

Japan's Economic Outlook and Challenges for 2020 and Beyond

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Summary

1. Based on its stance that there can be no fiscal consolidation without economic revitalization, the Abe administration has given priority to raising Japan's growth rate. Of course, there is little scope for further monetary easing, which has been the mainstay of government policy so far, and it will be difficult to raise the growth rate through macroeconomic measures. Because government policy has hitherto targeted the expansion of tax revenues through economic growth, efforts to implement an in-depth reform of the expenditure structure have been postponed. As a result, the initial goal of achieving a positive primary balance by fiscal 2020 is now close to impossible.
2. From 2022 onwards, Baby Boomers will start to move into the latter-stage elderly age group (75 and older), while second-generation Baby Boomers will start to move into the 65-plus age group from the mid-2030s onwards. These trends are expected to cause an accelerating decline in the working-age population. This is reflected in predictions of significantly slower economic growth, accompanied by major increases in social security expenditure, especially medical and nursing care. If the current situation is allowed to continue, the primary balance is likely to start expanding from fiscal 2020 onwards, and it will become impossible to halt the rise in the ratio of public debt to GDP.
3. Given that fiscal management is likely to become increasingly difficult from the 2020s onwards due to an aging-related decline in household savings, the government needs to move as quickly as possible to provide a roadmap for fiscal consolidation. To achieve fiscal consolidation solely by raising the consumption tax rate, the rate would need to be lifted to at least 20% by 2030 under the existing economic structure. If a sustained reduction in public debt and the introduction of reduced tax rates are added to the mix, the consumption tax rate would need to be raised even further.
4. One consequence of this situation is that it will be necessary to curb increases in national health care and nursing care costs, which are expected to expand substantially in the years ahead. However, while the government could limit medical consultation fees, modify the high-cost medical treatment system, or raise the copayment ratio under the healthcare system for the late-stage elderly, such measures are likely to yield only limited reductions in the burden on the national treasury. Similarly, measures relating to nursing care, such as changes to the scope of change the benefits under the nursing care insurance scheme, would have only a limited effect in terms of the reducing the burden on the national treasury, since the number of people requiring nursing care is expected to rise considerably, which means that it would be difficult to achieve major reductions in social security expenditure.
5. For these reasons, the government needs to target not only expenditure reductions, but also revenue growth resulting from an economic upswing. The factors that produce economic growth are labor inputs, capital stocks, and total factor productivity. Looking first at labor inputs, it should be possible to increase the labor participation rate for women, especially those in their 30s and 40s. However, even if this could be achieved, the economy will inevitably come under pressure from the shrinkage of Japan's working population, which will fall by around 0.4% in the 2020s and by 0.5-0.9% in the 2030s. As far as capital stocks are concerned, the investment efficiency of private capital expenditure has improved thanks the limitation of investment in recent years, which means that a certain amount of growth can be expected, especially in the

manufacturing sector. Of course, public fixed investment assets are unlikely to increase substantially, since despite severe budgetary constraints, the government will be forced to give priority to the replacement of existing social infrastructure from the mid-2020s onwards. This means that high economic growth would require a major improvement in total factor productivity (TFP). However, the last time that TFP rose to around 2% was during the bubble era in Japan, and during the IT and housing bubbles in the United States. Moreover, changes in the industrial structure will reduce the likelihood of a significant rise in TFP. For example, demographic aging will create increased demand for nursing care, which is a low-productivity activity.

6. From these perspectives, the government's vision of an economic rebirth with real growth in excess of 2% seems unlikely to be achieved. Of course, if the government implements various reforms, it should just be possible to achieve solid growth, with a real growth rate of 1% and a nominal growth rate of around 2%, by the 2020s. If growth on this level could be achieved, it would be possible to limit future increases in the consumption tax rate to the mid-10% range.
7. One urgent requirement if Japan is to achieve this level of growth will be workstyle reform. Japan's work force is expected to become more evenly divided between males and females, which means that men will need to become more involved in child care. That will not be possible without further efforts to reduce long working hours. Also, with the number of young workers falling, companies will need to eliminate seniority-based promotion and flatten their organizations. Additionally, it will be necessary to change university functions to ensure that young people are work-ready when they join the work force. With the aging of second-generation Baby Boomers, many of whom are in informal employment, Japan will also need to expand the debate over optimal social policies, such as the introduction of a basic income system. In addition, Japan will need to consider whether or not to accept more foreign workers, from the perspectives of inducing innovation through diversification, and easing labor shortages. Furthermore, since a high percentage of aged people in Japan are fit and healthy, the age at which people can start to receive pension payments should be raised from 65 to 67 or 68.
8. From an industrial policy perspective, the improvement of productivity in non-manufacturing industries is an imperative. Many non-manufacturing industries are labor-intensive and are facing increasingly serious labor shortages. It should be possible to raise productivity by effectively using new technologies, such as the IoT and AI, to raise capital equipment ratios. That would require the development of business environments in which new technologies can be used, and the training of management personnel. Measures targeting small and medium enterprises will also need to be changed. The fact that added value per worker in small and medium enterprises is significantly lower than in large enterprises is one of the reasons for the overall low level of macroeconomic productivity. To improve the productivity of small and medium enterprises and create more robust corporate groups, the government will need to change its stance of providing excessive protection, and shift from a policy of avoiding business failures to one of facilitating worker reemployment. This would require measures to facilitate circulation in the labor market, including the creation of a reemployment market, and the improvement of training systems.

1. Introduction

Having taken the position that there can be no fiscal consolidation without economic revitalization, the Abe administration has given priority to raising Japan's growth rate. However, the government has not shown great enthusiasm for the achievement of fiscal consolidation through reforms, including taxation and social welfare reforms. In its efforts to raise the level of economic growth, the government has relied heavily on monetary policy while placing less emphasis on growth strategies. With the benefits of monetary easing now starting to wind down, it will be difficult to lift the growth rate further. As a result, while the *Economic and Fiscal Projections for Medium to Long Term Analysis* released by the Cabinet Office in January 2017 assume that significantly higher growth will continue, the target date for achieving primary balance surplus has been pushed back to fiscal 2023 or later. In effect, the government has abandoned what was almost an international pledge to achieve a fiscal surplus by fiscal 2020.

Fiscal 2020 was originally chosen as the target year because the achievement of fiscal consolidation by that year was seen as essential in view of forecasts of a major increase in social security expenditure as the Baby Boom generation starts to move into latter-stage elderly age group from 2022 onwards. If the government fails to carry out social welfare reforms and continues to postpone the pain through stopgap measures, Japan will eventually face fiscal collapse. Furthermore, concern about the sustainability of social security systems and fiscal management is impeding positive consumption activities on the part of households, especially those in younger age groups. This factor has become a drag on the economy.

Given this situation, the achievability of a real growth rate target above 2% under the banner of a total emergence from deflation may not be especially high. Not only is the government using its commitment to that target as an excuse each time it postpones the consumption tax rise, but it is also delaying measures to reduce uncertainty about the future. There is a risk that this behavior will negate the benefits of the macroeconomic policies that the government has implemented so far. In this sense, the government needs to switch to a policy stance that is more in keeping with the real economic situation, by working steadily toward fiscal consolidation based on a more realistic growth forecast.

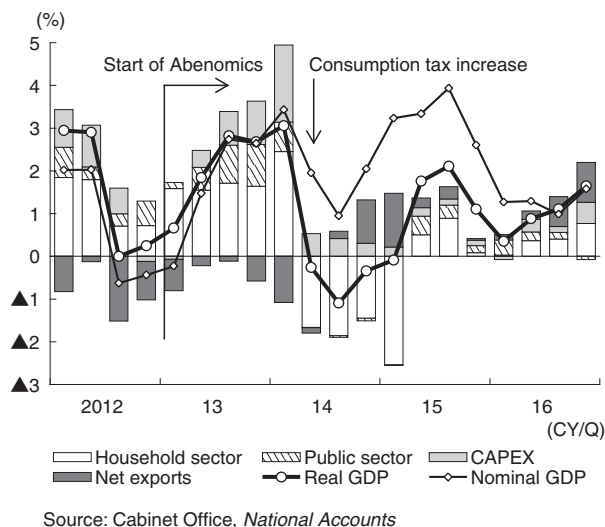
This article will present a more achievable economic and fiscal forecast for Japan from 2020 onwards. Based on that forecast, we will consider the policies that Japan needs to follow by examining a number of questions, including the types of policies needed to raise the growth rate, and the extent to which the government needs to tighten fiscal policy to avert a fiscal collapse.

2. Limitations of Abenomics

(1) Growth Rate, Inflation

We will begin by looking at economic performance since the establishment of the second Abe administration. After taking office in December 2012, the second Abe administration launched "Abenomics," a policy approach based on the "three arrows" of bold monetary easing, flexible fiscal policies, and growth strategies. Initially the growth rate accelerated to +3.1% year on year in the January-March quarter of 2014, in response to the correction of a significantly overvalued yen through qualitative and quantitative easing by the Bank of Japan under its new Governor, Haruhiko Kuroda. Additional impetus was provided by aggressive fiscal measures, including increased public investment and a corporate tax cut. Another factor was panic demand ahead of the consumption tax increase to 8% in April 2014 (Fig. 1). The GDP deflator, which had been consistently negative since the January-March quarter of 1998, except for the period during the oil price slump immediately

Fig. 1 Contributions to Japan's Real GDP by Demand Item (Year on Year)



after the onset of the global financial crisis, moved into positive figures. This ended the pattern of real growth higher than nominal growth.

Of course, the economy rapidly lost momentum after the consumption rate was raised in April 2014, due to a reactionary downswing following the panic demand surge ahead of the increase, as well as a decline in households' real purchasing power as a result of the increase. The economy continued to show strong signs of stagnation, even after the impact of the consumption tax rise began to fade from the spring of 2015 onwards. There is now evidence that Japan has not yet completed its emergence from deflation. For example, the GDP deflator, which had shifted to positive figures on a year on year basis, has returned to a negative trend since the July-September quarter of 2016.

While this economic stagnation was triggered by the April 2014 consumption tax increase, it continued ever after the effect of the increase started to wane in fiscal 2015. There are several reasons for this. First, with companies building global supply chains, a weaker yen is less effective as a driver for real exports. Second, monetary policies designed to produce a massive increase in the monetary base failed to lift the expected inflation rate. Third, the Chinese economy, which had emerged as the driver of the world economy, began to slow down. Fourth, the failure to adopt significant growth strategies, such as bold regulatory reforms, prevented business sector growth expectations from rising, with the result that there was no major expansion of investment or wage increases. Fifth, consumption has lacked strength, especially in younger age groups, due to an increasing social security burden and uncertainty about the future.

An analysis of Japan's potential growth rate since the launch of Abenomics shows that the decline in labor inputs has started to slow, thanks to the entry of women into the labor market, the continuing employment of Baby Boomers, and other factors. However, the growth of total factor productivity has slowed, with the result that the potential growth rate has remained unchanged at +0.8 year on year since the April-June quarter of 2012 (Fig. 2). In the absence of policies to strengthen the growth base, the economy has been losing momentum since the effects of bold monetary easing and aggressive fiscal expenditure began to wane.

Fig. 2 Japan’s Potential Growth Rate

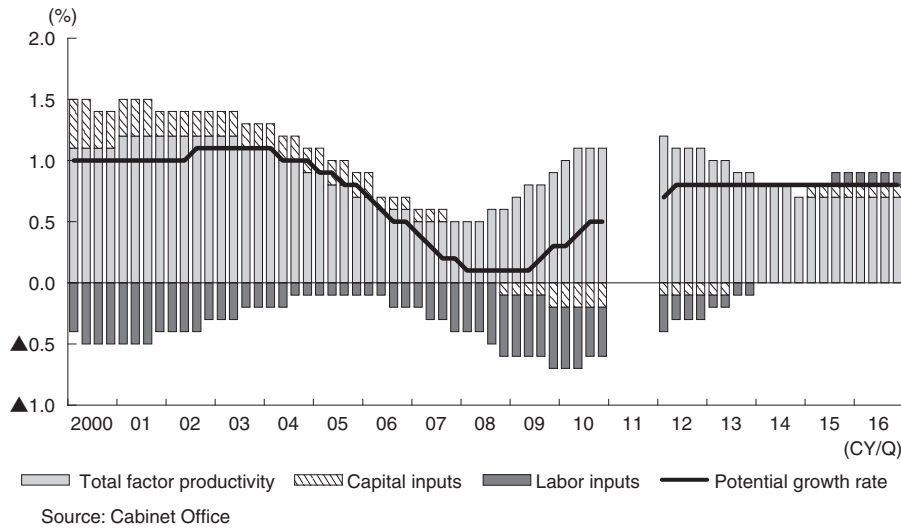
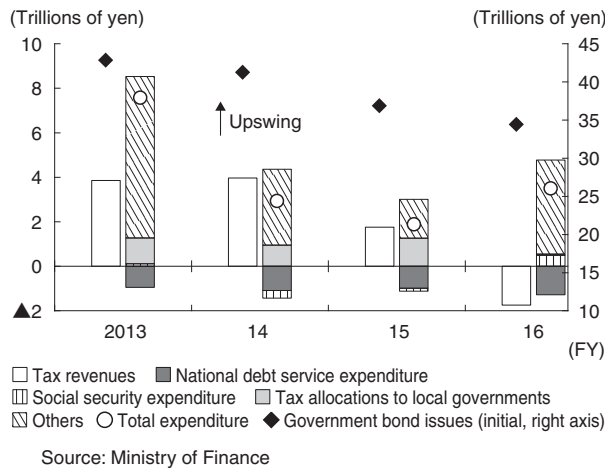


Fig. 3 Gap between Initial and Actual Budgets



Notes: The figure for fiscal 2016 represents the difference between the initial budget and the third supplementary budget.

