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This Survey is published on the responsibility of the Economic and Development Review Committee of the OECD, which is charged with the examination of the economic situation of member countries.

The economic situation and policies of Japan were reviewed by the Committee on 7 March 2011. The draft report was then revised in light of the discussions and given final approval as the agreed report of the whole Committee on 15 April 2011.

The report was thus prepared and reviewed before the tragic Great East Japan Earthquake on 11 March 2011. This published version has, however, been updated and approved by the Committee to adjust the short-term analysis and policy recommendations in light of the earthquake. We express our deep sorrow at the enormous loss of life and offer our condolences to those affected by this tragedy.

The Secretariat's draft report was prepared for the Committee by Randall S. Jones, Satoshi Urasawa and Byungseo Yoo, under the supervision of Vincent Koen. Research assistance was provided by Lutécia Daniel.

The previous Survey of Japan was issued in September 2009.

Information about the latest as well as previous Surveys and more information about how Surveys are prepared is available at www.oecd.org/eco/surveys.

BASIC STATISTICS OF JAPAN

THE LAND

Area (1 000 sq. km), 2009	377.9	Major cities, 2010 (million inhabitants):	
Cultivated agricultural land (1 000 sq. km), 2007	46.5	Tokyo (23 wards)	8.9
Forest (1 000 sq. km), 2007	250.8	Yokohama	3.7
Densely inhabited districts[1] (1 000 sq. km), 2005	12.6	Osaka	2.7
		Nagoya	2.3
		Sapporo	1.9
		Kobe	1.5
		Kyoto	1.5

THE PEOPLE

Population, March 2011 estimate (1 000)	127 960	Labour force in per cent of total population, 2009	51.9
Number of persons per sq. km	338.6	Percentage distribution of workers, 2009	
Percentage of population living in densely		Agriculture and forestry	3.9
inhabited districts in 2005[1]	66.0	Manufacturing	17.1
Net annual rate of population increase		Services	64.2
in per cent (2000-2011)	0.1	Other	14.8

PRODUCTION

Nominal gross domestic product in 2010		Share of agriculture, forestry and fishery in GDP,	
(billion yen)	479 179	at producer prices in 2009 (per cent)	1.4
Growth of real GDP, per cent 2010	3.9	Share of manufacturing in GDP,	
Gross fixed investment in 2010 (per cent of GDP)	19.4	at producers prices in 2009 (per cent)	17.6
Growth of real gross fixed investment, per cent 2010	–0.2	Growth of industrial production, per cent 2010	15.9

THE GOVERNMENT

			House of Representatives	House of Councillors
Public consumption in 2010 (in per cent of GDP)	20.1			
Current public revenue in 2009	31.0	Composition of Parliament,		
(in per cent of GDP)		March 2011:		
Government employees in per cent of total		Democratic Party	306	106
employment, 2010	7.8	Liberal Democratic Party	117	83
		Peace and Reform (*Komei*)	21	19
		Communist Party	9	6
		Your Party	5	11
		Others	20	17
		Vacancy	2	0
		Total	480	242
		Last elections	August 2009	July 2010

FOREIGN TRADE AND PAYMENTS

(2010, billion yen)

			Exports	Imports
Commodity exports (fob)	67 400			
Commodity imports (fob)	60 765	By country		
Services	–1 622.0	USA	15.4	9.7
Investment income	11 629.4	EU	11.3	9.6
Current balance	17 016.8	Asia	56.1	45.3
Exports of goods and services		Other	17.3	35.4
(in per cent of GDP)	15.2	By commodity (in per cent, 2009)		
Imports of goods and services		Foodstuff	0.7	9.7
(in per cent of GDP)	14.1	Mineral fuels	1.8	27.6
		General machinery, electric equipment and transport equipment	58.2	23.0
		Other	39.4	39.7

THE CURRENCY

Monetary unit: Yen	Currency unit per USD, average of daily figures	
	Year 2010	87.8
	February 2011	82.5

1. Areas whose population density exceeds 5 000 persons per sq. km.

Executive summary

The 11 March 2011 Great East Japan Earthquake was the strongest ever recorded in Japan and triggered the country's worst disaster of the post-war era. *We express our deep sorrow at the enormous loss of life and offer our condolences to those affected by this tragedy. The OECD will be working closely with the Japanese authorities in the coming months and is ready to assist them in any way we can at this difficult time.*

While it is still too early to assess the full extent of the damage, the immediate impact will be to reduce output, although this will later be reversed by reconstruction efforts. *Deflationary pressures are likely to remain a headwind to growth. The Bank of Japan should thus maintain an accommodative stance until deflation is overcome, paying attention to downside risks. The monetary policy framework could be improved, in part by raising the "understanding" of price stability to ensure more of a buffer against deflation.*

The priority for Japan is to address the humanitarian and reconstruction needs, along with the nuclear situation. *This inevitably creates the need for short-term increases in public spending. Nonetheless, in light of the debt situation, this may need to be funded by shifting expenditures and by short-term increases in revenues, appealing to the Japanese people's sense of solidarity.*

The fiscal situation has reached a critical point. *Chronic budget deficits were projected to push up gross public debt to an unprecedented 200% of GDP, and net debt to 115% in 2011. A credible and detailed medium-term consolidation plan that includes spending cuts and tax increases will thus be a top priority, while taking into account the need for reconstruction spending. The Fiscal Management Strategy should aim at a primary budget surplus large enough to stabilise the debt ratio by FY 2020, which may require as much as a 10% of GDP improvement in the primary budget balance. A detailed fiscal plan should be accompanied by social security reform to limit spending pressures due to rapid population ageing. Much of the deficit reduction will have to be on the revenue side, mainly through hikes in the consumption tax. Achieving the fiscal target may require that its rate be increased to as high as 20%, even if spending (excluding social security and interest payments) is held constant in real terms. In view of the severity of Japan's fiscal predicament, a reform of the fiscal framework may help achieve the fiscal targets and bolster credibility, helping to mitigate the risk of a run-up in long-term interest rates.*

Sustaining economic growth through the New Growth Strategy. *Stronger growth is also important to stabilise the debt ratio. The Strategy's objective of increasing demand in four areas – green innovation, health care, economic integration with Asia and regional development – should rely primarily on regulatory reform rather than on costly fiscal measures. In addition, the Strategy should emphasise economy-wide reform rather than focus on specific sectors. There is ample scope to boost demand through green innovation, but this will require market-based instruments placing a price on carbon – preferably through an emissions trading system – to promote private investment. Economic integration, by removing barriers to inflows of goods, foreign investment and foreign workers, should be promoted, in part, by comprehensive trade agreements. The high level of agricultural support should not be allowed to stymie Japan's participation in such agreements.*

Reforming the education sector. *Educational outcomes, which play a key role in productivity growth, could be improved by greater investment in early childhood education and care. The New Growth Strategy's plan to integrate childcare and kindergarten would help improve educational quality while allowing cost savings. The tertiary sector should be improved by strengthening competition through increased transparency about quality and by enhancing internationalisation, enabling universities to make a greater contribution to innovation. Given high tuition fees, ensuring access to student loans and making repayment income-contingent would improve equity. So would reducing dependence on private, after-school educational institutions, which place a heavy burden on families. Another priority is to improve vocational education to reflect changing labour market needs in the context of increasing dualism.*

Addressing labour market dualism. *Although the rising share of non-regular workers has helped firms to increase employment flexibility and cut wage costs, such workers face low pay, less training, precarious jobs and poor social insurance coverage. Reducing labour market dualism requires a comprehensive approach that includes greater social insurance coverage of non-regular workers, better training programmes, preventing discrimination against non-regular workers and lowering effective employment protection for regular workers. With the working-age population set to fall by almost 40% by 2050, it is essential to fully utilise Japan's human resources, including women and older persons. Female participation could be boosted by increasing the availability of childcare, promoting better work-life balance and reforming the tax system. The mandatory retirement age, set at 60 by most firms, should be abolished to encourage better use of older workers.*

Assessment and recommendations

Japan has been hit by its worst disaster of the post-war era…

The Great East Japan Earthquake on 11 March 2011, the strongest ever recorded in Japan, led to a tsunami and an enormous loss of human life, as well as massive economic damage. The impact has been exacerbated by the damage to thermal and nuclear power plants, which significantly reduced electricity generation. While it is still too early to assess the overall impact, it is likely to exceed the damage to the physical capital stock caused by the 1995 Hanshin-Awaji (Kobe) earthquake, which is estimated at 2% of annual GDP. A key priority has been to address the serious humanitarian needs resulting from the disaster.

… which will shape the path of the economy in 2011-12

It is also premature to assess the impact on economic growth, which had been projected at around 1¼ per cent during 2011-12. In early 2011, Japan had shown signs of emerging from the economic slowdown that occurred in the latter part of 2010. The immediate impact of the disaster will be to reduce economic activity, with the extent and length of the decline depending, in part, on how quickly the supply of electricity is restored. Moreover, the adverse effects in areas hit by the disaster may spread to other parts of the country and overseas, in part by disrupting global supply chains. As in past disasters, the downward impact on activity is likely to be reversed as reconstruction efforts boost private and public investment, making an extended downturn unlikely. In addition to the uncertainty resulting from the earthquake, there are significant downward risks related to developments in the world economy, exchange rates and commodity prices. Most importantly, however, the unprecedented level of public debt makes Japan vulnerable to a rise in long-term interest rates.

Continued deflationary pressure is likely

The pace of growth may not be sufficiently rapid to close the output gap before the end of 2012, notwithstanding the uncertainties arising from the negative supply effect of the earthquake and subsequent reconstruction spending. As a result, deflationary pressure is likely to persist. Inflation, as measured by the headline consumer price index (CPI), turned positive in the final quarter of 2010 but this reflects a large tax hike on cigarettes and a surge in food prices. The core CPI, meanwhile, fell 0.8% on a year-on-year basis, albeit at a slower pace than previously. Chronic deflation has reduced the GDP deflator by 14%

since 1998, despite the longest expansion in Japan's post-war history between 2002 and 2007. Deflation hampers growth by keeping real interest rates too high and squeezing corporate profits, resulting in downward pressure on wages and employment.

The Bank of Japan should keep an accommodative stance to ensure deflation is overcome…

The Bank of Japan reacted promptly following the disaster by providing liquidity on a large scale to stabilise financial markets. There was also intervention in foreign exchange markets as part of a multilateral commitment by G7 finance ministers and central bank governors to reduce exchange rate volatility. In addition, the Bank announced that it would double the size of the asset purchase programme to 10 trillion yen (2% of GDP) to prevent a deterioration in business sentiment and an increase in risk aversion. The programme was originally part of the "comprehensive monetary easing" launched in October 2010 to fight deflation by: *i)* establishing an additional asset purchase programme of initially 5 trillion yen that includes 3.5 trillion yen of government securities and 1.5 trillion yen of corporate bonds, commercial paper and real estate investment trusts, in an effort to reduce long-term interest rates and risk premiums; *ii)* reducing the policy interest rate from 0.1% to between 0 and 0.1%; and *iii)* pledging to maintain a virtually zero policy interest rate until it judges that "price stability is in sight". The Bank of Japan should maintain the current accommodative stance, paying attention to downside risks, including the impact of the earthquake, and should be ready to undertake further measures in the event of a deterioration of the outlook. In such a case, the focus should be on reducing long-term interest rates through expanded purchases of government bonds, while being cautious in buying high-risk private assets. Such an approach may also boost inflation expectations. Ending deflation may also have a positive impact on asset prices, particularly land prices, which have fallen to their 1975 level after 19 consecutive years of decline.

… while improving the monetary policy framework

There is also scope for improvements in the monetary policy framework. In December 2009, the Monetary Policy Board revised its 0 to 2% "understanding" of price stability by dropping the zero lower bound. This step still leaves the understanding very low, as it is met in principle when inflation in this range is "in sight". A higher inflation objective would provide more of a buffer against deflation. In addition, the Bank's policy intentions would be clearer, and thus much more credible, if expressed in terms of a range around a point. A typical target is 2%, plus or minus one percentage point. The case for revisiting the mechanism for setting the understanding of price stability can also be made. In some OECD countries, the inflation range is set by the government or by consultation between the government and the central bank, rather than independently by the central bank. Such an approach might promote government support for the inflation target and allow the central bank more independence in achieving it. Changes to the framework would further increase credibility and help ensure strong action to achieve price stability, thereby providing support to the economy during the long period of fiscal consolidation ahead.

