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The Gini Coefficient and Economic Inequality in Japan: Policy Challenges

In order to shake off the problem of income decline, there are three problems which Japan must come to grips with

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Summary

- **Characteristics of Japan's income inequality in an international comparison:** Between the years 2000 and 2009, no significant growth was seen in Japan's income inequality, with both the Gini coefficient and the income gap declining only a small amount. Looking at the real minimum wage and the Gini coefficient, we see that OECD member nations have all increased the minimum wage, and that this tends to increase the real purchasing power of the lower income bracket. As for real employee compensation in the macro sense and real wages (on a man-hour basis), we see that both figures are on the decline in Japan. This tells us that the problem Japan needs to solve in the future is not income disparity, but decline in income. (For details see *Japan's Economic Outlook No. 190*, *Update (Summary)*, September 9, 2016, by Mitsumaru Kumagai.)

- **Three challenges Japan faces in order to break out of income decline:** In order to shake off the problem of income decline, there are three problems which Japan must come to grips with: (1) Resolve the discrepancy in pay between regular employees and non-regular employees, (2) Short-term income support for low-income bracket may be valid to a point, but in the mid to long-term, policy should focus on improving value of human capital, and (3) Raising minimum wage is expected to produce the effect of raising the floor on incomes.

1. Characteristics of Japan's Income Inequality in an International Comparison

Extent of Japan's income inequality did not change between 2000 and 2009

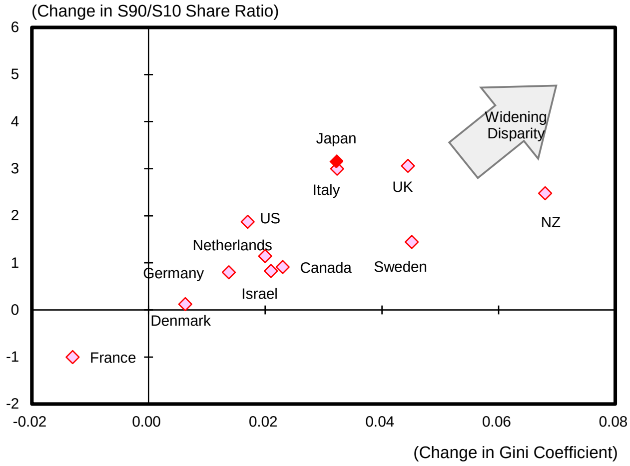
The problem of income inequality is a fundamental factor in the various arguments circulating in the political and economic communities of countries around the world. The question of income redistribution is one that comes up in many different situations, including the Brexit issue in the UK, the US presidential election, secular stagnation theory, and again in Stage 2 of Abenomics. In this chapter we attempt to come to a new understanding of the problem of income inequality in Japan by approaching the issue via an international comparison. Then we consider what the future challenges might be for government policy.

First we take a look at two representative indices which examine income inequality: (1) the Gini coefficient (after taxes and transfers), and (2) the S90/S10 income share ratio (share of income received by the top 10% divided by the share of income received by the bottom 10%), and then, through an international comparison, identify the characteristics of income inequality in Japan. In the case of both of these indices, the higher figure means a larger income disparity, while a lower figure means less disparity.

Looking at changes in income inequality in the OECD member nations between 1985 and 2000, we see that income disparity increased in almost all countries. Especially notable was growth in income disparity in New Zealand, the UK, Sweden, Japan, and Italy (Chart 1). In other words, the pace of growth in income inequality in Japan between 1985 and 2000 was rapid in an international comparison. It is thought that the reason for this may be that Japan's middle class shrank considerably during the economic downturn which followed the collapse of the economic bubble.

