



AUSTRALIA–JAPAN RESEARCH CENTRE

ANU COLLEGE OF ASIA & THE PACIFIC
CRAWFORD SCHOOL OF ECONOMICS AND GOVERNMENT

**THE FLOW OF FUNDS THROUGH A
GOVERNMENT – A CASE STUDY ON
JAPAN**

Jun Ikeda



ASIA PACIFIC ECONOMIC PAPERS
No. 366, 2007

ASIA PACIFIC ECONOMIC PAPER NO. 366

2007

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The Australia–Japan Research Centre is part of the Crawford School of Economics and Government, The Australian National University, Canberra.

ISSN 1834 9064
ISBN 0 86413 319 7

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THE FLOW OF FUNDS THROUGH A GOVERNMENT – A CASE STUDY ON JAPAN

In Japan, the sustainability of public finance including that of social security is of serious concern. The underlying cause is that Japan is in transition to a new phase of economy and society because of medium-term changes in the revealed preferences of people about their lifestyle. Nevertheless, the socio-economic systems and institutions, which are founded on public opinion (or the stated preferences of people), have not kept up those changes. This would contribute to the distortion in the flow of funds through the government, adversely influencing the fiscal sustainability. That distortion should be corrected based on such an understanding.

1 Introduction

In Japan, fiscal conditions are normally evaluated against the General Account Budget. However, this evaluation only shows, if roughly speaking, the relationship between the government sector and the private sector through the collection of taxes and their distribution, and hence that is affected by the social security account only indirectly, for example. That is to say, the General Account Budget is only affected by the social security ‘account balance’. From the viewpoint of how a government influences economic activities, however, it is important from whom and how much in total the government sector collects funds from the private sector, and to whom and how much the former distributes the funds to the latter. In the light of this view, this paper reviews the financial relationship between those two sectors in an integrated way, in spite of some statistical limitations.

The recent serious problem relating to the flow of funds through the Japanese government is how to balance the amount of the inflow and outflow of funds in order to make public finance sustainable. It is well known that in Japan, fiscal liabilities are enormous and cumulative, and the social security system is of deep-rooted concern because of a possible reform of the system to increase contributions and/or decrease benefits. The basic solution to this problem would be to increase the inflow of funds and reduce the outflow of funds; however, the public would not accept such policy changes because they would bring a reduction in benefits and/or an increase in burden to a considerable degree.

Thus, under such circumstances there is a limit to the reform of the flow of funds in order to make public finance sustainable. The framework of a national economy and society consists of socio-economic systems (including the flow of funds) and institutions. Consequently, in order to restructure these fiscal conditions, it is essential for the authorities to reform the flow of funds at the same time as the relevant systems and institutions are changed.

Of course, the authorities cannot arbitrarily decide the direction of change without some national consensus. Nevertheless, it is important for the authorities to understand what revealed preferences people have implicitly on their lifestyle, even if roughly. Given that the authorities are not able to change the revealed preferences substantially, socio-economic systems and institutions, which are founded on the public opinion (or the stated preferences of people), will eventually change in the direction that the revealed preferences are moving. The authorities should take necessary measures in order that those institutions can change smoothly in the right direction, and should reform relevant systems in step with these changes. The inflow and outflow of funds from/to the private sector should be also readjusted to match the socio-economic changes that are caused by the gap between the revealed preferences and public opinion.

Based on the above analysis, this paper aims to review how the authorities should influence economic activities by operating the flow of funds through the Japanese government after foreseeing the socio-economic trends.

2 How to understand the flow of funds through a government

Almost all government activities¹ are accompanied by the movement of funds in some form or other. The flow² of funds³ through a government, which is divided into the inflow of funds from the private sector and its outflow to that sector, can be paraphrased as a financial aspect of those activities. The activities, together with the relevant flow of funds, are usually informed by policy. From an individual point of view, however, it is important how much each person, according to his/her attributes such as age, income, assets and so on, should pay for the government and benefit from it. This paper therefore deals with the flow of funds from the two aspects: ‘the inflow of funds to a government and its outflow from it’ and ‘the burden⁴ of the public and their benefits’⁵. In some cases, funds are collected from corporations in the form of corporation tax, for example, and are distributed to the public in the form of public goods; however, the paper assumes that those funds are collected from each person and are distributed to him/her in the end.⁶

The flow of funds through a government is classified as follows. Firstly, the whole flow of funds can be dealt with from the following two aspects:

- a) the total burden and benefits for the public at a given period, and
- b) the lifetime burden and benefits of each person.

The flows of funds through a government can be also broken down into the following three flows:

c) The flow between generations: The lifetime burden and benefits for each person do not always balance; in other words, the net lifetime benefits (= the lifetime benefits – the lifetime burden) varies from person to person. The flow between generations is defined as the average of the net lifetime benefits by generation. One can understand that funds flow from generations with a positive net lifetime benefits to those with a negative one.

d) The flow between age groups: In general, the income level of the aged⁷ is lower than that of the youth and the middle-aged due to retirement. A difference in the life cycle phase thus brings about an income gap between the youth, the middle-aged and the aged. Such differences in income are normally reduced by the government, which means that funds flow between age groups through the government. The public pension system is a typical example as means of implementing such a flow. The flow between age groups assumes that each person is burdened in youth and middle age, while he/she benefits fully in old age, and therefore the lifetime burden and the lifetime benefits of each person should always balance. In reality, the average of the net lifetime benefits of a generation is not zero, because of the flow of funds between generations.

e) The flow among each age group: This flow includes not only the transfer of funds to others but also the distribution of funds to oneself, that is, the distribution of funds to the person from whom the funds are collected. However, the latter flow is also discussed in the whole flow of funds, and the paper deals with the former flow alone. This flow is typically caused by differences in the standard of living such as income and assets, living area, and the size of business and the kind of industry to which each person belongs. Of those, this paper focuses on the difference in the standard of living because of its importance from the viewpoint of each person.

What should the flow of funds through a government be? First, the amount of the whole flow of funds should be considered along the lines of the following analysis. Individuals and groups in the private sector tend to be financially at risk because they are responsible for how their funds are used (although the insurance business can hedge their funds to some extent),

and the risk, depending on the size, can make the society unstable. Funds under the market mechanism, however, have the advantage of revitalising the economy because those funds can be generally utilised more effectively than under the control of government. Meanwhile, spending by the government sector generally ensures social stability, although the economy could be less dynamic if the spending is excessive. Consequently, the amount of the whole flow should be determined based on striking a balance between economic efficiency and social stability. This view is common to the total burden and benefits of the public at a given period and the lifetime burden and benefits of the public, and hence the paper deals with the former as an indicator of the amount of the whole flow of funds.

Let us turn to the flow between generations. Other things being equal, every generation should have the same net lifetime benefits, that is, the flow of funds between generations should be zero considering intergenerational equity. Nevertheless, given the following points, depending on economic conditions, we should tolerate a generation having some positive amount of net lifetime benefits.

- Public finance performs the function of stabilising the economy. If a government increases expenditure or cuts taxes in order to reduce an economic downturn, the net total benefits of the public would become positive during the implementation of those measures, and subsequently the net total benefits would necessarily become negative, which fact brings a difference in the net lifetime benefits of each person by generation.
- Assuming that the level of income rises continuously with the passage of time, there will be no objection to benefits in old age becoming bigger than the burden in youth or middle age.

By definition, the flow between age groups does not affect the net lifetime benefits of each person. However, a large flow between age groups means a large burden in youth and middle age, and a large benefit in old age. This flow aims at reducing the income gap arising from a difference in the life cycle phase, and it is therefore significant that the flow between age groups should be considered simultaneously with the life cycle of the public.

As for the flow among each age group, the balance is important between economic efficiency and society stability (or equity), as is the amount of the whole flow. If people felt that gaps in the standard of living were widening, they would demand a correction. The authorities, however, should monitor what degree the gaps are widening, and if they believe that the gaps should be reduced from the viewpoint of social stability, they should disclose what good results the reduction would bring.