The fiscal situation has reached a critical point…

Numerous fiscal stimulus packages and spending pressure related in part to population ageing have driven up government expenditure, while a prolonged period of weak economic growth and tax cuts have constrained revenue, resulting in 18 consecutive years of budget deficits since 1993. Consequently, gross public debt has risen rapidly to uncharted territory at around 200% of GDP, while net public debt, at around 115%, is also the highest in the OECD area. The impact of the extraordinary level of debt has been mitigated by very low long-term interest rates, currently about 1¼ per cent. However, Japan will need to step up fiscal consolidation efforts to reduce the risk of a run-up in long-term interest rates, as well as to mitigate the long-run cost of returning to a sustainable fiscal path. The Fiscal Management Strategy in June 2010 re-started the fiscal consolidation process by setting a target of halving the primary budget deficit of central and local governments, from 6.4% of GDP in FY 2010 to 3.2% by FY 2015. To this end, central government spending in the general account budget (excluding debt repayment and interest) for FY 2011-13 is not to exceed the level in the initial budget for FY 2010, an objective that has been incorporated in the FY 2011 draft budget. However, reconstruction spending in areas devastated by the earthquake and tsunami will be significant given the scale of destruction. Such outlays by the central government amounted to 1% of annual GDP (over a six-year period) following the 1995 Kobe earthquake. It is important to finance reconstruction spending by shifting expenditures and by short-term increases in revenues, appealing to the Japanese people's solidarity. Over the medium term, fiscal consolidation remains a priority.

… making a detailed and credible medium-term fiscal consolidation plan essential…

The Strategy's long-term target of a primary budget surplus for central and local governments by FY 2020 would not be enough to stabilise the debt ratio, which would require a surplus of around 3% of GDP, assuming that the nominal interest rate is no more than 1½ percentage points above nominal growth. Stabilising the public debt ratio may require an improvement of about 10% of GDP in the primary budget balance, with a larger budget surplus necessary to put the ratio on a downward trend. The revision of the medium-term fiscal framework, planned for mid-2011, needs to provide a detailed multi-year plan of spending cuts and revenue increases to achieve these targets. Government expenditures (excluding interest payments) have risen from 33.4% of GDP in 2007 to an estimated 38% in 2010 due to fiscal stimulus and initiatives of the new government, such as the child allowance. The marked increase in outlays suggests scope for reductions, in part by withdrawing emergency spending. In particular, public investment, although it has fallen from more than 8% of GDP in the mid-1990s to 4¼ per cent in 2009, is one percentage point above the OECD average. While it is likely to increase as a result of reconstruction following the earthquake, it could be scaled back over the medium term, while trying to improve its allocation to enhance its efficiency. In addition, wage growth in the public sector has significantly outstripped that in the private sector, pointing to scope for savings, particularly in local governments.

… including reform of social security spending…

The revision of the medium-term fiscal framework is to be accompanied by a reform of social security, the main source of spending pressure. Given population ageing, social security outlays by the central government, which provides a subsidy to the social security fund, are projected to rise by almost 2% of GDP over the next decade, and perhaps by more given the consensus on the need to improve the quality of health and long-term care. In addition, the social security fund's balance has deteriorated over the past decade, reaching a deficit of 1½ per cent of GDP in FY 2009. Although the social security fund is not included in the Strategy's fiscal targets, it is part of general government and contributes to the evolution of public debt. Thus, it is important to achieve the Fiscal Management Strategy's objective of securing stable financing for social security. Moreover, measures to limit the rise in social security spending are a priority, in part through reforms of health and long-term care:

- Promoting the shift of long-term care away from hospitals toward more appropriate institutions using the fee schedule and closer monitoring of the classification of patients in hospitals.
- Improving the payment system by reforming the diagnosis procedure combination, which sets an overall fee based on the illness, so as to strengthen incentives for hospitals to increase efficiency.
- Expanding the use of generic medicine by making them the standard for reimbursement.
- Introducing gatekeepers to reduce the number of unnecessary consultations with specialists.

The general government balance also depends on the pension system, which is being reformed by raising the contribution rate to 18.3% by FY 2017, allowing the replacement rate of pension benefits for a single-earner couple to fall from around 60% to 50% and increasing the pension eligibility age gradually from 60 to 65 by 2025 for men and 2030 for women. As the long-run projection is sensitive to economic and demographic assumptions, additional reforms may become necessary in the future. In that case, further increasing the eligibility age would be the best option.

… and comprehensive tax reform to boost revenues

Given the upward pressure on spending and limited scope for further reductions, achieving the fiscal targets will require tax increases. Indeed, the government's long-term projection made in January 2011 shows a primary budget deficit in 2020 of between 2.5% and 4.2% of GDP (depending on the economic scenario) if spending (excluding social security and interest payments) is kept constant in real terms. Revenue should be increased by a comprehensive tax reform that broadens direct tax bases and encourages labour force participation, in part by relying primarily on the consumption tax for additional revenue. To balance the primary budget, the consumption tax rate would have to be raised by five to nine percentage points from its current 5%. Achieving the 3% of GDP primary surplus likely to be necessary to stabilise the debt ratio would require another 6 percentage-point hike in the consumption tax rate, bringing it towards the 20% average in Europe. Moreover,

reducing the debt ratio from the 2020s would require even more revenue. Thus, a doubling in the consumption tax rate to 10% would be just a first step to achieving a sustainable fiscal situation. Given the size of the adjustment and the projection for continued output growth, tax reform should be spelled out and announced in FY 2011 and tax increases should begin as soon as possible, taking into account the need to reconstruct areas devastated by the Great East Japan Earthquake. The consumption tax should be the major source of additional revenue, given that its impact on economic growth is less negative than direct taxes on household and corporate income. The regressive impact of higher indirect taxes could be best offset by policies to assist low-income families, such as an earned income tax credit, although such measures themselves push up the deficit and thus require cuts in spending elsewhere or further tax increases. Environment-related taxes to meet the target to cut greenhouse gas emissions might also be part of a package of measures to raise revenue.

Reform of the fiscal policy framework may help to bolster confidence in the long-run fiscal plan

Given the large deterioration in Japan's fiscal situation since the collapse of the asset bubble in 1990 and the unprecedented size of its fiscal problem, a strong fiscal policy framework is important to reinforce the credibility of a medium-term fiscal plan. *First*, budget procedures can be improved through a multi-year budgeting plan for spending and taxes, even if such plans have to be reconsidered in the event of unforeseeable exceptional circumstances. *Second*, the medium-term fiscal targets are a Cabinet decision that can be revised with a change in government. Establishing a stronger legal foundation for the fiscal targets would strengthen their credibility. *Third*, an objective body, at arm's-length from the policymaking process, to evaluate the government's progress in meeting its fiscal targets may enhance the transparency and credibility of a fiscal consolidation plan, especially one that will need to continue for at least a decade. Added credibility is key to mitigate the risk of a run-up in long-term interest rates.

Economic growth is an essential part of addressing the fiscal problem, making the New Growth Strategy important…

Sustained fiscal consolidation will tend to depress economic growth from the already low potential rate of ½ per cent estimated by the government, making policies to support growth essential. The government's New Growth Strategy aims at accelerating real output growth to a 2% rate in the 2010s by creating new demand through green innovation, expanded health care, economic integration with Asia and regional development. Demand is to be stimulated by fiscal measures, including spending, tax measures and public lending, and the revision of the regulatory and institutional frameworks. However, in view of the severe budgetary situation, it is important to stress regulatory reforms, rather than fiscal measures, and ensure that any spending increases are consistent with fiscal consolidation needs. In addition, reforms should not be limited to specific sectors, but extended economy-wide to raise productivity. Given that the working-age population is projected to shrink by 10% by 2020, achieving the 2% real growth target implies that productivity growth will have to accelerate significantly from the 1% average annual rate of

the past decade. Priorities include promoting entrepreneurship and business start-ups by reducing the cost of creating new firms and strengthening competition policy and innovation. Jump-starting the venture business sector and following through on the planned privatisation of Japan Post could also help foster private-sector dynamism.

… especially in the areas of green growth and health care…

Japan's target of reducing its greenhouse gas emissions by 25% by 2020 relative to 1990, premised on the establishment of a fair and effective international framework that includes ambitious targets for all major economies, calls for green innovation as an important source of growth. A top priority is to establish a price on carbon, preferably through a mandatory and comprehensive cap-and-trade emissions trading system (ETS), with the permits auctioned. A carbon tax should be introduced in areas not covered by the ETS and would also generate revenue for fiscal consolidation. Health care is also a potential source of growth, given Japan's large and increasing number of elderly and relatively low health outlays. However, given that the public sector covers 86% of health spending, boosting spending under the current framework would exacerbate the fiscal situation. The aim of public health insurance to cover all necessary treatment may have to be made less ambitious while expanding the scope of mixed billing to make treatments not covered by public insurance more affordable.

… and economic integration through free trade agreements

A core objective of the New Growth Strategy is to increase Japan's integration in the world economy. At present, Japan is an outlier in the OECD area, with the lowest level of imports and inflows of foreign direct investment as a share of GDP and the lowest share of foreigners in the labour force. The Strategy sets an objective of doubling the inflow of people, goods and capital by 2020 by reducing barriers to trade and restrictions on foreign investment and the movement of people into Japan. Increased openness is to be accomplished in part by negotiating Economic Partnership Agreements with major trading partners and starting discussions in 2011 with countries in the Trans-Pacific Partnership. Such agreements should be comprehensive and encompass agriculture, which has long been the major obstacle to Japan's inclusion in regional trade agreements. Greater openness to food imports would help push the restructuring of its agricultural sector. However, the Strategy also targets an increase in Japan's food self-sufficiency ratio, which may tend to fall as a result of regional integration that increases openness to low-cost food imports.

Economic growth also depends on the quality of education…

The New Growth Strategy also aims to increase the role of higher education in innovation. Education in Japan is outstanding both in terms of quantity and quality. Indeed, the share of the adult population that has completed tertiary education is the second highest in the OECD area at 43% and the quality, as reflected in the OECD's PISA exams, is one of the

highest. These excellent outcomes have been achieved with public spending on primary and secondary schools (as a share of GDP) that is below the OECD average, while public spending per student is above the average. It is supplemented by high private spending, including outlays for tutoring at private, after-school institutions, known as *juku*. Given the importance of education for economic growth, it is important to invest wisely and well in education.

… which could be improved through greater investment in early childhood education and care…

Public spending on early childhood education and care is low in Japan. Greater investment in this area is warranted, given that the returns appear to be large and as it would reduce the disadvantages of children from low-income families. At present, about one-third of children under the age of six are in licensed childcare centres under the direction of the Ministry of Health, Labour and Welfare, while another third are in kindergartens under the direction of the Ministry of Education, Culture, Sports, Science and Technology. The New Growth Strategy's objective of integrating kindergartens and childcare would improve the quality of education for children in childcare, while allowing cost savings by merging the two parallel systems. Another advantage of integration is that it would reduce the shortage of childcare by utilising excess capacity in kindergartens. There are waiting lists for licensed childcare centres, which are heavily subsidised, with the government paying 60%. The lack of affordable and high-quality childcare is cited as a major obstacle to raising Japan's relatively low female labour force participation rate. The government plans to increase capacity by 260 thousand places over the next five years, but this would have only a limited impact on female participation. Allowing a greater role for private suppliers, who are currently subject to controls, including price ceilings, would help address the childcare shortage. In the longer term, Japan could consider moving toward a system of vouchers that encourages suppliers to compete in providing the services demanded by parents.

… and reforms to improve primary and secondary education…

Japan is launching reforms to improve primary and secondary schools by lengthening textbooks by a quarter and increasing class time by one to two hours per week. While Japan is near the top in PISA scores, such a reform may have a positive effect, not least by weakening dependence on *juku*. Other reforms that would raise the quality of education include granting more autonomy for schools and expanding the scope for school choice by students and parents to encourage schools to excel. At present, only 14% of municipal school districts allow school choice.

… as well as tertiary education, thereby enhancing innovation

In contrast to primary and secondary schools, universities in Japan do not stand out in international comparisons, suggesting more scope to improve quality. The expanding supply of tertiary education in Japan and the shrinking number of high school graduates

have converged. As demographic trends further reduce the number of high school graduates, some tertiary institutions, including the national and public universities, would face pressure to consolidate if they fail to reform. Consolidation, with due regard to universities' autonomy, may make them more effective in R&D, but should take into account the impact on regional economies. It is important to increase transparency about the quality of tertiary institutions, including the labour market outcomes of their graduates, to strengthen competition and upgrade performance. Stepping up the internationalisation of universities, which have a relatively small share of foreign students, could also help boost performance, as would attracting leading foreign tertiary institutions to Japan. Higher-quality universities could make a larger contribution to innovation. While universities employ a majority of Japan's PhDs in natural sciences, they performed only 13% of R&D in 2007, of which 3% was funded by firms. The role of universities could be strengthened by enhancing labour mobility of researchers between universities, firms and government research institutes and raising the share of government R&D funding for universities that is competitively financed.

