economic bubble, Japan was confronted with problems of outstanding capitals, loans, and employment. After the bubble burst, the adjustment process for those outstanding capitals and employment took a long time. This resulted in Japan’s prolonged stagnation, which is referred to as the “Lost Two Decades.” The reasons behind Japan’s
Great Recession are thought to be the economic bubble and the bursting of the bubble, and some people see the decline of Total Factor Productivity (TFP) in the 1990s as another important factor accounting for the recession.

In the mid-1990s, the economic recession continued in the wake of the bursting of the bubble, and the Asian financial crisis in 1997 and the economic recession from 1998 aggravated economic conditions, which led to large-scale unemployment. In the early 2000s, the decline in the value of the yen contributed to revitalizing export-driven industries, and this led to the continuous growth of real GDP. This economic recovery was interrupted by the crisis that followed the collapse of Lehman Brothers. This unexpected crisis caused a temporary large-scale employment adjustment. Since the 1990s, Japan’s economy has experienced a long period of zero or negative inflation rates. Japan’s financial policy is also characterized by long-term zero interest rates. The GDP deflator became negative after 1995, and declined by more than 1% every year from 1999 to 2008.

The most significant structural change in Japan’s economy is population aging. In the 1980s, the percentage of people aged 60 and above accounted for 9.1% of the total population, but the share of the elderly rose to 22.5% in 2010. On the other hand, the percentage of people aged 15 and under declined from 23.5% in 1980 to 14.3% in 2010. Population aging stems from longer life expectancy and lower fertility rate. Recently, the latter has had a bigger effect on the aging of society, and the population of Japan began to decline in 2010. The change in Japan’s inequality is attributed to both population aging and macroeconomic shocks. A long-term upward trend in inequality is mainly the result of population aging. Income inequality within age groups is greater among the elderly than the young. In addition, an increase in the employment adjustment after the bubble burst increased the number of the unemployed and non-standard employees, and this led to an increase in the number of people in the lower income group. Likewise, population aging and an increase of non-standard employees are the two main factors accounting for income inequality.

Figure 1.1: Historical changes in Japan’s GDP growth rates
Source: The graph was drawn by the authors based on official GDP growth rate (supplied by Cabinet Office, Government of Japan [http://www.esri.cao.go.jp/jp/sna/menu.html]).

Note: Annual GDP growth rates are shown in the figure.
2. The Nature of Inequality and its Development over Time

2.1. Has Inequality Grown?

According to the OECD (2008), Japan’s Gini coefficient is close to the OECD average, at the same level as Korea, Canada, Spain, and Greece, lower than the US and UK, and higher than France and the Nordic countries (Figure 2.1). It is noted, however, that the Gini coefficient must be compared carefully among countries where different household groups are targeted and different welfare measures are used for measuring the Gini coefficient. In the case of Japan, the Gini coefficient is usually measured based on three large samples of data compiled by the Government: (1) *National Survey on Family Income and Expenditure*, which is compiled by Statistic Bureau, Ministry of Internal Affairs and Communications, (2) *Comprehensive Survey on Living Conditions*, which is compiled by Ministry of Health, Labour and Welfare, and (3) *Survey on the Redistribution of Income*, which is compiled by Ministry of Health, Labour and Welfare. Although these data sets contain large samples—NSFIE covers more than 55,000 households every five years, *Comprehensive Survey on Living Conditions* covers about 50,000 households every year, and *Survey on the Redistribution of Income* covers about 5,000 households—they show different degrees of inequality.

Figure 2.2 shows the trend of Japan’s household income inequality over the past three decades based on the above three sources of data for pre-tax income as measured by the Gini coefficient. In the figure, the Gini coefficient based on *National Survey on Family Income and Expenditure* is that reported by the government every five years. Although the calculation includes households regardless of their household heads’ employment status or employment type, it excludes single households. The Gini coefficient based on the *Comprehensive Survey on Living Conditions* is calculated by the authors based on income-class data reported by the government (income quartile before 1985 and income quintile after 1986). It may be upwardly biased because we use group data,
although single households are also included in the calculations. The Gini coefficient based on the Survey on the Redistribution of Income is also reported by the government.\footnote{For Comprehensive Survey on Living Conditions, we use income group data, but not that reported by the government, because the Gini coefficient is not reported before 1992.}

Figure 2.1: International comparison of Gini coefficients in the mid-2000s

Source: Gini coefficients of income inequality in OECD countries, mid-2000s (Figure 1.2) in Growing Unequal? Income Distribution and Poverty in OECD Countries (OECD (2008));

Generally, the Survey on the Redistribution of Income shows much higher inequality compared to the other two data sets. This is because more aged people are covered by the sample. The other two datasets show different levels of inequality, but the same trend of inequality. The Japanese government now provides inequality measures in Comprehensive Survey on Living Conditions to the

OECD, although it formerly provided those on *National Survey on Family Income and Expenditure*. The differences between the two data sets arise partly because the sample coverage is different.²

**Figure 2.2 Gini coefficients based on the three data sets**

Based on the *Comprehensive Survey on Living Conditions* or *National Survey on Family Income and Expenditure*, we can say that income inequality has not been increasing dramatically since around 1980, but has been increasing gradually. Note here that income inequality has several defects for

² Because the *National Survey on Family Income and Expenditure* surveys details daily consumption precisely, households in the tails of income distribution can be dropped from respondents.
measuring true household welfare. Income statistics are affected greatly by fluctuations in temporary income, but a change in temporary income does not always reflect a change in household welfare. In addition, income statistics do not reflect lifetime welfare. Because elderly people have more asset holdings but less income, income inequality has not properly measured the gap in social welfare, especially in a country such as Japan where an aging population occupies a large share of the entire population. Besides, because labor force participation rates are high in Japan, income inequality among the elderly is high. Thus, we want to show inequality based on a different measure of welfare—Consumption expenditure. Unlike income, consumption expenditure may reflect an individual’s welfare in the long run. Individuals consume more if they have money to survive and if their life-time income is higher. Fortunately, in Japan, the National Survey on Family Income and Expenditure (hereafter referred to as NSFIE) reports household consumption expenditure in detail. Therefore, in this chapter, we attempt to show the results using consumption inequality as well as income inequality based on NSFIE.³

2.1.1. Income Inequality and Consumption Inequality

NSFIE reports all types of income such as labor income, agricultural income, rent, pensions, other social security payments, income from dividends, interest, and occasional work. To obtain the Gini coefficient for after-tax income, we need to calculate the amount of tax each household pays, using information on household and individual characteristics. This is because the NSFIE (and any other microdata with large samples) does not contain information on an individual’s tax. By comparing observed characteristics such as family types, ages of family members, working status, and types of income in NSFIE with the taxation system in the corresponding year, we estimated tax payments and

³ We are allowed to use microdata of the NSFIE, which includes all types of individual and household in any age group. The following figures are calculated by the authors.
disposable income for each household. Our calculation program is sketched in Appendix Figure 1–Panel A for national income taxation and Panel B for local income taxation. To calculate the Gini coefficient, we divide all values of income and consumption by the square root of the total number of household members. Note that we use the micro data of the NSFIE in this calculation, unlike the case where we used the aggregated data based on the NSFIE for the previous figure, so that we can include both single households and households with more than two household members.

Figure 2.3 shows that the calculated Gini coefficients and their changes for each income and consumption category. Gini coefficients based on any of the categories show that inequality increased between 1984 and 1989, its rate slowed between 1989 and 1994, and it increased significantly after 1994. Through the earliest to the latest endpoints in the figure, we can observe an upward trend of inequality. Looking at each measure, specifically, the coefficient based on before-tax income is the highest. After excluding tax payments, which means after redistribution, the Gini coefficient for disposable income becomes lower. The Gini coefficient for consumption expenditure is somewhat higher than that based on disposable income. This may happen because disposable income here is estimated from observed characteristics, but is not calculated completely.

The important point here is that Gini coefficients based on consumption are generally lower than before-tax income. Indeed, the lowest Gini coefficient is for non-durable expenditures. The fluctuation range when using the consumption measure is smaller. This is exactly what the permanent income hypothesis suggests. This difference must be important especially in a country such as Japan, where the population is aging. The elderly may not have high incomes, but may possess large amounts of assets. Inequality as a whole can be overestimated with income measures.
Figure 3.3: Gini coefficient for income and consumption

Source: Authors’ calculations using microdata of the NSFIE.
Note: We used an equivalence scale for the number of household members. That is, each household income and consumption expenditure is divided by the square root of the number of household members.

2.1.2. Wealth Inequality

Japan’s wealth inequality has also increased gradually over the period encompassing the 1980s, 1990s, and 2000s. Figure 2.4 shows changes in financial assets using NSFIE. Total household asset holdings (excluding the value of real estate) divided by the same equivalence scale as before is used for the calculation. The figure shows a similar trend of inequality as income and consumption inequalities. That is, wealth inequality increased between 1984 and 1989, it decreased between 1989 and 1994, and it expanded after 1994.
Sudo, Suzuki, and Yamada (2012) also report the same trend. That is, inequality of financial wealth, like that of wage income, grew rapidly from 1984 to 1989, fell for a decade, and again grew moderately from 1994 until 2009. The increase in inequality was driven by high-wealth households, say the top 5%. The wealth inequality in Japan is small compared to that in the U.S., and is comparable to that in Canada.