Let us look at recent figures in the flow of funds through the Japanese government. International comparisons on the level of the total burden and benefits (which correspond to the total receipts and outlays defined by the OECD, respectively) shows that Japan is ranked relatively low among OECD countries (Table 1). In recent development, the total benefits increased steadily since the collapse of ‘the Bubble’ in the early 1990s while the total burden levelled off (Figure 1). This is because of increases in expenditure and tax cuts to ease the economic downturn after the collapse, and the net total benefits, as the result, expanded significantly although it tends to reduce recently due to continuous curtailments in total benefits. Incidentally, it is no exaggeration to say that the accumulated flow of funds, that is, the fiscal liabilities in Japan is at the highest level in OECD countries.⁸

The flow of funds between generations is generally measured by the method of ‘the generation account’. Although the trend of the lifetime burden and benefits are not available due to statistical restrictions, the recent data by generation estimated by the Cabinet Office of Japan (2005) shows that the net lifetime benefits for the aged is substantially positive while those for the younger generations (under fifties in 2003) are negative. In particular, the benefits for the future generations (the generations that were under twenty at the time of the estimate, the 2003 fiscal year) is considerably negative.⁹ It is said that the following three points can explain why such large differences in net lifetime benefits arise.

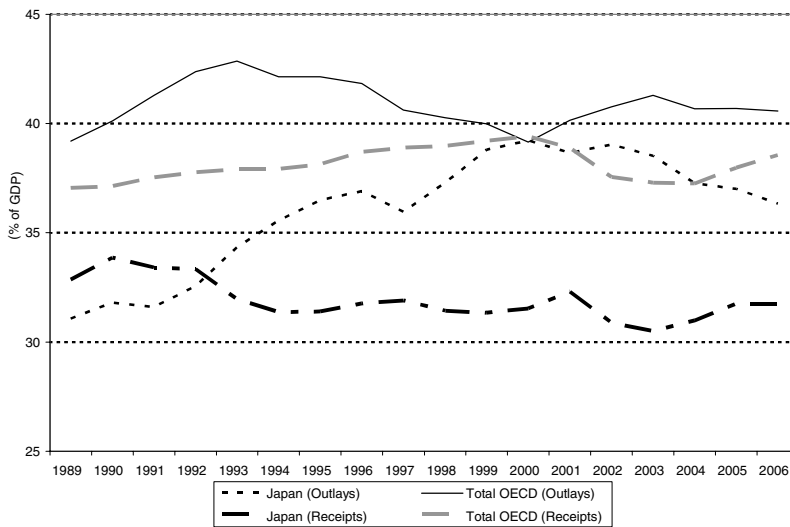
Table 1 Total outlays and total tax and non-tax receipts in selected OECD countries

(as at 2006, % of GDP)

	Total outlays	Total tax and non-tax receipts
Australia	34.0	36.5
Canada	39.5	40.5
France	53.8	51.1
Germany	45.9	43.5
Italy	49.6	44.9
Japan	36.3	31.7
United Kingdom	45.3	42.3
United States	36.5	34.2
Euro area	47.4	45.4
Total OECD	40.6	38.6

Source: OECD, ‘Economic Outlook No.80’, 2006.

Figure 1 Changes in total outlays and total tax and non-tax



Source: OECD, 'Economic Outlook No.80', 2006

- Unexpected declines in both fertility and mortality: In the early 1970s when the social security system was set up, the authorities did not assume rapid declines in both fertility and mortality as is happening now. Because of unexpected changes, the social security system is not longer consistent with Japan's demographic structure.
- An increase in the cost to stabilise the economy: After the 1995 collapse of 'the bubble', the economy floundered over a long period. If policies to revitalise the economy had not been adopted, the economy would have declined significantly, thereby having an adverse influence also on future generations.¹⁰ Successive increases in government expenditure and tax cuts were therefore necessary.
- Compensation to the old generation: The generation in old age (and deceased generations older than them) went through many hardships in their youth and middle age, such as supporting their parents because of the lack of a social security system, the experiences of World War II and confusion in the aftermath of the war. In addition, their incomes were generally lower than those of the younger generations. The old generation is thus worth being given special benefits in order to compensate for their previous hardships.

In the light of views on the flow between generations noted above, 'an increase in the cost to stabilise the economy' and 'compensation to the old generation' would be acceptable to some extent while 'unexpected declines in both fertility and mortality' would not.

Before turning to the flow between age groups and among each age group, we should mention some gaps in the standard of living. The income gap in Japan is ranks at the average among developed countries (Ministry of Internal Affairs and Communications Japan 2006; Förster and Mira d'Ercole 2005). Recently, it has expanded gradually since around 1980 (Table 2), which is said to have occurred mainly because of the demographic changes caused by declines in both fertility and mortality (Cabinet Office Japan 2006; Ootake 2005). To be specific, these declines raised the ratio of the aged to the total population, and since the incomes of the aged were generally lower than average incomes, a rise in that ratio widened the income gap between age groups.

As for the assets gap, in Japan this is said to be relatively small compared with the rest of the world. In the meantime, the assets gap is distinguished by a large difference in the assets level between the aged and the younger age groups. In other words, the assets levels of the aged are higher than in other countries (Oota 2003).

The recent flow between age groups is characterised by continuous increases in net burden (burden – benefits) per person in youth and middle age although the net benefits per person in old age is constant (Cabinet Office Japan 2001).¹¹ This demonstrates that the social security system was not reformed in step with demographic changes.

Table 2 Income redistribution effect

	Initial income	Income after redistribution		Income after redistribution through taxation		Income after redistribution through the social security systems	
	Gini coefficient	Gini coefficient	Improved by (percentage)	Gini coefficient	Improved by (percentage)	Gini coefficient	Improved by (percentage)
1972	0.35	0.31	11.4	0.34	4.4	0.33	5.7
1975	0.37	0.35	7.8	0.36	2.9	0.36	4.5
1978	0.36	0.34	7.4	0.35	3.7	0.36	1.2
1981	0.35	0.31	10.0	0.33	5.4	0.33	5.0
1984	0.40	0.34	13.8	0.38	3.8	0.36	9.8
1987	0.40	0.34	16.5	0.39	4.2	0.36	12.0
1990	0.43	0.36	15.9	0.42	2.9	0.38	12.5
1993	0.44	0.36	17.0	0.43	3.2	0.38	13.2
1996	0.44	0.36	18.3	0.43	1.7	0.37	15.7
1999	0.47	0.38	19.2	0.47	1.3	0.39	17.1
2002	0.50	0.38	23.5	0.49	0.8	0.39	21.4

Source: Ministry of Health, Labour and Welfare Japan, 'Survey on the Redistribution of Income', 2004.

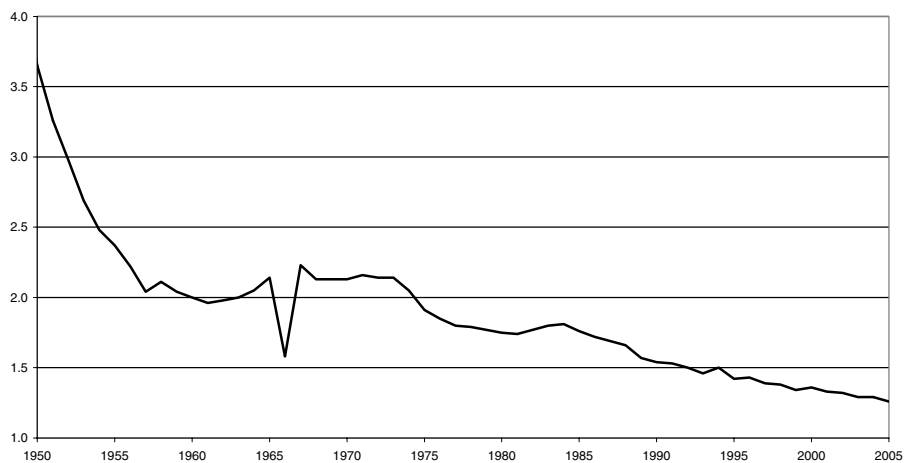
A reduction in income gap by taxation, which mainly causes the flow among each age group¹², has become less significant or levelled off (Table 2). This seems to reflect the fact that progressive rates of income tax has become more gradual and the value-added tax named the consumption tax, which is regressive relative to the income tax, has been introduced since 1989.

