

INEQUALITY AND POVERTY IN JAPAN*

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This paper presents a brief survey of inequality and poverty in Japan. It shows empirical evidence on the extent of both inequality in income distribution and of poverty rates; the paper discusses the cause of increases in both these variables, and the implication of such trends. The paper goes on to argue the difference between inequality of opportunity and inequality of outcome and shows some related empirical evidence. Finally, the paper investigates the relationship between economic efficiency and equity, supposed to be in a trade-off relationship, and presents my personal view of that relationship and policy recommendations.

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1. Introduction

Debate in Japan on the subject of poverty has centred on the assertion that the country is moving towards a less equal society. This is in sharp contrast with a popular belief that Japan is a country of equality. One typical subject is the growing inequality of income distribution. The present author's small book (1998a) initiated debate on income inequality. Other subjects are, for example, inequality in opportunity, represented by educational and occupational opportunity, promotion possibility in enterprises, the role of public policy in reducing various inequalities, and the relationship between efficiency and equity. It is very important when discussing the broader issue of inequality to distinguish between inequality of outcome and inequality of opportunity.

The purpose of this article is to discuss these various themes, relevant to Japan. It is argued in Japan that equity—equal income distribution—should be sacrificed to some extent in order to promote efficiency (i.e. a higher growth rate of the economy). This trade-off between equity and efficiency is a main topic of economic discussion. This paper examines this relationship.

Several specialists in economics, education, sociology and political science propose that Japan has been moving towards an unequal society in the fields of opportunity of education and employment. This is thought to occur because parents' levels of achievement in education and occupation determine those of their children—Japanese society has closed as the degree of intergenerational social mobility has lowered. The same is thought to be true for the effect of parents' incomes on children's economic success. This may cause Japan to become a less efficient society in the sense that qualified, resourceful and productive persons are unable to achieve better education and engage in important jobs and professions. This article examines these issues.

One subject which has received little attention is poverty. It has been believed for a long-time that poverty is not a main social problem in Japan. A group of specialists has

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been concerned with poverty, but this concern has never been widely discussed for the following reasons. First, the rate of poverty, defined by the rate of poor people over total population (frequently called the headcount ratio), was relatively low in the past. Second, since it was believed that the degree of equality in income distribution was fairly high, the possibility of serious poverty was not considered. The article shows that this is no longer true. At the same time, we propose the reason why poverty has increased, and investigate several features of poverty empirically.

2. A move towards inequality

2.1 A change in Japan over time

Income is the main indicator used in many countries including Japan for assessing the economic condition of both individuals and households. The two other indicators of economic wellbeing are wealth and consumption.

Why is income the main indicator? There are two explanations. First, nearly all people receive monthly incomes. Besides wages for employees, pension payments to retired people are considered monthly income. Most individuals evaluate their economic position by their monthly or annual income. Second, although data and statistics on income are not free from measurement errors, they are more reliable than those for wealth and consumption. The measurement of wealth is unavoidably difficult, and that of consumption requires the analysis of monthly household account books. Any collection of data on consumption is bound to introduce significant measurement errors.

Because of these data-related difficulties many studies, in Japan and elsewhere, draw on income distribution for inferences about affluence relative to statistical data on wealth and consumption.

The primary statistical source in Japan used for income data is the *Income Redistribution Survey* (IRS) published by the Ministry of Welfare and Labour. This source has been published for more than 40 years and is valuable for studying time-series changes in income distributions. Another useful feature is that the income data collected by the survey include nearly all the different samples of the heterogeneous occupation and age classes of Japan.

There are several other statistical sources that provide data on income distribution. Among these, the *Households Expenditure Survey* appears annually, the *National Survey of Family Income and Expenditure* every five years, and the *Wage Structure Survey* annually. The first two sources contain a sampling bias because they exclude samples of households whose family members are alone and single; the last source gives only wage figures of employees who work at firms with more than 10 workers. It is hard to say that these three sources are representative of Japanese households. The advantage of the IRS, for the purpose of this study, is that its more comprehensive sampling serves to show the pervasiveness of income inequality in Japan.

Nevertheless, our reliance on the IRS should not imply that the other surveys mentioned above are useless. These surveys do provide different, interesting and valuable data on income distribution. The reader should understand that the IRS allows one to obtain a wide picture of income distribution over a long period of time.

Shown in Table 1 are the Gini coefficients of the inequality results for primary income and redistributed income based on the IRS data. The Gini coefficient is the index commonly used to understand the issue of inequality. It takes zero value when complete

TABLE 1
Income Re-distribution Effects by Tax Policies and Social Security Programs

	A	B	C	D	E
			%	%	%
1961	0.390	0.344	11.8	—	—
1967	0.375	0.328	12.6	3.7	8.7
1972	0.354	0.314	11.4	4.4	5.7
1975	0.375	0.346	7.8	2.9	4.5
1978	0.365	0.338	7.4	3.7	1.2
1981	0.349	0.314	10.0	5.4	5.0
1984	0.398	0.343	13.8	3.8	9.8
1987	0.405	0.338	16.5	4.2	12.0
1990	0.433	0.364	15.9	2.9	12.5
1993	0.439	0.365	17.0	3.2	13.2
1996	0.441	0.361	18.3	1.7	15.7
1999	0.472	0.381	19.2	1.3	17.1
2002	0.498	0.381	23.5	0.8	21.4

A, Inequality before income redistribution; B, Inequality after income redistribution; C, Income re-distribution coefficient; D, Income re-distribution coefficient by tax policies; E, Income re-distribution coefficient by social security programmes.

Source: Ministry of Welfare and Labour, *Income Redistribution Survey*, various years.

equality is achieved, and it takes unity when perfect inequality is achieved. Thus the higher the coefficient is, the higher is the inequality. There are a number of other inequality measures used in the academic world such as the squared coefficient of variation (SCV), the mean log derivation (MLD), the Atkinson measure, the Dalton measure, and the Theil measure. Studies that adopt these measures do so in the interest of obtaining more precise inequality estimates. I report the Gini coefficient in Table 1 because the Gini is the most widely used measure.

The difference between primary income and redistributed income is important. Primary income is the income before tax and social insurance payments adjustments; redistributed income is measured after tax payments are subtracted and income transfers in the form of social insurance and social security benefits to needy and retired households and individuals are added. Because redistributed income shows more exactly what a household has to live on, it is more appropriate than primary income as a measure of income inequality.

Table 1 shows simply the primary and redistributed income measurements for Japan. Other comparisons may use several definitions of income and redistributed income in accord with social insurance benefits. For example, the IRS considers income after tax and after both social insurance contributions and social security benefits have been paid.

The important evidence in Table 1 is the inequality of redistributed income. Note the significant upward trend that occurred in the 1980s and 1990s. The difference between the lowest inequality in this period, 0.314 in 1981, and the highest, 0.381 in 1999, is 0.067. This is an alarmingly large difference, and is indicative of the large increase in inequality.

Of course, some of the large variations in Table 1 can be explained by changes in the economy. For instance, the substantial increase in the Gini coefficient, of 0.02, between 1996 and 1999 corresponds to the deepening of the recent recession, when unemployed and low-wage earners joined the ranks of the poor. The small decline in inequality in the 1960s and 1970s was due to fairly equal income distribution in those two decades. Note that these trends are also reflected in the primary income figures. That is, a small decrease

in income inequality occurs in the 1960s and 1970s, and a significant increase in the 1980s and 1990s.

Overall, however, the already high income inequality observed in the table appears, according to anecdotal evidence, to have been rising further. In the remaining part of this article we will consider the causes of this inequality and the effects on daily life in Japan. We will also examine changes in Japanese society and economy.

2.2 International comparison

An international comparison of inequality requires data on other advanced and industrialized countries that work on the same democratic and market principles. Japan belongs to a group of advanced, prosperous, industrialized Euro-American countries. However, while such an international comparison can yield significant results, it should not be forgotten that Japan is not a Euro-American country.

A rough international comparison is presented in Table 2, based on the latest figures. The important difference in figures in Japan is observed between Table 1 and Table 2; the latter has an applied equivalent-income approach to adjust for the effect of the number of family members while the first table made no adjustment, although both tables come from the common data source.