(2) Achieving Fiscal Consolidation

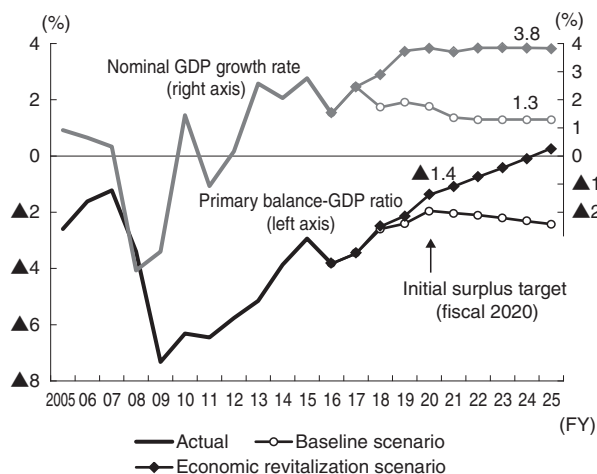
Not only has the growth rate started to taper, but there has been little significant progress toward fiscal consolidation. The economic expansion that followed the launch of Abenomics and the resulting increase in tax revenues have brought a steady reduction in government bond issues, from 42 trillion yen in fiscal 2013 to 34 trillion yen in fiscal 2017. The Abe administration has used the increase in tax revenues compared with the original budget for additional expenditure under a supplementary budget, with the result that there has been no progress toward the reduction of government spending (Fig. 3). This means that when tax revenues fall below the projected level due to an economic slowdown, as happened in fiscal 2016, the fiscal deficit increases precipitously, forcing the government to implement additional government bond issues under a supplementary budget. As a result, the primary balance deficit, which had been shrinking steadily, has now started

to expand again. This means that the initial goal of achieving primary balance surplus by fiscal 2020 under an economic revitalization scenario based on nominal growth over 3% and real growth over 2% is now essentially unachievable (Fig. 4).

Faced with this situation, the Abe administration has essentially abandoned its goal of achieving primary balance surplus by fiscal 2020, and is instead considering a new goal based on fiscal consolidation through the sustained reduction of the ratio of public debt to GDP. However, in September 2016, the Bank of Japan introduced quantitative and qualitative monetary easing with yield curve control and is implementing a monetary policy based on a long-term interest rate level of around 0%. This means that if Japan can achieve positive growth in nominal terms, the ratio of public debt to GDP will fall unless there is a substantial increase in fiscal expenditure. A change in the fiscal consolidation target to one based on the continuous reduction of the ratio of public debt to GDP would in effect signal a weakening of the government’s commitment to fiscal consolidation. From a long-term perspective, since the nominal growth rate tends to converge with the long-term interest rate, to keep the economy on track to fiscal consolidation, the government will ultimately need to achieve primary balance surplus.

A falling birthrate and demographic aging will make it increasingly difficult for Japan to lift its growth rate and work toward fiscal consolidation in the 2020s. Even if the government manages to balance the accounts in the short term by relying on monetary easing by the Bank of Japan, the people—especially the generations currently in the work force—will ultimately pay the price if it neglects to build a mechanism to strengthen the growth base and move Japan toward fiscal consolidation. We will now look at the negative demographic trends that will assail Japan in the 2020s.

Fig. 4 Nominal GDP Growth Rate and Ratio of GDP to Primary Balance



Source: Cabinet Office, *Economic and Fiscal Projections for Medium to Long Term Analysis* (submitted to the Council on Economic and Fiscal Policy on January 25, 2017)

Notes: The figures include fiscal expenditure on recovery and reconstruction, and fiscal resources.

3. Full-Scale Negative Impacts from Demographic Trends in the 2020s and Beyond

(1) Population Estimates

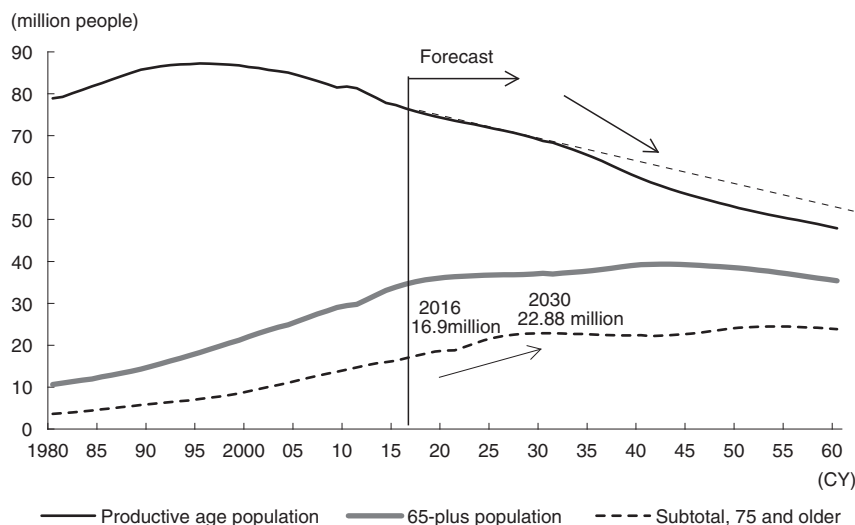
According to a 2017 estimate by the National Institute of Population and Social Security Research, Japan’s total population peaked in 2007. It has continued to decline ever since and is expected to fall below 100 million in 2053 (medium birthrate, medium mortality). Population decline is already causing various problems, especially in regional areas, and will continue to accelerate.

Of particular significance from a demographic perspective is the fact that the postwar Baby Boom generation born between 1947 and 1949 will start to enter the latter-stage elderly age group (75 and older) from 2022 onwards (Fig. 5). This means that the 75-and-older population will increase by almost 6 million, from 16.9 million in 2016 to 22.88 million in 2030. The productive age population (15-64), which makes up the bulk of the work force, began to decline after reaching a peak of 87 million in 1995 and is already down to around 76 million. The pace of decline will accelerate when second-generation Baby Boomers move into the 65-plus age group in the mid-2030s, and the productive age population is expected to fall to below 60 million in 2040 and below 50 million in 2056.

(2) Economic Impact

Obviously this massive population decline and demographic aging will have a negative impact on the economy. We will examine the outlook for the working population, using population forecasts for each group based on medium birthrate and medium mortality estimates. Assuming that the labor force participation rates for each group will remain unchanged at 2016 levels, the working population will shrink by an average of 0.5% per year until 2020. The pace of decline is expected to

Fig. 5 Demographic Forecast for Japan (Medium Birthrate, Medium Mortality)

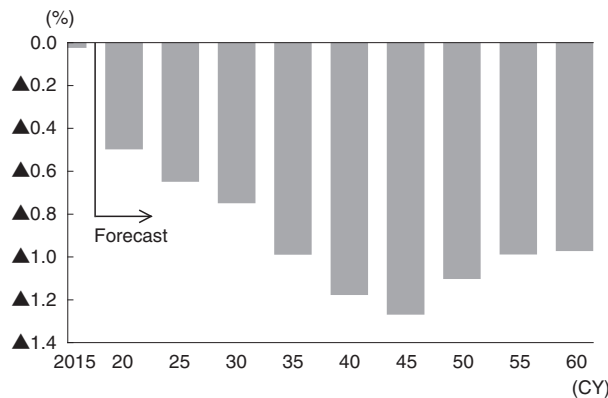


Source: Ministry of Internal Affairs and Communications, *Population Estimates*, National Institute of Population and Social Security Research, *Population Projection for Japan: 2016-2065 (April 2017)*

accelerate thereafter, reaching averages of around 1% per year by the mid-2030s and 1-1.5% per year in the first half of the 2040s (Fig. 6).

Even if the working population declines, overall economic growth will still be achievable, provided that there is a corresponding improvement in labor productivity. The real GDP growth rate per worker was +0.9% year on year in 2015 and has averaged +0.7% over the past five years (Fig. 7). If rate of increase in labor productivity remains at its present level, it should be possible to maintain positive growth in the 2020s, when the rate of decline in the working population will be 0.5-0.9%. However, the rate of increase will be permanently negative from the 2030s onwards. In the second half of the 1990s and the first half of the 2000s, real GDP per worker was generally positive in the mid-1% range year on year. Assuming that the rate of decline in the working population will peak out in the mid-1% range in the mid-2040s, it should be possible to avoid chronic negative growth provided that productivity growth on that level can be achieved.

Fig. 6 Forecasted Rate of Decline in the Working Population

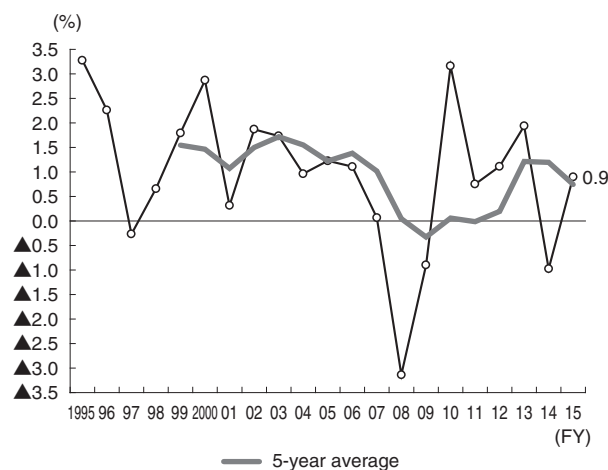


Source: Ministry of Internal Affairs and Communications, *Labour Force Survey*, National Institute of Population and Social Security Research, *Population Projection for Japan: 2016-2065 (April 2017)*

Notes 1: Future population figure are based on medium birthrate and mortality estimates.

Notes 2: The forecasts assume that the working population ratios for each age group will remain at the 2016 levels for both males and females.

Fig. 7 Real GDP Growth Rate per Worker (YoY)



Source: Cabinet Office, *National Accounts*

(3) Fiscal Impact

The impact of population decline and demographic aging will not be limited to the economy. In fact, the fiscal effects will be more severe than the economic effects. For example, even if the national population declines, per capita living standards will rise provided that there is steady growth in real GDP per capita. However, population decline and demographic aging will deal a fatal blow to government finances if there is a negative legacy, including public debt, and pensions and other social systems that depend on subsequent generations to carry the cost.

The factor that determines the impact on social security expenditure in Japan is the healthy life expectancy, which in Japan is currently 75. Beyond that age, people become increasingly reliant on healthcare and nursing care, leading to major increases in per capita expenditure on medical treatment and long-term care benefits. Any major growth in the 75-plus population will therefore inevitably lead to substantial increases in social security expenditure. Furthermore, under Japan's healthcare system, people aged over 75 are covered by the healthcare system for latter-stage elderly people, under which the percentage of costs borne by the national treasury is much higher than under insurance schemes. This means that the growth of the over-75 population will further accelerate growth in the burden on the national treasury.