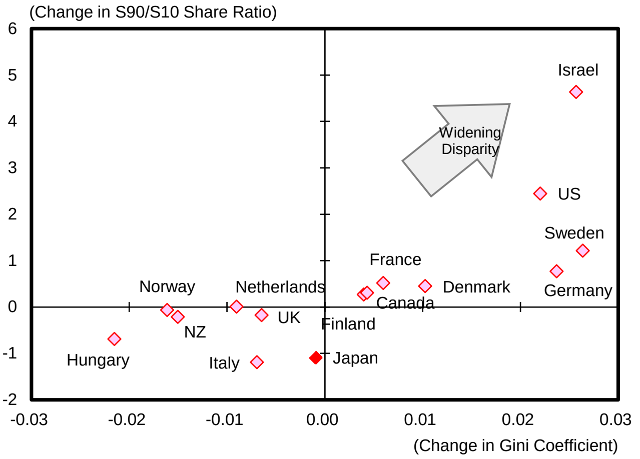
But then, between 2000 and 2009, we see that conditions differ considerably from country to country (Chart 2). Countries where income disparity grew the most were the US, Israel, Sweden, and Germany. In the case of Germany, our thinking is that labor market reform brought an increase in income inequality. On the other hand, in Japan's case, both the Gini coefficient and the S90/S10 income share ratio show a small decline – in other words, growth in income disparity was not observed during this period. These findings are consistent with those of the Ministry of Health, Labour and Welfare in their survey on income redistribution (based on income after redistribution). We can conclude, therefore, that during this period income inequality did not expand in Japan.

Changes in Gini Coefficient and S90/S10 Income Share Ratio (1985-2000)
Chart 1



Source: OECD; compiled by DIR
Notes: 1) The Gini coefficient is based on redistributed income (after taxes and transfers).
2) The S90/S10 income share ratio is the share of income received by the top 10% income level divided by the share of income received by the bottom 10% income level.

Changes in Gini Coefficient and S90/S10 Income Share Ratio (2000-2009)
Chart 2



Source: OECD; compiled by DIR
Notes: 1) The Gini coefficient is based on redistributed income (after taxes and transfers).
2) The S90/S10 income share ratio is the share of income received by the top 10% income level divided by the share of income received by the bottom 10% income level.

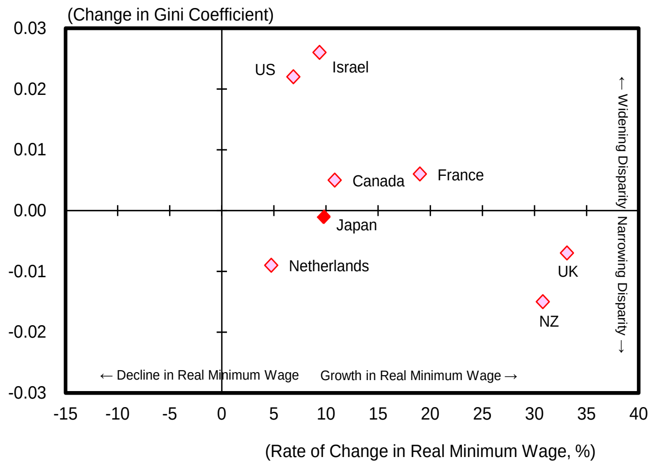
Japan needs to resolve the problem of income decline, not income disparity

In discussing people’s lives and economic activity in Japan, it is important to look not only at data associated with income disparity, but trends in level of income as well. Even if income disparity is not growing, if real income levels are on the decline, then it becomes necessary to deal with the problem of raising the minimum level of national income. In this section we examine the relationship between income disparity and income level, making use of available data from major nations.

Looking at changes in real minimum wage and the Gini coefficient between 2000 and 2009 reveals that real minimum wage was on the rise during this period in each of the countries from which data was obtained, and that the real purchasing power of the lowest income level also rose during this time (Chart 3). In both the UK and New Zealand, the real minimum wage rose considerably, while the Gini coefficient declined. This indicates that raising the minimum wage may have contributed to the narrowing of economic disparity in these countries. This means that, with the move toward raising the minimum wage in Japan in recent years, Japan’s income disparity can also be expected to narrow gradually.

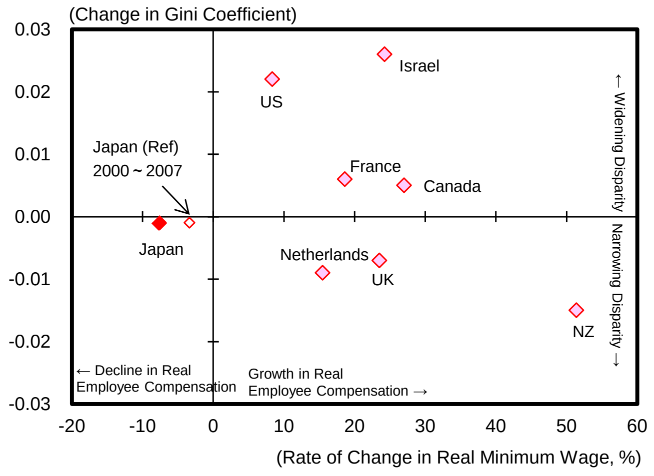
One the other hand, when we look at real employee compensation in the macro sense and real wages (on a man-hour basis), we see that both figures are on the decline in Japan (Charts 4 & 5). It is possible that there was some negative influence from the global financial crisis of 2008 during the year 2009, but when the calculation was redone using data only for the years 2000-2007, the same results were obtained. These considerations tell us that the problem Japan needs to solve in the future is not income disparity, but decline in income.