Table 2 shows that Japan belongs to a group of OECD countries where the highest level of income inequalities are observed; Japan ranks sixth in the OECD. It is noted that the statistical source for Japan used in this is the IRS. Thus, reliability of the statistical source in Japan is high. It can be concluded that Japan's income inequality is currently one of the highest among advanced and industrialized countries. It is desirable to abandon a common belief that Japan is an equal country in income distribution.

2.3 Causes of income inequality

There is no doubt that Japanese income inequality is quite high, and one of the highest among the advanced countries. It would be useful to provide a brief summary of the reasons why income distribution in Japan is now unequal. The causes described below invite controversy because some specialists disagree. Since it is not my purpose to argue these

TABLE 2
Income Distribution in Japan and Other Advanced Countries Compared

Country	Gini	Country	Gini
Denmark	0.225	Canada	0.301
Sweden	0.243	Spain	0.303
Netherlands	0.251	Ireland	0.304
Austria	0.252	Australia	0.305
Finland	0.261	Japan	0.314
Norway	0.261	U.K.	0.326
Switzerland	0.267	New Zealand	0.337
Belgium	0.272	U.S.	0.337
France	0.273	Italy	0.347
Germany	0.277	Portugal	0.356

Note:

An adjustment was made for household size by using an equivalent scale and data on disposable income.

Source: OECD (2004), *Income Distribution and Poverty in OECD Countries in the Second Half of the 1990s*.

controversies, some brief causes only are written here. Tachibanaki (1996b, c, 2005) presented more careful and comprehensive studies regarding these issues. Interested readers can refer to these documents.

First, to some extent the determination of wages has changed from the seniority payment principle to the performance-based payment principle. Able and productive workers receive higher wages, while less able and less productive workers receive lower wages. The difference in these two groups' wage payments has widened because of the change in payment principles.

Second, the Japanese macroeconomy has been weak in the past 15 years, the rate of unemployment has been over 5%, and there has been a large number of unemployed people whose incomes are very low. At the same time, enterprises have had management difficulties and have had to make considerable labour cost savings. One simple method that enterprises use to cut labour costs is to increase the number of non-regular employees such as part-time employees or employees with limited-duration contracts. The wages of these employees are considerably lower than those of regular full-time employees, producing a large number of wage earners with lower payments.

Third, ambitious and productive small-business owners can earn huge incomes and dividends when their business activities are successful and a limited number in service-industry businesses are very successful. However, the majority of small-business founders or venture capitalists face business failure and bankruptcy. In other words, successful business founders can receive very high returns for their risky business activities but there are only a small number of successful small-business owners who earn extraordinarily higher incomes. Incidentally, Tachibanaki and Mori (2005) found that the other profession receiving extremely high incomes was that of a medical doctors with their own practice.

Fourth, Japan has an ageing population, with more aged people and fewer young people. Income differentials among the aged are normally high. In particular, the income level of older widows is distinctively low because of their very low pension benefits. If the share of the aged in the total population was higher, wider income differentials would be expected. Another feature of the aging trend is that the share of senior employees approaching retirement age is also increasing. These employees receive relatively higher wages because of the seniority-based wage principle, although its significance has waned to a certain extent. These two features—widening income differentials among the aged and relatively higher wages for senior employees—when combined are one of the factors responsible for higher income inequality.

Fifth, the Japanese government's tax policies have encouraged higher inequality in income distribution. For example, the degree of progressivity in both income taxes and inheritance taxes has weakened. Representatively, the marginal income tax rate for the highest income class has been lowered from 70% to 37% in the past 20 years. This raises the degree of post-tax income inequality. In addition, the value-added taxes were introduced some 20 years ago. It is obvious that this tax is regressive, and favours higher income earners.

Sixth, changes in family structure are likely to widen household incomes. The number of family members has decreased and the number of households with only one member has increased, contributing to the widening differential in household incomes. At the same time, the number of income earners within a household has increased as more married women work and earn an income. The difference in incomes between households with two earners and those with only one earner is large, and an increase in two earner households has raised income inequality.

Seventh, Japanese society is changing to a society where deregulation and relentless competition are emphasized—the idea of the free market mechanism without government intervention and regulation has become the norm. This encourages severe competition not only between enterprises but also between workers, and thus leads to widening income inequality.

Described above are the principal reasons why the degree of income inequality is currently very high in Japan. There are, of course, several other reasons. Interested readers can refer to Tachibanaki (2005).

2.4 How do Japanese people evaluate income distribution

It would be useful to know how Japanese people understand and evaluate income distribution in response to the way the media reports that Japan is experiencing higher inequality in income distribution.

There are several ways to think about such evaluations by ordinary people. One interpretation is that ordinary people understand various documents and media reports fairly well, and thus are quite knowledgeable of the empirical evidence. Another is that people watch the lives and economic conditions of the people around them. They observe an increasing number of unemployed people, non-regular workers such as part-time employees, contract workers etc., and homeless people in large cities. At the same time, they watch news reports of luxurious condominiums costing more than 100 million yen that sell immediately.

It appears that some people are not concerned with income inequality, while others are concerned; and some people express their opinions on income inequality based on their value judgments.

Let us examine how Japanese people evaluate income inequality in their society. Table 3 shows the results of responses to our own questionnaire (2004) sent to about 8000 people whose ages, professions and regional residences were fairly random. There were more than 6000 responses. This high rate was due to the internet questionnaire method. Since it represents a sample of the Japanese population, the results are fairly robust and reliable.

The highest share is given by “Inequality is slightly high, 39.47%” and the next highest is by “Inequality is very high, 25.04%.” The sum of these two is 64.51%, and thus implies that about two-thirds of Japanese people understand that the degree of income inequality is more or less high; they regard the current inequality in income distribution as exceeding an acceptable level. I interpret this understanding as arising from the two facts described above, namely (1) people know fairly well about documents and reports which describe the current situation, and (2) people recognize income inequality based on their daily observation of the society around them.

TABLE 3
Evaluation by Japanese People of the Current Status of Income Inequality (%)

Inequality is very high	25.04
Inequality is slightly high	39.47
Indifferent	19.93
Inequality is not so high	10.08
Inequality is not high at all	4.80
No opinion	0.68

Source: Tachibanaki (2004)

3. Economic efficiency and equity

3.1 Economic analysis

Japan entered a period of slow economic growth in the 1990s following the bubble economy of the late 1980s. Negative growth rates were even observed in some years. This kind of slow growth or negative growth has an important impact on the allocation of output or value-added by participants because severe conflicts occur between winners and losers, between strong men and weak men. Winners and strong men obtain a larger share of the small output caused by the slow growth economy than losers and weak men. This implies that the former receive higher incomes, while the latter receive lower incomes, and that income differentials between the two widen.

Slowed economic growth has widened the breach between equity and efficiency. Distribution of income is associated with equity, and the growth of the economy is associated with efficiency. With low or no economic growth the income gap becomes larger, and thus the drop in equity is inevitable.

Economic theory usually suggests that this relationship operates inversely. That is, efficiency and equity are traded-off in the real world. Okun (1975) undertook to examine the veracity of this trade-off. If we interpret a high growth economy as a symbol of efficiency, and low income inequality as a symbol of equity, economic theory normally infers a negating relationship between the two circumstances. If we desire more efficiency, we have to sacrifice some equity, and we have to sacrifice some efficiency to achieve more equity.

Why does economic theory presume such a trade-off between efficiency and equity? The one clear explanation that we consider is the following relationship between the macroeconomy and income distribution. We can regard equity as a higher degree of equality in after-tax income distribution, and understand efficiency as a higher growth rate of the macroeconomy. Higher equality in after-tax income distribution requires considerably more progressive rates of tax on income. This means a higher tax rate for rich people and a lower tax rate for poor people. A more progressive income tax could lower the incentive for rich people to remain in the labour market and/or discourage the intensity of their work effort, and at the same time decrease the savings rates of rich people. In general, a reduction in labour supply and/or work intensity of the rich affects productivity negatively at the macroeconomic level, and a fall in savings rates can further lower the funds available in the market for capital accumulation. In turn, the adverse effects on labour and capital will lower the growth rate of the macroeconomy, and thus be detrimental to economic growth (i.e. efficiency). This is the delicate balance confronting the trade-off between equity and efficiency.

The effects of both tax and social security policies on labour and capital are crucial to determine the degree of the trade-off between efficiency and equity. More concretely, the elasticity of labour supply and of savings is important to determine the trade-off. If it were higher, the growth rate of the economy (i.e. efficiency) would be impaired. Since a higher rate of elasticity normally signifies a more equal post-tax (or redistributed) income distribution, higher equity induces lower efficiency.