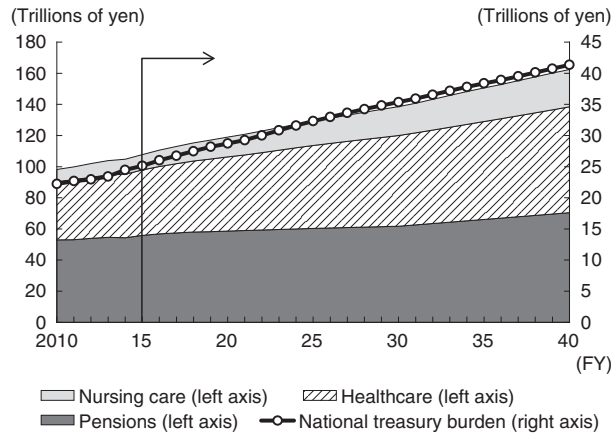
If we estimate per capita national healthcare and nursing care costs going forward using population forecasts by age group based on medium birthrate and medium mortality estimates, we find that national healthcare expenditure will rise from 40.8 trillion yen in fiscal 2014 to over 50 trillion yen by around 2023, and to over 60 trillion yen by around 2032. These projections assume that per capita healthcare and nursing care costs will rise in proportion to a general increase in inflation (assumed to be 0.5% year on year) as Japan emerges from deflation, and qualitative improvements (the average rate of increase achieved in a deflationary environment over the past five years). Similarly, long-term care benefit expenditure is expected to expand from 9.6 trillion yen in fiscal 2014 to over 20 trillion yen by around 2033. Total social security expenditure, including pension benefits, will increase from 104 trillion yen in fiscal 2014 to 130 trillion yen in fiscal 2026, and to over 150 trillion yen in fiscal 2035. This will inevitably result in a major increase in the burden on the national treasury, which will rise from 25 trillion yen in fiscal 2015 to over 30 trillion yen in fiscal 2022, and over 35 trillion yen in fiscal 2030 (Fig. 8).

If this situation is allowed to continue, far from reaching goal of primary balance surplus by fiscal 2020, the government will face a return to further deterioration in primary balance as the benefits of increased tax revenues from the consumption tax rise scheduled for October 2019 start to wane from fiscal 2021 onwards. An estimation of primary balance (general account basis) and the ratio of outstanding straight government bonds to nominal GDP indicates that the balance will start to worsen again in fiscal 2021, and that the deficit will expand to 4% of GDP by fiscal 2040. This estimation is based on several assumptions, including ① no change in labor participation rates from fiscal 2019 onwards, ② demographic trends based on a medium birthrate and medium mortality, ③ +0.9% year on year growth in real GDP per worker, and ④ a year on year deflator of +0.5%.

Furthermore, the balance of straight government bonds as a percentage of GDP will continue to rise and is expected to reach over 200% from fiscal 2030 onwards (Fig. 9). Public debt, including central and regional government liabilities, is likely to climb to around 250% of GDP over the same period.

By the 2020s, it is likely to become increasingly difficult to absorb fiscal deficits within Japan. An analysis of savings-investment balances for each sector shows that households, which are being affected by demographic aging, became net investors (savings deficit) in fiscal 2013, when panic buying occurred ahead of the consumption tax rise, and that household savings remained basically static in both fiscal 2014 and fiscal 2015. Because of the falling birthrate, housing investment has

Fig. 8 Outlook for Pension, Healthcare, and Nursing Care Expenditure



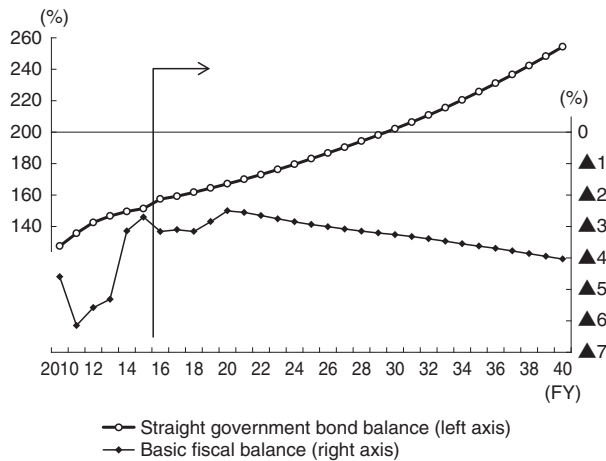
Source: Compiled by JRI using research data from the Ministry of Health, Labour and Welfare, Ministry of Finance, Ministry of Internal Affairs and Communications, and National Institute of Population and Social Security Research

Notes 1: Expenditure is based on actual figures up to fiscal 2014 and estimates from fiscal 2015 onwards. The burden on the national treasury is based on actual figures up to fiscal 2015 and estimates from fiscal 2016 onwards.

Notes 2: Pension cost estimates are based on Case G in Ministry of Health, Labour and Welfare, *FY 2014 Financial Verification*.

Notes 3: Healthcare and nursing care costs were estimated by multiplying the estimated population (medium birthrate, medium mortality) by the current benefit rates for healthcare and nursing care by age group. It was assumed that per capita healthcare expenditure would rise by 2.8% per annum until 2020, by 2.6% per annum in the 2020s, and by 2.3% per annum in the 2030s, and that per capita nursing care expenditure would increase by 0.5% per annum.

Fig. 9 Outlook for Primary Balance and Straight Government Bond Balance as Percentages of GDP



Source: Compiled by JRI using data from the Cabinet Office, Ministry of Finance and other sources

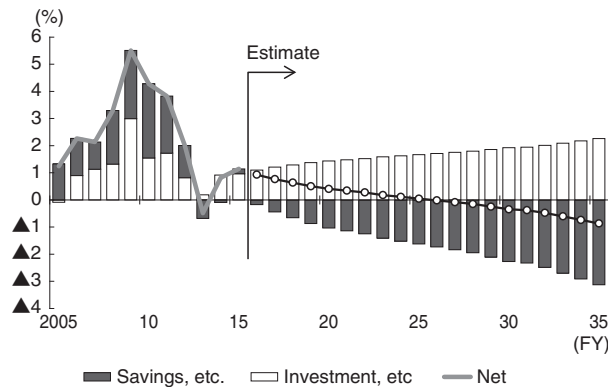
Notes 1: General account basis, final accounts up to fiscal 2015, supplementary budget basis for fiscal 2016.

Notes 2: Primary balance = revenues (excluding public bonds and surplus from previous fiscal year) – general expenditure (excluding government bond costs and transfers from special accounts to cover shortfalls in the settlement of the final accounts)

Notes 3: Nominal GDP up to fiscal 2018 is based on estimates by JRI. Nominal GDP figures for fiscal 2019 and beyond assume constant labor participation ratios, demographic trends based on a medium birthrate and medium mortality, +0.9% year on year real GDP per worker, and a GDP deflator of +0.5%.

Notes 4: Estimates of the straight government bond balance assume an interest rate of 1%.

Fig. 10 Estimation of the Household Savings/Investment Balance (Percentage of Nominal GDP) Based on Demographic Trends



Source: Compiled by JRI using research data from the Cabinet Office, Ministry of Internal Affairs and Communications, and National Institute of Population and Social Security Research

Notes 1: The estimates were calculated through extrapolation based on the relationship between the population aged 65 and older and the savings ratio and net housing investment in fiscal 1994-2015, using population estimates based on a medium birthrate and medium mortality.

Notes 2: It was assumed that the land purchase portion of investment would remain static at the actual level in 2015 (-0.3%).

fallen below the level of fixed capital consumption. Households have remained net savers by a small margin because of a major decline in investment. However, an estimation of future trends in household savings and investment, based on the relationship between the percentage of the population aged 65 and older and the ratios of household savings and household investment to GDP, indicates that the downward trend in households savings since fiscal 2016 will become permanent, and that households are likely to start drawing down their savings on a net basis by the mid-2020s (Fig. 10).

Japan is unlikely to become unable to finance its national debt domestically overnight for a number of reasons, including the fact that the corporate sector is expected to remain in a net savings position due to limited growth expectations, and the likelihood that the Bank of Japan will continue to buy up substantial amounts of government bonds for the time being, with the aim of completing Japan’s emergence from deflation. However, fiscal policy management will inevitably become increasingly difficult.

(4) The Required Consumption Tax Rate

From the 2020s onward, population decline and demographic aging are expected to create a challenging economic environment characterized by a slowing growth rate, expanding fiscal deficit, and shrinking household savings. To prevent the fiscal situation from creating turmoil, the government will need to raise the consumption tax rate. A high consumption tax rate is seen as the source of funds for social security, which is the main cause of the fiscal deficit.

Our estimate of the size of the increase that will be needed was based on certain economic assumptions. From an economic perspective we assumed that labor productivity would remain at around the present level, and that the nominal growth rate would continue to slow gradually due to population decline (labor participation ratio unchanged, per capita real GDP of 0.9%, deflator of 0.5% per annum). From a fiscal perspective we assumed that social security expenditure would continue to expand, but that other expenditure items would remain static as percentages of GDP.

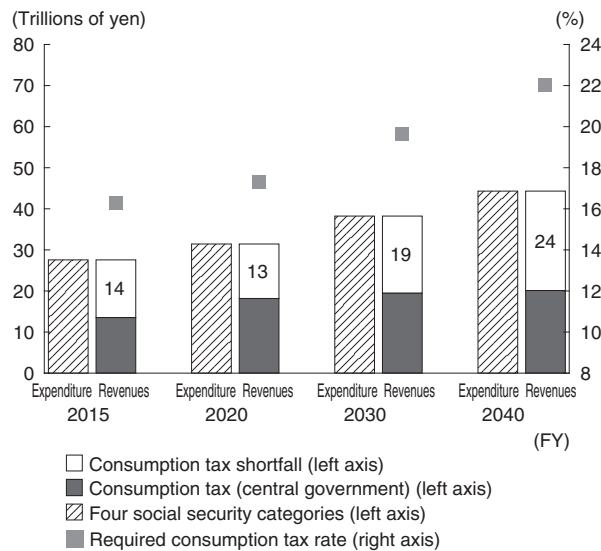
This estimation indicated that cost to the national treasury relating to the four social welfare categories (children and child-raising, healthcare, nursing care, pensions) will increase from 26.8 trillion yen in fiscal 2015 to 31.4 trillion yen in fiscal 2020, 38.2 trillion yen in fiscal 2030, and 44.3 trillion yen in fiscal 2040.

Revenues raised through the consumption tax to pay for this expenditure amounted to just 13.5 trillion yen in fiscal 2015, and currently there is a shortfall of 13.3 trillion yen. Even assuming that the consumption tax rate will be raised from 8% to 10% in October 2019, based on the economic growth rate predicted above, the central government’s share of consumption tax revenues will still amount to less than 30 trillion yen in 2040, and the shortfall will expand to over 20 trillion yen. Based on this estimation, the consumption tax rate needs to rise to the high end of the 10% range by 2020, and to over 20% from 2030 onwards. Otherwise, there will not be enough money to fund expenditure on the four social security categories (Fig. 11).

Several factors are not reflected in this estimation, including the effect of the reduced tax rate, and the fact that in order to achieve a steady reduction in the public debt balance, the government will either need to raise more tax revenues than are needed for the four social security categories, or to reduce expenditure. This means that the government will not be able to create a roadmap for fiscal consolidation unless it raises the consumption tax rate to at least 20% during the 2020s, and to the high end of the 20% range from the 2030s onwards.

As happened in fiscal 2014, however, a consumption tax hike on this scale would curb demand

Fig. 11 Consumption Tax Rate Required if the Current Economic and Fiscal Structures Continue



Source: Estimated by JRI using data from the Cabinet Office, Ministry of Finance, Ministry of Internal Affairs and Communications, and other sources

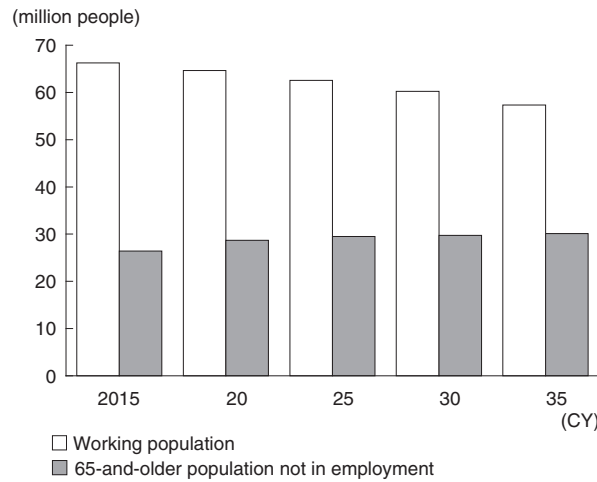
Notes 1: An increase in the consumption tax rate from 8% to 10% in 2020 is reflected in the figures.

Notes 2: Existing economic conditions are assumed to include labor productivity of +0.9%, a working population based on a medium birthrate and medium mortality estimates, and a GDP deflator of 0.5% per annum.

Notes 3: Social welfare expenditure on healthcare and nursing care is based on medium birthrate and medium mortality estimates. Per capita expenditure is based on growth over the past five years plus the GDP deflator in the case of healthcare, and on the GDP deflator in the case of nursing care. Pensions are based on Case G in the *FY 2014 Financial Verification*. Childcare is calculated as 0.4% of nominal GDP.

Notes 4: The reduced tax rate was not taken into account in the calculation of the required consumption tax rate.