### 2.1.3. Poverty

Using the *NSFIE*, we calculate the proportion of people with income/consumption of less than half the median income/consumption. For the calculation, we divide each household income or consumption by the square root of the number of household members. Samples with less than zero taxable income, disposable income, or consumption are dropped from the calculation.

Figure 2.5 shows that poverty rates are higher when the rate is defined using income such as taxable
income or disposable income, than when the rate is defined using consumption expenditure. The poverty rate calculated from income data of the NSFIE remains at around 8%. On the other hand, the poverty rate defined from consumption expenditure ranges between 5% and 6%. The reason why the poverty rate calculated from consumption expenditure is lower is that some people facing an income drop can cope by reducing their savings, by borrowing, and/or by receiving other transfer incomes to sustain the same level of consumption, while other people facing an income increase may restrain expenditure to protect against future shocks by raising savings, investment, and/or transferring to others.
Figure 2.5: Poverty rates according to the NSFIE

Source: Authors’ calculations using microdata of NSFIE.
Note: The figure shows the ratio of the number of people whose income is less than or equal to half of the national median income. For the calculation, household income and consumption expenditure are divided by the square root of the number of household members.

2.1.4. Public Assistance (Public Livelihood Aid) for Poor Families

In Japan, public livelihood aid is calculated on a household basis not an individual basis. The government calculates “affordable income” for each household, and “minimum living cost” mainly based on family type. If affordable income is less than the minimum cost of living, public income assistance is distributed to that household. Affordable income includes income earnings, all financial assets, value of real estate, social security benefits except public income assistance each household member can receive, and cash transfers households can receive from other extended family members.

Figure 2.6 shows the historical trend of welfare recipients, where recipients are defined as those who receive public assistance at least once a month, and is calculated as the average number of recipients every year. The figure shows that recipients have been increasing consistently since the latter half in 1990s. The rate of households receiving public assistance has recently overtaken the level in 1970. Details of households living on welfare are described later in Chapter 5.
Figure 2.6: Changes in the number of households living on welfare

Source: Care Reports of Welfare Administration (Ministry of Health, Labour and Welfare (2010)).
Note: The bars show the number of people living on welfare support, which is measured on the right axis. The line shows their percentage (number relative to 1,000 persons), which is measured on the left axis.

2.1.5. Educational Inequality

Table 2.1 shows the average years of education for various countries. Japan is ranked in the higher group. Figure 2.7 shows that the Gini coefficient for years of education becomes smaller as age decreases for groups aged between 60 and 85. The Gini coefficient becomes gradually higher as age decreases for groups aged between 35 and 39, and it becomes clearly higher as age decreases for groups aged between 20 and 34. Because Japanese people rarely go back to school once they started working, this trend means that the inequality in years of education fell in the 1960s, started increasing in the early 1970s, and increased gradually for three decades, expanding further from the early 2000s.

Table 1.1: Mean years of education
<table>
<thead>
<tr>
<th>Country</th>
<th>GINI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portugal</td>
<td>6.870</td>
</tr>
<tr>
<td>Spain</td>
<td>10.075</td>
</tr>
<tr>
<td>Italy</td>
<td>10.189</td>
</tr>
<tr>
<td>Hungary</td>
<td>10.488</td>
</tr>
<tr>
<td>Poland</td>
<td>10.493</td>
</tr>
<tr>
<td>Germany</td>
<td>10.524</td>
</tr>
<tr>
<td>Slovenia</td>
<td>10.889</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>11.041</td>
</tr>
<tr>
<td>Switzerland</td>
<td>110148</td>
</tr>
<tr>
<td>Austria</td>
<td>11.458</td>
</tr>
<tr>
<td><strong>Mean – all countries</strong></td>
<td><strong>11.514</strong></td>
</tr>
<tr>
<td>Sweden</td>
<td>11.631</td>
</tr>
<tr>
<td>Belgium (Flanders)</td>
<td>11.794</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>11.795</td>
</tr>
<tr>
<td>Australia</td>
<td>11.835</td>
</tr>
<tr>
<td>Latvia</td>
<td>12.020</td>
</tr>
<tr>
<td>Finland</td>
<td>12.043</td>
</tr>
<tr>
<td>Ireland</td>
<td>12.056</td>
</tr>
<tr>
<td>Japan</td>
<td>12.148</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>12.212</td>
</tr>
<tr>
<td>Denmark</td>
<td>12.571</td>
</tr>
<tr>
<td>Norway</td>
<td>12.844</td>
</tr>
<tr>
<td>Netherlands</td>
<td>12.880</td>
</tr>
<tr>
<td>France</td>
<td>12.909</td>
</tr>
<tr>
<td>Canada</td>
<td>14.412</td>
</tr>
</tbody>
</table>


**Figure 2.7: Educational inequality among age groups**

Note: Gini coefficients of years of education are listed separately by birth cohort. The weighted average of Gini coefficients over all age groups is 0.103677, where the weight is the population in each age group.

### 2.1.6. Labour Market Inequality

Figure 2.8 shows the male wage gap between 90 percentile and 50 percentile of income distribution, while Figure 2.9 shows that between 50 percentile and 10 percentile. As a general tendency of wage inequality, until the mid-1990s, the wage income difference decreased or remained unchanged for any age group before 60 years old. This is observed both for 90-50% difference and 50-10% difference. Since 1997, however, the trends have differed: the 50-10% wage gap has apparently expanded, while the 90-50% gap has been rather stable. An increase in Japan’s wage inequality after the mid-1990s has come with an increase in the number of persons in lower wage groups.

For females, the trend is quite different. The 90-50% wage gap decreased dramatically after 1987, and continued to follow a downward trend or remained unchanged after 1995. This is attributed to the Gender Equal Employment Opportunity Law promulgated in 1986. The 50-10% wage gap has been rather stable, but increased gradually from the mid-1990s, as it did for males.

*Figure 2.8: Log wage differences for men between the 90th and 50th percentiles*

Note: The figure depicts the average log wages across all industries and education-level groups, separately by birth cohort. Because the reported age categories in the original data set differ across years for those aged 60 and over, here we list figures only for those aged less than 60 years. All ages show the average for all ages including those aged 60 and over, which is not shown in the figure, so the figures for All ages may be higher than those for other age groups.
Figure 2.9: Log wage differences for men between the 50th and 10th


Note: See the note to the previous figure.

Figure 2.10: Log wage differences for women between the 90th and 50th


Note: See the note to the previous figure.
What happened in the labor market that lies behind this increase in wage inequality among low wage groups? First, the unemployment rate skyrocketed from the mid-1990s after the economic bubble burst. Figure 2.12 shows this trend clearly both for males and females. Decomposing to age groups, Figure 2.13 shows that the situation was more serious for young males. In Japan, workers are, once employed, protected by laws imposing severe requirements on employers laying off employees and by traditional employment schemes such as the seniority system. Therefore, young workers have more difficulty entering the labor market or moving to different jobs.
Figure 2.12: Unemployment rate

Source: Labor Force Survey (Ministry of Internal Affairs and Communications (2010)).

Figure 2.13: Unemployment rate by age group and gender

Panel A. Male
Panel B. Female

![Chart showing the employment rate for males (Panel A) and females (Panel B) separately by age group.](image)

Source: Labor Force Survey (Ministry of Internal Affairs and Communications)

Note: The listed unemployment rates are based on official data for every February from 1989 to 2009.

Table 2.2 summarizes the trend of the employment rate. The total employment rate decreased by about 1% between 1983 and 1988, and increased by about 2.5% between 1989 and 1992. It then started decreasing steadily after the economic bubble burst: decreased by about 5% between 1993 and 2004. It has remained at around 58% since 2007.

Figure 2.14 shows the trend of the employment rate for males (Panel A) and females (Panel B) separately by age group. The male employment rate in the working-age population decreased in the late 1990s. Especially for those aged 25-34, it was about 95% in the early 1990s, but declined to less than 90% in the 2000s. For females, the employment rate increased for all age groups, but it is not at a high level yet: Japan’s employment rate for those aged 15-64 was 60.1% in 2010 (Labour market statistics, OECD Employment and Labour Market Statistics), which is lower than in North European countries (70-80%), the United States (62.4%), the United Kingdom (65.3%), and Germany (66.1%), but is at the same level as France (59.7%).
### Table 2.2: Employment rate

<table>
<thead>
<tr>
<th>Year</th>
<th>Employment rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>1983</td>
<td>62.1</td>
</tr>
<tr>
<td>1984</td>
<td>61.7</td>
</tr>
<tr>
<td>1985</td>
<td>61.4</td>
</tr>
<tr>
<td>1986</td>
<td>61.1</td>
</tr>
<tr>
<td>1987</td>
<td>60.8</td>
</tr>
<tr>
<td>1988</td>
<td>61.0</td>
</tr>
<tr>
<td>1989</td>
<td>61.4</td>
</tr>
<tr>
<td>1990</td>
<td>61.9</td>
</tr>
<tr>
<td>1991</td>
<td>62.4</td>
</tr>
<tr>
<td>1992</td>
<td>62.6</td>
</tr>
<tr>
<td>1993</td>
<td>62.2</td>
</tr>
<tr>
<td>1994</td>
<td>61.8</td>
</tr>
<tr>
<td>1995</td>
<td>61.4</td>
</tr>
<tr>
<td>1996</td>
<td>61.4</td>
</tr>
<tr>
<td>1997</td>
<td>61.5</td>
</tr>
<tr>
<td>1998</td>
<td>60.7</td>
</tr>
<tr>
<td>1999</td>
<td>59.9</td>
</tr>
<tr>
<td>2000</td>
<td>59.5</td>
</tr>
<tr>
<td>2001</td>
<td>58.9</td>
</tr>
<tr>
<td>2002</td>
<td>57.9</td>
</tr>
<tr>
<td>2003</td>
<td>57.6</td>
</tr>
<tr>
<td>2004</td>
<td>57.6</td>
</tr>
<tr>
<td>2005</td>
<td>57.7</td>
</tr>
<tr>
<td>2006</td>
<td>57.9</td>
</tr>
<tr>
<td>2007</td>
<td>58.1</td>
</tr>
</tbody>
</table>

Source: Labour Force Survey (Statistics Bureau, Ministry of Internal Affairs and Communications).