Real Minimum Wage and Gini Coefficient (2000-2009)
Chart 3



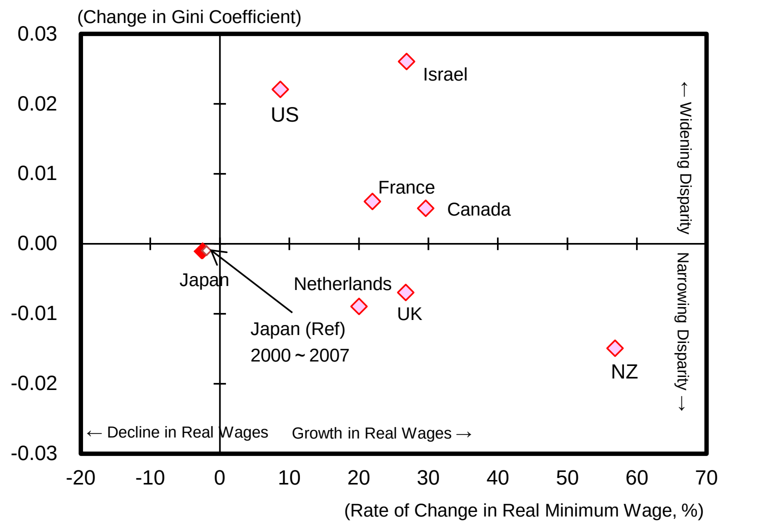
Source: OECD; compiled by DIR
Note: Real minimum wage obtained by taking the minimum wage of each country (converted into annual income), and using CPI to find the real term.

Real Employee Compensation and Gini Coefficient (2000-2009)
Chart 4



Source: OECD; compiled by DIR
Notes: 1) CPI used to find expression in real terms for real employee compensation.
2) Macro wages used for France rather than employee compensation.

Real Wages and Gini Coefficient (2000-2009) Chart 5



Source: OECD; compiled by DIR.
Notes: 1) Real wages expressed on a man-hour basis. CPI used to find expression in real terms.
2) Employee compensation used for New Zealand rather than wages.

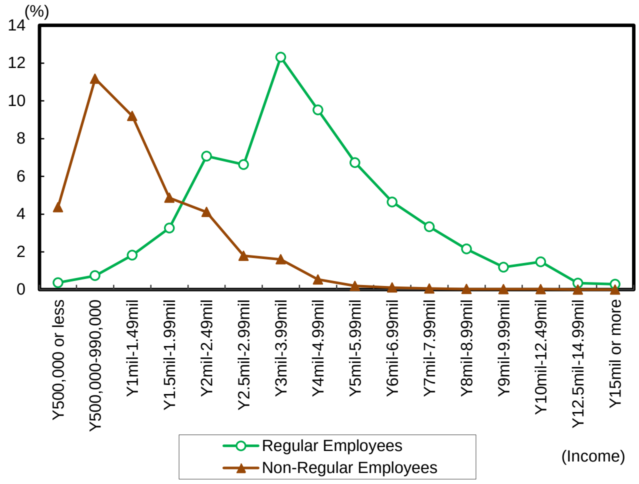
2. Three Challenges Japan Faces in Order to Break Out of Income Decline

(1) Resolve discrepancy in pay between regular employees and non-regular employees

There is a major discrepancy in pay between regular employees and non-regular employees in Japan. When income distribution in these two groups is placed side by side as in Chart 6, we notice that there are two peaks. Then, when we break these groups down into men and women, we see that the peak for non-regular employees is actually formed by women non-regular employees (Chart 7). What this tells us is that in order to mitigate or eliminate the two peaks in the chart, increasing the income of non-regular employees is essential, focusing especially on women. In practical terms, the following steps are suggested as possible means of moving in that direction: (1) Implement a Japanese version of "equal pay for equal work", (2) Support career training for non-regular employees, and (3) Eliminate work restrictions and limitations affecting women.