Expanding access to student loans and reducing dependence on juku would enhance equity, while easing burdens on families

It is important to expand access to public loans for tertiary education, which are currently available to only one-third of students despite high tuition payments in Japan. Making loan repayment contingent on income after graduation would also encourage students from low-income households to invest in education. Another equity concern is the prominence of *juku*, which provide additional instruction to about half of middle school and a quarter of primary students, resulting in long hours in classrooms that can have a negative impact on children's development. Reducing reliance on *juku* would also lower inequality in educational results as attendance at *juku*, which significantly raises educational scores, rises with family income. This inequality can be persistent, as higher test scores in turn allow students to attend more prestigious universities, which lead to regular employment and significantly higher lifetime earnings. Dependence on *juku* could be reduced by improving the quality of public schools and reducing the importance of multiple-choice tests – an area where *juku* are most effective – in entrance exams. In any case, *juku* are likely to continue to play a major role, making it important to increase the accessibility to low-income households. Reducing dependence on *juku*, along with greater investment in early childhood education and care, would also reduce the heavy burden of educational spending on households, which is reported to be a major cause of Japan's low birth rate – the second lowest in the OECD area at less than 1.4.

Improving vocational education and training is becoming increasingly important

The traditional pattern, in which firms hire graduates for long-term employment and train them within the firm, is shifting in favour of employing workers with specific skills. The new approach increases the importance of effective vocational education. Meanwhile, the rising share of students attending university is forcing the closure of junior colleges and specialised training colleges that have traditionally played a major role in vocational

education. To cope with changing labour market trends, it is essential to upgrade the quality of vocational education, including in universities, by developing effective curricula through close contacts with firms and unions, and by creating qualifications that are recognised by firms, another objective of the New Growth Strategy. It is also important to expand vocational training, which so far has played a relatively small role in Japan, given the emphasis on firm-based training. Expanding the programmes included in the Job Card initiative should be conditional on their success in improving the employment outcomes of participants. The need for greater vocational education and training is particularly important, given the rising share of non-regular workers – part-time, temporary and dispatched employees – who receive little firm-based training.

Reducing labour market dualism is a top priority

Japan's labour market retains a number of positive features, including flexibility in wages and hours worked. However, as economic growth slowed dramatically since 1990, the traditional labour market practice of long-term employment, seniority-based wages and mandatory retirement at age 60 became increasingly ill-suited to economic conditions. As a result, firms have employed more non-regular workers in order to gain greater employment flexibility and to reduce labour costs. Indeed, non-regular workers now account for a third of employment, reflecting their advantages to firms. However, the rising share of non-regular workers creates concerns, as they are paid less, even after adjusting for the type of job and education, receive less training and are poorly covered by the social insurance system. In addition, they face considerable job precariousness. For example, non-regular workers accounted for two-thirds of the fall in dependent employment between 2008 and 2009. Moreover, the limited mobility in a segmented labour market means that non-regular employment is not a pathway to regular employment. The government has proposed legally restricting the use of short-term dispatched workers and policies to promote their continued employment. This may aggravate the costs of inflexibility and reduce overall employment. Instead, a comprehensive approach is necessary that includes increasing the social insurance coverage of non-regular workers and upgrading training programmes, preventing discrimination against non-regular workers and reducing effective employment protection for regular workers.

Raising female labour force participation and making better use of older workers is important to cope with population ageing

Reversing the upward trend in non-regular employment may also encourage the labour force participation rate of women, who account for 58% of non-regular workers. The difficulty of obtaining higher-paying regular positions may discourage women from working, particularly those who left the labour force to raise children. Raising the relatively low participation rate for prime-age women, while increasing the fertility rate, requires other reforms as well. *First*, it is important to expand the availability of childcare. *Second*, better work-life balance is needed so that women can combine employment with family responsibilities. *Third*, the tax and social security system should be reformed to remove aspects that discourage spouses from working. In addition to raising female participation, making more effective use of older workers is a priority in the face of a projected fall of

nearly 40% in the working-age population by mid-century. At present, most firms impose mandatory retirement at age 60, although many workers are re-hired, usually on short-term contracts at significantly lower pay. The government should prohibit mandatory retirement and aim at a more flexible employment and wage system, based on ability rather than age. In sum, making better use of all of Japan's human resources – including women, older workers and youth – is essential to cope with the rapid population ageing. Such policies should be accompanied by increased inflows of highly-skilled foreign workers, as envisioned in the New Growth Strategy.

Chapter 1

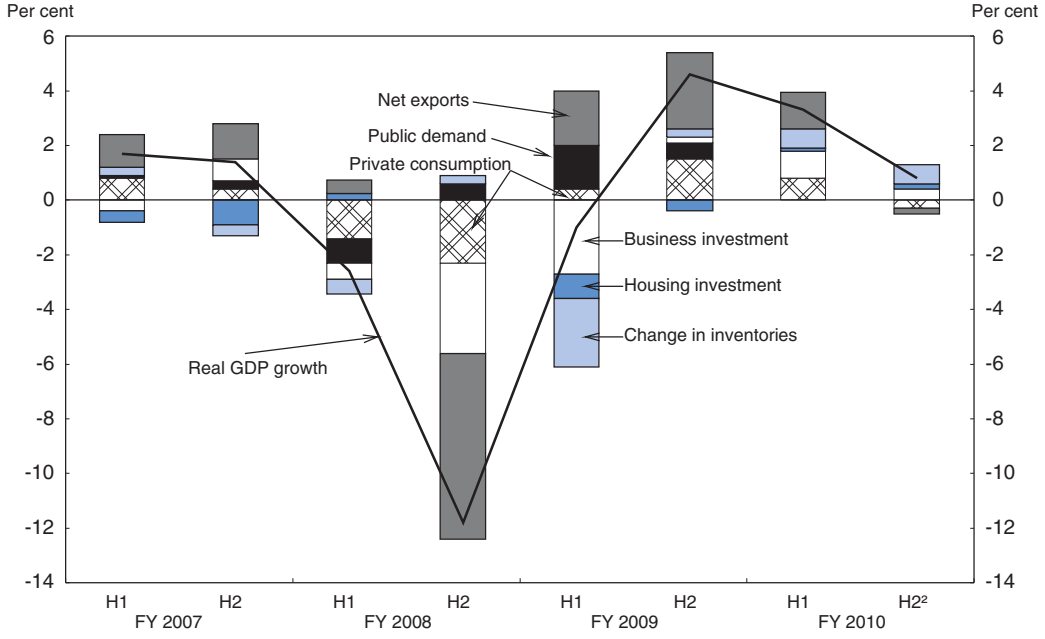
Japan's economic recovery: seeking a self-sustained expansion and an end to deflation

Japan's recovery from the severe 2008-09 recession was led by exports and fiscal stimulus. After stalling in late 2010, the expansion appeared back on track in early 2011, thanks to renewed export growth and improving labour market conditions, when Japan was hit by the Great East Japan Earthquake, the worst disaster in its post-war history. The earthquake and the accompanying tsunami led to an enormous loss of human life, as well as extensive damage to the physical capital stock that amounts to between 3.3% and 5.2% of GDP according to the government's preliminary estimate. The negative short-term impact of the disaster on economic activity is likely to be reversed later as reconstruction efforts boost private and public investment. The Bank of Japan should maintain an accommodative monetary policy stance until deflation is overcome. In addition, the monetary policy framework could be improved by raising the inflation range that is considered consistent with price stability. While monetary policy has a major role to play in sustaining the economic expansion during the period of fiscal consolidation ahead, output growth depends mainly on structural reforms to boost labour productivity and inputs.

Japan's recovery from the 2008-09 recession – its deepest of the post-war era – began in the second quarter of 2009, led by a significant contribution from external demand and large-scale fiscal stimulus (Figure 1.1). While export growth moderated following an initial spurt, in part due to slowing demand from Asia and yen appreciation, it helped to trigger a rebound in business investment starting in late 2009. Fiscal stimulus provided a significant boost to private consumption through lump-sum transfers to households and incentives to purchase consumer durables. The pace of growth – at a 4.5% annual rate between the first quarter of 2009 and the third quarter of 2010 – helped to stop the fall in nominal wages, thereby supporting private consumption. Nevertheless, output at the end of 2010 was 4% below its peak prior to the 2008 crisis and Japan is the only OECD country facing entrenched deflation. After reviewing Japan's recovery from the Great Recession, this chapter discusses the forces driving economic activity following the Great East Japan Earthquake and analyses how monetary policy can achieve price stability. The chapter concludes by looking at the longer-term challenges facing Japan.

Figure 1.1. **Japan's economic recovery**

Contribution to growth in percentage points[1]



1. Given that Japan's fiscal year begins in April, the first half of each fiscal year includes the second and third quarters of the calendar year, while the second half includes the fourth quarter and first quarter of the following year.
2. The second half of FY 2010 combines the fourth quarter results with the Secretariat projections for the first quarter of 2011 published in *Economic Outlook*, No. 88.

Source: Cabinet Office, *National Accounts*, and OECD (2010), *OECD Economic Outlook*, No. 88 (November 2010).

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Japan's recovery from the 2008 global economic crisis

A sharp rebound in exports, thanks in part to China

Despite its limited exposure to the global financial crisis, the accompanying collapse of world trade imposed a heavy toll on Japan's export-dependent economy, resulting in a 6.3% contraction in output in 2009 (Table 1.1). With export volumes down by 40% by early 2009, industrial production dropped by one-third (Figure 1.2). The upturn from the March 2009 trough was driven by exports, led by demand from other Asian countries, particularly China (Panel B). Indeed, the share of Japanese exports going to China (including Hong Kong, China), which had increased from 12% to 21% between FY 2000 and FY 2007, rose further to 25% in FY 2009. Export growth prompted a rebound in industrial production, reversed falling business profits and, according to the Tankan survey, bolstered confidence (Panel C). After falling to its lowest point on record in early 2009, more large firms described economic conditions as favourable than unfavourable by mid-2010. Increasing exports, profits and confidence underpinned a recovery in business investment beginning in the final quarter of 2009.

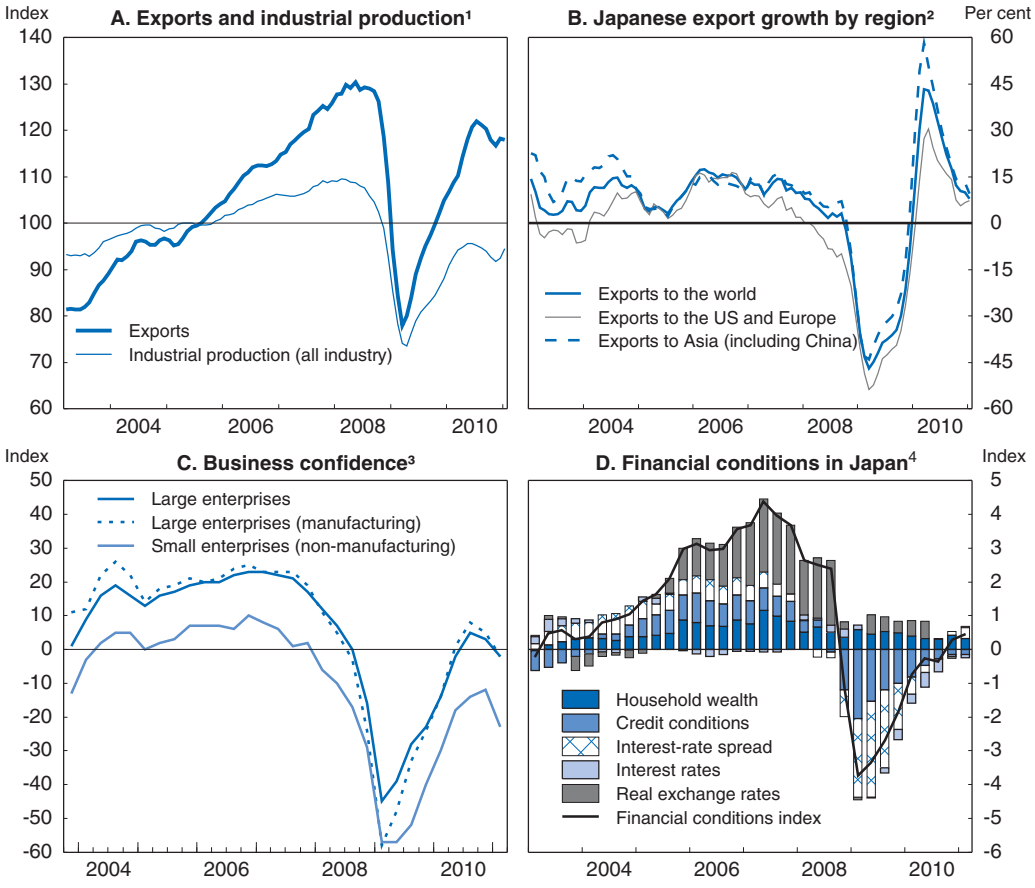
Table 1.1. **Economic indicators**

	2006	2007	2008	2009	2010
Demand and output (volumes)					
GDP	2.0	2.4	–1.2	–6.3	3.9
Consumption					
Private	1.5	1.6	–0.7	–1.9	1.8
Government	0.4	1.5	0.5	3.0	2.3
Gross fixed investment	0.5	–1.2	–3.6	–11.7	–0.2
Public[1]	–5.7	–7.4	–8.6	10.4	–3.2
Residential	0.5	–9.6	–8.0	–14.0	–6.3
Business	2.3	2.6	–1.4	–16.7	2.1
Final domestic demand	1.1	0.9	–1.2	–3.3	1.5
Stockbuilding[2]	0.2	0.3	–0.2	–1.5	0.6
Total domestic demand	1.2	1.3	–1.4	–4.8	2.1
Exports of goods and services	9.7	8.4	1.6	–23.9	24.0
Imports of goods and services	–4.2	1.6	0.4	–15.3	9.8
Net exports[2]	0.8	1.1	0.2	–1.5	1.8
Inflation and capacity utilisation					
GDP deflator	–0.9	–0.7	–1.0	–0.4	–2.1
Private consumption deflator	–0.2	–0.6	0.4	–2.1	–1.5
CPI	0.3	0.1	1.4	–1.3	–0.7
Core CPI[3]	–0.4	–0.2	0.1	–0.6	–1.2
Unemployment rate	4.1	3.8	4.0	5.1	5.1
Memorandum items:[4]					
Output gap	0.8	2.4	0.4	–5.3	–2.3
Net government lending[5]	–3.6	–3.1	–3.9	–8.9	–8.9
Net primary balance[5]	–3.0	–2.5	–3.0	–7.9	–7.6
Gross debt[6]	172.1	167.0	174.1	194.1	198.4
Net debt[6]	84.3	81.5	96.5	110.0	114.0
Current account[6]	3.9	4.9	3.3	2.8	3.6

1. Including public corporations.
2. Contribution to GDP growth.
3. The core CPI is the OECD definition, which excludes both food and energy.
4. The budget balance figures for 2009-10 are OECD estimates, as are the debt figures for 2010.
5. Per cent of GDP, excluding one-off factors.
6. Per cent of GDP.