3 The causes of demographic changes

Of various flows of funds through the government, conspicuous is the flow between generations, that is, the generational gap in net lifetime benefits. Can we narrow such a gap in the future? To begin with, how should we understand the demographic changes (that is, declines in mortality and in fertility) behind that gap? Of those changes, the decline in mortality is welcome; this should be assumed a precondition, and this section hence reviews the cause of the decline in fertility.

The fertility rate in Japan has tended to decline since the late 1970s when the rate became lower than the replacement level (the level of the fertility rate that enables the population to level off, and that is about 2.1 in Japan) (Figure 2). The decline must be therefore caused by medium and long-term factors. In reordering the causes of the decline based on data from the Cabinet Office, Japan (2004), these are divided into the following three groups: long-term factors, structural change factors; and friction factors. These factors

Figure 2 Trend in the total fertility rate



Source: Ministry of Health, Labour and Welfare Japan, 'Vital Statistics', 2006.

would have a great influence on the increase in the number of unmarried persons and persons marrying late¹³ at the same time producing decreases in the number of children per couple, resulting in a decline in fertility.

A rise in the standard of living over a long period (long-term factors) Historically, the standard of living of people has tended to rise except for temporary declines influenced by factors such as the fall of civilisations or a great war. Such a rise in the standard of living has brought the following changes, which would contribute to a downward tendency in fertility.

Firstly, citizens generally enjoy an increased ability to make a living on their own. This has reduced the need to raise a family¹⁴ through the following process.

- The increased economic viability makes it less necessary for people to help each other, which results in an increased number of unmarried persons and persons marrying late.
- People are less concerned to ensure that their children perform the functions of labour force or supporter of other family members, which results in a decrease in the number of children per couple.

Secondly, families are increasingly able to support their children. This has increased the number of unmarried persons and persons marrying late through the following process.

- It is less necessary for children to make a living independently from their family. Meanwhile, it is also less necessary for their parents to encourage them to become independent because few families are in financial difficulties.
- Due to an increase in well-educated persons, the average age when one begins to earn their living has been rising. Furthermore, for well-educated women there is much greater opportunity to work, which also contributes to a decline in the desire to raise a family.

Thirdly, women have tended to reduce the time for housekeeping, which necessarily increases the opportunity to work, thereby heightening the opportunity cost of having children.

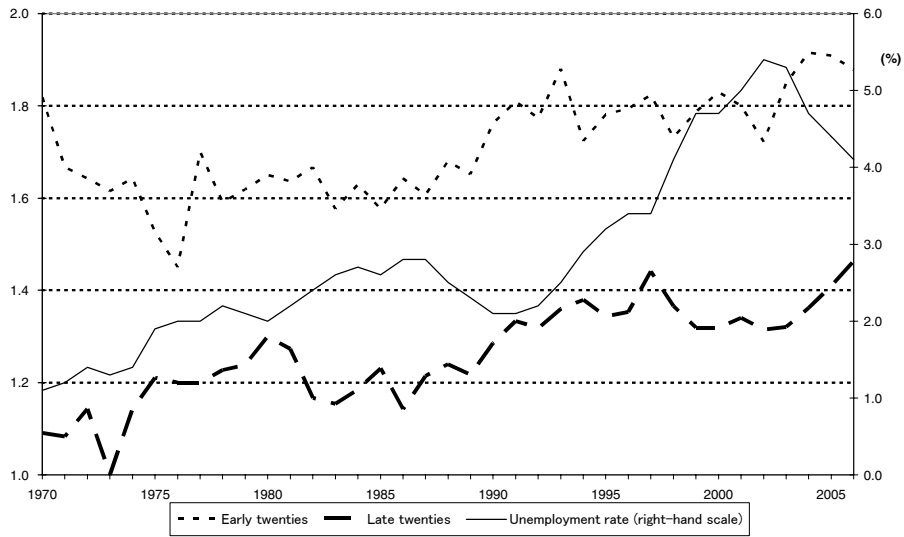
Structural changes in economy and society (structural change factors) The following factors cannot be explained by a rise in the standard of living over a long period or an economic cycle in the short term. Some structural changes in economy and society now under way would contribute to the decline in fertility through the following process.

- People are experiencing a greater economic burden in the care and education of their children, with an adverse impact on the number of children per couple. It is indeed possible that a recent drop in income has increased the relative cost of the care and education of children. However, such responses have been occurring for several decades, and will not disappear unless the economic conditions change significantly for the better.
- Similarly, men in Japan have generally come to experience a greater economic burden in the costs of living after they are married because in not a few cases, which are decreasing, they must support their wife. Meanwhile, for any Japanese woman who is supported by her parents or who will stop working after married, this is more likely to lower her standard of living after marriage because she depends on her husbands' income alone. These facts would adversely influence the public's attitudes to marriage. This factor cannot be also explained by a recent economic slump alone, as is the case with the sense of economic burden relating to the care and education of their children.
- A rise in the percentage of service industries¹⁵ heightens the opportunity cost to marry and have children through an increase in women's opportunity to work.

Friction factors The following factors, unlike the long-term factors and the structural change factors, could be removed or reduced if socio-economic systems and institutions changed. It seems that these factors are friction ones that are temporarily caused by structural changes in economy and society.

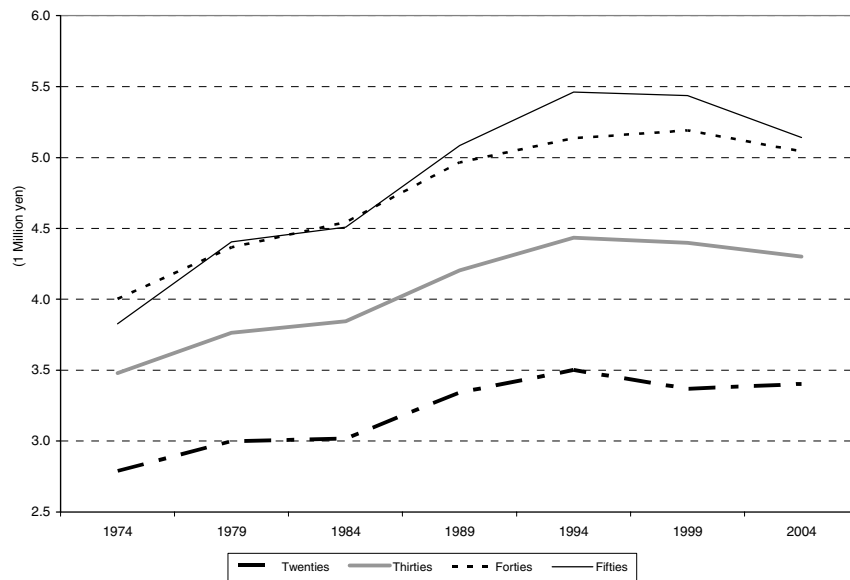
- After the collapse of 'the Bubble', the prospects for the economy became uncertain, thereby adversely exposing the labour market, particularly of the youth, due to the inflexibility of employment and the inflexible downward trend of wages (Figure 3 and 4).¹⁶ As a result, Japanese youth have generally come to have less economic ability to marry and have children. Such conditions may not be improved fundamentally with a mere expansion of the economy, given that the labour market will come to grow more slowly or shrink because the population will decrease due to the low fertility rate.
- Women's desire to have children will never disappear as long as they feel the need to raise a family (see endnote 14). Meanwhile, a woman's opportunity to work generally increases as she becomes well educated and the percentage of service industries rises. It is therefore important for women that their work and childcare are compatible. Actually, the women in Japan cannot easily return to work or find work after giving birth, and their family members including their husband do not sufficiently assist with childcare. These facts adversely influence marital compatibility.

Figure 3 Unemployment rate in the youth (the average rate = 1)



Source: Statistics Bureau, Ministry of Internal Affairs and Communications Japan, 'Labour Force Survey', 2006.

Figure 4 Wage level by age group (at market prices in 2005)



Source: Ministry of Internal Affairs and Communications Japan, 'National Survey of Family Income and Expenditure', 2005.