Note: Employment rate = (Employed person/Population of 15 years old or more) * 100.
Figure 2.14: Employment rate by age group and gender

Panel A. Male

Panel B. Female

Source: Labour Force Survey (Statistics Bureau, Ministry of Internal Affairs and Communications).
Note: Employment rate = (Employed person/Population of 15 years old or more) * 100.
In addition to this increase in the unemployment rate and decrease in the employment rate, the increase in non-standard workers has raised social issues related to inequality. The ratio in Japan of non-standard employees such as part-time workers, casualized workers, and contract workers has increased over the last three decades. The share of non-standard employees was 15.3 percent in 1984 and reached 35.1 percent in 2012. Figure 2.15 shows this trend. In the case of the female labor force, more than half are now non-standard employees.

As for males, the share of non-standard employees was very low. A dramatic change in the ratio of non-standard employees among males occurred around the mid-1990s. Before 1995, the non-standard ratio for males was stable at roughly 8 percent. The ratio started to increase after 1996 and reached about 18 percent in 2005. This change is prominent among prime-age men. Before 2005, most Japanese prime age males worked as regular employees. The percentage of non-standard employees among males was about 3 percent before 2005. For the male age group 25 to 34, the ratio of non-standard employees started to increase in 1996 and reached 13 percent in 2005. The ratio for the age group 35 to 54 started to increase in 2000 and reached about 8 percent by the mid-2000s.
Figure 2.15: Proportion of non-standard workers among all employees


Note: The figure shows the ratio of non-standard workers to employees, excluding executives of companies or corporations. Non-standard workers include part-time workers, contract employees, and casualized workers.

When discussing Japan’s labor market inequality, close attention needs to be paid to the wage gap between part-time employees and full-time employees. Figure 2.16 shows the income inequality between the two. During the period from 1980 to 2002, the hourly wage rate received by part-time employees declined continually compared to that of full-time employees. In the 2000s, part-time hourly wages appeared to increase slightly, but male (female) part-time employees are paid only half (60%) as much as full-time employees. This slight increase has not mitigated large increases in the share of non-standard workers either of men or women.
Figure 2.16: Proportion of hourly wage for part-time workers compared with full-time workers

Note: The ratio of hourly wage includes bonuses for part-time workers relative to full-time workers.

To summarize this sub-section, the increase in the unemployed, and the increase in non-standard workers such as part-time workers, casualized workers, and workers with short-term contracts may have brought about the increase in wage inequality throughout society. The next section gives more fundamental reasons for changes in income and wage inequality, decomposing inequality and poverty by educational groups and age groups.

2.2. Whom has it Affected?

2.2.1. Wage Inequality between Different Education Groups is Stable, but Wage Inequality within Groups is Increasing.

How are educational attainments related to the increase in wage inequality? Figure 2.17, which is from Kawaguchi and Mori (2008), indicates that wage inequality is stable, in spite of the increase in inequality of years of education, which is noted in the previous section. We cannot observe a greater
disparity among different educational groups for wages. This differs from the findings in other countries such as the US and the UK. One possible explanation is that more people attained higher education, so the labor supply of highly educated people increased during the same time as there was labor demand for highly educated people to adjust for higher technologies and to compete in globalization.

**Figure 2.17: Wage differential between college and high school graduates**

![Graph showing wage differential between college and high school graduates](image)

Source: Kawaguchi and Mori (2008; Figure 5. Panel E: Relative Wage Rate).

Note: Horizontal axis shows calendar year, and each line of the figure indicates wage differential between college and high school graduates, grouped by age range.

Figure 2.18 shows how wage inequality has changed *among* college or university graduates since 1980. Wage inequality within the same educational groups became larger after 1990 for almost all age groups except that aged 60-64. Kambayashi, Kawaguchi, and Yokoyama (2008) also explained that the increase in the within-group variance contributed to the wage disparity for males in the late 1990s. Thus, the expansion of wage inequality within college/university groups, but not between educational groups, led to a larger wage gap after the mid-1990s in the entire country.

**Figure 2.18: Log wage difference for male college graduates between the 90th and 10th percentiles**

Note: The dotted line indicates average log wages across all age groups.

As additional information, wage inequality between males and females has been steadily decreasing in Japan. Figure 2.19 shows that this tendency is found in all educational groups.
Figure 2.19: Male-female wage differential by educational group

![Figure 2.19: Male-female wage differential by educational group]

Note: The figure shows the difference in log of monthly contract earnings of regular employees between males and females.

2.2.2. Inequality Increases as Population Ages.

Figure 2.20 shows Gini coefficients by age groups over time. It shows a similar pattern for the periods when parent and child live together. Income disparity expanded for age groups between late 20s to the 30s, and for the age group between 5 to 9 years old, whereas such an expansion is not observed for those aged over 55.

Figure 2.21 shows consumption inequality by age group over time. The disparity in consumption expenditure is increasing for the following age groups: i) children under 20 years old and ii) their parents’ age group of 25 to 49 years old. There is no significant change in consumption disparity for the over 50-years old age group. In the 35- to 49-years old age group, a wider consumption disparity is observed, although a major change in income disparity is not observed.
Figure 2.20: Gini coefficient before-tax income by age group

![Graph showing the Gini coefficient for before-tax income by age group for different years: 1984, 1994, 2004. The graph reveals a pattern of increasing inequality with age, with the oldest age groups showing the highest Gini coefficients.](image)

Source: Authors’ calculations using micro data taken from the NSFIE.

Note: For the calculation, household income and consumption are divided by the square root of the number of household members.

Figure 2.21: Gini coefficient of consumption expenditure by age group

![Graph showing the Gini coefficient for consumption expenditure by age group for different years: 1984, 1994, 2004. The graph reveals a similar pattern of increasing inequality with age, with the oldest age groups showing the highest Gini coefficients.](image)

Source: Authors’ calculations using micro data taken from the NSFIE.

Note: See the note to the previous figure.
As for inequality in wealth, Figure 2.22 shows that the early 20s and over 50-years old groups had the largest disparities in financial assets in 1984. However, by 2004, this asset disparity had widened for children under 10 years old and the 25- to 39-years old age groups, while financial asset disparity narrowed for the over 50-years old age group. This partly explains the major difference between the trend of income disparity and consumption disparity by age group shown in Figures 2.20 and 2.21. That is, the difference in age profile of income and consumption inequality among age groups may be attributed to the trend of financial assets by age group.

**Figure 2.22: Gini coefficient of financial asset holdings by age group**

![Figure 2.22: Gini coefficient of financial asset holdings by age group](image)

Source: Authors’ calculations using micro data taken from the NSFIE.

Note: See the note to the previous figure.

### 2.2.3 Who are Poor?

As is easily predicted, the poverty rate is higher among the elderly groups. The important feature in Japan is, however, that the poverty rate increases sharply among working ages who have children. *Comprehensive Survey on Living Conditions* (Ministry of Health, Labour and Welfare (2010)) shows
that the poverty rate has increased among working ages from 10.3% of total households classified as poor (those who have less than half the median income of the entire country) in 1985 to 14.6% in 2009.

Figure 2.23 shows the relative poverty rate measured by income, where the poverty threshold is households with an annual income less than 50% of the median equivalent household income. The figure shows that high poverty rates based on disposable income are observed for three age groups: the over 60-years old elderly group, the late 20s to early 30s group, and under 10-years old group.

It is notable that the poverty rate dropped significantly in the elderly group between 1984 and 1989. It is also notable that, from the late 1990s to the 2000s, the poverty rate increased for the 25- to 35-years old age group and the under 10-years old age group. In particular, it is marked by a rise in the poverty rate for the under 5-years old group.

The same implication is found when measuring poverty using consumption expenditure. Figure 2.24 shows that the poverty rate for the elderly measured by consumption expenditure dropped from the mid- to late-1980s, and has not shown a major change since then. Meanwhile, the poverty rates for the 25- to 35-years old age group and under 10-years old age group continued to rise throughout the 1990s. As shown by income, the three groups with the highest poverty rates are the elderly over 70 years old, those in their 20s and 30s, and the under 10-years old age group, but the rise in the poverty rate is especially large for children under five.