Source: OECD (2010), *OECD Economic Outlook*, No. 88 (November 2010) and Cabinet Office, *National Accounts*.

Figure 1.2. **An export-led recovery**



1. Three-month moving averages of seasonally-adjusted volume data.
2. Year-on-year growth of a three-month moving average of exports in value terms.
3. Diffusion index of "favourable" minus "unfavourable" business conditions in the Tankan Survey. The 2011 figure is the forecast made in December.
4. The historical average is equal to zero. A unit decline in the index implies a tightening in fiscal conditions sufficient to produce an average reduction in the level of GDP by 1% after four to six quarters. For more information on the index, see Guichard *et al.* (2009).

Source: Ministry of Economy, Trade and Industry, Cabinet Office, Bank of Japan and OECD.

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A strong and prompt policy response

Policies to overcome financial market turmoil in Japan created the necessary environment for an economic recovery. In the wake of the global crisis, the yield on short-term corporate bonds (maturity less than three years) doubled from 1.3% in August 2008 to 2.7% by April 2009, while the capitalisation of the Tokyo Stock Exchange fell by one-half. By early 2009, financial conditions had deteriorated to a level last seen during Japan's banking crisis a decade earlier (Panel D), reflecting worsening credit conditions and widening risk premiums on bonds. The Financial Services Agency adopted policies to sustain credit flows and stabilise financial markets by injecting public capital in depository institutions, purchasing equities from banks, encouraging lending to small and medium-sized enterprises (SMEs) and taking steps to stabilise the equity market (2009 *OECD Economic Survey of Japan*).

In addition, the Bank of Japan also introduced emergency measures to promote financial market stability and facilitate corporate financing, including: *i)* short-term loans to banks amounting to 7.5 trillion yen (1.5% of GDP) by March 2010; *ii)* purchases of up to 3 trillion yen of commercial paper and 1 trillion yen of corporate bonds by December 2009; *iii)* increased outright purchases of government bonds; and *iv)* purchases of up to 1 trillion yen in shares of investment-grade firms held by eligible banks by April 2010. With the economic recovery and the normalisation of the financial market, the Bank gradually withdrew outright purchases of commercial paper and corporate bonds and purchases of equities held by financial institutions. However, purchases of commercial paper and corporate bonds were included in the Bank's October 2010 "comprehensive monetary easing" package (see below).

With these measures and the economic recovery, financial conditions normalised to their historical average by mid-2010 (Figure 1.2, Panel D). The banks returned to profitability in FY 2009, thanks to lower credit costs and gains on securities holdings (Table 1.2). Moreover, non-performing loans have remained steady at 2.5% of total loans, partly related to an easing of loan classification criteria in November 2008, while capital adequacy ratios have increased. Nevertheless, bank lending has been declining since the end of 2009, reflecting weak demand from large firms and a pickup in bond issuance.

Table 1.2. **Performance of Japanese banks**[1]

Fiscal year	2002	2003	2004	2005	2006	2007	2008	2009
NPLs/total loans	7.4	5.8	4.0	2.9	2.5	2.4	2.4	2.5
Stockholders' equity/assets	3.3	3.9	4.2	4.9	5.3	4.5	3.6	4.7
Return on equity (ROE)[2]	–19.5	–2.7	4.1	11.3	8.5	6.1	–6.9	4.7
Number of banks	134	131	129	126	125	124	123	120
Capital adequacy ratio[3]	9.4	11.1	11.6	12.5	13.3	12.3	12.4	15.8

1. Data cover city banks, the former long-term credit banks, trust banks, regional banks I and regional banks II.
2. Net income as a percentage of stockholders' equity (no adjustment for preferred stocks, etc.).
3. For major banks only. From 2005, the data cover the former long-term credit banks. The ratio for regional banks was 11.3 in 2009.

Source: Financial Services Agency, Japanese Bankers Association and OECD Secretariat calculations.

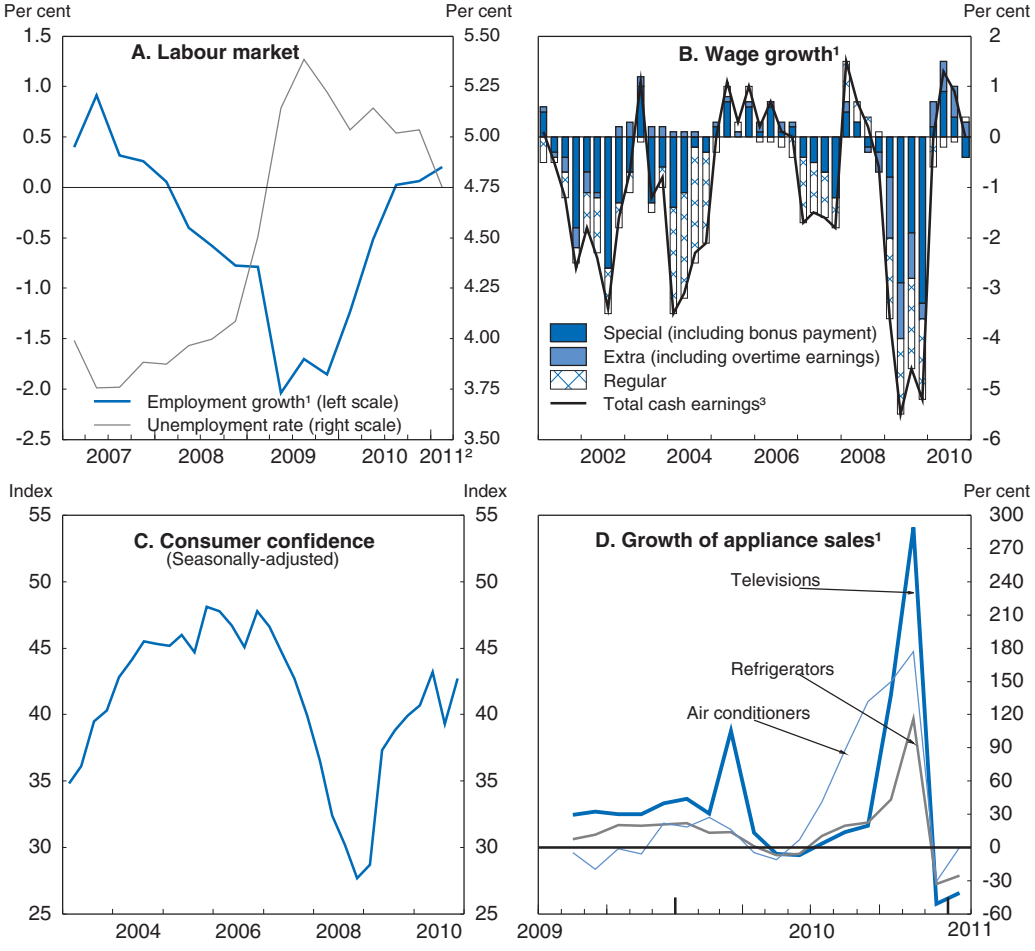
In addition, the government introduced large-scale fiscal stimulus (Chapter 2). Two supplementary budgets were implemented in FY 2008 following the Lehman shock in September 2008, followed by additional stimulus in the regular FY 2009 budget and a fourth package approved in May 2009. Fiscal stimulus in 2008-09, at 4.7% of 2008 GDP, was well above the OECD average, with increased spending accounting for all but ½ percentage point (OECD, 2009b). The emphasis on infrastructure construction temporarily reversed the downward trend in public investment. The government that took office in September 2009 implemented an additional 1.5% of GDP of fiscal stimulus later that year, funded in part by scrapping unfinished projects in the previous government's fiscal packages. Finally, with the recovery appearing to stall, the government launched two stimulus packages in September and October 2010, amounting to 0.2% and 1.1% of GDP, respectively, in a pre-emptive move to prevent a double-dip recession. The government expects the impact of the two packages together to add 1.0% to GDP. The fiscal stimulus, combined with the impact of the recession on tax revenues, boosted the budget deficit (excluding one-off factors) from 3% of GDP in 2007 to an estimated 9% in 2010. While the stimulus thus exacerbated the fiscal situation, it did help to mitigate the length and depth

of the recession, in part thanks to measures to support employment and increase transfers to households.

An improvement in the labour market and domestic demand

The new government shifted the focus of fiscal stimulus "from concrete to human beings" by expanding employment subsidies, increasing public job creation programmes and extending subsidies for purchases of energy-efficient vehicles and home appliances. Such an approach limited the rise in unemployment, which nevertheless reached a record-high 5½ per cent in the summer of 2009 (Figure 1.3). Perhaps most important was the expansion of the Employment Adjustment Subsidy, which pays downsizing firms to maintain employment. The number of workers covered by the scheme jumped from 200 thousand in FY 2008 to 2.5 million in FY 2009, as eligibility requirements were eased and subsidy rates were increased.[1] The expanded subsidy may have saved about 400 thousand jobs, suggesting that without it, the unemployment rate would have risen to

Figure 1.3. **Improvement in the labour market and in private consumption**



1. Year-on-year percentage change.
2. The first quarter of 2011 is the average of January and February.
3. Total cash earnings of all workers, including bonuses.

Source: OECD Economic Outlook Database, Ministry of Health, Labour and Welfare and Cabinet Office.

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above 6% (Duell *et al.*, 2010). In addition, the 2008-09 fiscal stimulus packages spent more than 1 trillion yen (0.2% of GDP), more than all active labour market programmes combined in FY 2007, to create jobs.[2] Thanks to the economic recovery and the fiscal packages, employment, which fell 1.6% in 2009, leveled off by the third quarter of 2010. With the working-age population declining by almost 1% a year, the unemployment rate is now below 5%.

Improved employment conditions reversed the decline in nominal wages that began in 2008 (Panel B). Rising wages reflected higher bonus payments, in line with rebounding corporate profitability, and an increase in overtime hours from a trough of 8.5 hours per week in early 2009 to more than 10 hours. Household disposable income was also increased by measures such as the lump-sum payments of 12 thousand yen (around $150) to households in March 2009,[3] the introduction of a child allowance of 13 thousand yen per month in FY 2010 for all children up to age 15 (total outlays of 0.4% of GDP) and the end of high school tuition fees. Improving labour market conditions and increased transfers in the context of larger declines in consumer prices boosted households' real disposable income by nearly 1% in 2009 and an estimated 2½ per cent in 2010. In addition, consumer confidence has rebounded sharply from its trough at the end of 2008 (Panel C). Rising household incomes and confidence led to gains in private consumption since the second quarter of 2009 until the third quarter of 2010.

Private consumption was also promoted by the "eco-point system" introduced in May 2009 and extended until the end of March 2011. The programme allows buyers of certain types of energy-efficient air conditioners, refrigerators and television sets to exchange the points later for other goods and services worth up to 36 thousand yen (around $450) per item.[4] In November 2010, television sales were almost four times higher than a year earlier, while air conditioner sales were nearly three times higher (Panel D). In addition, incentives for the purchase of energy-efficient vehicles increased car sales in August 2010 by nearly 40% above their year-earlier level.

Private consumption increased 3.6% (seasonally-adjusted annual rate) in the third quarter of 2010, boosting GDP growth to 3.3%. However, the end of the subsidy programme for cars in September and a reduction in the generosity of the system for appliances in November led to a sharp plunge in purchases of these products in the fourth quarter (Figure 1.3). Clearly, the major effect of the eco-point system was to bring forward future purchases. Meanwhile, export volumes fell sharply to around 10% below their pre-crisis peak by November 2010. Both factors contributed to the 1.3% decline in real GDP in the fourth quarter of 2010. With the recovery stalling, the rise in business confidence was reversed (Figure 1.2). Clearly, Japan has not yet achieved a self-sustained expansion, given its dependence on exports and fiscal stimulus.