Given this cause of the decline in fertility, the prospects for Japan's fertility rate is influenced substantially by structural change factors and friction factors. The latter can be a rising factor in fertility if the relevant public opinion, systems and institutions change. Nevertheless, the fertility rate will not reach the replacement level with the removal of the friction factors alone.¹⁷ Whether the fertility rate will exceed that level therefore depends on the structural change factors. The following section reviews the future trends of the structural change factors.

4 The maturation of economy and society

In what direction are the structural change factors in the declining fertility changing? When will those factors have the potential to raise the fertility rate? In other words, in what direction are the underlying socio-economic trends changing? This section focuses on socio-economic changes over a medium- and long-term perspective from the viewpoint of the everyday life of the population.

Generally, public opinion on their lifestyle would be that the standard of living has not risen noticeably. However, the following points seem to suggest that the public is implicitly satisfied with their present lifestyle even if incompletely so, and hence it seems to the public that making their lifestyle better 'materially'¹⁸ has become less significant while maintaining their standard of living has become more important.

- While the public believes that their standard of living has not risen noticeably, many of them are very positive about spending money on luxury goods and services (for example, brand-name products). This considerable demand for luxury goods and services would suggest that the public was satisfied with the necessities of life. The necessities in this context, of course, do not mean the minimum necessities to support their lifestyle; these will change as the public's standard of living rises. Nevertheless, as long as the necessities corresponding to their standard of living are provided in sufficient quantity, it is less likely that they will be in a tense situation where their standard of living needs to improve.
- Some people are forced to accept a fall in their standard of living owing to unemployment or a wage cut. It is, however, difficult for them to make the necessary adjustments, because it takes some time to change their mind and there are few goods and services around them to choose a plainer lifestyle. They are compelled to keep their standard of living as they did, which fact makes them feel that they are badly off. In the past, such a feeling would have motivated these people to increase their incomes and raise their standard of living; nowadays, however, they need the increase in income only to maintain that standard.

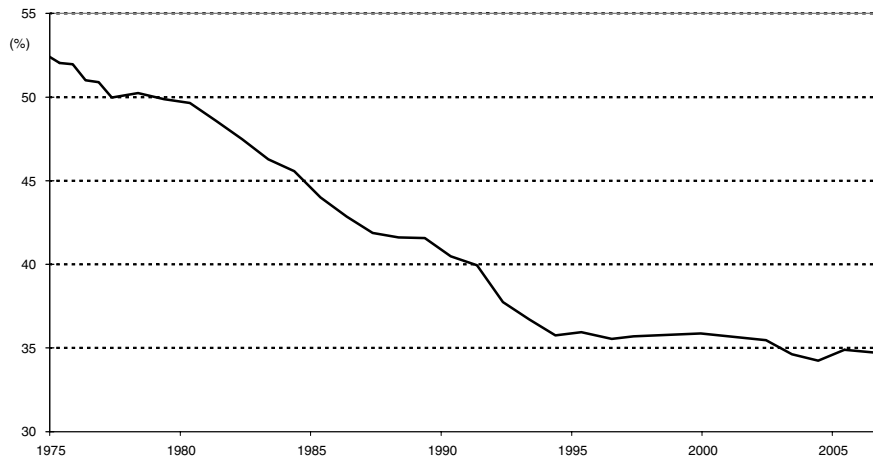
- It is often said that the Japanese public does not like to run a risk, that they lack fighting spirit and drive, and that they are not eager to try something new in an uncertain world. These facts would suggest that the public felt unnecessary to act just because they were satisfied with their lifestyle. If they did not feel satisfied, they would have to be more creative to make their lifestyle better.
- In this relationship, there is growing concern about the risks threatening the public's lifestyle. People, however, ought to have been surrounded by far more risks, even threatening their 'life' in the past when their standard of living was much poorer. Those concerns seem to arise from their attitude that they want to maintain their standard of living no matter what happens.

Why, then, have the public come to be implicitly satisfied with their lifestyle? The reason seems to be that their material desires have been gradually satisfied as the economy grows favourably after World War II. Human desire to pursue better lifestyle will never disappear, because this desire seems to know no bounds. Nevertheless, this desire can be satisfied more rapidly than expected, which would result in the present situation where most desires are satisfied. New desires will appear constantly, of course, but if these are satisfied instantly, people ultimately do not experience unmet desires.

Under these circumstances, even if the public aspired to a higher standard of living than at present, many of their aspirations would become a reality in the not-too-distant future, and they would gradually find it hard to envisage some new standard. Without these aspirations, potential demand¹⁹ for unknown goods and services will be difficult to reproduce, and the stimulus for technological development will become smaller. People are compelled to be satisfied with their present lifestyle accordingly.

One opinion poll supports this view. The poll, which has been taken by the Japanese government for more than 30 years and takes the form of a questionnaire on the preferences for material richness or spiritual richness, shows that after having declined continuously, the preference for material richness has levelled off for more than ten years (Figure 5). As Figure 5 shows, the movement of the preferences is generally independent of economic cycles in the short term. Although the flat trend since mid-1990s may be explained to some degree by the economic downturn after the collapse of the 'Bubble' economy, it is nevertheless incompatible with the recent expansion of the Japanese economy since 2002. This movement would therefore suggest that the public had almost reached the implicit target in their standard of living aspirations during the last decade. Based on those circumstances, this paper defines the present socio-economic²⁰ trends where people find it hard to envisage a higher standard of living than at present implicitly as 'the maturation of economy and society'. This paper

Figure 5 The preference rate of material richness (3-year moving average)



Source: Cabinet Office Japan, 'Survey of Public Opinion on the Life of the People'.

assumes that this maturation is a medium-term matter because the socio-economic trends would not be permanent and would change some day. Although when the trends will change depends on how fast the worldwide maturation mentioned later will progress, this paper, as a rough estimate, assumes the length of 'the medium term' not less than several generations.

As stated above, the public is satisfied implicitly with their present lifestyle (even if incompletely) while they are explicitly dissatisfied with the fact that the standard of living has not risen noticeably. This would suggest that a gap exists between the socio-economic trends, founded on the revealed preferences of people about their lifestyle, and the socio-economic systems and institutions that are based on public opinion (that they wanted to pursue better lifestyle in the same way as before). Where, then, does this gap come from? The gap would probably reflect the fact that the public could not yet fully understand the present circumstances where the economy and society were maturing in a medium term perspective. Nevertheless, public opinion will change in favour of narrowing the gap someday given that the revealed preferences are hard to change, which would suggest that at present Japanese economy and society is in transition towards maturation.

The maturation of economy and society influences the structural change factors in the decline in fertility through the following process. First, the sense of economic burden relating to the care and education of their children would suggest that the public does not want to worsen their families' standard of living even after they had children. This would be caused

by the fact that the public did not assume that their lifestyle would become much better in the future even if their lifestyle worsened temporarily. Such an attitude is just one aspect of socio-economic maturation. Similarly, the public would not want to worsen their standard of living after marriage. This is also one aspect of maturation.

As for a rise in the percentage of service industries, several thousand years' history of humankind would illustrate that the ratio of luxury goods and services to the necessities of life became high as the economy and society matured. The ratio of services to goods being relatively high in luxury goods and services compared with the necessities of life, the maturation will increase the percentage occupied by service industries.

Thus, the structural change factors in the decline in fertility are closely related with socio-economic maturation. Given that the maturation is a medium-term matter, the structural change factors would not easily change, and hence have little potential to raise the fertility rate in the short term.²¹ Any policy to raise the fertility rate in the short term would cost a great deal while the rate could not regain the replacement level in the medium term. The population in Japan would tend to decrease in the medium term accordingly.

As for economic conditions, socio-economic maturation does not mean a fundamental downturn of the economy, that is, the maturation is not directly linked with a decline in the growth rate of GDP, because that is mainly the matter of changes in the revealed preferences of people, not in public opinion. Nevertheless, it is likely that the demand for goods and services comes to mature, that is, the quality of goods and services comes to become more significant than the quantity, because potential demand for unknown goods and services are difficult to produce while existing good and services are provided in sufficient quantities.