The numerical values of both labour supply elasticity and savings elasticity in Japan are very low in general, implying that the degree of trade-off between efficiency and equity is at a minimal level. (See, e.g., Higuchi (1984) and Ishikawa (1987) for the low labour supply elasticity and savings elasticity.) Consequently, it should be possible to raise income and social security taxes with a more progressive tax rate that retains a certain degree of equity in income distribution without compromising efficiency and the Japanese macroeconomy.

The general mood in Japan, however, does not endorse this view. The public favours reductions in both average tax burden and the progressive marginal tax rate, even though this policy has led to more inequality in income distribution. This belief, in particular, is strong among business leaders, ruling politicians, bureaucrats, neo-liberal academics and journalists. They prefer the free market mechanism, and thus are against government intervention. In fact, the government's tax policy and social security programmes were adopted to meet with the Japanese people's and in particular leaders' view, and these policies widened the distribution of income. I pointed out that the marginal tax rate for the highest income class was lowered from 70% to 37%. This is a typical example.

In sum, the slow growth of the Japanese economy (i.e. lower efficiency) could be explained by reasons other than tax and social security policies. Such policies are not responsible for lower efficiency. Thus, the government could adopt tax and social security policies that could retain a higher degree of equality in post-tax or redistributed income distribution. Simply, no significant trade-off between efficiency and equity is observed, at least in Japan.

My view of the Japanese economy is not the majority opinion among economists. Most economists stress the trade-off relationship between efficiency and equity.

There are two historical examples of successful trade-offs between efficiency and equity. These are the economic reforms in the UK in the 1980s by Margaret Thatcher and in the USA by Ronald Reagan. In both cases deregulation policies were adopted that encouraged competition, and tax reductions worked to revitalize the two economies. As a result, both countries gained economic strength throughout the 1980s and 1990s. However, we know well that this emphasis on economic efficiency was at the expense of equity to some extent. Income inequality rose as a consequence in both the UK and the USA. Efficiency came at the expense of equity.

A different attempt at a trade-off between efficiency and equity occurred in Scandinavia in the 1980s. Economic conditions were at an all time low, as indicated by high unemployment and worsening balances of payment. Criticism was directed at the welfare systems of these countries with their very high welfare provisions financed by very high tax and social security contributions. The ruling social democratic parties were ousted in favour of conservative parties that advocated welfare reform. Welfare provisions found to be detrimental to economic efficiency were reduced until the economies recovered in the 1990s. Then electorates restored their social democratic governments, with the exception of Denmark. The Danes have recently reinstated their conservative government. The Scandinavian experience shows that the electorate recognizes the importance of the trade-off between efficiency and equity, and adjust their governments accordingly. Efficiency is emphasized in years when the economy is weak, and equity in years when the economy is strong.

It should be added that, despite the need for these Scandinavian countries to make the small trade-off between efficiency and equity, their high living standards were not compromised. Prosperous Scandinavian economies in recent years indicate that a high degree of efficiency is possible without sacrificing equality of both opportunity and outcome (i.e. income distribution). The trade-off between efficiency and equity in these countries was not long term but a pragmatic solution to a short-term crisis. I understand that Japan can learn a lot from the Scandinavian experience that could improve efficiency without sacrificing equity.

3.2 Philosophy and ethics

The trade-off between efficiency and equity can be argued philosophically in line with several schools of thought. It is primarily moral principle that drives economic policy and

causes people to favour certain policies over the many alternatives. If the majority of people see equity as more important, economic policy will adopt equal distribution of income, and something similar will be observed for efficiency. However, political philosophies have different definitions of what is moral political behaviour. There are four major schools of thought that are important for understanding the different philosophical positions to which an economy can be redirected through policy initiatives. I choose to discuss four doctrines from among many because they relate to contemporary rather than classical ideas, and also relate to the issue of the welfare state. These are (1) libertarianism (2) communitarianism (3) liberalism, and (4) (analytical) Marxism.

Libertarianism

This is sometimes called ultra-liberalism or classical-liberalism. It emphasizes the importance of human liberty or freedom, and is against any outside interference in human activities. It is therefore a doctrine that opposes the idea of a welfare state for the following reasons: First, economic inequality is not the first priority. Second, government welfare policies are claimed to deter the incentive to work, and thus removing all government intervention is desirable. Third, social welfare is not endorsed, but the right to life is. Fourth, the role of the state should be minimal. Hayek (1960), Friedman (1962), and Nozick (1974) are among the scholars associated with this school. They all see economic freedom as the most important principle, with no government intervention. Such a system can significantly increase economic growth. It is possible to describe the political and economic policies of Mrs Thatcher and Mr Reagan as expressing this philosophy.

Communitarianism

The communitarianist school promotes the just distribution of social goods among people who are bound together by some commonality such as culture, religion, language, or race, and/or are living in a community. In other words, community members help each other. Sandel (1982) and Waltzer (1983) expound on the main ideas behind this school. Both social justice and welfare provision are promoted. This is mainly how communitarianism differs not only from libertarianism but also from liberalism à la Rawls, although like liberalism, communitarianism accepts the provision of welfare. On social welfare, communitarianism, however, differs from liberalism. Its method and policy of welfare are contained within the large or small community where the people are supposed to have common interests. There is no provision for universal welfare by a central government. Therefore it excludes the services provided by a bureaucratic authority, but encourages non-profit organizations and associations to provide decentralized and mutual welfare services. Communitarianism is also open to the possibility of different welfare provisions among different groups or communities, which is inconsistent with universalism.

Liberalism

Liberalism is an idea made popular by Rawls (1971), and it is a school of thought that has influenced my ideas. Liberalism, of course, is not a new idea; it has been interpreted variously throughout history in the works of Hegel, Stein, Bentham, and Pigou, for example. I do not discuss these writers because Rawls gives the most contemporary interpretation. Rawls is sometimes severely criticized, however, because in his 1993 and 2001 books he

altered the original propositions he made in his 1971 book. I will not go into the fine details of these propositions because this article is not on his philosophy.

Rawls presumed human moral activity to be organized around two principals: the first being the liberty principle by which humans express political thought and opinion, plot their lives, evade violence and psychological pressures. The second is the difference principle by which humans attempt to maximize the welfare of the least advantaged individual even when equity of opportunity is assured. The latter, difference principle derives from the so-called utilitarian principle of Jeremy Bentham and John Stuart Mill, and became known as the max-min principle.

Rawls's difference principle generated some criticism. Two were serious. The first, by Harsanyi (1975), called the max-min principle immoral, and suggested instead the maximization of the average utility principle. The second, by Hare (1989), imagined in his criticism the max-min principle to be a sort of insurance strategy that assures a social minimum for all citizens. Both criticisms may be explained by the mix of concepts that forms the modern version of the utilitarian doctrine, by which society is expected to assure a minimum social welfare level for all citizens and to limit the principle of the average utility to citizens below a social minimum level. Rawls in turn called the modified version of Harsanyi and Hare the principle of restricted utility. It depends on an individual's preference whether the original difference principle of Rawls or the principle of restricted utility of Harsanyi and Hare is the desired welfare state.

In his later work Rawls criticized the traditional welfare state because it produces an alienated underclass of people that relies on endless government help without an incentive to work or to participate in society. Rawls promoted an idea of a property-owning democracy instead of welfare-state capitalism. This is a bold idea because it mediates against the welfare state, which can produce a large number of people who cannot survive without help from the state. Participation and work are essential for all individuals who are able to do so both physically and mentally. This idea corresponds to that of work-fare ("welfare though work") and the idea of participation income in Atkinson (1995).

Rawls has presented some groundbreaking conceptions of equity, liberty, and democracy. In my view, his propositions also have value because of the very debate they have generated. His most important contribution, in my view, is the attention to persons who are the least advantaged, or who are below the minimum level in a society. There are differing opinions on the treatment of these least advantaged persons. Because Rawls is a philosopher and not an economist who can make policy recommendations on the treatment of the least advantaged individuals, it is up to us economists to carry on in the spirit of Rawls's ideas.