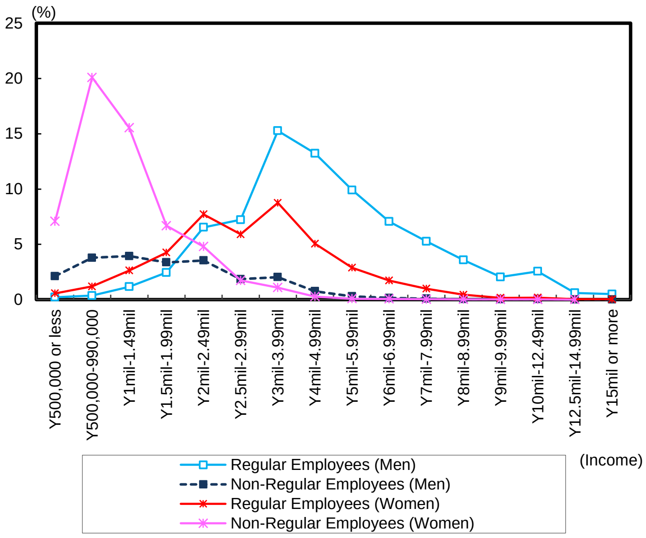
First, we have to gain a sufficient understanding of Japan's unique employment practices, and then realize a Japanese version of "equal pay for equal work". In doing, so it will also be necessary to alleviate the disparity in treatment of regular and non-regular employees. At the same time, it is also essential to encourage the acquisition of knowledge and skills on the part of non-regular employees by providing support for job training. The wages of non-regular employees do not grow much in comparison to their years of service, and one of the major causes of this problem is that non-regular employees (especially those working for small and medium enterprises) do not have the opportunity to participate in human resources development programs in the form of job training (Charts 8 & 9). Meanwhile, women non-regular employees face various work restrictions and limitations, including those associated with child-rearing, and these act as barriers to income growth. The key to resolving these issues is to provide more satisfactory child-rearing support.

Income Distribution of Regular and Non-Regular Employees (2012, Men & Women Total)
Chart 6



Source: Ministry of Internal Affairs and Communications; compiled by DIR.
Note: Denominator of the constituent ratio based on formula regular employees + non-regular employees.

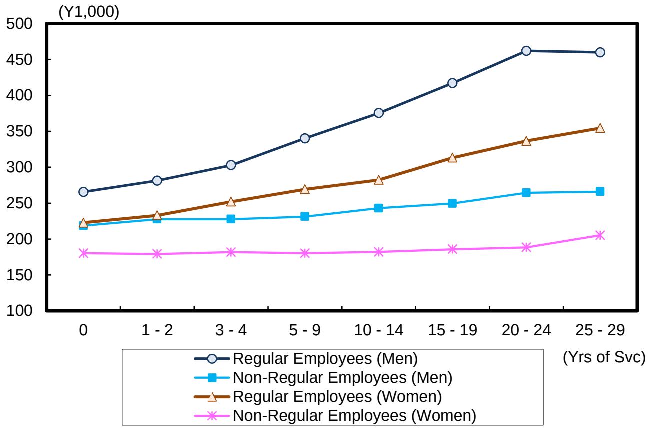
Income Distribution of Regular and Non-Regular Employees (2012, Gender Breakdown)
Chart 7



Source: Ministry of Internal Affairs and Communications; compiled by DIR.
Note: Denominator of the constituent ratio based on formula regular employees + non-regular employees.

Wage Curve by Years of Service (2015)

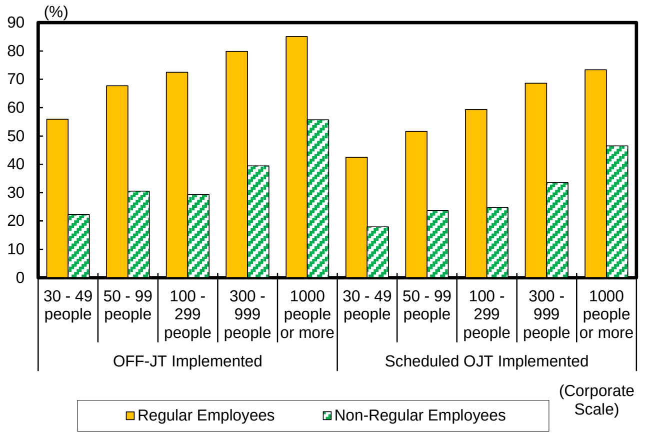
Chart 8



Source: Ministry of Health, Labour and Welfare; compiled by DIR.