Japan's short-term economic outlook

The evolution of the Japanese economy during the course of 2011 will be significantly affected by the 11 March 2011 Great East Japan Earthquake, which was the strongest ever recorded in Japan and triggered the country's worst disaster of the post-war era. The earthquake and accompanying tsunami resulted in an enormous loss of human life, as well as massive economic damage. A preliminary report by the government estimated the damage to social infrastructure, housing and private firms' fixed capital at between 3.3% and 5.2% of 2010 GDP (Cabinet Office, 2011). Given the high degree of uncertainty about

future developments, including the duration of electricity shortages, the size and timetable of government reconstruction programmes and the amount of private investment to rebuild factories and housing, it is difficult to predict the timing and size of an economic rebound (Box 1.1).

Despite the short-term negative impact of the earthquake, an extended downturn is unlikely for several reasons. In addition to the positive impulse from reconstruction spending, particularly in the second half of 2011, renewed export growth and positive developments in the domestic economy are likely to support economic activity.

On the external side, there are signs of a pick-up in growth in the Asian region, which accounts for 56% of Japanese exports. Exports to Asia have almost doubled from 4% of Japanese GDP in 2000 to an estimated 7.5% in 2010, making them an important driver of growth. In addition, the exchange rate, which had appreciated 30% in effective terms and

Box 1.1. **The economic impact of the Great East Japan Earthquake**

The government's first estimate is that the tragic earthquake and accompanying tsunami caused between 16 trillion yen and 25 trillion yen of damage, substantially larger than the 9.6 trillion yen (2% of GDP) in the 1995 Hanshin-Awaji (Kobe) earthquake.* The impact was focused on three prefectures – Iwate, Miyagi and Fukushima – which account for about 4% of nationwide economic output and 4.5% of Japan's population. The estimate also includes the damage incurred in the less severely affected prefectures of Ibaraki and Chiba near Tokyo and Aomori and Hokkaido to the north. The figures include damage to buildings (housing and fixed capital of private firms), public utilities (electricity, gas and water), public infrastructure (such as railroads, ports and highways) and public parks (Cabinet Office, 2011).

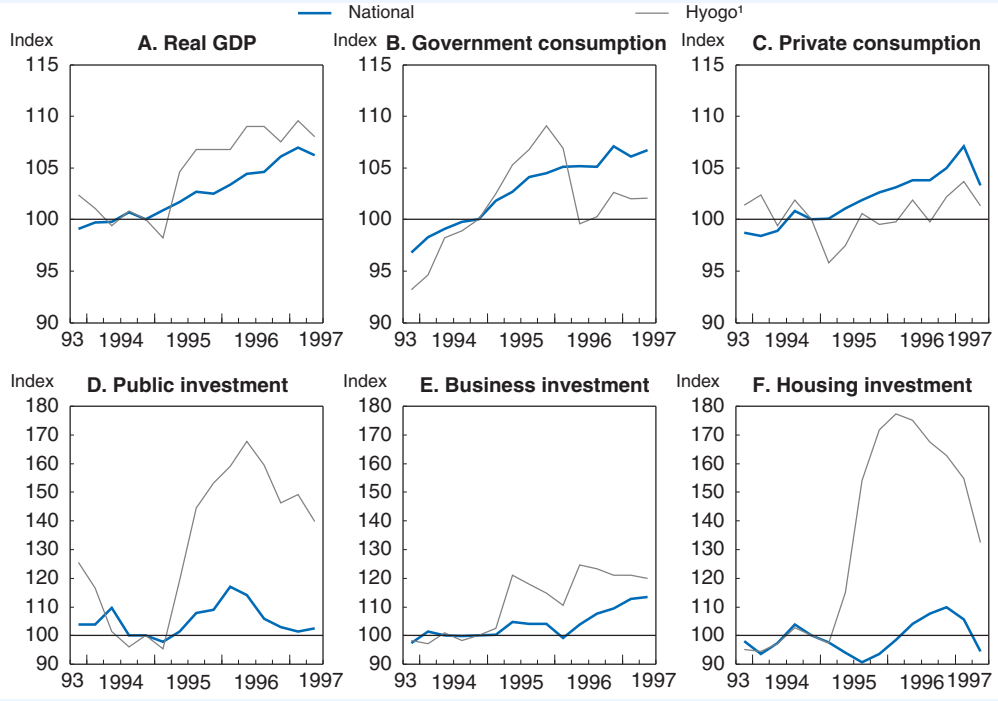
The experience of past disasters in Japan and other developed countries suggests a negative short-term impact on economic output followed by a rebound as reconstruction spending picks up (Bloom, 2009). The damage to the capital stock and disruption of supply chains are likely to result in a drop in production in the second quarter of 2011. For example, while Tohoku is not a major industrial centre, the reduction in its production of auto parts has stopped car manufacturing in other parts of Japan. However, given that industrial production in February 2011 was still 15% below its peak prior to the 2008 global financial crisis, there is scope to shift production elsewhere, thus limiting the negative short-run impact on output. In addition, Japan's increasing integration with Asia means that some firms will be able to shift production to overseas plants.

The January 1995 Kobe earthquake – the most costly disaster in Japan's post-war history prior to the Great East Japan Earthquake – followed the pattern of a short-term loss followed by a later rebound (Figure 1.4). The earthquake occurred during an economic expansion that lasted from late 1993 to mid-1997. Real GDP (Panel A) in Hyogo (the prefecture that includes Kobe) fell sharply in the first quarter of 1995, but then rebounded strongly and by the third quarter was 7% above its pre-earthquake level, compared to 3% for Japan as a whole. One factor was government reconstruction programmes, which boosted public investment by 45% above the pre-earthquake level by the same quarter (Panel D). Reconstruction spending by the central government amounted to 3.2 trillion yen (0.7%) of GDP by the end of FY 1995 and reached 5 trillion yen by FY 1999, with public investment accounting for a large amount. In contrast, there was a more modest increase in government consumption, which was unwound by 1996 (Panel B).

Box 1.1. **The economic impact of the Great East Japan Earthquake** *(cont.)*

Figure 1.4. **The impact of the 1995 Hanshin-Awaji (Kobe) earthquake**

4th quarter of 1994 = 100



1. Hyogo prefecture includes Kobe, which is its capital.

Source: Cabinet Office and Hyogo Prefecture.

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Business (Panel E) and residential investment (Panel F) also rebounded promptly following the Kobe earthquake, with the latter rising by almost 80%. All types of investment – public, business and residential – peaked four or five quarters after the earthquake. In contrast to investment, private consumption in Hyogo lagged behind the rest of the country, increasing only 3% from the final quarter of 1994 through the end of the expansion in 1997 (Panel C). Private consumption was likely squeezed by increased investment in housing, as may be the case in 2011 as well, as only 15% of firms and households have earthquake insurance.

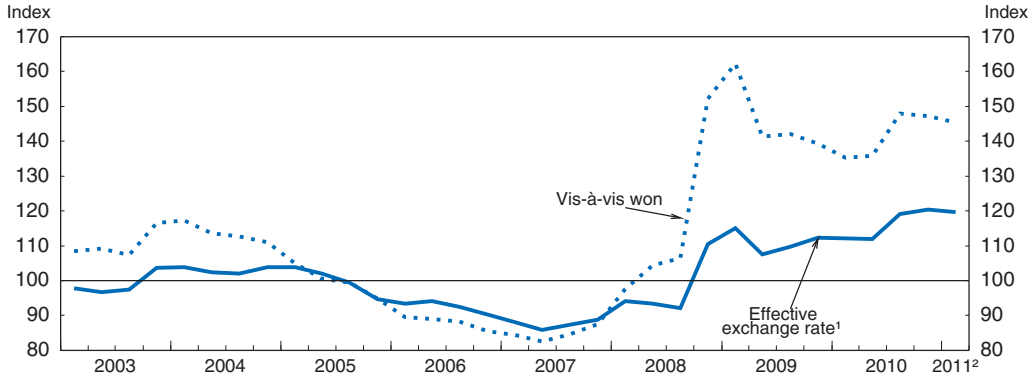
However, one unusual feature of the 2011 disaster is the reduced capacity of electricity generation, which creates uncertainty about the depth and length of the decline in output. Indeed, the earthquake and tsunami damaged a number of thermal, as well as nuclear power plants, which supply a third of Japan's electricity. During the week after the earthquake, electricity supply was 16% below assumed demand, with the shortages forcing blackouts (Cabinet Office, 2011). According to the Tokyo Electric Power Company, rolling blackouts will continue at least until the end of April. It is uncertain how quickly other electricity generating plants using oil, gas and coal can expand production to offset the shortages and to cope with increased demand during the summer.

* The estimate assumes that the "destruction rate" of physical capital was twice that of the Kobe earthquake. The higher end of the estimate reflects a high rate of damage to buildings due to the tsunami.

37% relative to the Korean won between the Lehman shock in September 2008 and February 2011, stabilised in early 2011 (Figure 1.5). The won-yen exchange rate has become particularly important, given the competition between Japanese and Korean products in world markets. However, the yen appreciated to a record high of 76 yen per dollar on 17 March before co-ordinated intervention by the G7 countries returned it to near its level prior to the earthquake (see below).

Figure 1.5. **Recent exchange rate trends**

2005 = 100



1. Trade-weighted, *vis-à-vis* 41 trading partners.
2. The first quarter of 2011 is the average of January and February.

Source: OECD Economic Outlook Database.

StatLink http://dx.doi.org/10.1787/888932388391

A number of domestic factors that were apparent in early 2011 prior to the earthquake will continue to have a positive impact on economic activity. *First*, the fiscal stimulus packages in the autumn of 2010 will support the economy in the first half of 2011. *Second*, the job-offer-to-applicant ratio has improved significantly from its trough of 0.43 in 2009 to 0.62 in February 2011. Improving labour market conditions should lead to further growth in wages, which stalled in the fourth quarter of 2010. Household income growth is likely to lead, in turn, to further gains in private consumption, although at a slower pace than in 2010, as the eco-point system ends and households will not soon replace the appliances purchased under the system. *Third*, business investment, whose share in GDP has fallen by nearly 3 percentage points since the 2008 crisis, should be a second source of domestic demand growth, given improving profitability during FY 2010 and continued export growth. Indeed, domestic machinery orders are trending up. *Fourth*, there was already considerable scope even before the earthquake for increased residential investment, which has fallen by one-third since the bungled regulatory change in 2007,[5] reducing its share of GDP to less than 3% in 2009, well below the OECD average of 4.5%. The measures planned in the New Growth Strategy to make residential investment a pillar of domestic demand growth (Chapter 3) should also support housing construction.

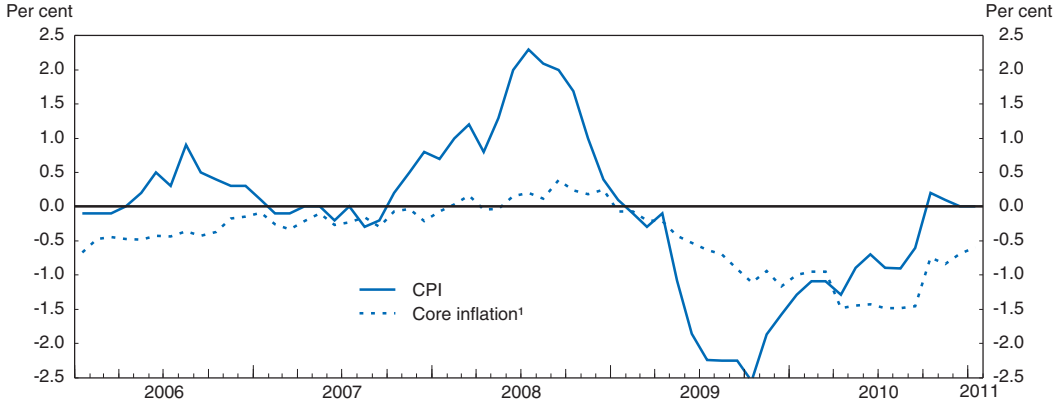
In addition to earthquake-related factors, there are a number of risks to economic growth, particularly given the uncertain world economic outlook. Although exports are relatively small at 15% of GDP in Japan, they have a major impact on business investment and labour market developments. In addition, exchange-rate volatility and rising commodity prices create uncertainty about the economic outlook. On the domestic side, the transition from a government-led to a domestic-led expansion as fiscal stimulus fades

poses risk. The pace and timing of fiscal consolidation, which will become clearer after the mid-2011 revision of the medium-term plan and once the extent of earthquake damage and the required reconstruction can be assessed more precisely, is likely to have a significant impact on the pace of growth. While faster consolidation might have a negative impact on growth in the short term, it would slow the run-up in the ratio of gross public debt to GDP, which is already the highest ever recorded in the OECD area, thereby reducing Japan's vulnerability to a rise in long-term interest rates.