It would be a mistake to ignore Sen when we talk about liberalism. Sen (1992, 1995), an economist, was not happy with the traditional measurements of welfare according to income in economics and/or with utility theory. He developed his own view on well-being. Happiness as a part of human nature cannot be measured only by economic variables such as income and/or utility, and should be measured by the degree of human "capability" that utilizes one's native ability fully. If one can utilize one's capability highly, happiness is higher. Sen, who is a native of India, was concerned with poverty in Asia; he thought that it would be difficult to evaluate human welfare in developing countries only by income and/or utility. The degree of illiteracy, availability of medical care, and so forth, is more important in this setting, so capability is measured by these indices.

Sen's idea is valuable, and the differences he points out between developing countries and developed countries are also useful. Sen's work can also be applied to developed and

advanced countries including Japan and there are some attempts in these countries to measure welfare using his indices. Nevertheless, income and/or utility are better measures in developed countries, so the index data are merely redundant. We will end the discussion of Sen's idea here, but it is not without some value.

(Analytical) Marxism

Marxist thought is fairly well known and requires no serious discussion here. For many countries it served as the main doctrine by which to manage political and economic systems. Its influence has declined considerably in these countries as their economies have transformed from the socialist model to the market one. It is nevertheless important to consider the Marxian emphases on workers' human rights and care of the weakest people. In particular, there has arisen an analytical Marxian school representatively given by Cohen (1995) and Roemer (1996, 1998), who consider the importance of distributive justice and equal opportunity. Their contributions to the literature are in their scientific and mathematical evaluations of various theories without strong prior bias or prejudice. Of course, there exist some ideas and thoughts in their propositions that are influenced by the traditional Marxian doctrines such as class conflicts between capitalists and workers, or landowners and tenants, and the exploitation theory. It is hard even for a non-Marxian like myself not to feel some sympathy with their propositions, in particular with distributive justice and equality of opportunity.

In sum, I believe that the idea of liberalism, in particular Rawls's propositions regarding the philosophical and ethical underpinning of the welfare state and the role of income redistribution policies, is crucial when considering Japan's much needed changes to after-tax income inequalities.

The reasons why I believe the Rawlsian philosophy are as follows. First, Japan can learn a lot from the Scandinavian approach that was able to retain equity without sacrificing efficiency. Second, we cannot ignore the terrible economic conditions of very poor people. Third, a very high income inequality is likely to produce a higher degree of social conflict.

4. Equality of opportunity and equality of outcome

Equality of opportunity is a principle that stands in sharp contrast to equality of outcome (or consequence). In a democratic country equality of opportunity is considered an initial condition of life before all individuals begin their economic and social activities. The condition of equality (or inequality) of outcome comes after such economic and social activities have ended. This is observed, as we saw previously, by the condition of income distribution.

Equality of opportunity is defined by the following two concepts. The first is a level playing field, to which a society must commit. This is a basic human principle of fairness in competition—candidates for employment positions are locked in competition. If institutional barriers are present, equality of opportunity is lost as a principle. The second is a non-discriminatory principle that states that any individual with the relevant attributes and qualifications to perform a job well should be able to apply for an opening in that job. Therefore only the relevant attributes and qualifications should be used to select individuals for these jobs, and the other information such as age, sex, cultural background, religion, and race (in some countries) should not be used. Age is a difficult issue in Japan currently—there is debate about mentioning age on job applications.

The general consensus in a democratic society, at least in principle, is that equality of opportunity should prevail. In the real world, however, there are various kinds of inequalities of opportunity. Immediate examples in Japan are discrimination against women and educationally disadvantaged individuals in the screening of candidates and promotion possibilities in later careers. Parents' social and economic conditions are influential in determining their children's success in educational and occupational achievement. This section examines these issues associated with equality of opportunity, by investigating the relationships among parents' socioeconomic status, children's education, occupation, position in an organization, and earnings.

Before examining the issues of equality of opportunity and equality of outcome, Table 4 shows how Japanese people evaluate equality in their society. The data source is the same as in Table 3. It indicates that "Equality is more or less high" is 20.3%, while "Equality is more or less low" is 45.19%. The number of people who think that the degree of inequality in general in Japan is high, more than double that of people who do not. It is important to recognize that Japanese society is now unequal not only in opportunity but also in outcome, and this view is supported by general opinion.

Tachibanaki (1988b, c) analyzed then for Japan, by adopting the path analysis for these variables I had earlier applied a similar model for France in Tachibanaki (1980), and subsequently for the UK in Tachibanaki (1998c). The Japanese model is the most complicated because a new variable, namely position in an organization, is considered, and also because a discrete dependent variable, for example occupation and position in an organization, is introduced.

In Figure 1 the essential recursive model is shown. The principal chain of effect goes in the following direction: parents' socioeconomic status affects children's education, which in turn affects their occupation, rank, and thus income. The term "rank" is used to indicate the hierarchical position or managerial role in an organization and, of course, applies only to employees. In the case of the self-employed, this variable cannot be considered.

Among the trajectories shown in Figure 1, economists are mostly interested in directions a and d while sociologists are mostly interested in directions a, b, and c. Here we consider first directions e, f, g, and h, and then directions a, b, c, and d. The novel feature of Figure 1 is the introduction of rank in the model. (In Tachibanaki, 1988a, b; I expand the number of hierarchical positions to five, each relating to the difference in responsibility and the number of subordinates.)

There are several arguments that can be used to explain the cause and effect relationships in the figure:

TABLE 4
Evaluation of Japanese People on the Current Status on Equality in General (%)

Equality is too high	4.92
Equality is slightly high	15.38
Indifferent	32.57
Equality is slightly low	23.48
Equality is too low	21.71
No opinion	1.94

Source: Tachibanaki (2004).

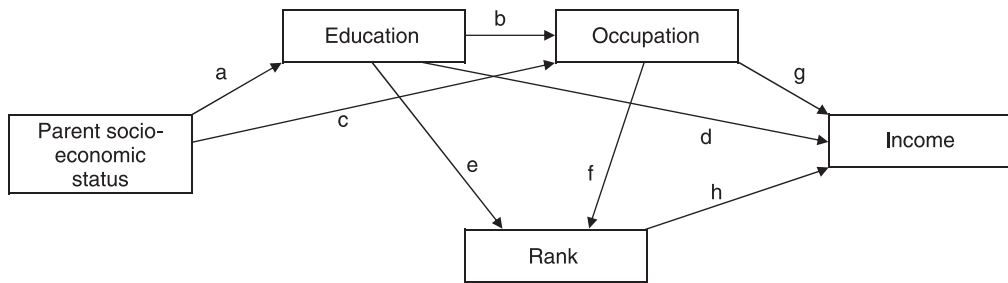


FIGURE 1. A recursive model applied by Tachibanaki

Source: Tachibanaki (1988a,b, 1998b).

1. Meritocracy claim. Educational attainment is thought to determine an individual's occupational attainment; the value can be close to zero for c and a large positive value for b .
2. Mediatory claim. Education facilitates the transmission of parents' socioeconomic status, and thus occupation, to children. The intermediation of education is represented by the positive values of both a and b . The difference between items 1 and 2 is that meritocracy involves nearly zero value of c yielding large positive value of b whereas intermediation involves only modest values of both a and b .
3. No social mobility claim. Parents' socioeconomic status, in particular their occupational attainment, determines children's occupational attainment. No social mobility is assumed by direction c , and this implies that a and/or b are negligible in value.
4. Performance claim. The effect of parents' socioeconomic status on children's educational attainment is weak; at the same time the effect of parents' occupation on children's occupation is weak. In other words, the children are on their own, so their performance is crucial for occupational attainment. The values of both a and c are again negligible.
5. Screening claim. Education works to differentiate individuals' capabilities and thus determines who should be promoted to a higher rank or position. In this case the effect of e is positive and large.
6. Human capital claim. Education raises an individual's productivity and thus earnings power. The effect of education on income is positive and strong, represented by the positive value of d . There is a lot written about human capital theory in the economics literature.
7. Responsibility and leadership claim. High rank or position in an organization demands high responsibility and leadership. These individuals must be able to manage subordinates with an eye toward raising an organization's productivity. It is natural to presume that high rewards are paid to individuals who occupy the higher ranks. The value of h is positive and large.

In Japan some of these claims have been explored in the sociological literature. For example, Hara and Seiyama (1999) observed that over time, with the development of industrialization, education has had a diminished effect on the determination of occupation. In the terminologies of the claims above, there occurred a shift from the meritocracy effect to the intermediation effect of education early on, and ultimately a shift to zero social mobility. Thus in Japan educational attainment has a minimal affect on occupational attainment. Grusky (1983) gave a similar finding for the USA.