Implementation Status of Training (FY2015 Survey)

Chart 9



Source: Ministry of Health, Labour and Welfare; compiled by DIR.

(2) Policy for dealing with low-income bracket should focus on improving value of human capital in mid to long-term, rather than on short-term income support

Since the bursting of Japan's economic bubble, its sizeable middle-class, which provided the legwork for the country's high-growth period, gradually shrank as the new low-income class grew larger. This is the problem of economic inequality which has now become a major subject of argument in Japan. In recent years, there has been much research, most of it outside Japan, whose results claim that expanding economic inequality inhibits mid to long-term economic growth. Moreover, this same expanding economic inequality is also indicated as one of the causes of long-term economic stagnation according to secular stagnation theory. Concretely speaking, the way this comes about is explained as follows: (1) Expanding economic inequality creates a large class of low-income people, whose educational opportunities are limited due to their economic condition. This damages a society's ability to accumulate human capital, then (2) Growth of the low-income class with its major liquidity constraints inhibits total demand.

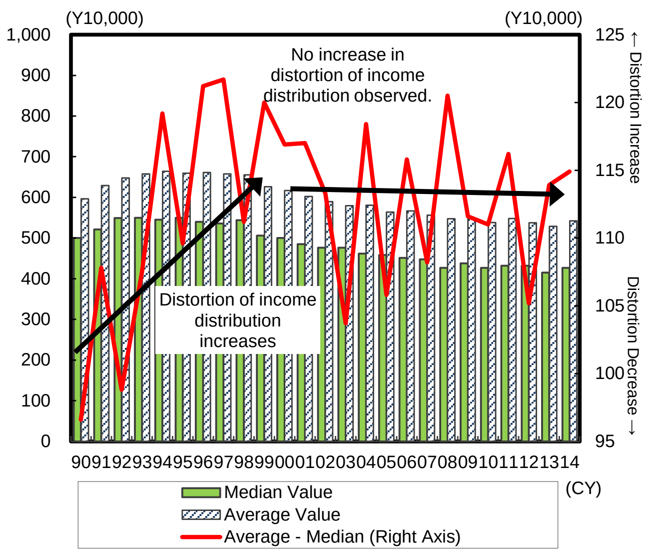
In this section, we consider the above arguments in light of changes in Japan's income distribution. First we look at income distribution and whether it is skewed by the difference between average value and median value. According to Chart 10, the difference between these values was expanding between the years 1990 and 2000. A skewed or distorted median is a simple way of indicating income inequality. During this time, just after Japan's economic bubble burst, there was a major downturn in the economy, and it is here that we can observe expansion in income inequality. However, after the year 2000, though we do see fluctuations in the difference between the average value and the median, the general trend is no longer toward growth in income inequality. In other words, we do not detect any expansion in distortion of income distribution.

Next we look at the shape of income distribution. Between the years 1990 and 2000, there was a decrease in the number of households with annual incomes between 4 to 7.5 million yen. Meanwhile, we see a small increase in households with incomes below 3 million yen and above 11 million yen (Chart 11). This is the period when the middle class (people with incomes of around 5 million yen per year) began to shrink. Then between the years 2000 and 2014, households with incomes between 500,000 and 3.5 million yen per year grew, while those making more than 4 million yen per year declined somewhat – in other words the low-income bracket is where the growth was. This is also the period in which the number of non-regular employees increased, along with the number of elderly households.

Finally, in light of these changes in income distribution, it is probably safe to say that income redistribution policies such as measures providing payment of cash benefits to persons of low income, are at least somewhat valid in that they can do something for the income inequality problem by bringing up the minimum income level for the short-term. However, cash benefits cannot be paid out indefinitely, and doing so does nothing to resolve the root problem. In the future, the important thing will be to improve the structure of the income distribution overall by implementing solid growth strategies such as reform in the area of labor productivity. In the mid to long-term view, education and support for job training must be strengthened as a means of improving the human capital of people in the low-income bracket.