The pace of the recovery is unlikely to be rapid enough to eliminate the output gap by 2012, thus contributing to deflationary pressure. The downward pressure on prices has clearly moderated during the past year of strong growth. Indeed, the headline inflation rate was 0.1% (year-on-year) in the fourth quarter of 2010 (Figure 1.6), although it was affected by temporary factors, notably Japan's largest-ever cigarette tax hike introduced in October (pushing up the consumer price index (CPI) by 0.3 percentage point) and higher fresh food prices (another 0.6 percentage point).[6] However, the core CPI fell by 0.8% in the fourth quarter of 2010 (year-on-year), based on the OECD definition, which excludes food and energy, the eighth consecutive quarterly decline.

Figure 1.6. **Consumer price developments**

Year-on-year percentage change



1. OECD definition of core inflation, which excludes food and energy prices.

Source: OECD Economic Outlook Database.

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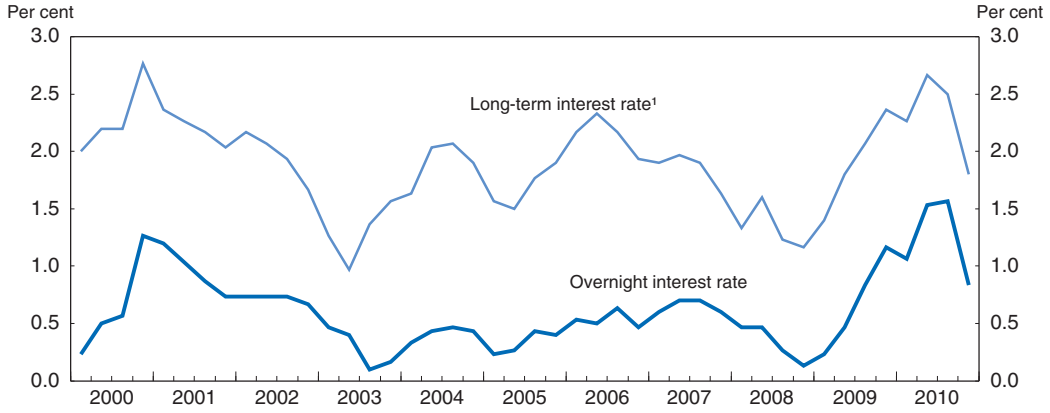
Monetary and exchange rate policies

Japan has endured persistent deflation, with the GDP deflator falling more than 14% since 1998 and the core CPI registering year-on-year growth in only nine months during the 12 years beginning in 1999. If inflation had increased at a 1% rate since 1998, the median of the Bank of Japan Monetary Policy Board's understanding of price stability announced in 2006, the level of the headline CPI in 2010 would now be 17% higher.

While Japan has avoided a deflationary spiral, the falling price level has a number of negative effects. *First*, the Bank of Japan has been unable to make monetary policy sufficiently expansionary. Indeed, a Taylor rule calculation by the OECD suggests that a policy interest rate of negative 2%, rather than zero, would be appropriate at present. Given the zero bound on nominal interest rates, the real interest rate remains significantly positive at a time when the negative output gap would call for negative real rates (Figure 1.7). *Second*, falling prices squeeze corporate profits, creating a vicious cycle as firms

Figure 1.7. **Real interest rates**

Nominal interest rates deflated by core CPI inflation (excluding food and energy)



1. Ten-year government bonds.

Source: *OECD Analytical Database* and Bank of Japan.

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reduce employment and wages to cut costs, thereby reducing household income and private consumption. *Third*, the negative redistributive effects of falling asset prices – generally from younger debtors to older creditors – are contractionary. A small positive inflation rate has the beneficial effect of allowing relative prices to adjust smoothly, while it is essential to avoid rates that are so high as to distort economic decisions. A recent study at the Bank of Japan found that the optimal rate of inflation in Japan is between 0.5% and 2% (Fuchi *et al.*, 2007). In sum, given the deleterious effects of deflation, achieving price stability should be a top priority.

In December 2009, the Bank of Japan Monetary Policy Board clarified its "understanding of medium to long-term price stability". In March 2006, it had defined it in terms of the year-on-year rate of change in the CPI as "the range approximately between 0 to 2%, with most Policy Board members' median figure at around 1%". The 2009 clarification stated that "the Policy Board does not tolerate a year-on-year rate of change in the CPI equal to or below 0%" and "that the midpoints of most Policy Board members' 'understanding' are around 1%". With these changes, the understanding of price stability is now inflation "in a positive range of 2% or lower, and the midpoints of most Policy Board members' 'understanding' are around 1%".

Recent measures by the Bank of Japan to achieve price stability

In the wake of the 2008 global financial crisis, the Bank of Japan took a number of steps, including a cut in the policy interest rate from 0.5% to 0.1% by December 2008. In December 2009, it introduced a "funds-supplying operation" to encourage a further decline in long-term interest rates by lending money to banks for three months at the policy interest rate. The total amount of loans was initially set at 10 trillion yen (2% of GDP) and later doubled to 20 trillion yen in March 2010. In August 2010, an additional 10 trillion yen was added in six-month loans to banks. The Bank also decided in June 2010 to supply up to 3 trillion yen in one-year loans at the policy rate to financial institutions lending to companies in "growth industries", such as environment-related sectors and health care (however, financial institutions decide which firms to lend to). In addition, the central bank boosted its purchases of government bonds from 1.4 trillion yen per month to 1.8 trillion yen in March 2009.

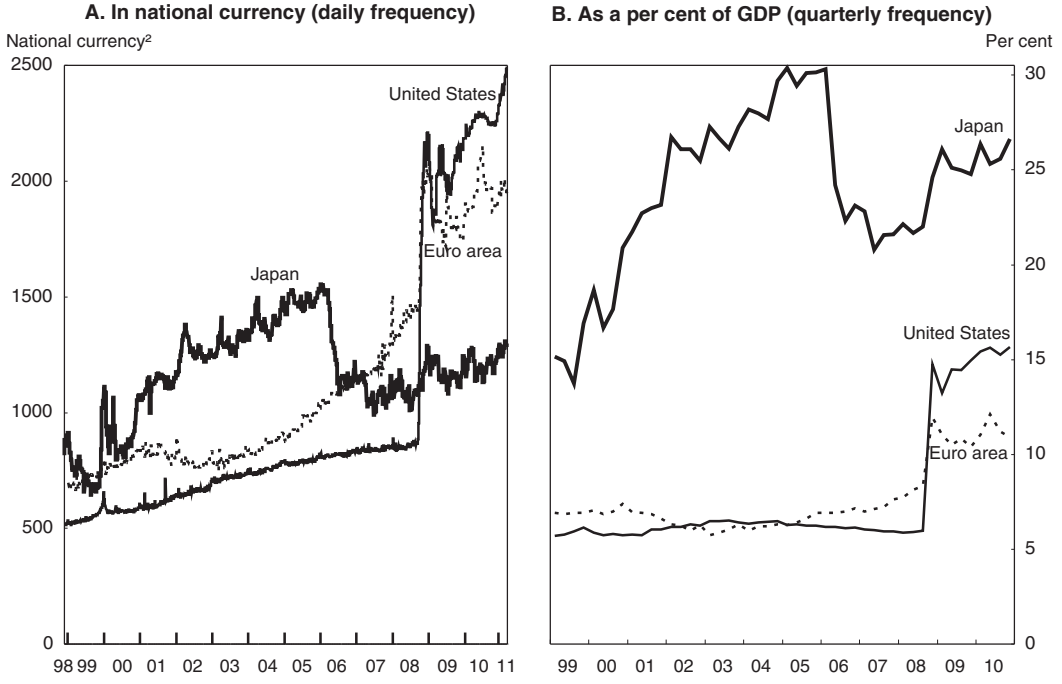
Despite these measures, the Bank's response to the 2008 crisis was relatively small compared to the 2001-06 period of quantitative easing and relative to other central banks (Figure 1.8). The Bank's balance sheet expanded by 21% between the September 2008 shock and the end of February 2011, well below the 34% for the European Central Bank (ECB) and the 181% for the US Federal Reserve. As a share of GDP, the Bank of Japan's balance sheet remains larger than that of the ECB and the Federal Reserve (Panel B). However, the Bank's balance sheet rose by 3.5% of GDP between the third quarter of 2008 and the fourth quarter of 2010, compared to 9.2% of GDP for the Federal Reserve. The relatively modest expansion of the central bank balance sheet in Japan may be partly explained by the less severe financial stress.

In October 2010, with the economy stalling and the yen appreciating, the Bank of Japan introduced "comprehensive monetary easing", in which it:

i) Reduced the policy interest rate from 0.1% to between 0 and 0.1%. In January, the rate averaged 0.08%, indicating little change thus far. This may reflect concerns that a zero interest rate could impair the functioning of money markets (Ueda, 2009).

ii) Pledged to "maintain the virtually zero interest rate policy until the Bank judges, on the basis of the understanding of medium to long-term price stability, that price stability is in sight". In its January 2011 outlook, the Monetary Policy Board's median projection for inflation in FY 2011 increased by 0.2 percentage point to 0.3% compared to the October projection, mainly due to the rise in commodity prices, while its real GDP projections were judged to remain broadly in line with the October outlook (Table 1.3). The

Figure 1.8. **International comparison of central bank balance sheets**[1]



1. Defined as central bank liabilities.
2. Billions of dollars and euro for the United States and the Euro area, respectively, and 100 billion yen for Japan.

Source: Thomson Financial.

StatLink http://dx.doi.org/10.1787/888932388448

Table 1.3. **The Bank of Japan's economic outlook**

The forecasts of the majority of Monetary Policy Board members[1] in per cent

		October 2010	January 2011
FY 2010	Real GDP	+2.0 to +2.3 (+2.1)	+3.3 to +3.4 (+3.3)
	Core CPI[2]	–0.5 to –0.3 (–0.4)	–0.4 to –0.3 (–0.3)
FY 2011	Real GDP	+1.5 to +1.9 (+1.8)	+1.4 to +1.7 (+1.6)
	Core CPI[2]	0.0 to +0.3 (+0.1)	0.0 to +0.4 (+0.3)
FY 2012	Real GDP	+2.0 to +2.4 (+2.1)	+1.9 to +2.2 (+2.0)
	Core CPI[2]	+0.2 to +0.8 (+0.6)	+0.2 to +0.8 (+0.6)

1. Median value shown in parentheses.
2. Excludes fresh food only. For FY 2010, the impact of the change in high school tuition fees was also excluded.

Source: Bank of Japan, *Statement on Monetary Policy*, January 2011.

projection does not take account of the forthcoming shift in the base year from 2005 to 2010 in August 2011, even though the Bank explicitly acknowledges that this shift will result in a downward adjustment to the CPI. The last rebasing, in August 2006, reduced the level of the CPI by ½ percentage point and a similar impact is likely this time, resulting in a one-time effect on the inflation rate.

iii) Established an "asset purchase programme", which includes the 30 trillion yen funds-supplying operation (which had 24.8 trillion yen in outstanding loans by the end of 2010). In addition, the Bank will purchase 5 trillion yen (1% of GDP) of assets over a one-year period. This includes 3.5 trillion yen worth of Japanese government securities, on top of the purchases under the existing market operations. Private assets are to account for 1.5 trillion yen of the total, namely corporate bonds (500 billion yen), commercial paper (500 billion yen), exchange-traded funds (ETF) (450 billion yen) and real estate investment trusts (REIT) (50 billion yen). Purchases of these various assets are intended to help to lower long-term interest rates and to reduce risk premiums.

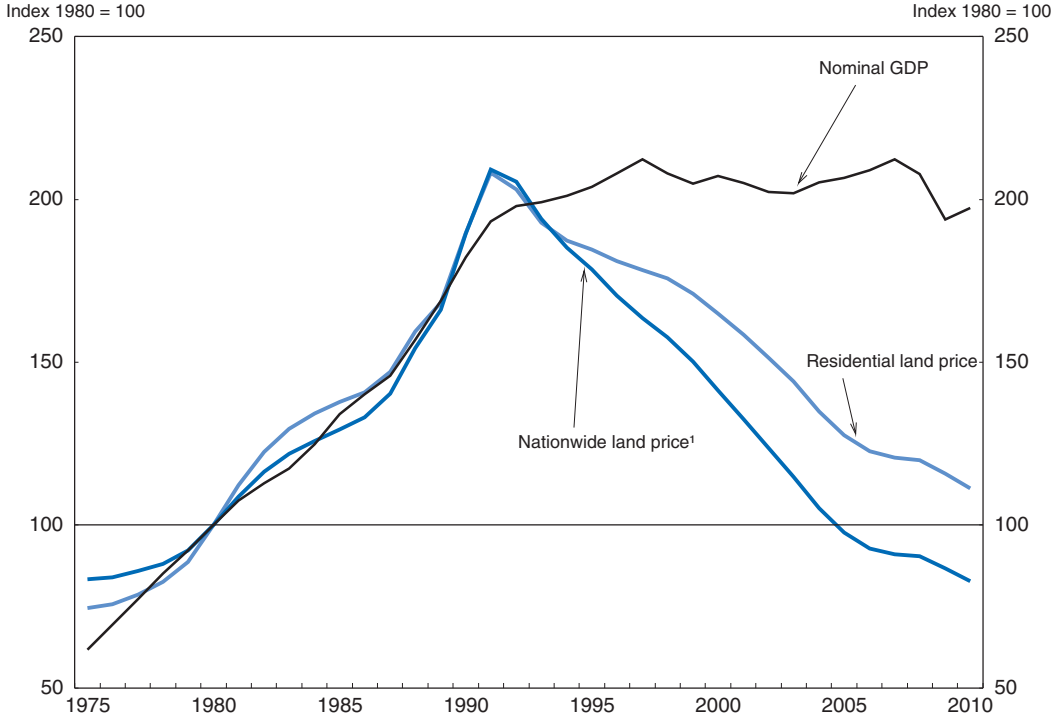
The Bank reacted promptly following the March 2011 disaster by providing liquidity on a large scale to stabilise financial markets. In addition, it announced that it would double the size of the asset purchase programme launched in October 2010 to 10 trillion yen (2% of GDP) to prevent a deterioration in business sentiment and an increase in risk aversion.