What are the causes behind the declining effect of education in advancing an individual in the workplace? First, because of high living standards in industrialized countries, a

large number of people are able to obtain higher schooling. In both Japan and the USA, about 50% of the work force now has four years, or at least junior college, education. In European countries, for example the UK, France, and Germany, these rates are 15–30%. From the high percentage of workers with higher education in Japan and the USA it can be inferred that higher education at college level is no longer a privilege of society's "elites." We can rightly expect that college degrees and graduate degrees do not make a big difference in job promotion.

Second, countries differ in the emphasis they place on education. The best-known studies of this issue are Willis (1977) for the UK and by Bourdieu and Passeron (1970) for France. Willis found several successive generations of people remaining in the working class and showing no strong desire for the education that might improve their lot because of a general contempt in the working class for educated people. This evokes the sharp social distinction between the UK's working class and the upper classes among whom education is valued. Bourdieu found a similar situation in France where, because of the small number of elite schools, it is not possible for working class students to attend such schools. Bourdieu and Passeron (1970) called this a replication or a reproduction system. Education is the instrument of ensuring intergenerational replication.

The first and second studies yield different interpretations of the place education has in occupational rank as transmitted over generations. The first is on the perpetuation of working or lower class mentality, and the second is on the perpetuation of upper class conduct and aspirations. In my opinion, the norm observed by Bourdieu and Passeron in France reflects that of Japan in the prewar years when society was very closed. Higher education was available only to upper class and rich households; compulsory schooling for the lower classes was less than six years.

It is also the second study that helps us understand what is happening today, especially with prestigious university educations. The situation observed by Willis is, of course, not entirely applicable to Japan because a large number of students attend either junior colleges or four-year colleges regardless of their socioeconomic background. Nevertheless, there is the issue of promotion being based on educational accomplishments.

Can we possibly infer that native ability is supplementary to education? In a situation where there is common educational attainment, for example at the college level, native ability is likely to be a useful factor in differentiating the productivity of college graduates. Another useful factor may be the quality of the college attended. We know that schools differ considerably in quality at both high school and college levels. Graduates of good schools often are more capable of doing high-level work. A third factor is education beyond a four-year college programme. MA or PhD degrees may be helpful in making further differentiation when there is a large pool of college graduates. Graduate or professional schooling enables an individual to acquire the knowledge and specialization that is not possible in four-year college programmes. Japan is moving toward graduate programmes, having observed the high skills emanating from US professional schools in the areas of business, medicine and law.

The main issue with privileging academic credentials from quality schools is that best opportunities go to the already advantaged graduates of prestigious universities. The entrance examinations to these universities are very competitive for the very reason that their graduates are known to be high achievers, finding positions as executives in large firms, high bureaucratic officials in government, and so forth. The same is true in France and South Korea. It is, of course, academic credentialism that enables graduates of prestigious universities to be so successful.

Among the cause and effect claims we listed earlier in this section, claims 4, 5, 6, and 7 belong to the domain of sociology. Nevertheless, the economics literature has shown great interest in claim 6 on human capital. Human capital theory relates an individual's productivity to formal education and job training. As an individual's productivity is raised, as shown by Becker (1964), it is generally accepted that wages should be proportional to the level of formal schooling and job training.

From Figure 1, however, claim 5, on screening practices, is evidently more important than human capital theory if we consider the education required for positions of rank within organizations. In the theory of the economics of information as explored by Arrow (1973) and Spence (1973) they both found education to be the way some individuals are selected from among many candidates. Often many applicants are screened for these positions, and the employer has only information on the educational backgrounds of the applicants. Job applicants freshly out of school do not usually have anything but their education to show the employer. Of course, job interviews may reveal an individual's capability, but most often not. An employer must depend on level of education and the quality of the school when selecting which job candidate to hire.

Screening can also be a way to select workers from within a firm for promotion up the hierarchy. Senior jobs are generally few in number and there is keen competition among employees for selection. Employers in Japan use information on employees' educational backgrounds as a criterion in the preliminary selections, in which, Tachibanaki (1988a, b) found, most college and junior college graduates made the first cut (for promotion from ordinary employee to section head), but most high school graduates did not. A college diploma is an important criterion in the determination of promotions. This Japanese practice of screening, reflecting the effect of education on rank, is given by direction e in Figure 1.

A more complicated and difficult issue is that of the indirect effect of job performance (education combined with job training) in promotions in the combined directions b and f in Figure 1. Tachibanaki (1988a, b) examined both the direct effect of education in higher jobs, direction e, and the indirect effect of job performance, directions b and f. Interested readers can refer to these studies. Only the conclusion is described here. Those hired to high positions directly because of their education (direction e) had more opportunity to move up the hierarchy than those moving in directions b and f combined. Consequently education prevails as the most determining factor in the screening of applicants for high-level jobs.

Finally, we come to claim 7 on the responsibility inherent in positions of leadership. Since section heads, department heads and directors have responsibility for the work quality of their subordinates, they must be good mentors and possess strong management skills that encourage productivity. Executives at the top of the hierarchy have the highest responsibility, and they must demonstrate strong financial skills in order to run the firm efficiently. Tachibanaki (1988a, b, 1998b) observed that the importance of these skills meant that the earnings differentials between ordinary workers and promoted workers are very large, reflecting the influence of other factors like education and/or accumulated levels of job training, shown as direction h in Figure 1.

It is widely believed that education affects wage differentials to a relatively small degree in Japan. The observations here have to do with higher-level positions where income differentials are very large. In Japan the high responsibility and leadership of those promoted to executive positions are appreciated and generously rewarded.

Table 5 shows a summary of these seven claims, and indicates various implications. Many empirical studies presented the signs and the magnitudes of various parameter values, and confirmed the implications.

TABLE 5
A Summary of Seven Claims

Claims	Implications
Meritocracy	$b > 0, c = 0$
Mediatory	$a > 0, b > 0$
No social mobility	$a = 0, b = 0, c > 0$
Performance	$a = 0, c = 0$
Screening	$e > 0$
Human capital	$d > 0$
Responsibility and leadership	$b > 0$

Summarizing this section, in Japan it is concluded that the effect of education has declined in the determination of both occupational attainment and income. However, when job hierarchy is taken into consideration, the screening role of education is important and affects earnings differentials by both occupation and hierarchy in particular considerably.

The impact of parents' social status on children's success in education and occupation was relatively weak in the past. This has changed recently, as many sociological studies such as Sato (2000), Kariya (2001) show. Equality of opportunity therefore has eroded significantly and, as described previously, equality of outcome in terms of income has also deteriorated quite significantly.

5. Poverty

5.1 Poverty rate

Poverty was not a major issue for a long time in Japan for several reasons. First, the rate of poverty was not as high. During the period of rapid economic growth and a stable economy the rate of unemployment was low; at the same time income inequality was low as shown earlier. This implies that the number of poor people was small.

Second, the first result does not necessarily imply that there were no poor people. In fact, the rate of poverty was about 8.1% in 1994, as shown by Nishizaki *et al.* (1998). The data source of this poverty rate is the *National Survey of Family Income and Expenditure*, which is different from the *Income Redistribution Survey* used in this paper. There were a significant number of poor people in the past. However, this was not a major social issue because the poor were helped and supported economically by family members.

There was a traditional norm such that "If a family member is in economic difficulty (i.e. poverty), family members feel a strong need to provide economic support." This family support is encouraged by the law; the government's income support programme for poor people, called the livelihood protection system, postulates that it is the first priority of family members to help. Family help takes precedence over government support.

New findings have appeared recently, as Table 6 shows, regarding the status of poverty. A comparison of OECD countries was released recently, and its results are reflected in Table 6. International comparisons are difficult because each country has certain specificities regarding poverty. The OECD defined poverty as households receiving incomes less than 50% of the median income of all households. This 50% definition allows a degree of international comparability because the universal definition of poverty is applied to all OECD countries. Incidentally, household income is adjusted by the equivalent scale in order to take into account the differing size of families.