The poverty rate among the elderly shows a declining trend, but it still remains at a high level compared to other age groups. This rapid increase in the proportion of the elderly in the population make poverty rates look high in the old age groups across society. However, a striking feature of the recent change is the emergence of new poverty-stricken groups: the under 10-years old children group and their parents in the 25- to 35-years old group. The serious situations of younger households must not be overlooked even in an ageing society.
Figure 2.23: Poverty rates calculated by disposable income

Source: Authors’ calculations using micro data taken from the NSFIE.

Note: The figure shows the ratio of the number of people whose income is less than or equal to half of the national median income. For calculation, household income and consumption is divided by square root of the number of household members.
Figure 2.24: Poverty rates calculated by consumption

![Poverty Rate over Time](chart)

Source: Authors’ calculations using micro data taken from the NSFIE.

Note: The figure shows the ratio of the number of people whose consumption expenditure is less than or equal to half of the national median. For the calculation, household consumption is divided by the square root of the number of household members.

Figure 2.26 shows the age distribution of the poor over time, which is how many people are poor within each age group. Unlike previous figures showing the poverty rate within the entire population, this figure indicates that poverty is fairly high and is getting more serious among the younger age groups. In other words, looking at the issue of the poverty rate within the same age group as a benchmark, it is the children and their parents who are suffering from more serious poverty problem than before. There is more to this issue than the figures indicate.

---

4 Because the limited number of samples for those aged over 75 gives unstable results in this group, we should focus on the figures for groups younger than 74.
Figure 2.2: Age distribution of the poor: percentage of poor within age group

Source: Authors’ calculations using micro data taken from the NSFIE.

Note: The figure shows the percentage of “the poor” within each age category. The poor includes those whose income is less than or equal to the national median income, after taking equivalent scale of income (household income is divided by the square root of the number of household members).

2.2.4 Who Receives Public Income Assistance?

Figure 2.26 shows that the number of recipients of public income assistance has increased among those aged over 60. Note here that the population of this age group is also increasing. The ratio of recipients rapidly increases among younger generations: the numbers of recipients aged between 20 and 39, and between 0 and 19 years old have increased, although the population in these age groups is decreasing significantly (Figure 2.27). According to Care Reports of Welfare Administration (2010), the percentage of recipients working as non-standard employees (day-laborers or side-job workers) is increasing.
Figure 2.26: Welfare recipients by family type (monthly average)

Source: Care Reports of Welfare Administration (MHLW (2010)).
Note: The number of individuals is measured on the vertical axis.

Figure 2.27: Welfare recipients by age group

Source: National Survey of Public Assistance Recipients (MHLW (2010)).
Note: The number of individuals is measured on the vertical axis.
2.3. Chapter Conclusion: Why has Inequality Grown?

The degrees of inequality of income and consumption, measured from individual data, have increased slightly in 1980s, and have increased significantly after the latter half of 1990s. Such an increase in individual income disparity resulted mainly from population aging as a long-term trend. Because income disparity within an age group is high among the elderly, and because the elderly tend to have lower income, the increase in older people leads to a rise in income inequality across the entire country. This is also found in the poverty rate. Because the poverty rate within the elder group is generally high, the poverty rate of the entire country has naturally increased along with population aging.

In addition to this age-structure change, the decline in income level among the lower income group of society as a whole contributed to the increase in income inequality in the late 1990s. The widening wage gap is associated with the decreasing male employment rate and the increasing unemployment rate of the working-age population since the late 1990s. Moreover, the rise in the share of male non-standard employees also added to the increase in the wage gap.

The increasing rate of male non-standard employees is due to the employment adjustment that started in earnest from 1995 after the economic bubble burst. In Japan, full-time permanent employees benefit from a high level of job security, whereas an employment adjustment targeted at non-standard workers is carried out relatively easily. In response to the economic recession, many Japanese companies avoided employing full-time employees in favor of part-time employees because of a sizable cost of an employment adjustment. Because non-standard employees’ average earnings are lower than those of full-time employees, increasing non-standard employment and labor market segmentation have led to a widening of the income gap.

Although skill-biased technological changes have occurred, the wage gap between educational groups has been stable because both labor supply and demand for workers with higher education have increased. In comparison, wage income inequality within educational groups has expanded.
GINI Country Report \textit{Japan}

Changes in family structure are also one possible reason for wider household income gaps. The increases in relatively poor old singles (or couples), relatively poor young singles, and single-parent households led to expanded income inequality among households. We will see these changes in family formation later in the next chapter.
3. Social Impacts of Inequality

3.1. Introduction

Inequality affects society in many aspects. We first focus on people under a certain living standard: those who suffer from material deprivation and the homeless. These topics are closely related to family formation, so we describe how family formation has changed over time. We also describe how many households own housing, summarizing changes in the price of land.

As another social impact, we will pick up crime, showing how crime rates have changed, summarizing the economic downturn over time. We further show the relationship between youth crime and the economic situation of households.

Inequality should be measured not only monetarily, but also from physical and psychological conditions. We report the situation of health inequality in the country over a period of years. We then show how it is related to economic conditions. In the final section, we summarize changes in subjective measures of welfare.

3.2. Cumulative Disadvantage and Multidimensional Measures of Poverty

3.2.1. Material Deprivation

Figure 3.1 shows the percentage of people with difficulty affording daily food, medical and health-care goods, and clothing needed by a family. Among selected OECD countries, Japan has the lowest proportion of deprivation in any of these three aspects. However, as Abe (2006) points out, “relative” deprivation, which is the condition whereby the expected standard of living is not satisfied due to a lack of the necessary resources, may be high in Japan. Relative deprivation seems to be higher among working households, especially those with small children.
**Figure 3.1: Financial difficulty meeting everyday expenses (2000)**

![Bar chart showing financial difficulty meeting everyday expenses across different countries.]

Source: Measures of Material Deprivation in OECD countries (OECD (2006); Figure 2).

Note: Original data are from the Pew Global Attitude Project. The figure indicates percentages of individuals reporting three types of financial difficulty in meeting everyday expenses.

### 3.2.2. Changes in Number of Homeless

We next look at extremely poor people, the homeless. According to the *National survey on the Actual Conditions of the Homeless* (Ministry of Health, Labour, and Welfare (2012), the number of homeless people has been decreasing (Figure 3.2). However, other statistics from the same survey indicate that the number of people who have been homeless for over five years has been increasing. The structurally homeless may be increasing.
Survey on the Actual Conditions of the Homeless compiled by Ministry of Health, Labour, and Welfare (2012) summarizes the situation of the homeless, using large samples of homeless people. It reports that the number of homeless people aged over 60 is increasing. Educational level is not very low: more than half of all homeless have educational levels above high school. About 60% are actually working. However, the amount of earnings has been decreasing, and has stayed at quite a low level: about 80% of workers earn less than 5,000 yen (about 50 dollars) per month.

In this sample at least, the homeless do not always have poor health. The most serious problem is perhaps that those who leave a life of homelessness are decreasing, and those who remain homeless are increasing, according to samples between 2003 and 2007. Although the number of homeless, on average, decreases during an economic upturn, some people find it difficult getting out of a homeless state once they become homeless.
3.3. Family Formation and Breakdown, Lone Parenthood, and Fertility

When we analyze historical changes of household income inequality, we have to note changes in the distribution of household size. The distribution of household size has changed substantially in Japan: the percentage of single-member households increased from 18% in 1980 to 24% in 2005. During the same period, the average number of household members decreased from 3.2% to 2.7%. The percentage of households with one or two members increased from 34% in 1980 to 53% in 2005.

3.3.1. Changes in Family Type

The trend of a decrease in household size can be broken down into specific changes in family formation. Comprehensive Survey of Living Conditions (MHLW) shows historical changes in family types. Here, family types are categorized as follows: 1. One-person Households; 2. Nuclear Households, which include (a) Married couple only, (b) Married couple with child(ren), and (c) One Parent with child(ren); 3. Three-generation Households, and 4. Others. We summarize the statistics in this sub-section.

There are two apparent changes in family structure, especially after 1985. First, the number of three-generation households (where grandparent(s), parent(s), and child(ren) co-reside together) has decreased sharply. Second, the number of singles has increased greatly. The number of nuclear households also increased after the 1970s, but the rate of increase has been slowing recently. These features are shown in Figure 3.3.

Figure 3.4 reports changes in the shares of family type within nuclear households. The shares of married couples with dependent child(ren) and three-generation households have decreased, while the numbers of married couples without children and singles have increased.

Figure 3.3: Number of households by family type
Source: Comprehensive Survey on Living Conditions (Ministry of Health, Labour and Welfare (2010)).

Note: The sample for Hyogo prefecture is not included in 1995, when the Hyogo Earthquake occurred. Total number of households is shown as a bar measured on the right axis, while others are shown as a share of total number of households, which is measured on left axis.
3.3.2. Rates of Marriage, Divorces, and Fertility

Marriage rates have been declining since the early 1970s. The rate of decline has slowed recently (Figure 3.5). Divorce rates increased, peaking in 2003, and dropped a little subsequently (Figure 3.6). Economic conditions might be related to fewer marriages and more divorces, although a detailed analysis requires future research. Economic conditions, especially the labor market, have been severe during the mid-1990s and early 2000s. High divorce rates around that time might be due to a household head not earning enough money, and low marriage rates around that time might be due to young people not earning enough money to get married.