Fig. 12 Forecasts of the Working Population and the 65-and-Older Population not in employment



Source: Ministry of Internal Affairs and Communications, *Labour Force Survey*, National Institute of Population and Social Security Research, *Population Projection for Japan: 2016-2065 (April 2017)*

Notes 1: Population forecasts are based on medium birthrate and medium mortality estimates.

Notes 2: The forecasts assume that the percentages of each age group in the working population for both males and females will remain at the 2016 levels.

by reducing the real purchasing power of households through inflation. Based on the “Ricardian neutrality” proposition, the achievement of fiscal consolidation through a consumption tax increase would alleviate the concerns of those in younger age groups, who are becoming increasingly cautious in their consumption behavior because of fears about the future of social security. This would significantly reduce the negative economic impact. However, elderly people, especially pensioners who are no longer working, will make up a growing percentage of the Japanese consumer market (Fig. 12). Since inflation and a higher consumption tax rate would directly reduce the real purchasing power of pensioners, we cannot be certain that domestic demand would remain stable in the face of a major consumption tax hike.

This analysis shows that if economic growth remains at its present level, and if the government fails to reform social security systems, it will ultimately be forced to raise the consumption tax rate to over 20%. However, there is no guarantee the economy could withstand a tax increase on that scale, and the end result could be economic and fiscal collapse. To achieve both growth and fiscal consolidation, the government will need to reduce social security expenditure through various reforms, while also targeting the highest growth rate possible. We will now consider how far social security expenditure can realistically be reduced, and the extent to which an upswing in the growth rate can be anticipated.

4. Scope for Reducing Social Welfare Expenditure

(1) Unavoidable Rise in National Healthcare Expenditure

Of the four categories of social security expenditure, the ones that are expected to show major expenditure increases going forward are national healthcare and nursing care. The cost of pension benefits to the national treasury is expected to rise only gradually for a number of reasons. First, the Baby Boom generation, which is the biggest age group, has already reached pension age. Second,

increases in per capita benefits will be curbed by a macroeconomic sliding system (albeit at the cost of significantly reduced livelihood support under the pension system).

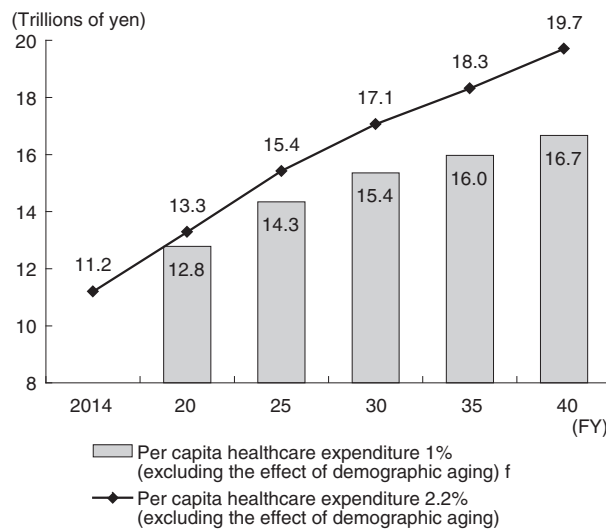
Expenditure on children and childcare support is not expected to cause a serious worsening of the fiscal situation going forward, in part because the number of children will decrease. Conversely, a major increase in the birthrate resulting from the success of various measures would have a positive effect on growth and fiscal consolidation in the long-term perspective, although it would be necessary to verify the costs and benefits. It would be unlikely to have a major negative impact on the future fiscal situation.

On the other hand, there will be a dramatic increase in national healthcare expenditure when the Baby Boom generation starts to move into 75-and-older age group in the 2020s. The percentage of people requiring nursing care will also rise gradually. Trends such as these will inevitably lead to increases in national healthcare expenditure and nursing care benefits. We will now consider the extent to which expenditure in these two areas can be curbed.

First, one way to curb national healthcare expenditure is to reduce medical fees. In the five years between fiscal 2009 and fiscal 2014, per capital national healthcare expenditure increased by an average of 2.6% per annum. If we exclude a +0.9% increase due to demographic aging, the actual increases was 1.7%. Over the same period, the GDP deflator showed negative growth of 0.3%, while the real GDP growth rate was +1.3%. The rate of increase in medical fees means either the quality of medical care rose faster than the real economy, or that the increase was excessive relative to national income growth. Even if the GDP deflator remains firmly positive on a year on year basis, if the rate of increase can be held to 1%, excluding the effect of demographic aging, the burden on the national treasury would be reduced by estimated 0.5 trillion yen in the period to fiscal 2020, by 1.7 trillion yen in the period to fiscal 2030, and by 3.0 trillion yen in the period to fiscal 2040 (Fig. 13).

Of course, an attempt to curb increases in medical fees resulting from higher productivity could have the effect of slowing technological progress. There would also be increasing resistance from providers of medical care. While the government obviously needs to work toward appropriate levels for medical fees, it would not be a good policy choice to make major reductions a permanent

Fig. 13 Curbing the National Treasury Burden by Curbing Medical Fees



Source: Estimated by JRI using data from the Ministry of Finance, Ministry of Health, Labour and Welfare, Ministry of Internal Affairs and Communications, and National Institute of Population and Social Security Research

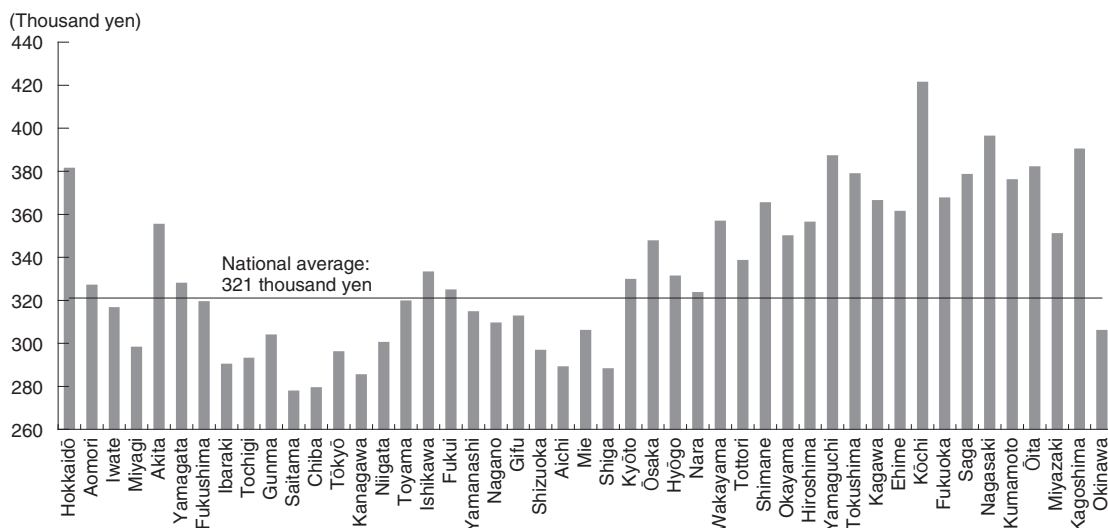
feature of measures to curb medical fees.

There is regional variation in per capita healthcare expenditure due to differences in disease types, numbers of hospital beds, and other factors. Total healthcare expenditure would be reduced by 2.0 trillion yen if expenditure in regions where it is above average could be brought into line with the national average (Fig. 14). However, the cost to the national treasury would be reduced only once and by just 0.5-0.6 trillion yen. Thereafter, healthcare expenditure and the cost to the national treasury would increase in step with demographic aging and the rate of increase in medical fees. While various measures are needed to reduce regional inequality, the development of a sustainable healthcare system will require the appropriate distribution of resources, including the achievement of appropriate numbers of physicians and hospital beds. If the government focuses excessively on the reduction of healthcare expenditure, there is a risk of harmful effects, such as shortages of doctors.

To reduce the healthcare burden on the national treasury, the government needs to keep increases in national healthcare expenditure as low as possible, while increasing the amount paid by patients. In this context, we need to consider the extent to which the government can reduce the cost to the national treasury of the high-cost medical treatment system and the healthcare system for latter-age elderly people, which are causing the burden on the national treasury to increase. Under the high-cost medical treatment system, copayments are subject to monthly limits, and insurance benefits are paid to cover any costs above that level. In recent years, Baby Boomers' incomes have started to fall due to retirement, and there have been significant increases in both the amounts of benefits paid, and also in the percentage of total of health insurance benefits (Fig. 15).

In response to this situation, the government has made changes to the high-cost medical treatment system for those aged 70 and older in fiscal 2017, including an increase in the copayment ceiling. Healthcare expenditure for Baby Boomers is likely increase further going forward, and the government is expected to modify the system from time to time, including further rises in the

Fig. 14 Per Capita Healthcare Expenditure by Region (FY 2014)



National medical expenditure could be reduced by 2.0 trillion yen by bringing expenditure in regions where it is above average into line with the national average.

Source: Ministry of Health, Labour and Welfare, *Heisei 26-nendo kokumin iryohi no gaikyo* [Overview of National Healthcare Expenditure in Fiscal 2014]

Notes: Per capita national healthcare expenditure has not been adjusted by age. As a result, expenditure in regions with high percentages of elderly people generally tends to be higher.

copayment ceiling. However, insurance benefits under the high-cost medical treatment system currently amount to little more than 2 trillion yen, and the burden on the national treasury amounts to only 0.7-0.8 trillion yen. The government will need to revise the system to prevent an accelerating rise in benefit payments. However, unless the system is entirely abolished, the contribution to fiscal consolidation would not be especially large.

Benefit payments under the healthcare system for the late-stage elderly aged 75 and older reached 13.4 trillion yen in fiscal 2014, including 12.7 trillion yen paid to people other than those with incomes similar to those of people still in the work force (co-payment about 10%). This has already swollen to over 80% of the level for those aged under 70 (15.2 trillion yen) (Fig. 16). If these

Fig. 15 High-Cost Medical Treatment Expenditure

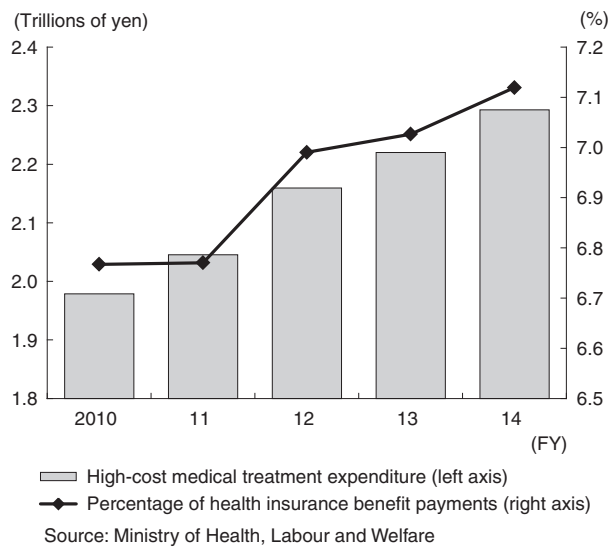
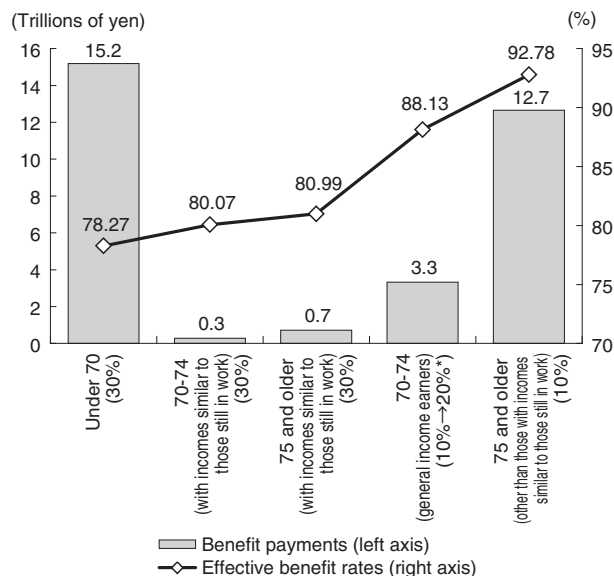


Fig. 16 Benefit Payments and Effective Benefit Rates by Age and Income Level (FY 2014)



Source: Ministry of Health, Labour and Welfare

Notes 1: Effective benefit rate = Medical insurance benefits / healthcare costs

Notes 2: The ratio for general income earners in the 70-74 age group has been raised to 20%, starting with those who have become 70 since April 2014.

systems are kept in their present forms, benefit payments will inevitably increase further when Baby Boomers start to move into the late-stage elderly age group from 2022 onwards.