The problem relating to the Japanese economy is that the authorities have endeavoured to adapt the economy and society to public opinion without full consideration. The socio-economic trends, which are founded on the revealed preferences of people, are hard to change significantly, and such an endeavour by the authorities, contrary to their intention, would result in the distortion in the flow of funds through the government such as huge fiscal deficits and increasing concern about the social security system. The public's understanding on the 'Bubble' economy in late 1980s and the collapse in the subsequent period would have been very much apart from the progress of the maturation. The problems incidental to the maturation are thus hard to resolve merely by economic reforms; those are both economic and social problems, which are to be solved fundamentally with changing not only economic systems and institutions but also public opinion, as well as social systems and institutions.

What is the basic cause of maturation? The possible answer is, in short, stability of society that has underlain favourable growth of the economy after World War II. Japan has not experienced a rapid and considerable change in economy and society for about 60 years. There has been no instance where major economic systems in Japan have collapsed and as

the result confidence in social order declined considerably, although the Japanese people have experienced the shift from a high-growth economy to a stable-growth economy in early 1970s when the oil crisis occurred and ‘the Bubble’ economy and its collapse before and after 1990.

It is a fact that a stable society caused a favourable growth of the economy until recently, but the maturation seems to suggest that the development of economy has reached a fixed level under the existing social order. This fixed level corresponds to the condition where most material desires of the public are satisfied. As long as a stable society enables an economy to grow favourably, people’s material desires can be steadily satisfied accordingly. This causes the conditions of the public’s material desires in the medium and long term that we have described, and as the result the economy and society comes to mature. Thus, stability of society positively influenced the development of economy until recently, but at present stability of society would underlie the maturation. Given a longstanding stability of society, the progress of maturation is inevitable.

Stable society may make it easy for people to plan their future. In the meantime, that may leave them less room to determine their own future because the difference in the inherited lifestyle environment²² between people becomes more significant. Such social conditions would contribute to impeding people from raising their standard of living, that is, to impeding the birth of new material desires. Stability of society seems to influence the maturation through this channel, too.

Still, the important point is that the progress of maturation is not permanent. In the future, the world economy and society will mature²³ as the standards of living in developing countries catch up with those of developed countries. A worldwide rise in the standard of living would cause the restriction of natural and social environment such as the exhaustion of natural resources, a global climate change and a global war in the medium and long term, and society would tend to destabilise worldwide accordingly. Under such circumstances, technical development would be strongly stimulated to find a way out of those difficulties, and people would come to demand the goods and services produced using the technology. As a result, the world economy and society could move beyond maturation, and enter into a new phase of socio-economic development. In other words, the present civilisation system could shift to a new one after the economy and society fully matured.²⁴ This is the reason why ‘the maturation of economy and society’ is assumed a medium-term matter. In addition, ‘a higher standard of living’, which is referred in the definition of socio-economic maturation, would not be an absolute one, but a relative one linked with a medium term, that is, ‘a higher standard of living’ would vary with civilisation system. Maturation is caused by a rapid rise in the standard of living in the medium term, and not merely caused by the fact that the standard of living becomes high.

Regardless of this, in the medium term the Japanese economy and society will mature ahead of other countries. In spite of the definition of ‘the maturation of economy and society’, the standard of living in Japan could rise if Japan imported goods from the countries in a higher standard of living and adopted their technology. Maturation hence does not necessarily mean that the standard of living does not rise. Nevertheless, a rise in the standard of living is usually obliged to follow in the footsteps of other countries, which would be characteristic of the maturation.

Under those circumstances, there arises the concern that Japan could fall behind other countries economically in the medium and long term, or could not perform a leading role in the world economy. Nevertheless, given that immigrants in Japan are much smaller in number than that in other developed countries (Table 3), it would be hard to accept immigrants positively in order that their material desires to make their lifestyle better may vitalise the economy and society. This is reinforced by the fact that any policy that can destabilise society could not be positively adopted, given that immigrants may put the society into disorder. Some say that Japan must pursue the equality of opportunity to vitalise the economy and society. That pursuit, however, cannot equalise ‘the inherited lifestyle environment’ (see endnote 22) for each person (unless discriminating against opportunity reversely); there is a limit to pursuing the equality of opportunity.

The progress of the maturation is thus inevitable given a stable stability, and obstructing the progress would not be a drastic solution to the concern about the economic competitive-

Table 3 Stocks of foreign and foreign-born populations in selected OECD countries

(as at 2004, % of total population)

	Foreign population	Foreign-born population
Australia	7.4	23.6
Canada	5.3	18.0
France	5.6 (*1)	10.0 (*1)
Germany	8.9	13.0
Italy	3.9	2.5 (*2)
Japan	1.5	-
United Kingdom	4.9	9.3
United States	6.6	12.8

Note: (*1) 1999, (*2) 2001

Source: OECD, ‘International Migration Outlook 2006’.

ness of Japan. Given this fact, the first thing to do for Japan would be to make the economy and society smoothly mature. This would contribute to improving the distortion in the flow of funds that is caused by the fact that Japanese economy and society is in transition to the maturation.

In addition, Japan, from a medium and long-term perspective, should make progress in the maturation from not only an economic but also cultural aspect, for example, lest buried in the world through playing some leading role in maturation. It is highly important that Japan find the new identity in a non-economic field.

5 The government facilitates changes in socio-economic institutions and manages reforms of relevant systems

As noted in Section 4, the socio-economic conditions of Japan are maturing over the medium term. This contributes to a decline in fertility, and demographic changes, accompanied by decreases in population, are inevitable. Nevertheless, the public does not yet fully understand the steady rise in the standard of living and the resulting progress of maturation, and this contributes to the recent problem with the flow of funds through the government. Given that socio-economic institutions will eventually change toward narrowing the gap with the socio-economic trends, this section considers what the government should do in order to facilitate changes in socio-economic institutions, and what relevant systems should be reformed.

Beginning with the relationship between each person and his/her family, the essential function of family is to stabilise the livelihood of family members by helping each other economically and spiritually. With a rise in the public's ability to make a living on their own, people are less called upon to help each other because the economic function of family (as provider of labour and supporter of the aged) diminishes in size, resulting in a reduced need to raise a family. Such a change will not stop easily because it is caused by a rise in the standard of living over a long period. Such an irreversible movement is of great significance in reviewing what a family should be and what policies a government should implement on aspects of family.

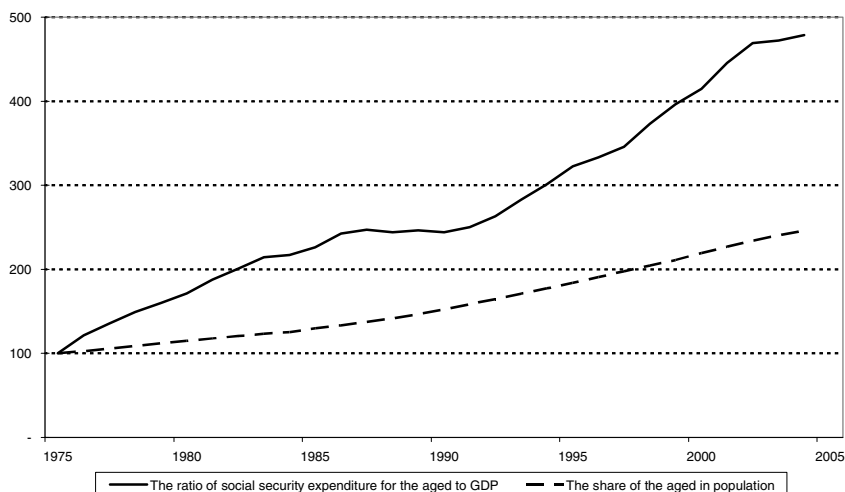
As the functioning of the family changes, how should the life cycle of each person operate? Generally, the life cycle of a person involves them being brought up by their parents in childhood, and working in youth and middle age while supporting those who were unable to make a living by themselves, and is supported by their children and/or the government in old age. From the viewpoint of whether such a life cycle is sustainable or not, the balance between the supporting persons and the supported ones is significant.