In Japan, fertility rates are closely related to marriage rates, because many people give birth after getting married. The lower marriage rates thus simply led to lower fertility rates. This is shown in Figure 3.7. Higher female wages and greater labor supply, compared to the past, also contributed to lower fertility rates. That is, the economic downturn decreased male workers with high wages.
compared to the past, and increased female workers with low wages compared to the past, which might have lowered fertility rates. Furthermore, an increase in uncertainty about the future may lead young people to have fewer children.

**Figure 3.5: Marriage rates (number of couples per 1000 persons)**

Source: Vital Statics (Ministry of Health, Labour and Welfare (2010)).

**Figure 3.6: Divorce rates (number of couples per 1000 persons)**

Source: Vital Statics (Ministry of Health, Labour and Welfare (2010)).
3.4. Housing Tenure

One of the important expenditures affecting a household’s living standard is expenditure on housing. As is well known and clearly shown in Figure 3.8, prices of land and housing declined dramatically in the early 1990s—the end of the economic bubble. Subsequently, prices have moved cyclically within a narrow range. They rose until 1998, fell from 2004, rose again from 2007, and fell until 2010. They have since remained at around the same level.

Figure 3.9 shows that homeownership declined from 1980 until 1995 (precisely, until the time point between 1995 and 1997), then increased, and remained at a high level since 2005, according to the *Population Census Survey* (the Statistics Bureau, Management and Coordination Agency). The percentage of households with homeownership in 2010 was about 61%, which is a little lower than that in the 1970s.
Figure 3.8: Changes in residential land prices from previous year (% change)

Source: The Published Price of Land (Ministry of Land, Infrastructure, Transport and Tourism; 2010 and 2011).
Note: The land price survey on the 1st of July reports the average land price in each prefecture based on prices at all the survey points throughout Japan. The figure shows the rate of change of land prices for dwellings averaged across Japan.

Figure 3.9: Rates of homeownership

Source: The Population Census Survey (conducted every five years since 1920) (the Statistics Bureau, Management and Coordination Agency). Note: Rates of home ownership are defined as number of owned houses relative to total number of households.
3.5. Crime and Punishment

This section summarizes the broader social impact of inequality—the effects on crime. Because there are no microdata on crime and punishment in Japan, we cannot examine the effects of household welfare on the behavior of committing crimes. We summarize macro statistics on crime rates, mainly using annual reports of the government (provided by National Policy Agency), and attempt to explain the relationship between economic conditions and crime.

3.5.1. Changes in Crime Rates

Figure 3.10 shows changes in crime rates by type of offenses since 1975. Total penal code crimes are classified into five offenses: 1: larceny offenses, 2: felonious offenses (homicide, robbery, arson, rape), 3: violent offenses (violence, bodily injury, intimidation, extortion), 4: intellectual offenses (fraud, embezzlement, counterfeiting, official corruption, breach of trust), and 5: moral offenses (gambling, indecency).

The crime rate is defined as the number of cases known to the police (number of cases for which the occurrence of crime was recognized by notification of victim, complaint, prosecution, and others) per 1,000 persons.
Figure 3.10: Crime rates

The figures indicate that the total crime rate (aggregated over all kinds of crimes) has increased dramatically since 1998. This coincides with the time the labor market slumped. The highest share of total crime is occupied by larceny offenses, which started increasing rapidly in 1998, peaked in 2003, and has been decreasing since then. Other crime rates show different trends: intellectual offenses decrease during a recession and increase during a boom; violent offenses have decreased gradually since 1975, but rose suddenly from 2000, decreasing again from 2007.

According to Ohtake and Kohara (2010) and Kawashima (2012), an increase in inequality during the 1970s and the 1990s raised crime rates. This is causal in the sense that the effect remained even after removing the time trend and changes in unobserved heterogeneities over the period.
3.5.2. Who Commits Crimes?

To understand who commits crimes, we summarize the characteristics of new prisoners who started serving jail sentences. Among males convicted of larceny, the percentage increased among those aged over 60 (Figure 3.11). Convictions for robbery and fraud increased among young people in their 20s. Among females, the number is quite low, so we have to be careful about finding a general trend, but convictions for larceny increased especially among the elderly from 2007. This is very different from the experience with males: males convicted of any offenses decreased during this period.

Figure 3.12 shows that junior high school graduates (and younger) accounted for 42% of new convictions in 2010, which is the largest share of total new convictions. However, the shares of high school dropouts and high school graduates have increased sharply since 2007.

---

5 “New prisoners” are specifically defined as inmates whose judgments were finalized, and entered an institution for the first time during the survey year (1st of January until 31st of December in the survey year) to serve a sentence.
Figure 3.11: New prisoners

Source: Statistical Survey on Correction (Ministry of Justice; http://www.moj.go.jp/housei/toukei/toukei_ichiich_kousei.html)
3.5.3. Youth Crime

Figure 3.13 shows that the number of male inmates of juvenile prisons decreased from 2004, and the number of female inmates decreased from 2006. In contrast, the percentage of younger inmates such as males aged 14, 15, and 16, and females aged 14, are increasing as a percentage of total inmates of juvenile prisons.

Splitting these inmates into their family’s (parent’s) economic classes, the largest share is from “not rich but not poor” families. We also cannot see an increase in young inmates from poor families (Figure 3.14). We need to investigate in more detail to conclude a relationship between youth crime and household economic conditions.

Figure 3.12: New prisoners by education level

Source: Statistical Survey on Correction (Ministry of Justice; http://www.moj.go.jp/housei/toukei/toukei_ichiran_kousei.html)
Panel A. Male

![Bar chart showing the number of new juvenile prisoners by household economic classes for males from 2002 to 2010. The chart indicates a decrease in prison numbers over the years.]

Panel B. Female

![Bar chart showing the number of new juvenile prisoners by household economic classes for females from 2002 to 2010. The chart indicates a decrease in prison numbers over the years.]

Source: Statistical Survey on Treatment of Juvenile Delinquents (Ministry of Justice).

Note: Juvenile prisoners refer to inmates of prisons or reform and training schools under the provision of Article 56 of the Juvenile Law.

**Figure 3.14: New juvenile prisoners by household economic classes**
3.6. Health inequalities

Inequality should also be measured on a non-monetary base. We pick up health as an example, and summarize changes in health inequalities over time.

3.6.1. Historical Changes in Health

Japan’s life expectancy has increased for over four decades, and now is the longest in the world. It is generally said that the Japanese diet is a factor, but public health services may also contribute. The following figure shows how Japan’s life expectancy has extended separately for males and females.
Health is not only measured by life expectancy. Living actively is another important measure of health. Comprehensive Survey on Living Conditions (MHLW) enquires about “self-reported state of health” and “frequency of visits to a doctor.” The report states that about 8% of respondents had some health problems and went to clinics or hospitals in 2010. The report also shows that the number of unhealthy people increased between 1998 and 2007, and subsequently decreased. Considered that Japan’s economy was in a fairly severe state between 1998 and 2001, relatively good state between 2001 and 2007, and subsequently in a little worse state, the state of health of people seems not to move simply in accordance with economic conditions, although the increase in the number of unhealthy people may be partly due to population aging.
compared to those with a higher education. Economic inequality might be related to health inequality.

**Figure 3.16: Subjective health status by educational attainments (2010)**

![Chart showing subjective health status by educational attainments.]

**Source:** Comprehensive Survey on Living Conditions (MHLW (2010)).

### 3.6.2. Causes of Death

Mental health problems are becoming serious in Japan. Compared to other OECD countries, Japan has relatively high suicide rates (Figure 3.17). This is more apparent when we compare the rate of homicides, which is absolutely lower than those of other countries (Figure 3.18). Suicide rates showed an increase in inequality between 2002 and 2008.
Figure 3.17: Deaths by suicide


Note: Suicide rate is defined as the number of deaths caused by self-inflicted injuries per 1000 persons.
Figure 3.18: Deaths by homicide


Note: Homicide rate is defined as the number of deaths by violence per 1000 persons.

To examine the relationship between suicide rates and economic conditions or inequality, we look at changes in suicide rates more in detail. Suicide rates increased and remained at a high level from the latter half of 1990s when a serious recession started and labor market deteriorated. During the recession between 1995 and 2005, suicide rates increased rapidly among middle-aged persons and older persons. After 2005, suicide rates increased among the young both in male and female groups.
The rate of increase is high among young females.

**Figure 3.19: Rates of deaths by suicide**

**Panel A. Male**

**Panel B. Female**


Note: The figure shows rates of deaths caused by suicide to total deaths.
3.7. Subjective Measures of Well-being, Satisfaction, and Happiness

In Comprehensive Survey on Living Conditions (MHLW), respondents are asked: "how would you describe your living conditions?" Possible answers are “very hard,” “hard,” or “not hard but not easy,” “easy” or “very easy.” All tables and figures in this section were originally published in the annual report: Comprehensive Survey on Living Conditions.

According to Figure 3.20, subjective measures of living conditions, based on this survey, deteriorated from 1992 to 2004. Those households who answered “not hard but not easy” decreased, while those who answered “hard” or “very hard” increased sharply.

Figure 3.21 is split into four income groups (from bottom income group I to top IV). Those who answered “very hard” or “hard” increased in all income groups, but the increase is larger in lower groups than in higher groups. Disparity in subjective well-being might become larger than actual inequality in observed well-being, such as levels of income and consumption.