While additional monetary easing is certainly welcome, the Bank of Japan should be ready to pursue further measures if the outlook deteriorates. In such a case, increasing the size of asset purchases is an important option with a view to further encouraging lower interest rates at the longer end of the maturity spectrum and lifting inflation expectations. Monetary expansion should focus on purchases of government bonds. The purchase of risky private assets is an extraordinary policy for a central bank (Bank of Japan, 2010) and the Bank should be very cautious in expanding it. In addition, the scheme aimed at increasing bank lending in "growth areas", gives the central bank an industrial policy role, albeit indirectly, as financial institutions, rather than the central bank, make the actual lending decisions.

The Bank of Japan's commitment to maintain the virtually zero interest rate until price stability is in sight is conditional on avoiding potential risk factors, such as the emergence

of financial imbalances.[7] Concern about financial imbalances reflects the lessons learned from the 2008 global financial crisis, which demonstrated that a narrow focus on meeting CPI inflation targets was not sufficient to prevent excessive credit growth and the development of asset price bubbles. In Japan's case, though, a consideration of such risk factors strengthens the case for maintaining an accommodative monetary stance. Indeed, nationwide land prices have fallen for 19 consecutive years, reverting to their 1975 level (Figure 1.9). The prolonged period of falling property prices has significantly reduced wealth and continues to force balance-sheet adjustments, with negative consequences for growth. Similarly, equity prices are less than one-half of their 1990 levels. Thus, the "bubble" at the moment is a negative one, and stopping the long downward trend in asset prices would boost the economy and help stop deflation.

Figure 1.9. **Land prices in Japan**



1. Land prices on 1 January of each year for all uses (residential, commercial and industrial).

Source: Ministry of Land, Infrastructure, Transport and Tourism.

StatLink http://dx.doi.org/10.1787/888932388467

Reforming the monetary policy framework

Continued deflation since the late 1990s – despite the longest economic expansion of the post-war era from 2002 to 2007 – suggests that the monetary policy framework could be improved. In December 2009, the Monetary Policy Board revised its 0 to 2% "understanding" of price stability by dropping the zero lower bound as noted above. While the decision to explicitly exclude zero is a step forward, the current understanding could include inflation of 0.3% – the Bank's projection for FY 2011 – as well as the 0.6% projected for FY 2012.[8] A higher inflation objective would provide more of a buffer against deflation. For example, the ECB, which initially focused on a 0 to 2% inflation range, added "close to 2%" to their definition in May 2003, with the explicit objective to underline the ECB's commitment to

provide a sufficient safety margin against the risk of deflation (ECB, 2003). Furthermore, each of the 15 OECD inflation-targeting countries has a lower bound of at least 1% for their inflation objective (Table 1.4),[9] thus providing a buffer that limits the risk that a negative demand shock would push them into deflation. Six countries have a target range of 1 to 3%, while another four have a range of 2 to 4%. Three of the remaining countries have a zone centred on 2.5%. During the past decade, the central bank of Japan has exited zero interest rates twice – in August 2000 and July 2006 – based on its assessment of the economy and risks at the time even though underlying inflation was still in negative territory. Raising the lower end of the understanding of price stability to 1%, for example, would reduce the risk of a premature tightening of monetary policy and reinforce the credibility of the commitment to continue the current policy. The Bank of Japan justifies its low range on the grounds that Japan has historically experienced low inflation, even during the 1980s boom. However, persistent deflation may suggest a need for a higher definition of price stability.

Table 1.4. **Inflation objectives in selected OECD countries and areas**

	Introduction date	Current inflation target
Inflation-targeting countries		
New Zealand	1990	1 – 3
Canada	1991	2 +/– 1
United Kingdom	1992	2 +/– 1
Sweden	1993	2 +/– 1
Australia	1993	2 – 3
Czech Republic	2010	2 +/– 1
Israel	1997	2 +/– 1
Poland	1998	2.5 +/– 1
Chile	1999	3 +/– 1
Korea	2001	3 +/– 1
Mexico	2001	3 +/– 1
Iceland	2001	2.5 +/– 1.5
Norway	2001	2.5 +/– 1
Hungary	2001	3 +/– 1
Other central banks with a numerical inflation objective		
European Central Bank	2003	Below but close to 2%
Switzerland	2000	Not more than 2%

Source: Roger (2010) and OECD Secretariat.

Other improvements to the monetary policy framework could be envisaged. *First*, the Bank's policy intentions would be clearer, and thus more credible, if its understanding of price stability were expressed in terms of a range around a point. This would help to anchor expectations and provide more transparent guidance for policy. Indeed, in 13 of the 15 inflation-targeting OECD countries, the objective is expressed in terms of a range around a specific point (Table 1.4).[10] *Second*, the fact that the understanding is simply the combined range of each member of the Monetary Policy Board, whose membership changes regularly, creates some uncertainty about possible changes in the understanding. *Third*, the inflation objectives of the Bank of Japan and the government must be consistent.[11] In some OECD countries, the inflation range is set by the government or by consultation between the government and the central bank rather than independently by the central bank. Such an approach might promote government support for the inflation target and allow the central bank more independence in achieving it. However, it is

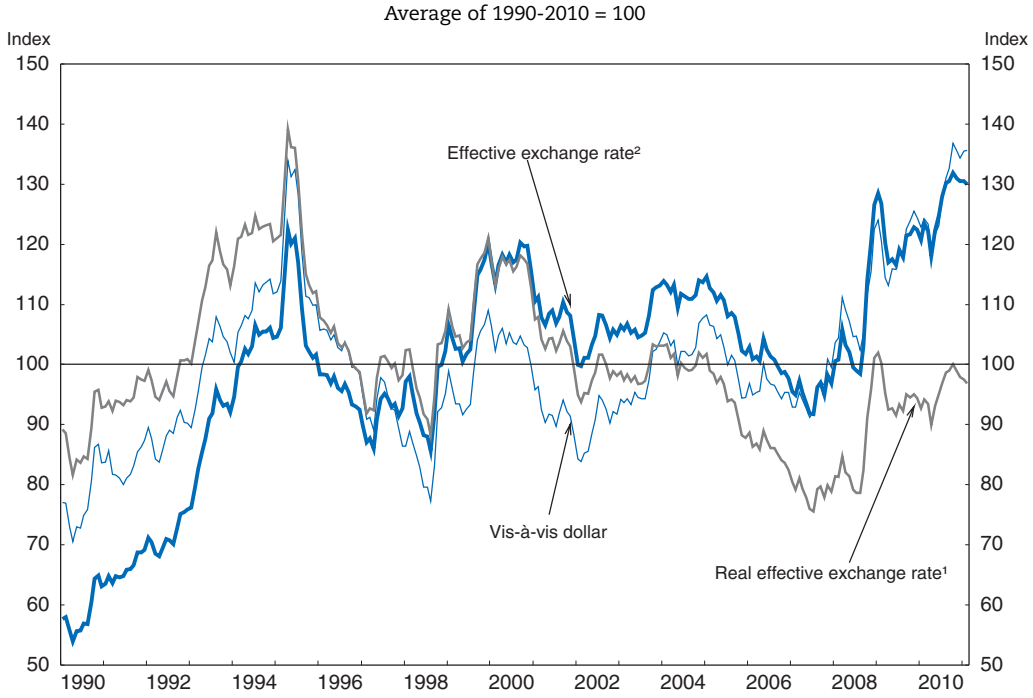
important that the central bank have the independence in terms of the instruments needed to achieve the target.

Finally, the pledge to continue the current monetary policy stance until price stability is "in sight", rather than when it is actually achieved, poses challenges in a deflationary environment. During the latest two episodes of exiting zero interest rates, the envisaged return to sustained price stability did not materialise.[12] While a forward-looking approach is generally desirable in the conduct of monetary policy, Japan's history of deflation suggests that a different approach would be warranted. In particular, projecting inflation when it is negative is very difficult, as the relationship between inflation and the output gap weakens. In other words, the Phillips curve flattens when inflation approaches zero. According to one study, the Phillips curve for Japan becomes flat when inflation rate falls below a ½ per cent quarter-on-quarter rate (Mourougane and Ibaragi, 2004). The balance of risks between temporarily overshooting the inflation target and remaining mired in deflation suggests that the Bank of Japan should wait until inflation is firmly positive in the range of an upwardly-revised inflation understanding before increasing interest rates.

Exchange rate policy

More vigorous monetary expansion would also help address Japan's concerns about the exchange rate. As noted above (Figure 1.5), the yen appreciated in the wake of the September 2008 Lehman shock, although from a long-term perspective, it does not appear overvalued. Indeed, the real effective rate is about 3% below its average between 1990 and 2010 (Figure 1.10). The IMF recently concluded the yen is "consistent with medium-

Figure 1.10. **Long-run trends in the yen exchange rate**



1. Deflated based on consumer price indices.
2. Trade-weighted, *vis-à-vis* 41 trading partners.

Source: OECD Economic Outlook Database and Bank of Japan.

StatLink http://dx.doi.org/10.1787/888932388486

term fundamentals" (IMF, 2010). In any event, the Japanese authorities intervened unilaterally in the foreign exchange market on 15 September 2010 in the amount of 2.1 trillion yen (0.4% of GDP) for the first time in six years. The intervention immediately reduced the currency's value relative to the dollar by almost 4%. By early October, though, the exchange rate had surpassed its pre-intervention level. Hence, this intervention in foreign exchange markets might not have had a sustained impact on the value of the yen. However, it can be argued that the intervention discouraged unwarranted speculation that had caused excessive volatility in the exchange rate. Following the Great East Japan Earthquake, there was renewed intervention in foreign exchange markets in March as part of a multilateral commitment by G7 finance ministers and central bank governors to reduce exchange rate volatility. The immediate impact was a depreciation of the yen, which had risen to a record high against the dollar, to around its pre-earthquake level.