In general, an increase in the number of aged people must affect the total cost of support for the aged paid by the youth and middle-aged population, while a decrease in the number

of children must adversely affect the total cost of the care and education of children. In Japan, however, the former cost has increased more than the progress of population ageing which is moving in step with the development of the social security system (Figure 6). Yet the public does not feel that the latter cost has decreased, judging by their perceptions of facing an economic burden for the care and education of children. Thus, the public feels that the burden imposed on the supporting persons is increasing regardless of the generally unchanged ratio of the supported persons to the supporting ones for the past 40 years (Figure 7). The social security system, of course, functions to lighten that burden. Nevertheless, a recent trend in the flow of funds between age groups shows that the net burdens per person in youth and middle age continue to increase, while the net benefits per person in old age does not change substantially. Given that this trend will not change, the present flow of funds between age groups is not sustainable. It is essential to reduce the total benefits received by the aged lest the balance between the supporting persons and the supported ones is lost.

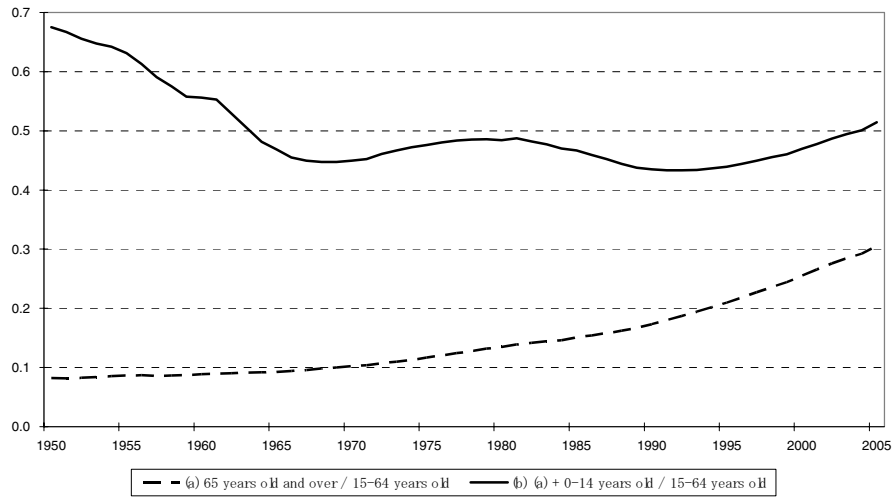
How should the total benefits received by the aged be reduced? To reduce their benefits by the same amount would be impracticable. Instead, taking proper account of demographic changes it is appropriate to review the definition of the aged who are to be supported by their family and/or the government. The fundamental role of pension system lies in the reduction

Figure 6 Social security expenditure for the aged and the population of the aged
(1975= 100)



Source: National Institute of Population and Social Security Research Japan, 'The cost of Social Security in Japan', 2006m etc.

Figure 7 The composition of population by age group



Source: Statistics Bureau, Ministry of Internal Affairs and Communications Japan, 'Population estimates', 2006.

of the risk that unexpected long life causes a greater cost of living than expected, and hence the system ought to be initially aimed at those who live longer than life expectancy.²⁵ Actually, the pension's role is much broader than originally envisaged, but given the improved ability of people to make a living by themselves, the pension's role should be reduced; people should make a living without others' assistance until the age of life expectancy (or the age in proportion to that expectancy). Accordingly, the social security system should aim to support those who live beyond life expectancy.

Of course, the reform of the relevant systems in line with the above thinking (for example, increasing the age when the public pension starts to be paid) might mean that those who lost their eligibility to receive the social security benefits cannot earn a stable livelihood unless their employment is secured. For this reason, it is highly important that the authorities, in introducing this reform, endeavour to adjust socio-economic institutions such as the mandatory retirement system and make work after retirement at the mandatory retirement age more flexible.

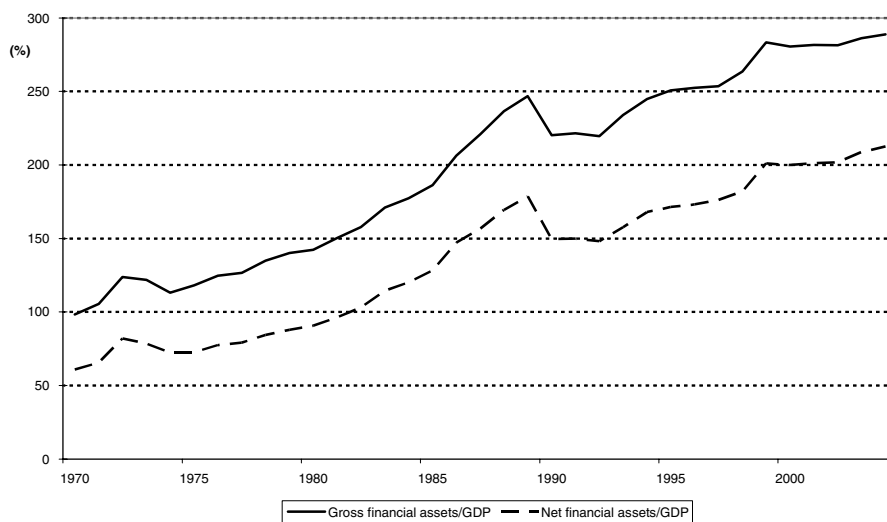
What should be regarded as important in providing public support for the aged? The basic concept of the existing social security system is to secure for the aged a standard of living similar to that of the younger people working regularly. This concept seems to assume implicitly that the aged are helpless and have no (or little) means to make a living all by

themselves; therefore, their incomes and assets are not regarded in Japan as important data for determining the amount of public support for them.

Among other things, however, the improved ability to make a living by oneself increases the assets of the public, particularly of the aged (Figure 8 and Table 4). Of course, the amount of the assets varies from person to person; nevertheless, given that in Japan the assets of the aged, on average, have increased and their assets are generally larger than those of younger people, the existing social security system actually seems to ensure them a higher standard of living than that of the younger people. The public and the authorities should abandon the view that all of the aged are helpless, but instead adopt the view that the aged are to be supported if their standard of living is lower than that of younger people. Income and assets should be taken more into account in fixing the size of public support to the aged.

Turning to the labour market, Japan's unemployment rate is still high and the number of part-time workers, whose wage level is generally much lower than that of regular employees, remains large in spite of the recent recovery of the economy and its subsequent expansion, and these trends are conspicuous among the youth. This contributes to the expansion of the income gap within each age group and between age groups, and this deterioration in the labour market is caused by the inflexibility of employment and the

Figure 8 Financial assets in the household sector



Source: Economic and Social Research Institute, Cabinet Office Japan, 'Annual Report on National Accounts', 2006

Table 4 Net assets per household by age group of household head

(Two or more person households, Average = 1)

	Total	Financial assets	Non-financial assets	Persons per household
Average	1	1	1	3.26
Under 30	0.21	-0.01	0.28	3.02
30 - 39	0.37	-0.22	0.57	3.60
40 - 49	0.70	0.16	0.87	4.02
50 - 59	1.07	1.07	1.06	3.42
60 - 69	1.42	1.98	1.24	2.72
70 and over	1.53	2.13	1.33	2.42

Source: Statistics Bureau, Ministry of Internal Affairs and Communications Japan, 'National Survey of Family Income and Expenditure', 2005.

inflexible downward trend of wages, as noted in Section 3. Additionally, social institutions such as the wage system based on seniority and the system of lifetime employment seem to be responsible for these inflexibilities. Although those institutions are now becoming more flexible, the authorities should endeavour to smooth over these changes. These changes would contribute to a reduction in the friction factors causing the decline in fertility.

For women it is important that work and childcare are compatible. Actually, in Japan, women cannot easily return to work or find work after giving birth, and this discourages them from having children; they feel under pressure to work and take care of children at the same time. In the background there seems to be an implicit assumption that women cannot earn a living by themselves and ought to be keeping house and caring for their children, and therefore do not work after giving birth.

Given the improvement in people's ability to make a living by themselves, such an assumption should be eliminated. To ensure that women's work and childcare are compatible, the authorities should endeavour to facilitate changes in sharing housekeeping within their family or by resorting to the female labour market so that they can easily return to work or find work after giving birth. These changes would also contribute to the reduction in the friction factors causing the decline in fertility, as is the case with the labour market.