Figure 3.22 is split into age groups. Younger people, especially those in their 30s and 40s, may be experiencing hard living conditions, compared to the elderly. Figure 3.23 splits the sample into types of employment. Those who work as fixed-term employees are experiencing relatively bad economic conditions, and their deterioration rates are high. The situation is especially serious for those who have employment contracts of less than one month.
Figure 3.20: Living conditions

Source: Comprehensive Survey on Living Conditions (MHLW (2010)).

Figure 3.21: Living conditions by income quintiles

Source: Comprehensive Survey on Living Conditions (MHLW (2010)).
Figure 3.22: Living conditions by age of household head

Source: Comprehensive Survey on Living Conditions (MHLW (2010)).

Figure 3.23: Living conditions by household head’s employment status

Source: Comprehensive Survey on Living Conditions (MHLW (2010)).
3.8. Chapter Conclusion: Social Impacts of Inequality

In this chapter, we first showed that the number of homeless has decreased since 2000, as economic conditions improved compared to the severe conditions of the late 1990s. However, the problem of the homeless may not be solved: more homeless people are not working and have remained homeless for longer than before. We then showed changes in family types. Family types comprising independent elderly households and single parent households as well as one-person households (singles) have been increasing.

Residential land prices dropped sharply in the early 1990s—the end of the economic bubble. They increased slightly during the first half of the 2000s, but decreased slightly again after 2008. Home ownership has changed in parallel with these price changes.

The total crime rate increased during the serious recession in the 1990s, but decreased consistently in the 2000s. Negative economic shocks and increased inequality may raise crime rates, although statistics on youth crime indicate that inmates are not always from poor families.

Next, we showed the relationship between health and economic conditions. Although life expectancy has become longer, even during serious recessions, health as measured by an active healthy life or a subjective measure of health might be deteriorating along with the economic downturn. One serious health problem is an increase in mental health problems, which is reflected by an increase in suicide rates. Suicide rates in Japan are relatively high compared to other countries. During the recession between 1995 and 2005, they increased rapidly among the middle aged and elderly, and since 2005, suicide rates among young people have been increasing. This coincides with the fact that the severe economic conditions after the Asian financial crises affected the employment of middle-aged people and the recent recession after 2007 affected the employment of young people.

Finally, households’ subjective welfare at all ages decreased during the 1990s and 2000s. This is more apparent among single-parent households and those who work as fixed-contract employees.
Political and Cultural Impacts

4.1. Introduction

How do Japanese people relate to society? In this section, we first look at voting behavior, and memberships of organizations in society. We then look at the extent to which people trust others and institutions. We further summarize political views and legitimacy. In the final section, we show the extent to which people support government policies, especially redistribution policies toward a more equal society.

4.2. Political and Civic Participation

When inequality increases, people may tend to participate in political activities to redress deteriorating differentials in a society. Data on Voter Turnout in Visual Form reports that the average electoral turnout in general elections has been 66.64% soon after World War II (70.47% for the House of Representatives and 62.46% for the House of Councilors). Figure 4.1 shows that the rates are roughly on a downward trend for either house. A closer look at changes since the late 1990s, however, shows that there has been a recovery. This may reflect greater interest in government policies and in growing inequality and uncertainty about the future.

OECD Social Indicators (2011) also report the average voting rates of major countries. According to this report, the Japanese average voting rate for the most recent election in 2011 was about 67%, which is slightly lower than the OECD average of 70%. Although a decreasing voting rate is sometimes discussed as a problem in many countries, that report shows that the decrease has not been so large in Japan.

The difference in voting rates between educated people and less educated people is not large (Figure
4.1 -Panel A). In contrast, the difference between older people and young people is large (Figure 4.2 -Panel B). This is an important aspect when discussing policy toward inequality. Although inequality is becoming a serious problem among the young relative to the elderly, the policy required for inequality-related problems may not be adopted if differentials in voting between the young and the old are not improved.

Figure 4.1: Percentage of total electorate turnout at general elections

Source: Data on Voter Turnout in Visual Form (March 2012): Mede Miru Touhyouritsu in Japanese (Election Department, Ministry of Internal Affairs and Communications; http://www.soumu.go.jp/main_content/000153570.pdf)

Note: General elections for the House of Representatives are held every four years, but can be held earlier if the lower house is dissolved, and elections to the House of Councilors are held every three years. The lines in the figure is are drawn simply by connecting each of the data points.
Figure 4.2: Percentage point differences in voting rates (most recent election)
Panel A: Between people with high and low education levels

Panel B: Between those aged 55+ years and those aged 16–35 years

Note: The original figures for Panel A and B are CO4.2 and CO4.3, respectively, in the source data.
4.3. Unionized Workforce

The labor unionization rate has declined significantly, especially since the late 1970s (Figure 4.4). Behind this downward trend is a change in Japan’s employment conditions. As seen in Chapter 2, regular full-time workers have decreased and non-standard part-time workers have increased since the late 1990s.

**Figure 4.3: Percentage of workforce unionized**

![Graph showing the percentage of workforce unionized from 1947 to 2009.](image)

Source: The number of union employees is from Basic Survey on Labour Unions (MHLW), and the number of employees is from Labour Force Survey (Statistic Bureau).

Note: The figure shows the ratio of the number of employees in labor unions relative to the total number of employees in Japan.

A decline in the rate of union participation is also observed in the following figure. Figure 4.4 shows the kinds of voluntary organizations and activities in which Japanese people participate, and changes in the 1990s. The big changes between 1990 and 2000 are a decrease in labor unions and an increase in religious groups. An increase in religious groups may reflect an increase in social and economic instability or uncertainty, which might be related to an increase in Inequality.
4.4. Trust in Others and in Institutions

The OECD (2010) has some measures of social cohesion. According to this report, Japan’s index of “Trust in Others” is slightly higher than the OECD average. A high level of trust in others means that a large number of people answer yes to the question “Generally speaking, would you say that most people can be trusted or that you need to be very careful when dealing with people?” (Figure 4.5). The increase in trust between 1998 and 2007 is relatively large for Japan (Figure 4.6). The turnover of economic conditions during this period may be attributed to this change.
Figure 4.5: Percentage of people expressing high level of trust in others

Source: European Social Survey (ESS) (2008 wave 4) for OECD-Europe and the International Social Survey Programme (ISSP) (2007 wave) for non-OECD Europe (OECD (2010))

Note: Trust data are based on the question: “Generally speaking, would you say that most people can be trusted or that you need to be very careful when dealing with people?” Data refer to 2007 for New Zealand, Mexico, Australia, Austria, Japan, Korea, Ireland, United States, and Chile.
Figure 4.6: Average annual percentage point change in “Trust in Others”


Note: Change refers to 1998/2007: Slovak Republic, Switzerland, New Zealand, Australia, Austria, Japan, Ireland, United States and Chile; 2002/2008 for the other countries.
4.5. Political Values and Legitimacy

What are Japanese political values? We summarize statistics related to this topic, using *Japanese General Social Survey* (JGSS hereafter), which has been conducted by Tokyo University and Osaka University of Commerce since 1998. The definitions of variables/answers are summarized in the note to each figure.

According to Figure 4.7, the percentage of conservatives is about 30% and that of progressives is about 20%; a large number of people answer that they are neither conservatives nor progressive. This has not changed during the 2000s. According to Figure 4.8, the percentages of people answering left wing and right wing change over time. However, if we look at the threshold of five, right wing (higher than or equal to five) decreased until 1990 and then increased. Those who support a policy of expanding immigrants have decreased (Figure 4.9). Considered that economic conditions have become severe and inequality has increased since the mid-1990s, the change in inequality may have affected Japanese forming political views.

**Figure 4.7: Political views: conservative vs. progressive**

<table>
<thead>
<tr>
<th>Year</th>
<th>Conservative 5</th>
<th>Conservative 4</th>
<th>Conservative 3</th>
<th>Conservative 2</th>
<th>Conservative 1 (Progressive)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Note: The figure summarizes answers to the question “Where would you place your political views on a
five-point scale?"

**Figure 4.8: Political views: “the left” vs. “the right”**


Note. The figure summarizes answers to the question “In political matters, people talk of “the left” and “the right.” How would you position your views on this scale, generally speaking?”
4.6. Values Related to Social Policy and Welfare State

How do people act toward government policies related to income redistribution? Figure 4.10 shows the percentage of people agreeing with the view that inequalities are too large in the country. The number of people recognizing the existence of inequality and the problem of inequality has increased greatly during the past decade. About 62% in 1999 said: "they strongly agreed or agreed that inequality is too large," while the percentage was about 85% in 2009. The same survey asked whether or not the respondent agrees with the idea that the poor are lazy. Figure 4.11 shows that more than 70% of people strongly agreed or agreed with this idea. Moreover, this tendency has not changed during the 2000s, while inequality has changed during this period. This probably explains the limited number of people supporting government redistribution policies. Figure 4.12 shows that those who support income redistribution policies of the government are at most 60%, although the number has increased during the 2000s. In 2009, about 8% disagree or strongly disagree with income
redistribution policies.

**Figure 4.10: Percentage of people who agree that “inequalities are too large in the country”**

![Bar chart showing percentage of people who agree that inequalities are too large in the country for 1999 and 2009.](chart1.png)

Note: The figure summarizes answers to the question “How much do you agree or disagree ‘Differences in income in Japan are too large’?”