To avoid this situation, the government has progressively raised the copayment level for people in their 70s from 10% to 20% since April 2014. If the copayment ratio for late-stage elderly is raised from the present level of 10% to 20%, benefit payments would be reduced by over 1 trillion yen, and the burden on the national treasury would be lightened by an estimated 0.4-0.5 trillion yen. Since healthcare expenditure for late-stage elderly will double by the late 2030s, the savings achieved by reducing benefits could be expected to increase progressively in step with demographic aging. However, as long as the copayment ratio remains at around 20%, the reduction of the cost to the national treasury would be around 1 trillion yen at most, and the contribution to fiscal consolidation would be limited.

(2) Changes Needed to the Scope of Nursing Care Insurance Coverage

After the age of 75, there is an accelerating increase in the percentage of people requiring care, and demographic aging will inevitably cause a major increase in the benefit payments. We will look at the methods available to curb nursing care costs, starting with care payments.

Nursing care costs per recipient have increased by an average of just 0.3% annually over the past five years. Since the average rate of increase in nursing care costs per person in each age group is close to zero, we can assume that most of this increment is attributable to a rise in the percentage of people who require nursing care as a result of demographic aging. As noted above, the average yearly GDP deflator during this period was -0.3%, which means that nursing care fees have been set roughly in step with inflation. This suggests that there is limited scope to curb increases in nursing care fees.

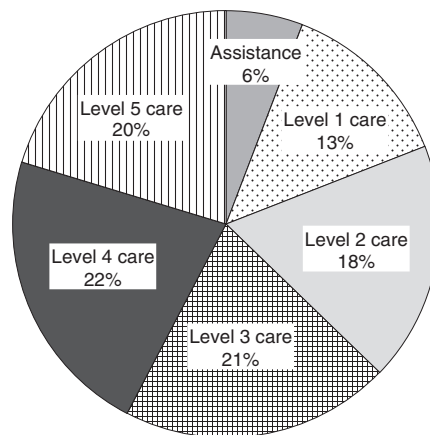
The retention rate for nursing care workers has always been low due to low wage levels. The Ministry of Health, Labour and Welfare estimates that there will be a shortage of 377,000 nursing care workers by 2025. Normally a shortage of nursing care workers would require a further rise in nursing care fees, and the reduction of nursing care fees would not be seen as an appropriate way to reduce the cost of nursing care benefits.

The scope of benefits under Japan's nursing care insurance system is seen as too broad by international standards. There are seven care categories—two for people requiring assistance, and five for those requiring nursing care. In Japan, benefits for all people requiring support or nursing care are paid through the insurance system. In Germany and South Korea, nursing care is provided under the social security system, as in Japan, while insurance benefits are limited to those requiring medium- or high-level nursing care.

An analysis of total nursing care insurance expenditure in fiscal 2014 according to the status of recipients shows that those requiring support and those requiring nursing care at levels 1 and 2, which are not covered by insurance in Germany and South Korea, accounted for 37% (Fig. 17). By changing the scope of insurance cover to the same levels as in Germany and South Korea, it would be possible to reduce the current level of nursing care benefits by 3.5 trillion yen, thereby lightening the burden on the national treasury by 0.8-0.9 trillion yen. As the 75-and-older population grows, the potential savings for the national treasury will increase year by year. Any move to narrow the coverage of the insurance system would probably be challenging from a political perspective. However, Japan's public insurance services are excessive by international standards, and steps should be taken to reduce this expenditure as much as possible, such as by transferring those requiring support or level 1 or 2 nursing care to private insurance.

By steadily implementing these measures, it would be possible to reduce national healthcare and nursing care costs to some extent. Of course, even if all of these steps were taken, the initial

Fig. 17 Breakdown of Total Nursing Care Insurance Expenditure by Recipients' Need Level (FY 2014)



Source: Ministry of Health, Labour and Welfare, *Kaigo hoken jigyo jokyo hokoku*
[Report on Status of Nursing Care Insurance Scheme]

reduction in the burden on the national treasury would be only 1-2 trillion yen, which would not solve the problem of insufficient fiscal resources to meet future increases in national healthcare and nursing care costs. The only way to bridge the shortfall in fiscal resources will be a tax increase. In the next section, we will consider the extent to which the economy's capacity to achieve growth and generate tax revenues can be raised.

5. Can the Economy Grow Faster?

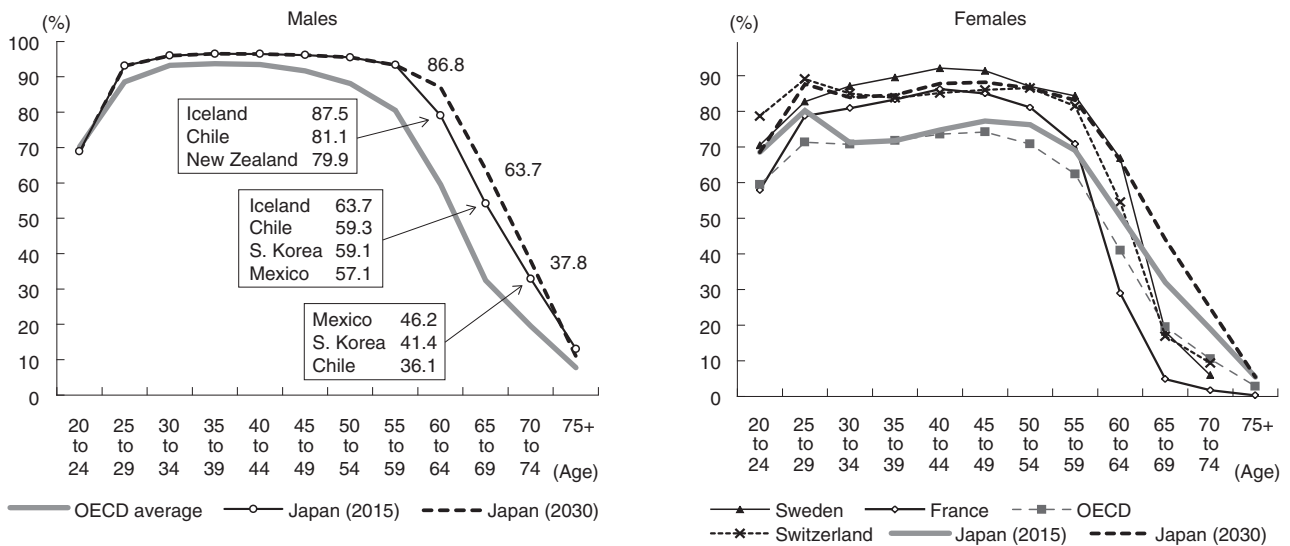
(1) Scope for Further Increases in Labor Force Participation

From a supply-side perspective, economic growth is defined in terms of growth in labor inputs and capital stocks, and total factor productivity for other items. We will look first at growth in labor inputs.

The demographic situation is unlikely to change significantly in the foreseeable future. Even if a substantial rise in the birthrate can be achieved, this would not start to have a positive effect on the economy through the working population until the mid-2030s. For this reason, current measures to curb demographic pressure on the economy will need to focus first of all on the improvement of labor force participation. In fact, Japan's labor force participation rate remained around the 63% level from the late 1970s until the mid-1990s. It began to decline in the late 1990s but bottomed out at 59.1% in 2012 and has now shifted to a gradual rising trend. This growth is being driven by women and the elderly. Female labor force participation bottomed out in 2012 and has since risen sharply. In addition, male work force participation, which until recently tended to fall continuously in step with aging, is now appears to have bottomed out, indicating that people aged 65 and older are starting to engage in employment. If the labor force participation rate continues to rise, there is a strong possibility that downward pressure on the economy due to demographic factors will be eased to some extent.

However, the outlook looks less optimistic if we compare male and female labor force participation rates in different countries (Fig. 18). The labor force participation rate for males is already high by world standards. There is a little room for improvement in the rate for those aged 60 and older, but the only countries with higher rates than Japan for those aged 70 and older are

Fig. 18 Labor Force Participation by Age in Japan and Other Major OECD Countries



Source: OECD, *Labour Force Statistics*

Notes: The figures are constant up to the age of 59. For people aged 60 and older, the unemployment rate is assumed to be constant, and the ratio was extrapolated in line with the trend. However, it was assumed that the current rate for the 65-69 age group had peaked out at the world's highest level.

Source: OECD, *Labour Force Statistics*

Notes: The unemployment rate is assumed to be constant, and the rate was extrapolated in line with the trend. However, it was assumed that the rate had peaked out at its current level in the countries with the highest levels in the OECD.

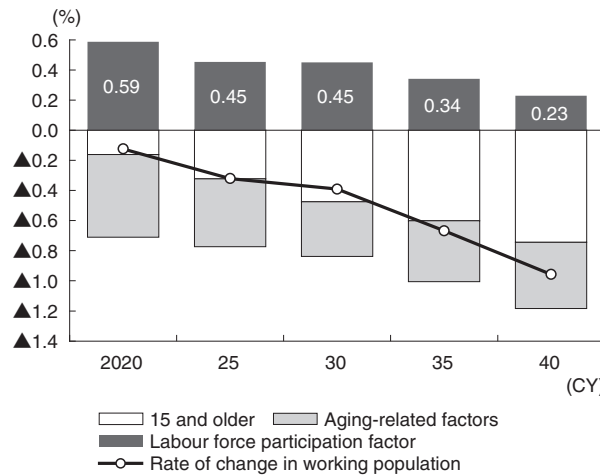
those with low income levels, such as Mexico, South Korea and Chile. This suggests that major growth is unlikely.

Japan's labor force participation rate for females is still very low compared with rates in Scandinavian countries, despite a recent upward trend in the rate for women in the child-raising age bracket (30s and 40s). Participation is likely to increase, in part because of improvements in childcare support, including the creation of more day care facilities.

Female labor force participation has risen due to a cyclical factor in the form of economic expansion, and policy factors, such as support for female participation in the work force. However, Japan is now approaching full employment, which means that cyclical factors are unlikely to lead to further increases in labor force participation. This means that any increase going forward is likely to be driven just by policy factors. Moreover, the labor force participation rate can be expected to level out after it reaches the same level as Sweden and Switzerland, where participation rates are highest in every age group. This means further substantial rises in labor force participation can be expected in every age group, and that the so-called M-curve will largely disappear by 2030. Of course, as demographic aging advances, a growing percentage of the population will advance into the higher age groups, which have low labor force participation rates. As a result, the overall participation rate for females will inevitably decline.

On this basis, rising labor force participation rates for women and the elderly could boost Japan's working population by 0.4-0.5% per year in the 2020s and by 0.2-0.4% per year in the 2030s. However, this growth will not be sufficient to offset the negative effects of population decline and aging, with the result that the overall figure will inevitably fall by around 0.4% per year in the 2020s, and by around just under 1% per year in 2030s (Fig. 19).

Fig. 19 Outlook for Japan’s Working Population

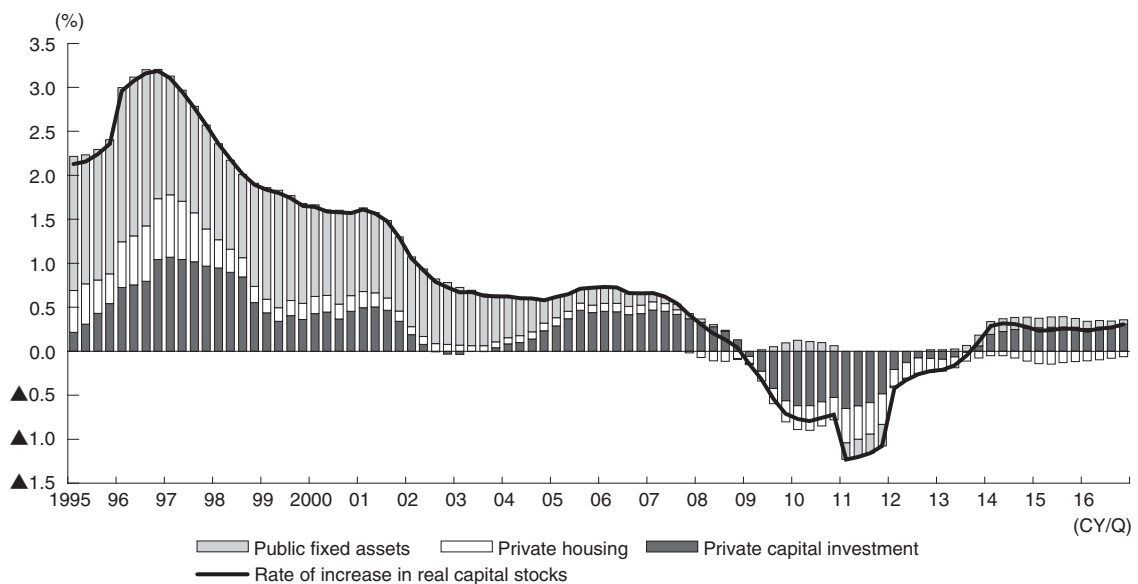


Source: Compiled by JRI using data from the OECD, the National Institute of Population and Social Security Research, and the Ministry of Health, Labour and Welfare

Notes 1: Forecasts are based on the medium birthrate and medium mortality.