Distortion of Income Distribution (Households)

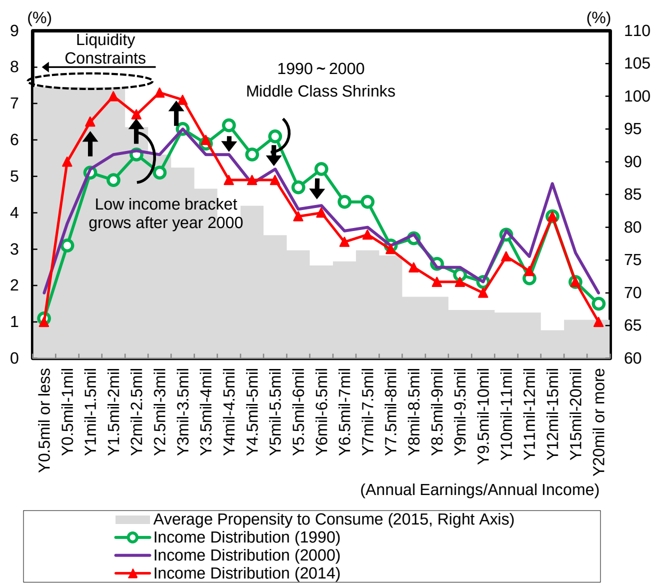
Chart 10



Source: Ministry of Health, Labour and Welfare; compiled by DIR.

Changes in Income Distribution and Average Propensity to Consume (Households)

Chart 11



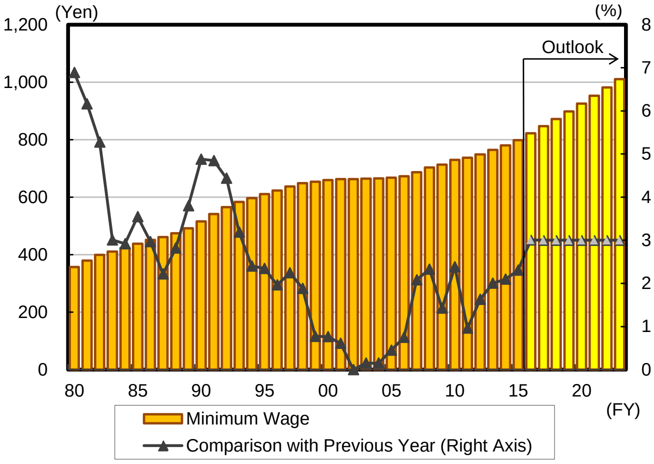
Source: Ministry of Health, Labour and Welfare, Ministry of Internal Affairs and Communications; compiled by DIR.
Note: Income distribution is based on “earnings”, while average propensity to consume is based on “income”.

(3) Raising minimum wage expected to produce effect of raising the floor on incomes and the economy

As part of its policy regarding low income and inequality, the Abe administration has indicated plans to raise the minimum wage by 3% annually, with a final target of 1,000 yen per hour in the future (Chart 12). Looking at changes in the extent of influence the minimum wage has on the economy, we see that its influence has grown considerably under Abenomics, and that the number of workers directly influenced by increases in minimum wage is also growing (Chart 13). However, when we rank cities and prefectures from 1 to 4 according to relative economic strength and then take another look at the influence of minimum wage, we see that it differs according to rank. It appears that recent increases in minimum wage have been carried out with consideration to regional economic conditions.

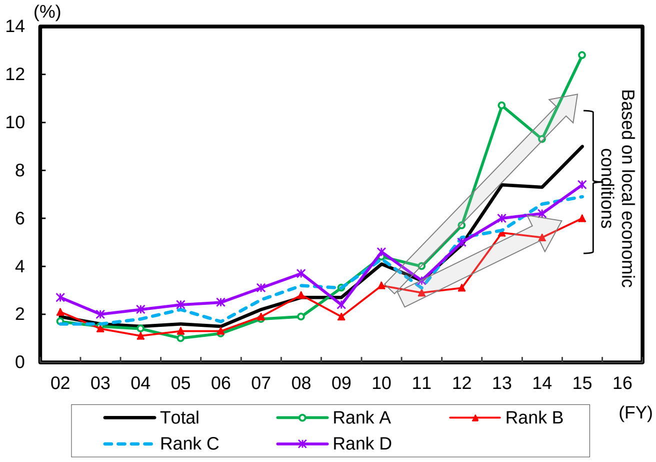
It is also assumed that growth in minimum wage has the effect of raising the economic floor, and hence indirectly contributes to increases in hourly wages for workers overall. When we look at changes in minimum wage by type of employment, we see that until the end of 1990, there was a positive relationship between the minimum wage and hourly wages in general for both general workers and part-time workers (women) (Chart 14). After the year 2000 as well, a clear relationship can be seen between the minimum wage and hourly wages for part-time workers (women). Hence growth of 3% in the minimum wage can be expected to have the effect of bringing up the level of hourly wages a certain amount for part-time workers (women).