**Figure 4.11: Percentage of people who agree that the “poor are lazy”**

![Bar chart showing percentage of people who agree that the poor are lazy for 2000 and 2005.](chart2.png)

Source: World Values Survey (2000, 2005) Note. The figure summarizes answers to the question “Do you agree or disagree with the following statements?: People who don’t work become lazy.”

**Figure 4.12: Percentage of people who agree that the “government should redistribute”**
4.7. Chapter Conclusion: Appraisal of the Interdependence and the National Story of Inequality Drivers and their Cultural and Political Impacts

In this chapter, we showed how individuals connect to society in Japan. First, we looked at voting behavior. The voting rate is about 67% in Japan (this is also about the average among OECD countries) and has gradually decreased over three decades. There is no difference in voting rate by educational level, while the voting rate is significantly higher among older people than among younger people. Second, we found that the labor unionization rate has steadily decreased over time. This reflects a weakening of the traditional seniority system and increase in non-standard employees in Japanese companies. Third, we found that the level of trust in others is about average in OECD countries and increased between 1998 and 2007. Fourth, regarding political positions, about 30% of Japanese position themselves as conservative and about 20% as progressive. The share of people with...
rightwing political views has been increasing since 1990.

In the last section, we summarized the extent to which people support government policies, especially redistribution policies to mitigate an expansion of inequality. More than 80% recognize that income inequality is too large. At the same time, however, more than 70% agree that “the poor are lazy.” As a result, the percentage of people supporting income redistribution is limited: the ratio supporting income redistribution is at most 62%, and more than 30% neither support nor do not support, although the number of people supporting redistribution policy has been increasing during the 2000s.
5. Effectiveness of Policies for Combating Inequality

5.1 Introduction

The Japan faced severe economic conditions between the mid-1990s and early 2000s. Per capita GDP has not increased significantly since the economic bubble burst in 1991 (Figure 5.1): annual GDP growth rates hit a high of 12.8% in 1968, hovered around 5% in the 1970s and 1980s, and then fell dramatically by around 1% after 1991. The lowest was -2% in 1998 (Asian financial shock) and -5.5% in 2009 after the collapse of Lehman Brothers.

The Bank of Japan eased monetary policies several times, and interest rates have stayed at a low level of 0% for the past ten years. The consumer price index decreased after 1998, and deflation is one of the biggest recent problems in Japan (Figure 5.2). Government debt has accumulated during the period of the recession, and was about 230% of annual GDP in 2011 (Figure 5.3). This is the highest in the world.
Figure 5.1: Real GDP per capita in Japan


Figure 5.2: Consumer Price Index for all items (index 2005=100)

Source: Main Economic Indicators (Organization for Economic Co-operation and Development)
Figure 5.3: Government Debt as a % of GDP

Source: World Economic Outlook (International Monetary Fund)

Note. Gross debt consists of all liabilities that require payment or payments of interest and/or principal by the debtor to the creditor at a date or dates in the future. This includes debt liabilities in the form of Special Drawing Rights (SDRs), currency and deposits, debt securities, loans, insurance, pensions and standardized guarantee schemes, and other accounts payable. Debt can be valued at current market, nominal, or face values. http://research.stlouisfed.org/fred2/series/GGGDTPJPA188N.

5.2 Minimum Wage

The following sections summarize government policies related to inequality. Figure 5.4 shows that the minimum wage has increased since 1997, stayed at the same level from 2001 to 2005, but increased again from 2007. However, the relative level of the minimum wage to average wage in the country—the Kaitz index—has not changed tremendously. Figure 5.5 shows the Kaitz index for males and females, respectively. For males, the minimum wage level unchanged during 1980s, decreased between 1990 and 1993, and then slightly increased after that. For females, it unchanged during 1980s, decreased largely between 1990 and 1993, stayed at the same level until 2004, and increased after that. That is, through the entire period from 1980 till 2009, the relative level of minimum wage is rather constant. The increase in the minimum wage is thought to have only small effects on alleviating existing levels of income inequality (Kawaguchi and Mori, 2009).
Figure 5.4: Changes in prefectural minimum wage


Note: We calculate weighted average minimum wage for the country as a whole using prefectural minimum wage level and weighting the prefectural population.
Figure 5.5: Kaitz index

Source: Handbook on Minimum Wage Settings (Saitei-Chingin-Kettei-Yoran (Tokyo: Roudou Chousakai))

5.3 Taxes

Tax revenues have paralleled cyclical changes in economic conditions. Tax revenue as a percentage of GDP increased in the 1980s, decreased in the 1990s, increased again from the early 2000s, but then decreased after 2007 (Figure 5.6).

The impact of income redistribution policies using income tax has been small. This is because the maximum income tax rate has been cut and the progressiveness of income taxes as a whole was reduced in the late 1990s. Using information on income tax payments, Moriguchi (2010) shows that the shares of total wage accruing to the top 1% of wage earners and above have stayed at a low level, and have risen steadily since the late 1990s. She points out a consistent decrease in marginal tax rates after 1990s as one of the determinants of this increase (Figure 5.7). Although this was not found by the conventionally used survey data in Chapter 2, the income gap between those who belong to the top group and the others may have increased.

Figure 5.7: Changes in top 1% wage income share and marginal tax rate

5.4 Public Social Expenditure

5.4.1 Levels and Trends

The amount of social security payments has increased over time. Figure 5.8 shows the upward trend of total expenditure as a percentage of annual real GDP, which is shown by bars in the figure. Looking at the composition of the payments, amounts related to population aging, such as social security payments for the elderly, and for health and medical care, have increased.

Figure 5.8: Ratio of social security benefits by functional category to Annual Real GDP (%)


As another type of expenditure related to population aging, Japan started public mandatory long-term care insurance in 2000. People aged over 40 must pay long-term care insurance, and receive benefits when they actually need long-term care in principle (depending on ADL). Figure 5.9 shows that LTC payments have increased since 2000 as population has aged.

Figure 5.9: Long-term care payments as a % of real GDP
5.4.2 Social Assistance for Families with Children

Social assistance for families with children increased during the 2000s (Figure 5.10). The amount of child allowance and child-related expenditure in the figure includes: 1. payments to households who have a child under 12 years old and have an income of less than the income ceiling threshold; 2. payments to households who have a child under 18 years old (child rearing allowance); 3. government expenditures on child-related services; and, 4. payments for child-care leaves. The increase in the child-related payment is partly due to a sharp drop in birth rates as mentioned in Chapter 3.

Figure 5.10: Child allowance and child-related government expenditure as a % of GDP


5.4.3 Active Labor Market Policy

Government expenditure on job training as a percentage of GDP is low (Figure 5.11). The unemployed are given unemployment insurance, but not much job training. People participate in job training at their own expense in many cases.

Looking at the changes, expenditure on job training has been on a downward trend for a long time. Although it increased from 1995 through 2000 when the labor market was in a severe condition following the bursting of the economic bubble and the Asian financial crisis, it has not increased since the 2008 crisis that followed the collapse of Lehman Brothers.
Figure 5.11: Government expenditure on job training as % of GDP


Note: Government expenditure on job training includes general job training, job training especially for young people, and for disabled people, which is reported by Ministry of Health, Labour and Welfare. Because the components of all expenditure related to unemployment and job training have changed significantly since 2008, the line is disconnected. The statistics are shown every five years before 2005.

5.5. Education

In response to serious economic conditions and austere budget conditions since the late 1990s, government expenditures on basic education, which are financed mostly by local governments, peaked in 1995, and have been decreasing since then (Figure 5.12). National government expenditures on education, which are mostly for college and university education, have also decreased since 1995, regardless of the increase in the number of people entering higher education. The burden of expenditure on education is mostly imposed on each household in Japan. As economic inequality increases, educational inequality increases between households who can and cannot afford education costs. This tendency might be stronger if less educated parents who have lower incomes tend to invest less money on child’s education.

Figure 5.12: National and local government expenditure on education
5.6 Conclusion

This chapter summarized public policies related to inequality. Japan’s minimum wage has increased steadily since 2007, but the increase in the minimum wage seems to have only a small effect on alleviating existing levels of income inequality. The impact of income redistribution policies through income taxes has been smaller. This is because the maximum income tax rate was cut and the progressiveness of income taxes as a whole was reduced in the late 1990s. The Japanese government has increased its fiscal spending on social security for the elderly along with population aging. The government has increased unemployment insurance payments as the numbers of unemployed increased, but has not increased job training for the working population. Government expenditures on intermediate and higher education peaked in 1995, and then decreased. This decreasing trend is probably due to serious economic conditions and austere budget conditions since the late 1990s. The educational burden is basically imposed on households. If more educated parents with higher
incomes invest more on their children’s education and less educated parents with lower income invest less, inequalities will further increase in the future.

To conclude, Japan’s income inequality has widened gradually since the 1980s. The wage gap has become large not between but within educational groups. An increase in the income gap has come with a decreased income share of low income groups. The poverty rate has also risen during this period.

Most Japanese recognize that inequality has been expanding, but their attitude towards income redistribution policies has not changed in the 2000s. Approximately 70% of Japanese think “The poor are lazy.” The percentage of people who agree that “it is the responsibility of the government to reduce differences in income between families with high incomes and those with low income,” is 60%, although it has increased during the past decade. The change in attitudes towards the government’s role in reducing income inequality does not seem overly dramatic.