Notes 2: It was assumed that the labor force participation rate for females would continue to rise at the present rate and then level out after reaching the current highest level for OECD members.

Fig. 20 Year on year Contributions to Real Capital Stocks by Asset Category



Source: Cabinet Office, *Jisshitsu kotei shihon sutokku* [Real Fixed Capital Stocks]

(2) Scope for Growth in Capital Stocks

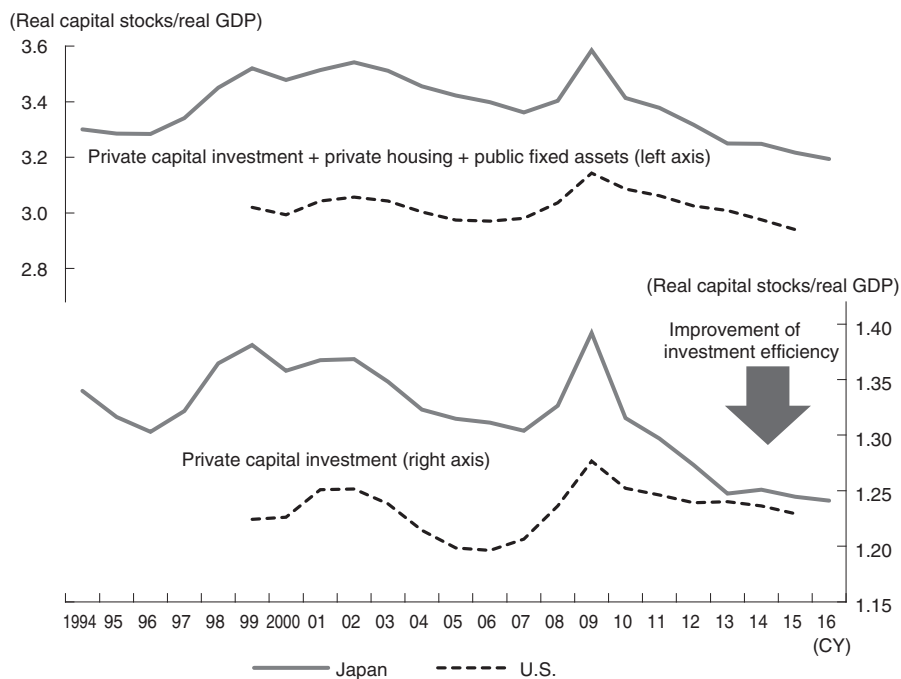
We will look next at the potential for growth in capital stocks. The growth of Japan’s capital stocks began to slow in the late 1990s and shifted to negative growth in 2009 after the global financial crisis. While there has been a return to growth since then, the rate of increase has remained below 0.5% since 2014 (Fig. 20). A more detailed analysis shows that while private housing stocks have been shrinking since 2008 due to population decline, private enterprise capital stocks have

shifted to a positive trend, albeit gradual, while stocks of public fixed assets have also shown positive growth due to aggressive public investment by the government. Since continuing population decline will inevitably lead to further declines in private housing stocks, the outlook for capital stocks will depend on whether or not trends in private capital investment and public fixed assets remain positive.

Private capital investment can be expected to show continuing positive growth, albeit marginal. The capital coefficient (real capital stocks/real GDP), which shows the capital stocks per unit of production, peaked out in 2009 and shifted to a downward trend, at least as far as private capital investment is concerned. It is currently similar to the level in the United States (Fig. 21). Japan has been burdened with excessive capacity since the 1990s, and the low level of capital efficiency compared with Europe and North America is seen as a problem. The reduction of capital investment since the global financial crisis has brought a major improvement in capital efficiency. The correction of capital stocks is now tapering off, and investment can be expected to show moderate growth in step with demand expansion.

However, only the manufacturing sector is showing an improvement in investment efficiency, as indicated by a rise in the tangible fixed asset turnover rate (net sales generated per unit of tangible fixed assets, net sales/tangible fixed assets). Investment efficiency in non-manufacturing industries has remained flat since the late 1990s (Fig. 22). In view of trends in the manufacturing environment, including local production for local consumption, and the development of global value chains, manufacturing is unlikely to make a major contribution to capital investment in Japan. Unless there is a substantial improvement in the investment efficiency of non-manufacturing industries, growth in private capital stocks is likely to remain gradual.

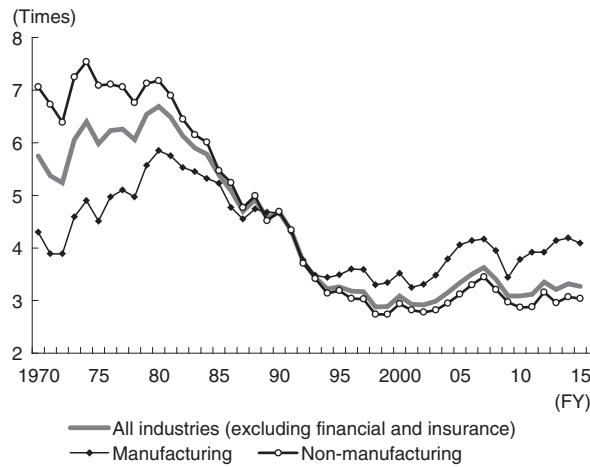
Fig. 21 U.S. and Japan Capital Coefficients



Source: Cabinet Office, U.S. Department of Commerce

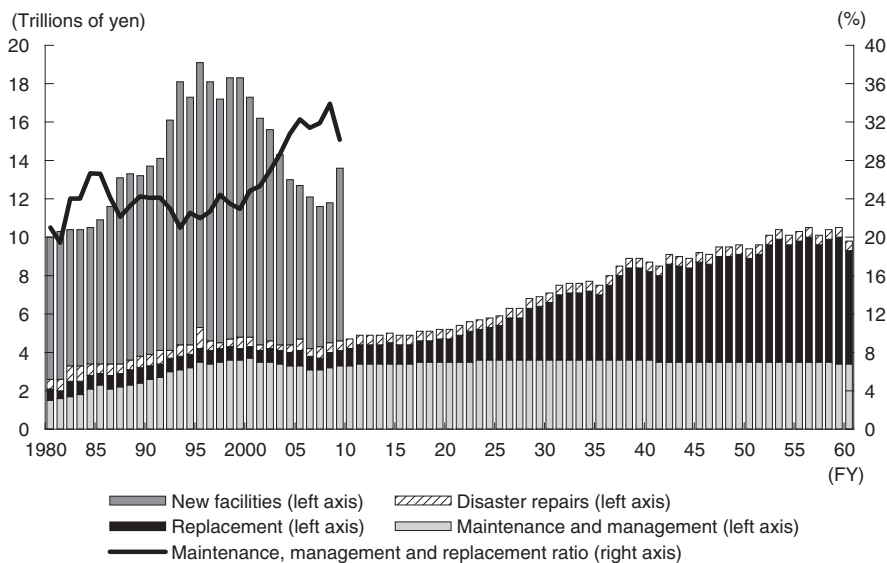
Notes: Real capital stocks are represented in the graph as private capital investment + private housing + public fixed assets.

Fig. 22 Japan’s Tangible Fixed Asset Turnover Rate



Source: Ministry of Finance, *Financial Statements Statistics of Corporations*
 Notes: Tangible fixed asset turnover rate = net sales / tangible fixed assets

Fig. 23 Cost of Maintaining, Managing, and Replacing Social Infrastructure



Source: Ministry of Land, Infrastructure, Transport and Tourism, *White Paper on Land, Infrastructure, Transport and Tourism in Japan, 2009*
 Notes: Social capital under the jurisdiction of the Ministry of Land, Infrastructure, Transport and Tourism (roads, sea ports, airports, public rental housing, sewerage systems, urban parks, flood control systems, seashores).

As shown in Figure 21, public fixed asset investment is currently increasing, but investment efficiency is improving less than that of private capital investment, and conditions are not really suitable for major increases in stocks. When other factors are taken into account, such as Japan’s tight fiscal situation, and the prospect of substantial demand for infrastructure replacement from the 2020s onwards, there is little hope of sustainable growth. In fact, there is a real possibility that fixed capital stocks will be reduced, especially in regions affected by significant population declines (Fig. 23).

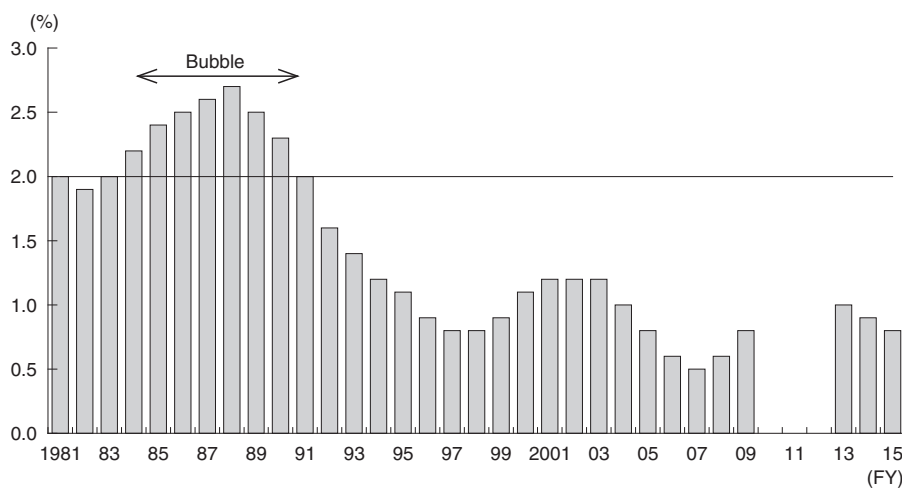
Given this situation, there is a strong possibility that the overall growth rate of Japan’s capital stocks will remain slow at between zero and 0.5%.

(3) Scope for Improvement in TFP

Labor inputs can be expected to continue on a gradual downward trend, while growth in capital stocks is likely to remain slow. This means that the achievement of real growth in excess of 2% under the government’s economic revitalization scenario would require growth in other areas, specifically total factor productivity (TFP) at a rate higher than 2%. The only time that Japan’s TFP has risen by more than 2% was during the bubble period of the mid-1980s and the 1990s (Fig. 24). Similarly, TFP growth in the United States only climbed to around 2% during the IT and housing bubbles of the late 1990s and mid-2000s. It remained in the low end of the 1% range between the 1970s and 1980s, and has been below 1% since the global financial crisis (Fig. 25). The TFP growth rate would rise from the present level of +0.8% year on year if deflationary pressure on domestic demand could be eliminated. However, any scenario in which TPF increases by more than 2% would also need to include a bubble-like situation in Japan.

High TFP growth has also become unlikely because of Japan’s industrial structure. TFP rises not only because of productivity improvements in individual industries, but also because of a shift toward industries with higher added value. Because of demographic aging, however, demand expansion in Japan is instead expected to occur in industries with low added value. Since capital stocks are not increasing, we can look at real GDP per worker in each industry as a proxy variable for TFP¹. An analysis from this perspective shows that employment is rising significantly in the public health and social welfare area, which is characterized by low real GDP and a negative growth rate. Nursing care-related activities form the core of this sector (Fig. 26). While demand for nursing services will continue to expand in step with demographic aging, increased demand for an industry with low added value will reduce rather than raise the productivity of the country as a whole.

Fig. 24 Year on Year Contributions from Total Factor Productivity (TFP) in Japan



Source: Cabinet Office

Notes: Official data for 2010-2012 are unavailable due to the effects of the Great East Japan Earthquake.

¹ A major difference between real GDP per worker and TFP is thought to be unlikely in an economy in which growth in the working population and capital stocks is already close to zero, as in the case of Japan.