Changes in Minimum Wage
Chart 12



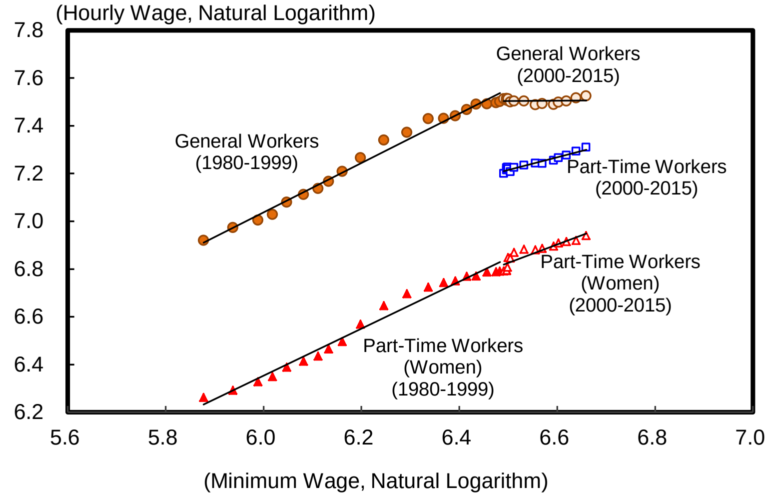
Source: Ministry of Health, Labour and Welfare; compiled by DIR.
Note: Amount for FY2016 uses Commission's guidelines. It is assumed that 3% growth continues after FY 2016.

Rate of Influence of Minimum Wage (by Rank)
Chart 13



Source: Ministry of Health, Labour and Welfare; compiled by DIR.
Notes: 1) Rate of influence is the percentage of workers falling below the minimum wage after revision of the amount of minimum wage.
2) Guidelines for raising minimum wage are decided on based on the 4 economic rankings of cities and prefectures. There are 5 cities and prefectures in rank A, 11 prefectures in rank B, 14 prefectures in rank C, and 17 in rank D.

Relationship of Minimum Wage to Hourly Wage (Scheduled Wage)
Chart 14



Source: Ministry of Health, Labour and Welfare; compiled by DIR.
Notes: 1) Change in hourly wage uses amount one year after change in minimum wage since there is a delay in the effect of the change becoming manifest.
2) Hourly wages of general workers obtained by dividing scheduled wages by scheduled hours.

How to measure the negative impact of raising the minimum wage

While raising the minimum wage has a positive aspect in that it can help revitalizing personal consumption by virtue of encouraging growth in worker incomes, for corporations, it means an increase in personnel expenses. This could be an especially serious problem for regional and small to medium-sized enterprises. There is even the risk that small to medium-sized enterprises might carry out restructuring or use other means to rapidly cut back on personnel as a means of keeping personnel expenses down. In a survey carried out in 2010 by the Ministry of Health, Labour and Welfare, companies were asked to list problems which might occur if the minimum wage were raised to 800 yen. Results showed that the smaller the corporation, the more likely the response was that instability or uncertainty regarding the future of the business would arise (Chart 15). This is a factor which we must remain aware of.

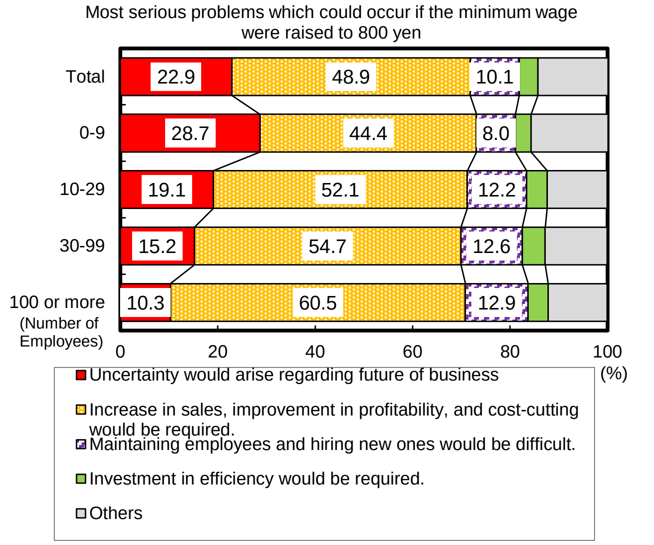
In recent years, with the minimum wage growing, the employment environment has improved as well, and in macro terms, personnel adjustments (such as restructuring, etc.) have not emerged as a result. However, as further increases in the minimum wage continue on into the future, there is always the possibility that negative impact on the employment market could occur. Caution is therefore required, as well as continued monitoring of the effects of raising the minimum wage on small to medium sized enterprises.