TABLE 6
Poverty rates in OECD countries (%)

Mexico	20.3	Germany	10.0
USA	17.0	Austria	9.3
Turkey	15.9	Poland	8.2
Ireland	15.4	Hungary	8.1
Japan	15.3	Belgium	7.8
Portugal	13.7	France	7.0
Greece	13.5	Switzerland	6.7
Italy	12.0	Finland	6.4
Australia	11.9	Norway	6.3
Spain	11.5	The Netherlands	6.0
UK	11.4	Sweden	5.3
New Zealand	10.4	Czech Republic	4.4
Canada	10.3	Denmark	4.3
		TOTAL	10.7

Source: OECD (2004), *Income Distribution and Poverty in OECD Countries in the Second Half of the 1990s*.

An international comparison of poverty is a difficult subject for the following reasons. First, each country has specific social and economic conditions which make a comparison difficult. Second, the state of income distribution differs from country to country; thus, a simple rate of poverty does not identify whether a country has a larger number of extremely poor people. The OECD definition of poverty, however, is not bad because adjustments for the above mentioned problems are made. In other words, the OECD comparable definition is a good attempt to ensure international comparability.

Table 6 shows a shocking result for Japan with a poverty rate of 15.3%, ranking fifth in the OECD, after Mexico, the USA, Turkey, and Ireland. Since both Mexico and Turkey are semi-industrialized countries, Japan ranks third among advanced industrialized countries after the USA at 17.0% and Ireland at 15.4%. Japan's poverty rate is one of the highest among advanced countries.

An increase in the number of poor people is supported by other statistical sources that show the number of households and individuals helped by the government's income (economic) support programme. As explained previously, the government provides the support programme of last resort. Family and other relatives are the source of support before government help is sought. If there was an increase in government support programmes, it would indicate increasing poverty.

Figure 2 shows that the number of both households and individuals receiving government economic support has increased considerably. The number of the former is currently about one million, having increased by about 0.4 million during the past 10 years. Figure 2 indicates poverty to be at quite serious levels.

We do have to take account of the different trends indicated by Table 6 and Figure 2. The first regards poverty of households whose incomes are lower than a certain amount, while the latter signifies households that needed some economic help from the public sector. In other words, not all households regarded as poor in Table 6 receive government economic support as Figure 2 indicates. Thus, the number of poor households is higher in Table 6 than that in Figure 2. I do not propose, moreover, that all households regarded as poor should receive economic support from the government; such a policy would mean the government would need to pay an extraordinarily large amount out of public funds.

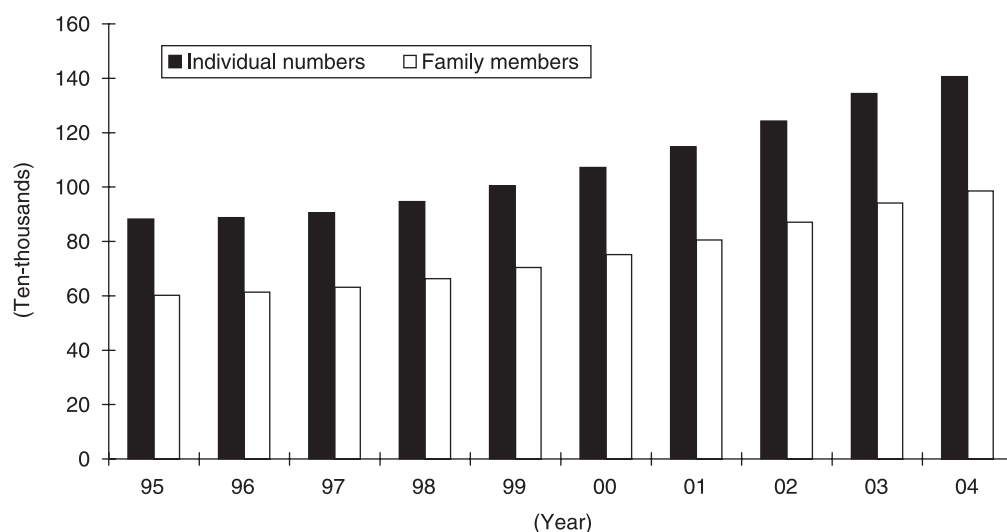


FIGURE 2. The number of income support recipients

Note: Figure are annual average.

Source: Ministry of Welfare and Labour: Annual Report

TABLE 7
Poverty Rates by Age Class in Japan (%)

Age	Poverty Rate	Share
0–17	14.3	17.4
18–25	16.6	8.9
26–40	12.4	14.9
41–50	11.7	10.3
51–65	14.4	19.4
66–75	19.5	16.4
76 over	23.8	12.7

Source: OECD (2004).

Who are the poor in Japan? Table 7 presents the rate of poverty by age. This table suggests a fundamental feature of poverty. There are two main groups of poor people—older people and younger people. Around 20% of those aged 66–75, and 14–17% for the youth. The former consists of the aged who cannot work or who are disabled; some aged people, the great majority widows, receive very small pensions for various reasons. The principal reason for the higher poverty rate for young people is because of the very high rate of youth unemployment, and also low wages caused by shorter working hours. A very low minimum wage for youth is another reason, as will be shown later.

5.2 Income support programme to poor people

The ultimate policy device to reduce the numbers of poor people is the government's economic support programme mentioned previously. It is important to evaluate the efficiency of this programme. For example, is it effectively reducing the number of poor people?

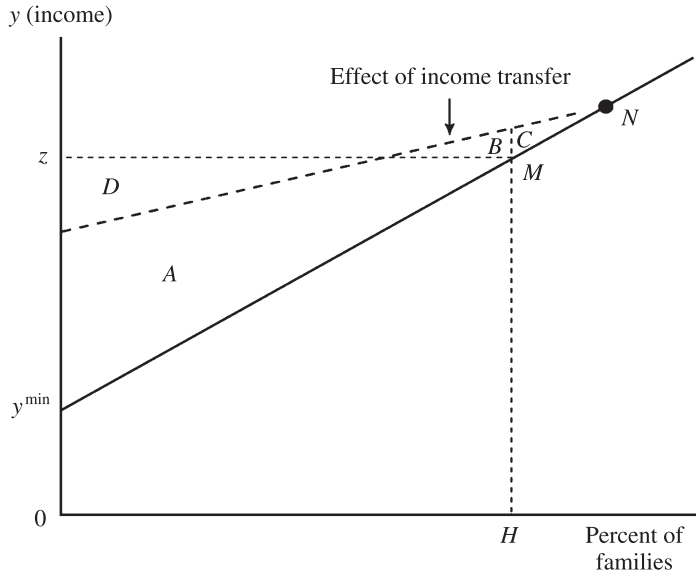


FIGURE 3. Two criteria to evaluate the efficiency of income support programmes
 Source: Atkinson (1995) p. 227.

Is it unnecessarily supporting people who are not poor? Is it paying to the poor amounts exceeding requirement? These three aspects can indicate the degree of the programme's efficiency; and interesting to estimate this empirically.

There are two types of efficiency to evaluate the impact of the programme. Figure 3 presents these as shown by Atkinson (1995). Some explanations are provided in order to show the implications of this figure.

We consider the distribution of income from the lowest income earner to the highest income earner. The horizontal line shows the index of households that is the rank of their income in increasing order. The index is in $[0,1]$ and is the inverse of the cumulative distribution of population that was arranged from the lowest to the highest. The vertical line represents the income figure. OZ is the income figure given by the poverty line. Thus, OH is equal to the rate of poor people in the total population and is called the headcount ratio. y^{\min} shows those receive the lowest income.

The solid line, $y^{\min} N$, represents the cumulative distribution function of income. Since it is assumed that the density function of income distribution follows the uniform distribution, it produces a straight line such as this. The government adopts the income support programme in order to reduce the number of poor people. By adopting such an economic support programme, the cumulative function of income distribution is shifted from the solid line to the dotted line. Figure 3 shows that the income figures of all people in the range between y^{\min} and N (a breakeven point) increase by such an economic support programme. Thus, their wellbeing increases. It is noted that the total amount of poverty is represented by the area $ZM y^{\min}$.

The income support programme reduces the total amount of poverty by area A . Area B is the amount of excessive payments higher than the requirement (i.e. OZ) paid to poor people, and the area C is the amount of unnecessary payments to people who are not poor. The area D represents the total amount of poverty remaining after the adoption of

TABLE 8
The Estimated Efficiencies for Income Support Programme (%)

Poverty Line	Horizontal efficiency		Vertical efficiency	
	1996	2002	1996	2002
50% of the median income	3.5	7.9	88.4	95.8
40% of the median income	5.4	12.8	80.5	92.6

the income support programme. In other words, the programme was unsuccessful in reducing the number of poor people entirely.