Fig. 25 Year on Year Contributions from Total Factor Productivity (TFP) in the United States

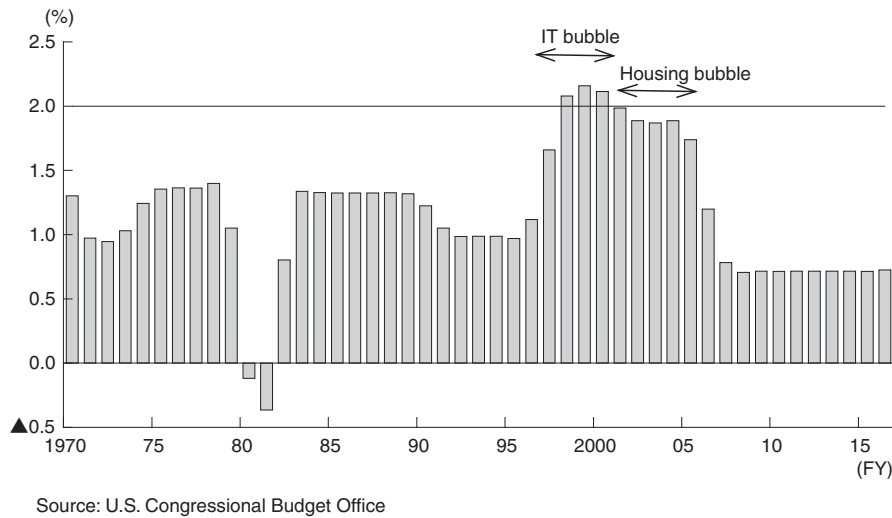
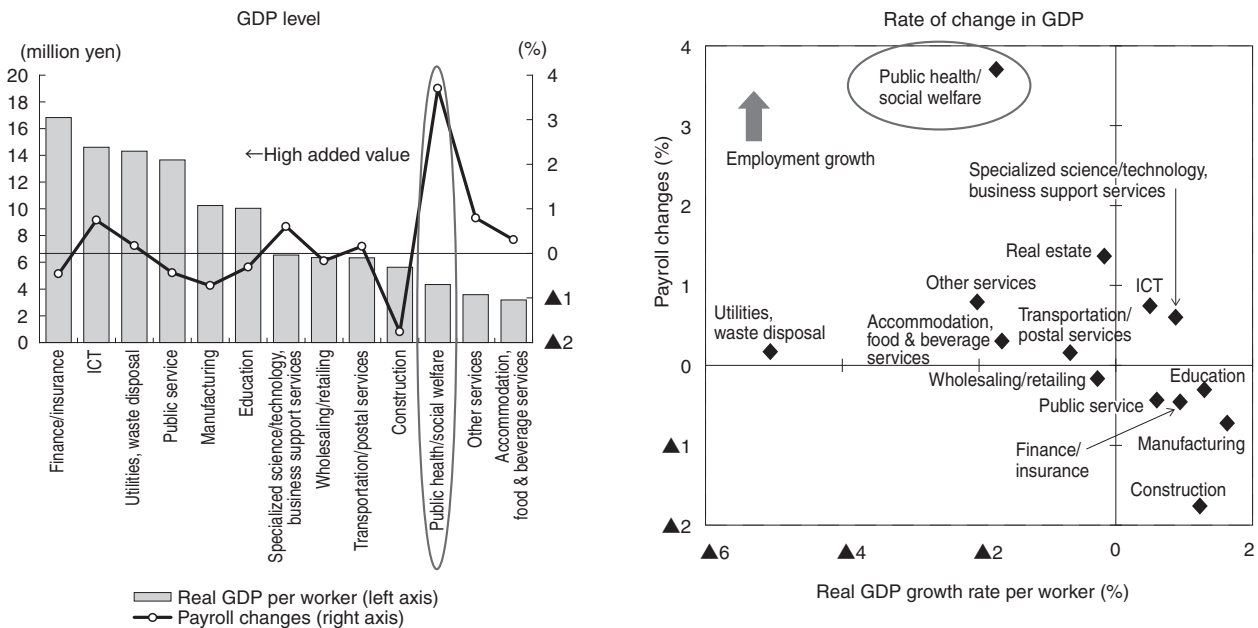


Fig. 26 Payroll Changes, Level of and Changes in Real GDP per Worker by Industry



Unless dramatic improvements in the productivity of nursing care-related businesses can be achieved, Japan will face increasingly high barriers to the achievement of faster improvement in TFP.

From this perspective, the government’s scenario of TFP growth in excess of 2% will be unachievable, and a more realistic goal would be steady year on year growth in the middle of the 1% range, as was achieved in the first half of the 2000s.

(4) An Achievable Growth Target

When these factors are taken into account, we are forced to conclude that the achievability of the scenario of real growth in excess of 2%, as espoused by the government, is extremely low. Of course, if the government moves forward steadily with certain measures, such as labor market improvements to facilitate employment for women and the elderly, the use of advanced technologies, such as the IoT and AI, and the reform of regulations that hinder innovation, then it would be possible to reduce downward pressure on the economy due to demographic factors, and also to achieve marginal growth in capital stocks and raise the level of TFP growth. If TFP growth can be raised to the mid-1% range, its level during the first half of the 2000s, it certainly would not be impossible to achieve real growth of 1% and nominal growth of around 2% in the 2020s, and real growth of around 0.5% and nominal growth in the mid-1% range in the 2030s (Table 1).

If growth around this level could be achieved, the tax increases and expenditure cuts required to make progress toward fiscal consolidation would be reduced thanks to rising tax revenues. An estimation of the consumption tax increase needed to fund the four categories of social security expenditure indicates that the rate could be kept at around 16% until 2040 (Fig. 27). A bigger increase is likely to be needed if other factors are taken into account, such as the introduction of a reduced tax rate, and measures to achieve a continuing reduction in public debt. However, it should still be possible to keep the ultimate tax rate below 20% by curbing medical and nursing fees, by correcting regional disparity in healthcare, by revising the high-cost medical treatment system, by increasing the copayment level under the healthcare insurance system for the late-stage elderly, and by excluding preventive and low-level nursing care from the nursing care insurance system.

The government has presented an economic revitalization scenario in which it will not be necessary to raise the consumption tax rate, on the assumption that Japan will achieve high economic growth. However, the majority of citizens and businesses are skeptical about the achievability of this scenario, and it will be difficult to eliminate the mood of uncertainty about the future that has permeated both the general public and the business sector. Under these circumstances, a realistic scenario consisting of the required measures based on a more feasible growth forecast would be more effective in easing uncertainty and raising growth expectations than the continued repetition of an optimistic scenario that is unlikely to be realized. In this sense, the government needs to eliminate uncertainty by moving resolutely to raise the consumption tax rate, while also working on reforms designed to achieve robust growth that reflects Japan’s real economic potential. In the following section, we will look at the issues that need to be tackled to allow a growth upswing.

Table 1 An Example of Realistic Economic Indicators

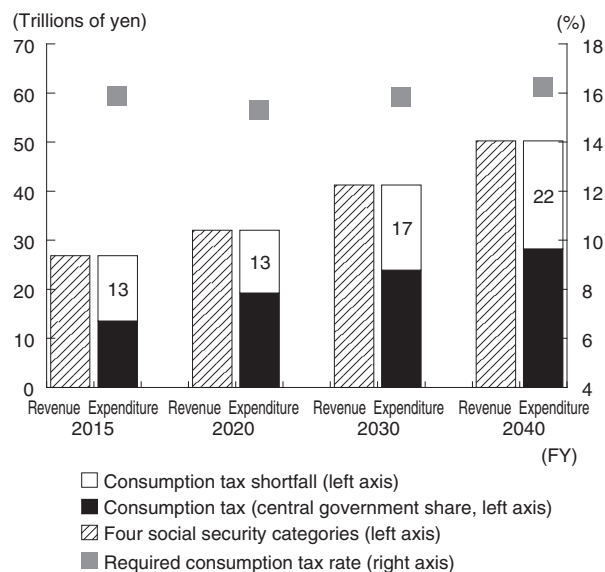
Fiscal year	2020	2025	2030	2035	2040
Working population	▲0.1	▲0.3	▲0.4	▲0.7	▲1.0
Labor productivity (Per capita real GDP)	1.5				
Real GDP	1.4	1.2	1.1	0.8	0.5
GDP deflator	1.0				
Nominal GDP	2.4	2.2	2.1	1.8	1.5

Source: Compiled by JRI

Notes 1: The working population was estimated on the assumption that the pace of improvement in the labor force participation rate would continue to rise until it reaches the highest level in the OECD.

Notes 2: Labor productivity is based on the average for the economic expansionary phase in the first half of the 2000s.

Notes 3: Efforts to achieve the Bank of Japan’s 2% inflation target have been reflected in the GDP deflator.

Fig. 27 Consumption Tax Increase Required with a Higher Growth Rate

Source: Compiled by JRI using data from the Cabinet Office, Ministry of Finance, Ministry of Internal Affairs and Communications, and other sources

Notes 1: The figures take into account a consumption tax increase from 8% to 10% in 2020.

Notes 2: The growth rates in the case of a growth upswing are as shown in Table 1.

Notes 3: To reflect the effect of an economic upswing on the four social security categories, a 1% per annum GDP deflator has been added to average per capita healthcare expenditure over the past five years. It was assumed that the rise in per capita nursing care costs would be equivalent to the GDP deflator. Pension costs are based on Case E in the FY 2014 Financial Verification. Child-raising costs were assumed to be equivalent to 0.4% of nominal GDP.

Notes 4: The reduced tax rate was not taken into account when calculating the required consumption tax rate.

6. Essential Steps toward the Maintenance of Real Growth of 1% in the 2020s

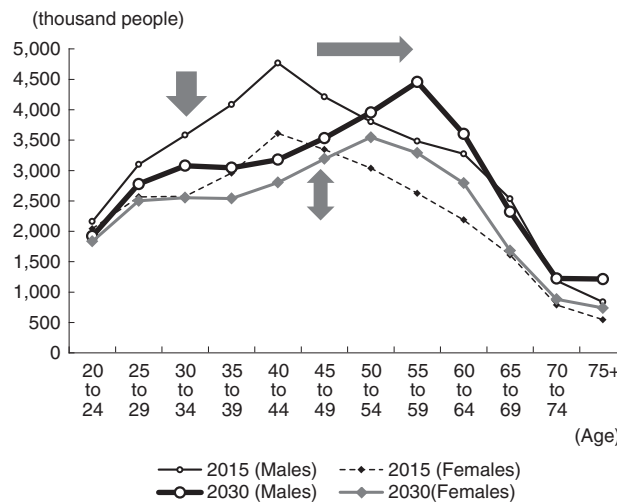
(1) Responding to Demographic Changes

A. Work Style Reform

The first requirement for raising Japan's growth level is work style reform. The government's work style reform concept simply focuses on the correction of excessive working hours. However, the improvement of added value per worker, or labor productivity, is essential to the maintenance of growth at a time when the working population is shrinking. There is also a need for increased efforts to bring women and the elderly into the labor market. When we consider the major changes that are expected to affect the labor market due to demographic factors, it becomes clear that work style reform initiatives need to be accelerated, and that we cannot afford delays in this area.

First, the imbalance between males and females in the work force could be greatly reduced by eliminating the so-called "M-curve" effect, which reflects the high percentage of women who leave work during their childbirth and child-raising years (Fig. 28). This would require an increased role for men in child-raising. Unless men participate more in child-raising, the decline in the birthrate could accelerate further, leading to increased downward pressure on growth due to demographic factors. For husbands and wives to share child-raising activities, it will first be necessary to step up efforts to reduce excessive working hours. That in turn would require changes to the content of work and working conditions, including the creation of teleworking environments, and the

Fig. 28 Status of and Outlook for the Working Population by Gender/Age



Source: Compiled by JRI using data from the Ministry of Internal Affairs and Communications and the National Institute of Population and Social Security Research
 Notes: The figures for 2030 are based on the upswing scenario.

simplification of meetings and reporting processes.

The second major characteristic of demographic changes is the dramatic decline in the younger age groups. Pyramid-shaped organizations will become increasingly difficult to maintain in this environment, and seniority-based promotion systems are likely to disappear amid a shift to inverted pyramid structures. Ultimately the majority of organizations are likely to take on amorphous or flattened shapes. This will obviously require a shift to results-based wage systems. Employers will also need young workers to become strategic assets immediately, which will require changes to Japanese-style employment and human resource development practices, such as the mass hiring of new graduates, and on-the-job training. The functions of universities will also need to change. Without timely efforts in these areas, delays in the effective utilization of young workers could impede the improvement of productivity.

A third characteristic is the aging of second-generation Baby-Boomers as the next large-volume generation after the Baby-Boomers. As noted above, it will obviously become impossible to maintain seniority-based organizations and wage structures. Moreover, there has been a major increase in informal employment among second-generation Baby-Boomers, whose job-seeking years in the late 1990s coincided with Japan’s financial crisis. Many are expected to be unable to achieve sufficient income during their 40s and 50s which is the main asset-building period, with the result that elderly poverty is likely to become a major issue when this generation advances into the 65-and-older age group. We will need to build a national consensus by thoroughly debating the kinds of social policies needed for elderly people who were unable to accumulate sufficient income as a result of informal employment, and the merits and demerits of various policies, such as the introduction of a basic income system.