The increasing political power of the elderly and little change in attitudes towards income redistribution policies suggest that a more efficient policy to reduce income inequality has not been implemented. Although the policy for lower income groups that mainly consists of younger people is an urgent issue, the government has failed to formulate and implement more efficient policies because of financial and political reasons.
References


Appendix

Appendix Figure 1: National income tax payment calculated in our tax calculation program (The case of 1999 calculation)

Note: This chart summarizes our income-tax-calculation program, where disposable-income is predicted from observed before-tax income, using NSFIE. This is an example of calculation for 1999 income. The items shown in a box are calculated in our tax-calculation program, while those in a dotted box are not calculated in our program. Since taxation system changes over years, we made a different program for each year.
Appendix Figure 2: Local tax payment calculated in our tax calculation program (The case of 1999 calculation)

Note: See the note for the previous chart.
## Appendix Summary Table for Japan

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gini: income before taxes</td>
<td>↑</td>
<td>→</td>
<td>↑</td>
<td>↑</td>
<td>n.a.</td>
<td></td>
</tr>
<tr>
<td>Gini: income after taxes</td>
<td>↑</td>
<td>→</td>
<td>↑</td>
<td>↑</td>
<td>n.a.</td>
<td></td>
</tr>
<tr>
<td>Gini: consumption expenditure</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>n.a.</td>
<td></td>
</tr>
<tr>
<td>Gini: asset holdings</td>
<td>↑</td>
<td>↓</td>
<td>↑</td>
<td>↑</td>
<td>n.a.</td>
<td></td>
</tr>
<tr>
<td>Poverty: income before taxes</td>
<td>↓</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>n.a.</td>
<td></td>
</tr>
<tr>
<td>Poverty: income after taxes</td>
<td>↓</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>n.a.</td>
<td></td>
</tr>
<tr>
<td>Poverty: consumption expenditure</td>
<td>→</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>n.a.</td>
<td></td>
</tr>
<tr>
<td>Number of households living on welfare</td>
<td>↓</td>
<td>→</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td></td>
</tr>
<tr>
<td>Gini: Educational years</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td></td>
</tr>
<tr>
<td>Male wage gap between 90 and 50 percent</td>
<td>↓</td>
<td>↓</td>
<td>→</td>
<td>→</td>
<td>↑</td>
<td></td>
</tr>
<tr>
<td>Male wage gap between 50 and 10 percent</td>
<td>↓</td>
<td>→</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td></td>
</tr>
<tr>
<td>Female wage gap between 90 and 50 percent</td>
<td>↓</td>
<td>↓</td>
<td>→</td>
<td>→</td>
<td>→</td>
<td></td>
</tr>
<tr>
<td>Female wage gap between 50 and 10 percent</td>
<td>→</td>
<td>→</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td></td>
</tr>
<tr>
<td>Unemployment rate</td>
<td>→</td>
<td>↓</td>
<td>↑</td>
<td>↑</td>
<td>↓</td>
<td></td>
</tr>
<tr>
<td>Employment rate</td>
<td>→</td>
<td>↑</td>
<td>↓</td>
<td>↓</td>
<td>↑</td>
<td></td>
</tr>
<tr>
<td>Share of non-standard employees</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td></td>
</tr>
<tr>
<td>Wage gap between part-time to full-time workers</td>
<td>↓</td>
<td>↓</td>
<td>↓</td>
<td>↑</td>
<td>↑</td>
<td></td>
</tr>
<tr>
<td>Wage gap between college graduates (male under 64)</td>
<td>→</td>
<td>→</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td></td>
</tr>
<tr>
<td>Male-female wage gap</td>
<td>↓</td>
<td>↓</td>
<td>↓</td>
<td>↓</td>
<td>↓</td>
<td></td>
</tr>
<tr>
<td>Gini old-young gap: income after taxes</td>
<td>↓</td>
<td></td>
<td></td>
<td>n.a.</td>
<td></td>
<td>(’84-2004)</td>
</tr>
<tr>
<td>Gini old-young gap: consumption expenditure</td>
<td>↓</td>
<td></td>
<td></td>
<td>n.a.</td>
<td></td>
<td>(’84-2004)</td>
</tr>
<tr>
<td>Gini old-young gap: asset holdings</td>
<td>↓</td>
<td></td>
<td></td>
<td>n.a.</td>
<td></td>
<td>(’84-2004)</td>
</tr>
</tbody>
</table>
### Chapter 3

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of homeless</td>
<td>n.i.</td>
<td>n.i.</td>
<td>n.i.</td>
<td>↘</td>
<td>↘</td>
<td></td>
</tr>
<tr>
<td>Lone Parenthood</td>
<td>↗</td>
<td>↗</td>
<td>↗</td>
<td>↗</td>
<td>↗</td>
<td></td>
</tr>
<tr>
<td>Marriages</td>
<td>↘</td>
<td>↗</td>
<td>→</td>
<td>↘</td>
<td>↘</td>
<td></td>
</tr>
<tr>
<td>Divorces</td>
<td>↘</td>
<td>↗</td>
<td>↗</td>
<td>↘</td>
<td>↘</td>
<td></td>
</tr>
<tr>
<td>Fertility</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housing, House prices</td>
<td>↗</td>
<td>↘</td>
<td>→</td>
<td>↘</td>
<td>↗</td>
<td></td>
</tr>
<tr>
<td>Home-ownership</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crime rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Youth crime rates</td>
<td>n.i.</td>
<td>→</td>
<td>→</td>
<td>n.i.</td>
<td>n.i.</td>
<td></td>
</tr>
<tr>
<td>Life expectancy at birth</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suicided rates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Living conditions</td>
<td>n.i.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Chapter 4

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Electorate turn up, general</td>
<td>↘</td>
<td>↘</td>
<td>↘</td>
<td>↘</td>
<td>↘</td>
<td>(90-2000)</td>
</tr>
<tr>
<td>Unionization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political participation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(95-2003)</td>
</tr>
<tr>
<td>Trust in others</td>
<td>n.i.</td>
<td>n.i.</td>
<td>↗</td>
<td>n.i.</td>
<td>n.i.</td>
<td></td>
</tr>
<tr>
<td>Conservatives</td>
<td>n.i.</td>
<td>n.i.</td>
<td>n.i.</td>
<td>→</td>
<td>→</td>
<td></td>
</tr>
<tr>
<td>Right wing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agreeing no further immigrants</td>
<td>↘ ('95-2003)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income differences are too</td>
<td>↗ ('99-2009)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor are lazy</td>
<td>n.i.</td>
<td>n.i.</td>
<td>n.i.</td>
<td>→</td>
<td>n.i.</td>
<td></td>
</tr>
<tr>
<td>Government should redistribute</td>
<td>n.i.</td>
<td>n.i.</td>
<td>n.i.</td>
<td>↗</td>
<td>↗</td>
<td></td>
</tr>
</tbody>
</table>
## Chapter 5

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth rate (real GDP per capita)</td>
<td>↑</td>
<td>↓</td>
<td>↓</td>
<td>↑</td>
<td>↓</td>
<td></td>
</tr>
<tr>
<td>Price index</td>
<td>↑</td>
<td>↑</td>
<td>↓</td>
<td>↓</td>
<td>↓</td>
<td></td>
</tr>
<tr>
<td>Government debt (% of GDP)</td>
<td>→</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td></td>
</tr>
<tr>
<td>Minimum wage level</td>
<td>n.i.</td>
<td>n.i.</td>
<td>↑</td>
<td>→</td>
<td>↑</td>
<td></td>
</tr>
<tr>
<td>Kaitz Index</td>
<td>→</td>
<td>↓</td>
<td>→</td>
<td>→</td>
<td>↑</td>
<td></td>
</tr>
<tr>
<td>Total tax receipt (% of GDP)</td>
<td>↑</td>
<td>↓</td>
<td>↓</td>
<td>↑</td>
<td>↓</td>
<td></td>
</tr>
<tr>
<td>Marginal tax rate for top 1%</td>
<td>→</td>
<td>→</td>
<td>→</td>
<td>↓</td>
<td>→</td>
<td></td>
</tr>
<tr>
<td>Expenditures on social security (% of GDP)</td>
<td>n.i.</td>
<td>n.i.</td>
<td>↑</td>
<td>↑</td>
<td>↑</td>
<td></td>
</tr>
<tr>
<td>Expenditures on long-term care (% of GDP)</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>↑</td>
<td>↑</td>
<td></td>
</tr>
<tr>
<td>Expenditures on child allowance and child-related services (% of GDP)</td>
<td>n.i.</td>
<td>n.i.</td>
<td>→</td>
<td>↑</td>
<td>↑</td>
<td></td>
</tr>
<tr>
<td>Expenditures on job-training (% of GDP)</td>
<td>↓</td>
<td>↓</td>
<td>↑</td>
<td>↓</td>
<td>↓</td>
<td></td>
</tr>
<tr>
<td>Expenditures on higher education</td>
<td>↑</td>
<td>↑</td>
<td>↓</td>
<td>↓</td>
<td>↓</td>
<td></td>
</tr>
<tr>
<td>Expenditures on lower education</td>
<td>↑</td>
<td>↑</td>
<td>→</td>
<td>↑</td>
<td>→</td>
<td></td>
</tr>
</tbody>
</table>