There are two types of efficiency for the income support programme. The first is called horizontal efficiency represented by the ratio of A over (A+D). The second is called vertical efficiency, or poverty reduction efficiency, which is represented by the ratio of A over (A+B+C). The former implies the degree of the success in reducing the numbers of poor people, while the latter implies one minus the degree of ineffectiveness, or of redundancy in reducing the numbers of poor people. In other words, the higher the latter ratio, the more effective the programme is in reducing the degree of ineffectiveness of the programme.

It is very likely that there is a trade-off between horizontal and vertical efficiency because raising the former goes hand in hand with reducing the latter. We want to examine whether this trade-off is observed in Japan.

Table 8 shows the estimated result of the two types of efficiency. The statistical source is the *Income Redistribution Survey* by the Ministry of Welfare and Labour, both 1996 and 2002. Needless to say, the target policy is the income (economic) support programme for poor people, called the livelihood protection system in Japan. The estimation was made by Tachibanaki and Urakawa, 2005.

Two different criteria were adopted to define poverty. The first is that of 50% of the median income, a common international measure adopted by the OECD. The second is that of 40% of the median income. This latter definition suggests the rate of poor people (i.e. the headcount ratio) is higher because the poverty line is lower than the 50% definition.

The table shows the following empirical results regarding the degree of efficiency of the income support programme in Japan. First, the horizontal efficiency is quite low, between the lowest 3.5% and the highest 12.8%, and is slightly lower than 10% on average. The following conclusion can be derived. The income support programme in Japan is quite ineffective in reducing the number of poor people. An extremely large number of people remained poor even after the income support programme was enacted. In other words, the government policy is unsuccessful in reducing the number of poor people. We can point out several reasons for this ineffectiveness—the expectation of family support rather than public support, the severe means test to qualify for public support, and the reluctance to apply for assistance and the stigma involved for those taking advantage of the programme.

Second, contrary to the first conclusion, the vertical efficiency is quite high, at around 90%. It is noted that we support the trade-off relationship between horizontal and vertical efficiency when two efficiencies are compared regarding the effect of the income support programme.

The high vertical efficiency implies that the government is successful in minimizing the redundant payment to people who are not poor, or the excessive payment higher than the requirement to people who are poor. In other words, the government management

policy regarding the effectiveness of the income support programme is quite efficient in minimizing redundant payments. This is explained largely by the very severe means test for possible candidates.

There are several examples of these severe means tests. Possible candidates have to write down and report their economic circumstances to the public authority; and the documents are excessively complicated. The second example is that possible candidates are required to have zero savings amounts to qualify to receive income support. The third example is that no children of possible candidates can be attending senior high school.

Third, we pay attention to the difference in the definition of poverty, namely 50% or 40% of the median income. It is found that the degree of horizontal efficiency is higher in the 40% definition than the 50% definition, while the degree of vertical efficiency is lower in the former than in the latter. This result is normal if we understand the meanings of both horizontal and vertical efficiencies correctly. A more useful finding is that the difference between the 50% definition and the 40% definition is not too large. In other words, the difference in the poverty definition does not matter so much, but the intrinsic nature of the income support programme in Japan is responsible for the large difference in the horizontal efficiency and vertical efficiency.

I do not deny the condition of the means test; the government fund is contributed to from general tax revenues and is limited; we also have to eliminate the free-rider problem of public policies. The problem is the severe qualification conditions for the income support programme. The zero saving condition may be too severe because people like to keep some funds against future uncertainty. The Japanese senior high school attendance rate is currently over 90% among 15 year olds. Under this circumstance nearly all parents would hope that their children go to senior high school. These conditions exemplify a too-severe means test.

Let us conclude the usefulness and efficiency of the income (economic) support programme in reducing the numbers of poor people. It is not particularly effective in reducing the numbers of poor people in Japan. In other words, there are a large number of poor people who should be supported economically by the government. It is quite effective, however, in minimizing redundant payments to non-poor people and even to poor people.

5.3 Public pension programme

The method of estimating the degree of the two efficiencies is very useful as shown by the example of the income (economic) support programme to poor people. Another public policy, the public pension programme to reduce the degree of poverty, is evaluated based on the same method. We apply the same estimation technique and the same data set, but to a different sample. Since we are interested in the effect of the public pension programme, we restrict the sample to people whose age is 65 years and over.

Table 9 shows the estimated result of two types of efficiency, horizontal and vertical. The most impressive observation given by this table is that the degree of the horizontal efficiency is on average about 80%. This implies that the public pension benefit is very effective in reducing the number of poor old people. If there had been no public pension programme, there would have been a much larger number of poor old people. The public pension programme is crucially important in eliminating the poverty of this group.

Two important sources commonly supported the income of retired people in the past. The first is economic support from their adult children. This kind of intergenerational economic transfers from children to aged parents was quite common. The second is

TABLE 9
The Estimated Efficiencies for Public Pension Programme to Reduce Poverty (%)

Poverty Line	Horizontal efficiency		Vertical efficiency	
	1996	2002	1996	2002
50% of the median income	75.9	76.7	41.5	47.5
40% of the median income	81.7	82.3	32.5	37.4

self-support of retired people in the form of personal savings, retirement payments etc. These two social and economic customs, supporting income after retirement from the labour market, have eroded considerably for various reasons. The public pension programme was introduced in order to compensate for such erosion. It has developed gradually since 1973 and is called the beginning of the welfare system in Japan. The public pension programme played a crucial role in minimizing the number of poor old people.

We must emphasize the previous result that the group most significantly affected by poverty remains older people. Does this contradict the result given by the effectiveness of the public pension programme? The answer is No. We have to stress the about 20% figure of horizontal inefficiency of the public pension programme. The remaining 20% suggests that there is a non-negligible portion of older people whose public pension benefits are considerably low or who receive no public pension benefits, for various reasons.

The degree of the vertical efficiency in Table 9 is about 30–40%, somewhat lower than 50%. It is, however, much lower than the estimated vertical inefficiency of the income support programme to poor people. Therefore, it is concluded that some excessive pension benefits or some redundant pension benefits are paid to older pensioners. This is not a bad result because the purpose of the public pension system is not only to reduce the degree of poverty among older people, but also to support a decent level of economic life for them. It is not surprising that the public pension programme pays benefits that are higher than the poverty line. This produces the 30–40% of vertical efficiency of the public pension benefit.

5.4 Minimum wages

The role of the minimum wage law is to reduce the numbers of workers who receive a very low level of wages, and thus who are likely to be poor. All industrialized countries have a minimum wage policy intended to keep a certain minimum level of economic life for all employees. Japan is no exception. The next concern is to evaluate the effectiveness of this programme.

The minimum wage system in Japan is governed by both the central government's minimum wage committee and local (i.e. prefectural) governmental committees. These committees consist of three parties such as employers, trade unions (i.e. employees) and neutral members. Each prefectural committee determines the amount of the minimum wage for each industry after making reference to the amount determined by the central government committee. This process implies that the minimum wage level is determined by the two criteria of industry and region. Many advanced countries have more criteria than Japan such as age, job tenure, occupation etc. One surprising thing in Japan is that age is not a criterion for the determination of minimum wages unlike nearly all other countries.

TABLE 10
International Comparison of Minimum Wage System (1997 pound level)

	(1) (%)	(2) (%)	(3)
Belguim	4.56	50	4
Canada	3.80	40	5
France	3.97	57	12
Japan	2.41	31	10
the Netherlands	4.27	49	4
New Zealand	3.18	46	1
Portugal	1.65	—	5
Spain	2.10	32	2
USA	3.67	38	5

Notes:

Column (1) is the minimum wage amount, column (2) is the ratio of the minimum wage over the median wage of full-timers, and column (3) is the rate of wage earners who receive wages lower than the minimum wage.
Source: Metcalf (1999)

Let us evaluate the role of the minimum wage system. Is it effective in reducing poverty, or keeping a decent level of economic life for employees? Two approaches are adopted to evaluate this. The first is to make an international comparison in order to assess the relative position of Japan in comparison with other industrialized countries. The second is to compare the income support programme to poor people and the minimum wage system in Japan. Since the former postulates the poverty line, it is worthwhile comparing it with the minimum wage amount.