In international terms Japan's minimum wage is not at all high when compared to the level of general workers in various countries (Chart 16). Although these results have to be taken with a certain grain of salt, seen from the viewpoint of an international comparison, raising the minimum wage after taking possible negative impacts on the employment environment into account is considered to be appropriate as a countermeasure against income inequality and as a means of raising the minimal economic level. Movement toward raising the minimum wage as a means of correcting economic inequality is gaining strength around the world, and Japan is by no means unique in its policy approach.

The most desirable actions for the government to take in the current state of affairs is to respond to the situation with a policy which will raise productivity and earning power in regions and small to medium enterprises which are likely to be most impacted by increases in the minimum wage. Considered in the long-term, the major prerequisite to raising the minimum wage is for corporate earnings to improve. At this time the government's growth strategy calls for support for improvement in productivity, especially amongst small and middle sized firms making use of advances in IT. We welcome and look forward to further progress in this area in the future.

Corporate Concerns Regarding Effects of Raising Minimum Wage

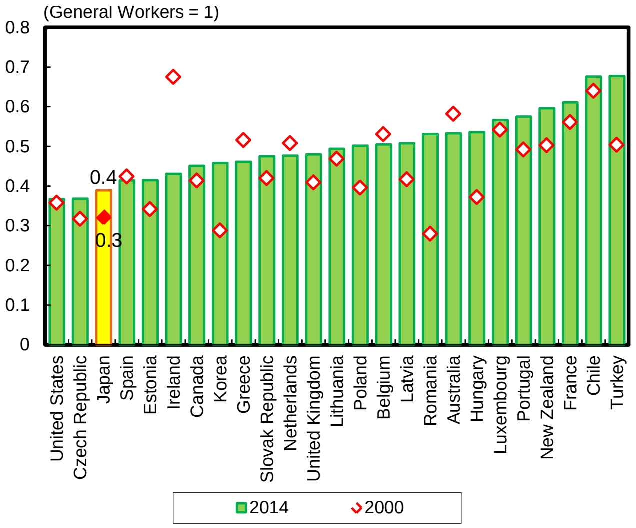
Chart 15



Source: Ministry of Health, Labour and Welfare (2010) Survey on the smooth implementation of the increase in minimum wage in small and medium-sized enterprises; compiled by DIR.

Ratio of Minimum Wage to Average Wage (Median Value) of General Workers

Chart 16



Source: OECD; compiled by DIR.

Economic Indicators and Interest Rates

Chart 17

Indicator	2015 Oct-Dec	2016 Jan-Mar	2016 Apr-Jun	2016 Jul-Sep	2016 Oct-Dec	2017 Jan-Mar	FY14	FY15	FY16	FY17
	Actual			DIR estimates			Actual		DIR estimates	
Real GDP										
Q/q %, annualized	-1.7	2.1	0.7	0.8	1.7	1.6				
Y/y %	0.7	0.2	0.8	0.5	1.4	1.2	-0.9	0.8	0.9	0.9
Current account balance SAAR (Y tril)	19.2	19.9	18.8	18.9	19.3	19.8	8.7	18.0	19.4	21.7
Unemployment rate (%)	3.3	3.2	3.2	3.1	3.1	3.0	3.5	3.3	3.1	3.0
CPI (excl. fresh foods; 2010 prices; y/y %)	0.0	-0.1	-0.4	-0.4	-0.1	0.3	2.8	-0.0	-0.1	0.8
10-year JGB yield (period average; %)	0.29	-0.01	-0.15	-0.12	-0.05	-0.05	0.46	0.26	-0.09	-0.05

Source: Compiled by DIR.

Note: Estimates taken from DIR's *Japan's Economic Outlook No.190 Update (Summary)*.