B. Increased Acceptance of Foreign Workers

Even if there is a dramatic increase in labor force participation by women and the elderly, the economy will still be under pressure from demographic factors. To overcome this problem, Japan will need to accept more foreign workers. To offset the decline in its domestic working population,

Japan will need to increase the number of foreign workers by over 200,000 a year in the 2020s, by around 400,000 a year by the first half of the 2030s, and by around 600,000 per year in the second half of the 2030s. This would raise the total number of foreign workers from 1.08 million at the end of 2016, to almost 9 million by 2040 (Fig. 29). An increase on this scale seems unlikely when global competition for highly skilled and qualified workers, Japan's conservative stance toward foreign residents, and other factors are taken into consideration.

In its "Japan Revival Strategy," the Japanese government makes specific reference to the importance of using highly skilled and qualified foreign workers to boost Japan's capacity for innovation. In some senses, groups of people with the same values and culture offer greater comfort and facilitate group efforts toward common goals. However, they can also lead to the formation of a uniform culture that is unlikely to produce breakthrough ideas. It may be possible to boost labor productivity by actively welcoming foreign workers with advanced skills and qualifications as a way of bringing in diverse values and facilitating flexible thinking.

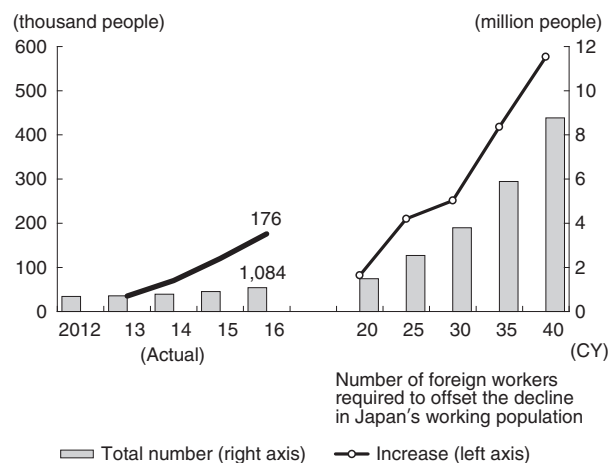
According to Iwasaki [2015], however, there are major obstacles to the recruitment of highly skilled and qualified foreign workers. First, Japanese small and medium enterprises lack awareness of globalization. Second, Japanese companies do not have the systems and management skills needed to accept foreign workers. Third, the acquisition of Japanese language skills is a difficult barrier. Japan will need to work steadily to lower these barriers in various ways, including systems to help foreign students in Japan to find jobs with Japanese companies, and the development of globally oriented human resource management systems.

We also need a thorough debate about the merits and demerits of accepting unskilled foreign workers under skill training programs. These programs have deviated from their original purpose and turned into de facto tools for the recruitment of unskilled workers from other countries.

C. Raising the Pension Age

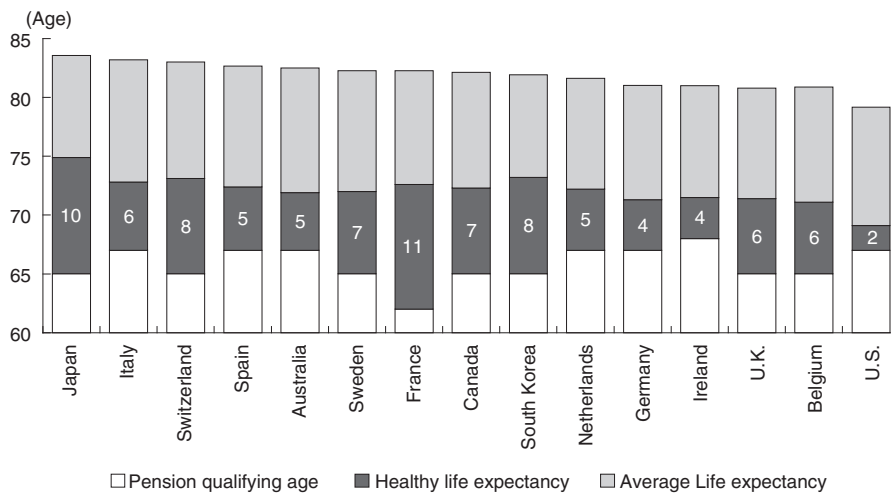
Changes to social security systems will be unavoidable. In Japan, the falling birthrate and demographic aging have been accompanied by a rise in healthy life expectancy, which is the age to which people can enjoy normal lives without health problems. By 2015, Japan's figure was the highest in the world at 74.9 years, indicating that Japan's healthy aged population is large by world standards. Despite this, the pension qualifying age is lower than in any other developed country

Fig. 29 Foreign Workers in Japan



Source: Compiled by JRI using data from the Ministry of Health, Labour and Welfare

Fig. 30 Pension Qualifying Age, Healthy Life Expectancy, Average Life Expectancy in Developed Countries (2015)



Source: WHO, World Bank, Japan Pension Service

Notes: Pension qualifying ages are for guaranteed pensions. Qualifying ages that have already been decided are shown. The figure for Switzerland is for males.

except France at 65 years. Among developed countries, only Japan and France pay pensions for 10 years or more to people who are in good health. (In France, the pension qualifying age is 62 and the healthy life expectancy is 72.6.) As soon as the transition to the current qualifying age of 65 is complete, we should move as quickly as possible to lift the age to 67-68, which is becoming the standard in developed countries (Fig. 30).

If the pension age is raised, it will obviously be necessary to secure employment until that age is attained, which means that there would also be a significant burden on employers. Since labor shortages are expected to become a chronic problem, the barrier to extended employment for older people will not be especially high from an overall macroeconomic perspective. However, employers would need to provide suitable working environments and work formats for older people. Changes would also be needed in other areas, such as wage-setting mechanisms. This underscores the importance of work style reform, as discussed earlier in this article.

If this change can be achieved through work style reform and other measures, the sustainability of the pension system would be enhanced. It should also be possible to raise the growth level, since the pace of decline in the working population would also slow somewhat.

(2) Economic Policy Issues and Responses

A. Improving Productivity (Added Value Creation Capacity) in Service Industries

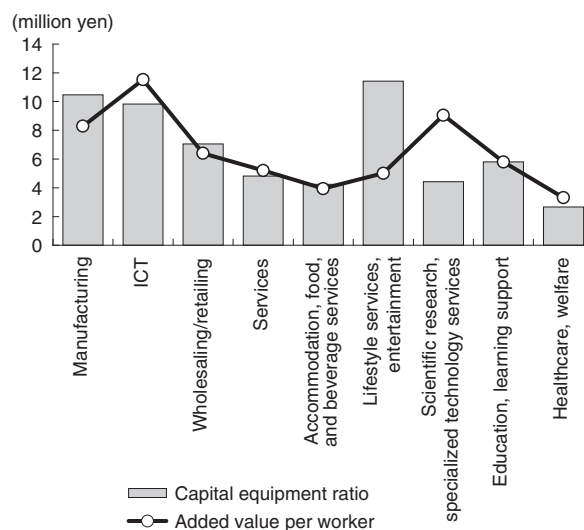
Japan’s willingness to accept low growth is not only the result of demographic pressures. In fact, a more significant cause is the fact that manufacturing, which has been characterized by high productivity, now plays a relatively smaller role in the economy due to the reduction of Japan’s technological edge over other Asian countries, such as South Korea and China, as well as the trend toward local production for local consumption, and other factors. Japan has not been able to create high-added-value industries to offset this change. For this reason, Japan is unlikely to raise its growth level unless it focuses not only on responses to demographic factors, but also on ways to increase the added value of non-manufacturing industries.

A key issue in this context is the extremely low productivity of non-manufacturing industries.

According to the *Financial Statements Statistics of Corporations* compiled by the Ministry of Finance, with a few exceptions, such as real estate, insurance and finance, and ICT, all non-manufacturing industries have significantly lower nominal added value per worker than manufacturing industries. One reason for this is the low capital turnover rate in non-manufacturing industries (Fig. 31). Unlike manufacturing industries, which are highly capital-intensive, non-manufacturing industries are mostly labor-intensive. While their capital equipment ratios will inevitably be low compared with manufacturing industries, there is still ample scope to increase added value through aggressive capital investment. In particular, it should be possible to reduce labor content and develop new demand through the intelligent use of new technologies, including the IoT and AI, in industries that face increasingly severe labor shortages, such as nursing care and transportation.

However, many non-manufacturing companies have not developed operating environments in which the IoT and AI can be utilized, or lack staff capable of managing these systems. Before they can make progress in these areas, such companies will first need to change their operations and provide staff training. A change in public attitudes toward services will also be needed. The fact that logistics companies are being forced to modify their services and raise charges because of labor shortages is a reflection of the inability of non-manufacturing industries to set appropriate price levels because of the persistent attitude in both the household and business sectors in Japan that services should be free. Globally, rising income levels are normally matched by a proportionate rise in the percentages of employment and added value contributed by non-manufacturing industries. In this environment, pressure to reduce service prices actually reduces domestic demand and creates a deflationary environment because of the resulting pressure to reduce labor costs. Added value in non-manufacturing industries is likely to improve further, and there will also be greater opportunities to create new businesses, if the practice of paying reasonable prices according to the services provided takes root in Japan.

Fig. 31 Capital Equipment Ratios and Added Value per Worker (FY 2015)



Source: Ministry of Finance, *Financial Statements Statistics of Corporations*

Notes 1: Capital equipment ratio is Tangible fixed assets (excluding construction in progress, averages at start and end of years) divided by the number of employees.

Notes 2: Added value per worker is Added value divided by the number of employees.

B. Changes to Measures Targeting Small and Medium Enterprises

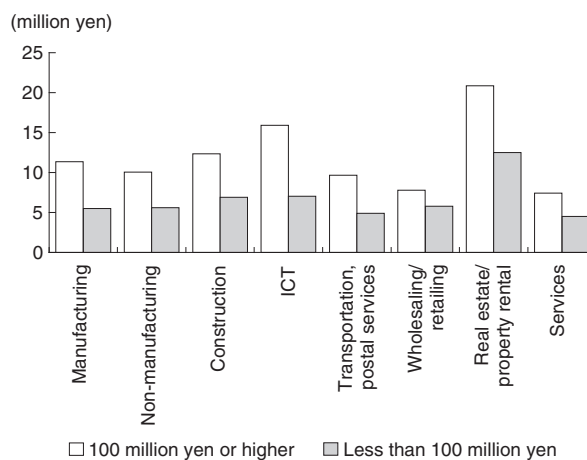
In addition to changes relating to service industries, there is also a need for major changes in measures targeting small and medium enterprises. One of the factors reducing Japan’s overall productivity is low productivity in small and medium enterprises. For example, added value per worker in small and medium enterprises is generally around one-half of the level in large enterprises (Fig. 32). There are several reasons for this. First, the government’s protection measures, such as the SME Financing Facilitation Act, give first priority to the avoidance of SME bankruptcies. Second, subcontractors, especially those serving the manufacturing sector, have low margins. Third, SMEs have a cautious stance toward capital investment, which is reflected in their low capital equipment ratios.

To raise the productivity of small and medium enterprises and create more robust corporate groups, Japan will first of all need to modify protective measures. As labor shortages grow more serious, the policy focus must shift from bankruptcy avoidance to support for reemployment. Specifically, we should not fear the winnowing out of companies with shrinking added value capacity. Instead we should create an environment in which it is easier for workers who lose their jobs to move to companies and industries that generate higher added value. Obviously, the most important requirements in terms of facilitating labor market mobility would be the development of a reemployment market, and the improvement of worker training.

Also useful would be policies to help companies escape from subcontracting relationships, such as exporting support for small and medium enterprises with advanced technological capabilities, and tax mechanisms to facilitate IT-related investment so that companies, especially in non-manufacturing industries, can make greater use of IT.

The government has introduced a variety of measures designed to improve productivity, but there have been no tangible benefits. One reason for this is the lack of decisive action on problems affecting non-manufacturing industries and small and medium enterprises, which are holding back improvements in productivity in Japan. The current labor shortages, as well as innovations in AI and other types of technology, offer excellent opportunities to attack these issues decisively and make radical changes to Japan’s business and employment environments.

Fig. 32 Added Value per Worker by Size of Business (FY 2015)



Source: Ministry of Finance, *Financial Statements Statistics of Corporations*

Notes 1: Added value is the sum of Net operating profits, labor costs, taxes and levies, rent for chattels and real estate and interest paid, etc.

Notes 2: Added value per worker is Added value divided by the number of employees.

To achieve both economic growth and fiscal consolidation in an environment of population decline, Japan needs sustained efforts based on realistic forecasts, rather than repetitions of optimistic predictions, such as those in the economic revival strategy. Above all, we need to make steady, cumulative progress on essential future-oriented reforms and measures, even if these involve pain.

(April 11, 2017)

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