As statistical data show, the recent expansion in income gap is mainly caused by demographic changes. There is nevertheless a vigorous controversy about whether the

income gap is expanding substantially because of factors other than these changes. In the minds of those sensitive to this income gap expansion, there would be a deteriorating labour market, in particular, that of the youth. However, the fundamental cause would be that there was less scope for the public to determine their future because of social stability while they were losing the dynamism to overcome the gap because they were finding it hard to aspire to a higher standard of living than at present. The public perceives the income gap, even if it were not so large in reality, to be a high hurdle. To the extent that such attitudes among the public adversely influence social stability, it may be necessary to reduce this income gap to some degree.

However, any reduction in the income gap would have an adverse impact on the efficiency of economy. It is, of course, essential that any individual be guaranteed a standard of living proportionate to the standard of living of the public. Nevertheless, in order to avoid the reduction in the income gap becoming excessive, the authorities should endeavour to change the public's concerns about the gap in the standard of living by improving the labour market and pursuing equity in the lifestyle environment that people inherit. The public does not need to be too worried about the gap because their concerns are merely a passing phase of the maturation.

Lastly, let us consider the relationship between the people and the government. As mentioned above, the Japanese authorities, against the revealed preferences of people, have endeavoured to adapt the economy and society to public opinion, thereby resulting in huge fiscal deficits and increasing concern about the social security system. Why have the authorities, who should operate with public support, preferred such an approach? The key point to answer this seems to be the attitudes of the Japanese public to their government. Japanese people take it for granted that the government must maintain security and stability of the nation, yet implicitly respect the government. People thus feel ambivalent toward the government. Indeed, it seems as if the government and the people exist in separate worlds. A government has the primary responsibility to maintain security and stability. Nevertheless, in Japan the people seem to have a relatively low level of awareness that the government depends on public support. As an inevitable result, the public ought to insist that the government settle all kinds of problems adversely affecting them for which they do not feel responsibility to settle.

In a situation where a large gap exists between the revealed preferences of people and public opinion, there would be a limit to what the authorities could do even if they endeavoured to adapt the economy and society in accordance with public opinion. Instead, the authorities should endeavour to change the public opinion so that the public does not rely too much upon the government, and should promote greater independence of spirit. At the same time, the authorities should reduce the functions of the government in a changing economy and society.

6 Readjusting the flow of funds to meet socio-economic changes

On the premise of changes in socio-economic institutions and the reforms of the relevant systems occurring as mentioned above, the flow of funds through the government should be readjusted to meet any medium-term socio-economic changes. Some guidelines for these readjustments follow.

The whole flow of funds through the Japanese government is characterised by rapid increases in the net total benefits going to the people after the collapse of ‘the Bubble’, mainly caused by increases in the total benefits for the public. In the future, social security benefits will inevitably increase as population ageing progresses, and this will increase the total benefits further. Nevertheless, the authorities should endeavour to avoid a rapid increase in the amount of benefits unless a national consensus is achieved. For the time being, they should keep down an increase in the total benefits as much as possible and fiscal conditions should be improved mainly by curtailing expenditure, although a certain amount of increase in the total burden will be unavoidable. At the same time, the authorities, in anticipation of future socio-economic trends, should endeavour to achieve national consensus on the amount of the flow of funds over a medium-term perspective.

Turning to the flow of funds between generations, although depending on economic conditions, it should be generally acceptable that a generation has some positive amount of net lifetime benefits. Nevertheless, given that future generations will experience a reduction in the amount of net lifetime benefits, with the present generation bequeathing a huge burden to future generations, it is necessary to redress the imbalance in the flow of funds between generations from the viewpoint of intergenerational equity. In concrete terms, the net lifetime benefits of the current older generation should be reduced. This, however, means infringing upon their vested rights to social security benefits, and given the time limitation (the average year when they will reach the life expectancy), it will be difficult to reduce these benefits substantially as history shows that Japan’s social security system has not been reformed drastically so far. We should accept this fact as inevitable.

Under these circumstances, the net lifetime benefits of the younger generations (including future generations) will have to be reduced. Nevertheless, the net lifetime benefits of the middle-aged and the youth will be larger than that of the future generations if policies do not change, and hence the former should be reduced in order to treat both of them as equitably as possible.

The flow of funds between age groups should be reduced, and for this purpose, it is essential to define the aged cohort more narrowly. In addition, how the aged are supported publicly should be decided on the basis of their incomes and assets to a greater extent than

in the past. With the adoption of these measures, the benefits received by the aged will generally reduce, and the flow between age groups will decrease accordingly.²⁶

Lastly, as for the flow of funds among each age group, it may be necessary to reduce the gap in the standard of living applying at present in Japan. However, this should be only a temporary measure. Hence, how much the authorities should reduce the gap over the medium and long term should be discussed nationwide along with the question of the amount of the whole flow of funds.

A gap in the standard of living should be measured on the basis of the public's assets more than in the past given that they come to have more assets relative to their incomes as their standard of living rises. As Japanese society stabilises, the inherited lifestyle environment will have a greater influence on the assets level of each person. In a stable society such as Japan, considering people's assets in measuring the gap would also contribute to revitalising socio-economic conditions.

It is also necessary to review how the authorities are affected by inheritance practices given that the public's attitude to raising a family is changing. The existing inheritance system gives favourable treatment to immediate family members of an estate in the form of the *iryu-bun*²⁷ and some tax relief on the succession of property. However, with the individual becoming a more popular lifestyle unit instead of the family, such an inheritance system should become less significant. Indeed, considering parental affection for children and their responsibility for the support of children, it would be desirable that some part of the property of an estate was still subject to the inheritance system, but this part should not be bigger than the existing *iryu-bun*. Nevertheless, the authorities should impose a higher taxation on the transfer of the rest of the property to the immediate family members than if it were transferred to others. Such treatment would also contribute to revitalising the economy and society through reducing a difference in the inherited lifestyle environment.²⁸

7 Conclusion

In Japan, in transitioning to a matured economy and society a gap arises between socio-economic trends, based on the revealed preferences of people, and socio-economic systems and institutions. The authorities, against these preferences, have endeavoured to adapt the socio-economic conditions to these systems and institutions. As the result, the flow of funds through the government has become distorted, giving rise to serious concern about fiscal sustainability.

The distortion should be corrected based on the following understanding. Public opinion, on which socio-economic systems and institutions are founded, will eventually

change toward narrowing the gap to match socio-economic trends. It is therefore essential for the authorities to reform the relevant socio-economic systems in order to fit in with medium-term socio-economic changes at the same time to endeavour to facilitate some changes in socio-economic institutions in the direction where the revealed preferences of the public are moving. Apart from these reforms and changes, it may be indeed important to revitalise the economy as much as possible by stimulating technological development and raising productivity. Nevertheless, these measures alone could not change the socio-economic trends substantially. Regardless of this, any policy going against these trends would generally cost a great deal while being less effective in the medium term. It is, of course, important to avoid drastic reforms and changes in the short term because it takes some time to change public opinion, as well as socio-economic systems and institutions. However, this should be considered from the viewpoint of facilitating reforms and changes with the long-term objectives in mind.

The authorities should reform the relevant socio-economic systems and endeavour to facilitate changes in socio-economic institutions based on the following analysis:

- The public needs to understand that the individual is becoming more important than the family as a basic lifestyle unit.
- The aged should be defined more narrowly consistent with demographic changes.
- The view that all of the aged are helpless should be abandoned.
- The entry and exit to the labour market of workers should be made more flexible.
- Women's patterns of work should be reformed to be more compatible with the care of children.
- The public should not be too concerned about a gradually emerging gap in the standard of living.
- They should not rely too much upon the government and promote greater independence of spirit instead.

On the premise of the reforms of the relevant systems and the changes in the above institutions, the flow of funds through the government should be readjusted to meet the medium-term socio-economic changes based on the following analysis:

- The authorities should avoid a rapid increase in the amount of the whole flow of funds for the time being, and the fiscal condition should be improved mainly by curtailing

expenditure. At the same time, the authorities, in anticipation of future socio-economic trends, should endeavour to achieve national consensus on the amount of the flow of funds over a medium-term perspective.