Table 10 presents three variables associated with the minimum wage system for several advanced countries. These three variables are (1) the minimum wage amount evaluated in terms of purchasing parity value, (2) the ratio (i.e. percentage figure) of the minimum wage amount over the median of full-time wage earnings and (3) the rate of employees who receive wages lower than the minimum wage amount. The first two variables indicate the degree of generosity of the system, and the third variable describes the degree of strictness and law enforcement.

The first variable shows that the rank in Japan according to the minimum wage amount is third from the bottom, implying that the Japanese minimum wage amount is low. The second variable shows the lowest figure, i.e. 31%, among the sample countries. The result based on these two variables suggests that the minimum wage amount in Japan is very low, internationally speaking. The third variable also indicates that 10% of employees receive wages lower than the minimum wage amount. This rate is the second highest, after 12% in France. The Japanese minimum wage law is neither generous if we pay attention to the minimum wage amount nor strict in managing the system. This can be proposed when Japan is compared with other advanced countries.

Although it is easy to understand that the Japanese minimum wage payment is not generous but quite low internationally speaking, it is necessary to assess whether this low amount is insufficient to guarantee the minimum consumption level. The next task is to compare the minimum wage amount with the official poverty line, which is given by the minimum subsistence level. The government determines the minimum expenditure level for each region and various family members. This level can be regarded as the official poverty line because the government supports this cash benefit, if a recipient has no

TABLE 11
A Comparison between the Minimum Wage and the Official Poverty Line (2002 yen per month)

	Minimum wage	Poverty line	Difference
Tokyo (23 districts)	123,520	163,970	-40,450
Kobe	117,760	163,970	-46,210
Sendai	107,644	156,590	-48,946
Naha	105,376	149,200	-43,824

Notes:

- (1) Poverty line here is given by the cash benefit of the income support programme to poor people.
- (2) Poverty line is based on a household, consisting of a husband (33 years old), a wife (29 years old), and a child (4 years old).
- (3) Minimum wage is calculated for an employee who works average monthly working hours.
- (4) There is an opinion such that these two are not comparable because the minimum wage system is for an individual, while the income support programme is for a household. This table shows the case where a husband works and a wife does not work.

income. The cash benefit is calculated based on the minimum requirement for survival, i.e. food and drinks, clothes, gas and electricity, etc.

It should be noted, however, that the definition of poverty adopted previously such as 50% or 40% of the median income is different from the official poverty line adopted here. The former was made to guarantee an international comparison, while the latter was estimated to meet the economic and consumption conditions in Japan.

Table 11 shows the comparison between the minimum wage amount and the official poverty line provided by the income support programme to poor people. I adopt four cities, Tokyo, Kobe, Sendai and Naha for the comparison because both the minimum wage amount and the official poverty line are different by region. The official monthly poverty line is calculated based on a household with a husband (33 years old), a wife (29 years old), and a four-year-old child. The monthly minimum wage is estimated under the assumption that an employee works for the average monthly working hours.

The striking observation provided by this table is that the minimum wage amount is lower than the cash benefit of the income support programme to poor people for all four cities. This result is surprising for the following reasons. First, the cash benefit is equivalent to the official poverty line because the government pays the minimum amount to poor people for survival. Of course, the official poverty line itself is controversial. Figures in this table, nevertheless, can be regarded as an official poverty line because they are the actual amounts paid by the government. The minimum wages lower than the official poverty line signify that people who receive these minimum wages cannot survive—they earn incomes which are lower than the minimum subsistence level. The 10% of wage earners who receive lower than the minimum wage amount as shown by the previous table are more disastrous than wage earners, who receive just the minimum wages.

Second, minimum wage earners are working, while income support recipients are not working. There are a large number of income support recipients who are, in fact, unable to work for various reasons such as old age, disabilities, poor health etc. It is important to help these people. Working, however, accompanies disutility, and requires mental and physical anguish. Thus, several people may feel that not working but with the income support programme is better than working with the minimum wage payment. Simply, there must be a general consensus such that working should be rewarded more highly

than not working; it should be desirable that the minimum wage amount is higher than the official poverty line. The Japanese system does not support this.

Why does Japan have such an unusual system and outcome? One reason is that the cash amount paid by the income support programme to poor people is somewhat higher than the requirement. There is an opinion expressed as follows: it is difficult to be qualified to receive income support from the government for various reasons mentioned before. When qualified, however, the cash payments are generous. My personal opinion is that the degree of difficulty for qualification should be lowered slightly, while the cash payment level may be decreased somewhat.

A much more important reason, in my judgment, is that the minimum wage amount is too low. It is desirable to raise the amount to eliminate the unusual inverse relationship between the two systems. This proposal, however, is not easily implemented in Japan because there is a tradition that many concerned people believe that it is harmful to firms if the minimum wage amount is raised, or if more strict law enforcement activity is introduced. In particular, the effect on smaller-size firms is always mentioned, as is the expectation of a negative effect on retaining employment.

A more significant reason to justify the relatively low level of minimum wages may be pointed out. Despite the fact that nearly all concerned people know that the Japanese minimum wage amounts are too low, there are two types of workers whose wage payments are around the minimum wage levels—married female part-timers and young employees. It is well known that wages of part-time employees are considerably lower than those of full-time employees, and wages of young workers are also quite low because of their relatively low skills and the seniority payment system. These two types of workers do have economic support in the form of husbands and parents who live respectively with their wives and young adult children. Even if the wages of married female part-timers and young employees are low, they are unlikely to be poor since they are able to receive economic support from their husbands and parents.

The private support system mentioned above is well understood, and thus concerned people on the minimum wage committees did not propose raising the wages of these two types of workers. I believe that such an approach can no longer be supported for the following reasons. First, the number of single (i.e. unmarried) men and women, and/or economically independent persons has been increasing and will increase further. In other words, they have to consume by themselves based on their independent incomes. Second, low wage earnings of these two types of employees must reduce their work incentives significantly. In sum, their low wages can no longer be justified. Time has come to increase the minimum wage amount.

How can we achieve such a goal under the condition that employers and the society in general hold negative attitudes towards an increase in the minimum wage amount? One useful method is to publicize the fact that the minimum wage amount is too low this in not widely understood. If the society recognized the necessity of raising the minimum wage amount, pressure to accept it would be brought to bear. Another method is to persuade employers who have always been against it. This method would demand a decrease in wage payments for male full-time employees who receive relatively high levels of wages; cuts need to be made to prevent a drastic increase in labour costs due to an increase in the minimum wage amount. In sum, the society, employers and male full-time employees altogether have to agree that the minimum wage amount ought to be increased; such a goal must be achieved.

6. Concluding remarks

The article examined inequality and poverty in Japan. It is found that the degree of inequality of outcome in terms of income distribution has been increasing, and its level is one of the highest inequality levels among advanced countries. Several reasons for this increasing trend have been presented. At the same, it is proposed that inequality of opportunity in terms of educational and occupational opportunity, promotion possibility in enterprises, treatment of women etc., is currently at a higher level in comparison with the postwar period and the subsequent period of rapid economic growth. The influence of parental social and economic status is large and contributes to the inequality of educational and occupational opportunities of children.

The relationship between efficiency and equity has been discussed. The economic literature normally accepts the trade-off relationship between efficiency and equity. It is proposed, nevertheless, that the Japanese case cannot be applied to this trade-off, and thus it is possible to seek a narrow path that achieves both economic efficiency and equity. Related to this argument some discussions on philosophy and ethics are made, and the author's personal preference is presented to solve the issue of efficiency and equity.

Poverty is the second subject in this article. It is found that the rate of poverty (i.e. the headcount ratio) is now very high in Japan, and it is ranked third among advanced countries. After examining the cause of the high rate of poverty, say 15.3%, some discussions are made on the subject, among others, of who the poor are and how serious is their condition.

There are several policy tools that are aimed at reducing the numbers of poor people. An interesting subject is to examine whether these policies are effective in this endeavour. I pay attention to the following three policy tools—the income support programme to poor people, the public pension programme and the minimum wage policy. It is found that the first policy does not work well, while the second is effective in reducing poverty among the aged. The third is not effective. The time has come to strengthen the role of both the income support programme to poor people and the minimum wage system.

Japan is now at acritical period because both inequality of outcome and inequality of opportunity and poverty have been increasing; their current levels are too high to be justified based, in my personal judgment. It is necessary to stop and alter this increasing trend by strengthening several economic and social policies.

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