- As for the flow of funds between generations, the net lifetime social welfare benefits of the older generation should be reduced as far as circumstances permit and the difference in net lifetime benefits between the younger generations (including future generations) should be narrowed.
- The flow of funds between age groups should be decided based on the public's incomes and assets more than in the past.
- The flow of funds between each age group should be decided in consideration of the public's assets more than ever. The succession of property to immediate family members and the transfer of property to others should be treated less differently. How much to reduce the gap in the standard of living in the medium and long term should be decided based on nationwide discussions.

To sum up, after the above reforms and changes the Japanese people will work longer, more people will remain in the workforce, and those who truly need help will be supported. These are the socio-economic conditions to accord with socio-economic maturation. It is a fact that many of the above changes and reforms are now under way. However, almost all of these are being implemented as necessities as the age for the start of pension benefits was raised because of the deterioration of the balance of the public pension system. They are not based on a systematic understanding. During the period when an economy and society is changing over a medium and long-term perspective, it is important to foresee the socio-economic trends, and based on this prognosis, the flow of funds through the government should be readjusted in step with the changes in socio-economic institution and the reforms of the relevant systems.

Notes

- 1 In this paper 'government' means 'the General Government' in the System of National Accounts, and the government sector and the private sector are roughly distinguished by whether they are authorised to collect funds or not.
- 2 In this paper 'the flow' of funds means the transfer of ownership of funds, and hence excludes the movement of funds by credit or debt.

- 3 Strictly speaking, there are flows by means other than funds (payment in kind, for example), which is, however, exceptional. This paper regards those flows as the flows of funds that are equivalent to that value.
- 4 The payment of the rental fee for a national property, for example, seems to be unsuitable for the term ‘the burden’ of the public. This paper, however, regards such payment of consideration as falling into the category of the ‘burden’ because of those flows being exceptional and statistical limitations.
- 5 From the viewpoint of how much each person perceives utility from the distribution of funds by the government, it would be inappropriate to consider the amount of funds distributed by the government as ‘the benefits’ of the person concerned. If a person did not perceive utility from public goods and services, the benefits should be zero. It would be, however, difficult to measure exactly the utility each person perceives, and this paper assumes that the public, in all, perceives the utility equivalent to the funds distributed by the government in the form of public goods and services. Similarly, the paper assumes that the public perceives the burden equivalent to the funds collected by the government in the form of public pension premium although the pension system brings the youth and the middle-aged a reduction in the burden to support their parents.
- 6 To explain in detail, this paper assumes that the funds that an organisation such as a corporation pays a (local) government are collected equally from the public belonging to the area where the government has jurisdiction over. Meanwhile, it is also assumed that funds expended in the form of public goods and services are distributed equally to the public in the area where the funds are distributed.
- 7 This paper assumes that the boundary dividing ‘the youth’ and ‘the middle-aged’ is the average age of marriage or having the first child and that the boundary dividing ‘the middle-aged’ and ‘the aged’ is the average age of retirement.
- 8 In gross terms, the GDP ratio of fiscal liabilities is 176%, which is the highest in OECD countries, and in net terms, the ratio is almost equal to the one in Italy that is ranked highest (OECD, ‘*Economic Outlook*’ No. 80, 2006).
- 9 The net lifetime benefits of the generation of 60 years and over is, on average, about 49 million yen (or 12.6 times GDP per capita) while that of the future generations is about -46 million yen (or -11.9 times GDP per capita) (as at the 2003 fiscal year).
- 10 In the light of this view, an increase in expenditure or a tax cut should benefit not only living generations but also future generations. Under the assumption noted in endnote 5, therefore, the lifetime benefits of living generations may be essentially overestimated while that of future generations may be underestimated.
- 11 The ratio of benefits to burden of the generation of 60 years and over per year has been about 2.5 since 1980 while those of the younger generations have continued to fall for more than 30 years, which results in all the benefits of these generations being smaller than the burdens. Incidentally, it should be remembered that the estimate by Cabinet Office Japan (2001) includes the flow between generations and that hence the total benefits of the public are bigger than the total burden in a situation where net fiscal liabilities are positive.
- 12 There is no comprehensive indicator of the flow among each age group. Although exceptional, taxation differs by age as some amount of tax is deducted for old-age pensioners. Meanwhile, a reduction in income gap by the social security system mainly causes the flow between age groups. However, this system partly causes the flow among each age group as the contribution rate of ‘the employees’ pension plan’ differs by income, for example.
- 13 In Japan, unmarried persons having very few children, the increase in the number of those persons has a great effect on the decline in fertility.

- 14 It seems that the fundamental cause of the reduction mentioned in the text lies in the true nature of humankind. In other words, the human desire that one wants to live without restraining by others seems to reduce the need to raise a family. Nevertheless, family brings spiritual satisfaction, and therefore this need will never disappear.
- 15 Possibly, the rising percentage of service industries might be caused by a rise in the standard of living over a long period. Nevertheless, this paper assumes that service industrialisation is one aspect of the structural changes in economy and society because the industrialisation would have progressed during the last part of the Edo period in Japan.
- 16 The unemployment rate rose substantially since 1994 (although it tends to fall recently), particularly in twenties (Figure 3). Meanwhile, for the same period the wage level in twenties has levelled off (although that in thirties and over has fallen slightly) (Figure 4). A relatively low employment rates in thirties and over reveal that only a few of them exited from the labour market in spite of deteriorated economic conditions. This fact, together with the inflexible downward trend of wages, has adversely influenced the number of new entrant to the labour market, particularly of the youth.
- 17 D'Addio and Mira d'Ercole (2005) notes that some policy change raises the fertility rate of Japan to a level of 2.0 at highest, which reveals that the fertility rate would not exceed the replacement level even if 'optimal' policies were adopted.
- 18 In this paper, not only goods but also services fall into the category of the term 'material'.
- 19 Yoshikawa (2003) notes that new goods and services, among other things, have the potential to make an economy continue to grow through removing the restriction of demand, in other words, the removal of the restriction performs an important role in long-term economic growth. Under the circumstances mentioned in the text, however, the fact seems to be significant that the removal was becoming hard.
- 20 If focusing on the amount of potential demand for unknown goods and services, this should be defined as the 'economic' trends. However, the trends are founded on the revealed preferences of people about their lifestyle, that is, social conditions. This paper therefore defines such conditions as 'the maturation of economy and society'.
- 21 Kito (2000) notes that from a historical viewpoint it is obvious that the stagnation of population in Japan is one aspect of the maturation of society.
- 22 This means the environment that is inherited from one's family regardless of their wishes, and includes their economic environment in childhood and their inherited property.
- 23 The worldwide decline in fertility would reflect this fact. The average of the fertility rates in the world declined from 5.02 in 1950-55 to 2.65 in 2000-05; when the average in developed countries was 1.84 compared to 2.07 in developing countries (Cabinet Office Japan, 2006b).
- 24 Kito (2000) notes that Japan experienced four waves of population change historically, which are caused by the shift of civilisation system such as the shift from the agricultural economy and society to the industrial one. He seems to assume that when the total amount of affluence in a country reaches the upper limit under the existing civilisation system, potential demand for unknown goods and services will restart to increase, thereby strongly stimulating technical development, and as the result, the civilisation system will shift to a new one.
- 25 Ihori (2001) notes this. In addition, Yoshida (1997) argues in a similar way.
- 26 This would generally reduce the burdens of the youth and the middle-aged. In the meantime, the review of the flow between generations would generally result in some increase of those burdens as noted above, and consequently, the total burdens of those generations may not decrease (or will decrease by a small margin at best).

- 27 This means the part of the property that the descendant is permitted to transmit through succession in spite of the estate's intention.
- 28 The children brought up in an affluent family will come into a rich inheritance by virtue of their circumstances over and above the property bequeathed by their parents or given by them while alive. It should be therefore noted that there is a limit to reviewing the inheritance system in order to revitalise the economy and society.

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