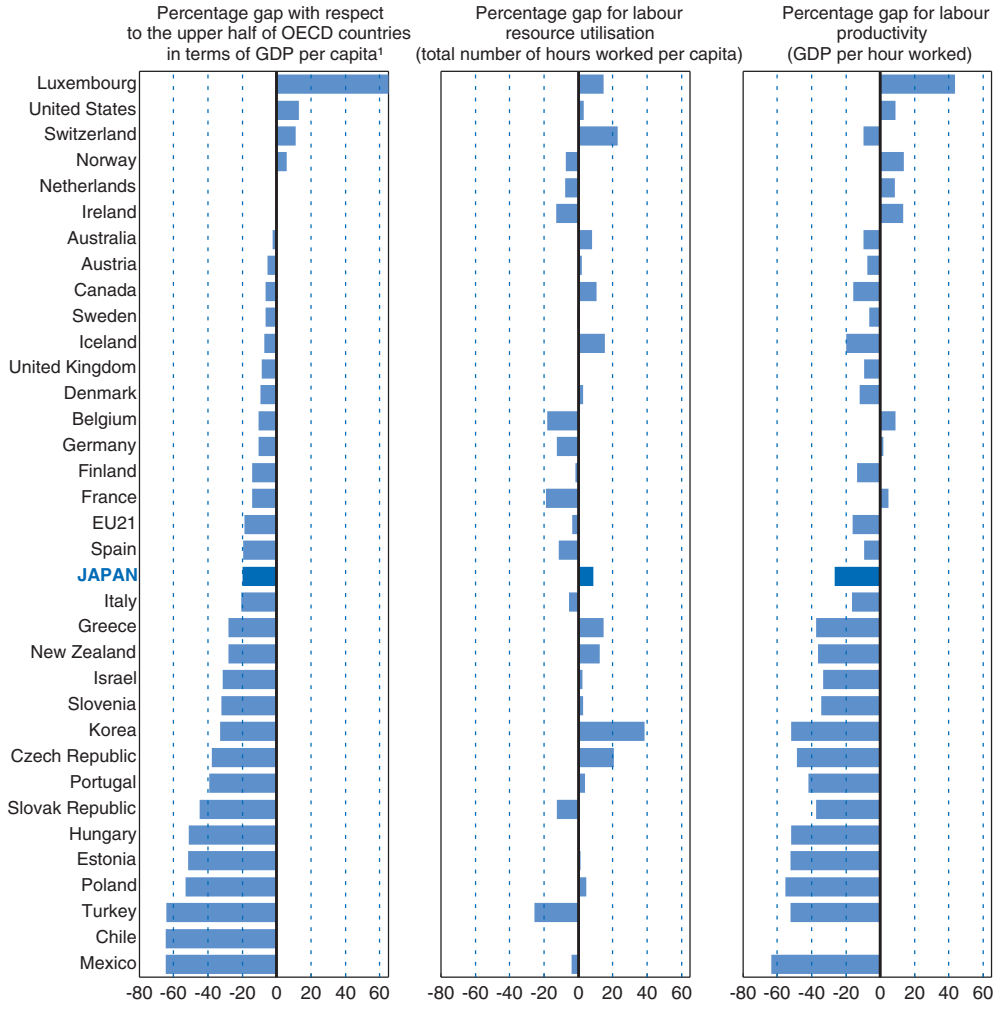
The medium-term outlook: sustaining growth and addressing the fiscal problem

The course of monetary policy will need to take into account the pace of economic growth and the evolution of inflation, which will depend in part on progress in fiscal consolidation over the medium term. Indeed, the budget deficit (excluding one-off factors) is estimated at around 9% of GDP in 2010 and gross public debt is set to exceed 200% of GDP in 2011. The high and increasing debt ratio makes Japan vulnerable to a rise in long-term interest rates from their exceptionally low level at present, making a detailed and credible fiscal consolidation plan, including spending cuts and tax hikes, a priority. The government's medium-term Fiscal Management Strategy, which is analysed in Chapter 2, targets a primary budget balance by 2020. However, stabilising the debt ratio would require a primary budget surplus of about 3% of GDP and achieving the government's goal of reducing the debt ratio from FY 2021 would necessitate an even larger surplus. Overcoming deflation, in addition to sustaining economic growth, would facilitate the stabilisation in the debt-to-GDP ratio.

It is essential to increase real output to help improve living standards and to help stabilise the debt ratio. Per capita income in Japan was 20% below the top half of OECD countries in 2009, putting Japan in 19th place among the 34 member countries (Figure 1.11). Of course, economic resources are not the only things that matter in people's lives. The well-being of individuals depends on a variety of indicators, such as health and education (OECD, 2009a). Japan, with the longest life expectancy in the world and a high level of educational attainment, has many strengths that are not fully reflected in GDP per capita. One study, using a welfare measure that combines consumption, leisure, inequality, and mortality, found that the ratio of welfare to income is relatively high in Japan (Jones and Klenow, 2010). Nevertheless, economic growth is essential to maintain living standards as the number of working-age persons per elderly is set to drop from 2.8 in 2009 to 1.3 in 2050.

The government's New Growth Strategy, analysed in Chapter 3, targets 2% real growth by creating new demand through green innovation, expanding health care, enhancing Asian economic integration and increasing tourism and regional development. However, the scope for creating new demand is constrained by the severe fiscal situation and the freeze on government spending planned for FY 2011-13. More than in many countries, the scope for fiscal stimulus in Japan has been exhausted. Consequently, spending related to the New Growth Strategy was limited to around 1.7 trillion yen (0.4% of GDP) in FY 2011.

Figure 1.11. **Explaining differences in income in 2009**



1. Using PPP 2009 exchange rates.

Source: OECD (2011), *Going for Growth, 2011*.

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Instead, supply-side measures should be given greater emphasis, notably through structural reforms to boost the potential growth rate (White, 2010).

Even with reforms, achieving 2% real growth over the coming decade is a challenging objective, particularly given the decline in the working-age population at an annual rate of around 1%. Japan's labour productivity has grown about 1% a year over the past decade. There is scope to raise labour productivity per hour worked in Japan, given that it was 27% below the top half of OECD countries in 2009 (Figure 1.11, right-hand panel). The key to closing the gap is broad structural reform of all sectors of the economy, not just in certain industries.

Education is crucial to raise labour productivity. While Japan ranks high in both the quantity of education, as reflected in the share of adults with tertiary education, and in the quality of education, as shown by its outstanding scores in the OECD's latest PISA assessment, there is scope for improvement, as discussed in Chapter 4. In particular, Japan under-invests in early childhood education and care, where the returns to investment in

education are highest. In addition, there is ample scope for enhancing the quality of tertiary education and expanding the role of universities in innovation. Given the dire fiscal situation, there is limited room to lift public investment in education, while the burden on families is already so high that it discourages child bearing. Consequently, it is essential, where possible, to increase value for money to free resources for priority areas while making greater use of market mechanisms to enhance efficiency.

The wide gap in labour productivity per hour worked is partially offset by a relatively large labour input. Nevertheless, inputs can be further increased as part of the population, especially women, faces obstacles to labour force participation. Boosting female participation, as discussed in Chapter 5, requires many fundamental changes in employment practices in order to balance work and family responsibilities, as well as increasing the availability of childcare and changing the tax system. More fundamentally, reversing the growing share of non-regular workers and facilitating the transition from non-regular to regular employment would help to make employment more attractive, particularly for educated women. In addition, reducing the reliance on non-regular employment would encourage training by firms, thus helping to promote human capital and labour productivity growth. Finally, the practice of mandatory retirement, usually at age 60, leads to the under-utilisation of older workers in Japan. In sum, a wide range of policies are needed to help Japan increase labour inputs and productivity, thereby boosting its per capita income toward the top half of OECD countries.

Notes

1. To expand the programme, the following changes were introduced: *i)* eligibility was extended to firms experiencing a 5% drop in the volume of production, instead of 10% previously; *ii)* non-regular workers were included in the scheme; *iii)* the subsidy rate was increased to two-thirds of wages instead of a half (and to four-fifths instead of two-thirds in the case of SMEs); and *iv)* the subsidy period was increased to 300 days in three years from 150 days.
2. These include the "Hometown Employment Revitalisation Special Grant", the "Emergency Job Creation Programme" (temporary jobs of less than six months, created by prefectural governments or Silver Human Resource Centres for the elderly) and the "Emergency Human Resource Development and Employment Support Fund".
3. The payment was 20 thousand yen for persons below age 18 and over age 65.
4. Electronic stores labeled about 2 000 products as eligible for the programme. The eco-points are worth 5% of the original price of air conditioners and refrigerators and about 10% of the price of televisions.
5. A revision of the Building Standards Law in June 2007, which aimed at improving the inspection process after a scandal in 2005, caused severe bottlenecks in the approval process, resulting in a plunge in housing starts.
6. The impact of the April 2010 change in high school tuition fees is estimated to push down the year-on-year change in the CPI by about 0.5%.
7. This is consistent with the Bank's two-pronged approach of conducting monetary policy on the basis of the short-term economic outlook and from a long-term perspective of risk factors that could affect prices.
8. It should be noted that the understanding of price stability is based on headline CPI, while the Bank only projects core CPI (excluding fresh food only). The rationale is that, in the long run, the volatility of fresh food prices is not a concern.
9. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

10. That number includes Turkey, which has a target of 6.5%, plus or minus 1 percentage point.

11. The New Growth Strategy posits a 1% rise in the GDP deflator. Historically, the GDP deflator has risen by about 1 percentage point less than the CPI on average. If this relationship were to hold over the coming decade, it would imply a 2% CPI inflation rate.

12. In the case of FY 2007, the initial projection of 0.8% core inflation (excluding fresh food only) in the Bank of Japan's April 2006 economic outlook was gradually revised down to 0% in October 2007.

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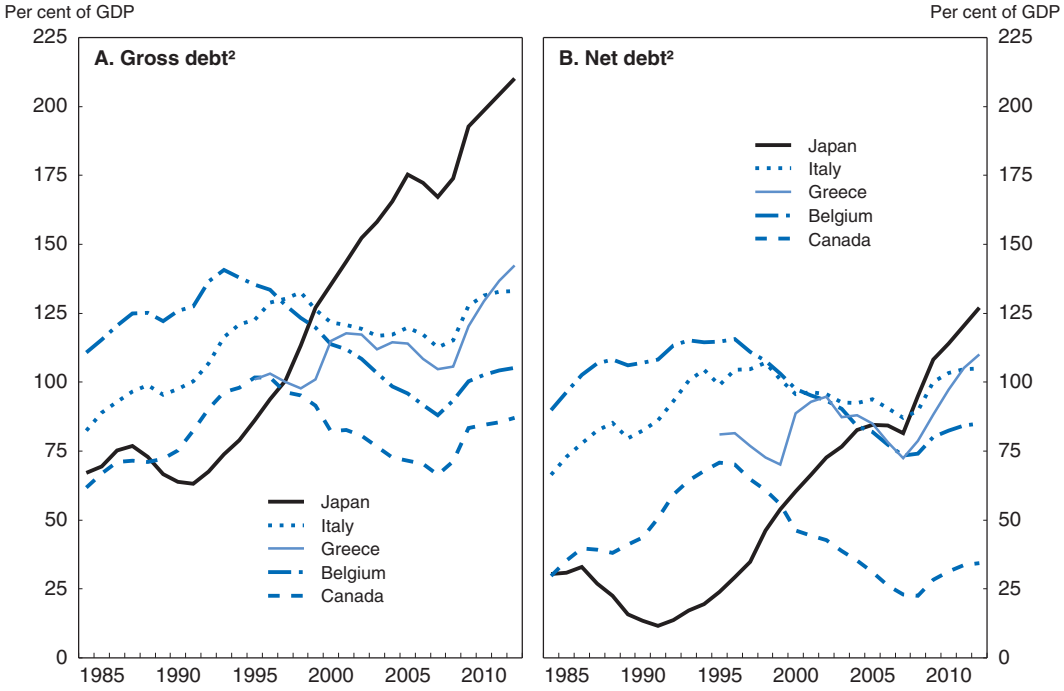
Chapter 2

Achieving fiscal sustainability in Japan

With gross government debt surpassing 200% of GDP, Japan's fiscal situation is in uncharted territory. Correcting years of rising debt will require a large and sustained effort. A detailed and credible multi-year fiscal consolidation plan that includes both spending cuts and revenue increases will be a top priority to maintain confidence and prevent a run-up in interest rates. Given the size of the adjustment in the fiscal balance needed just to stabilise the debt ratio in 2020 – around 10% of GDP – it is important to start fiscal consolidation as soon as possible, while taking into account the need to reconstruct areas devastated by the Great East Japan Earthquake. The consumption tax should be the main source of additional revenue, given that it is low and its impact on economic activity is less negative than other taxes. Tax measures should be accompanied by social security reform that limits spending increases, including in health care, and addresses problems in pensions. Given the large deterioration in Japan's fiscal situation since the collapse of the asset bubble in 1990 and the unprecedented size of its fiscal problem, a strong fiscal policy framework is important to reinforce the credibility of a medium-term fiscal plan. The framework may be improved through such steps as a multi-year budgeting plan, a stronger legal basis for the fiscal targets and an objective body at arm's-length from the policymaking process.

Japan's fiscal situation has reached a critical point. Since 1993, numerous fiscal stimulus packages and spending pressure, related in part to population ageing, have driven up government expenditure, while prolonged economic stagnation and tax cuts have constrained revenue, resulting in 18 consecutive years of budget deficits. In FY 2010, almost one-half of the central government's general account was financed by new debt issuance. The steady string of deficits through periods of expansion and recession alike indicates that the problem is more structural than cyclical in nature and has been aggravated by deflation. Indeed, nominal GDP has been almost flat since 1993, while public debt has risen at a 6% annual rate, boosting gross public debt to the unprecedented level of 200% of GDP (Figure 2.1). Moreover, net public debt, at around 115% of GDP, is also the highest in the OECD area, including Greece (Panel B).[1]

Figure 2.1. **Public debt in selected OECD countries**[1]



1. The five countries with the highest gross debt ratios in the OECD area in 2000.
2. OECD estimates for 2009-10 for Japan and 2010 for the other countries. OECD projections for 2011-12.

Source: OECD (2010), *OECD Economic Outlook*, No. 88 (November 2010).

StatLink http://dx.doi.org/10.1787/888932388524

This chapter analyses how Japan can overcome its structural budget deficit during the coming decade and achieve fiscal sustainability. After reviewing fiscal developments through FY 2010, the chapter discusses the Fiscal Management Strategy announced in June 2010. The third section looks at the prospects for fiscal consolidation over the coming

decade, including specific spending and tax measures to ensure fiscal consolidation, followed by a discussion of possible reforms to the fiscal framework to improve fiscal policy and ensure that medium-term objectives are achieved. Recommendations are presented in Box 2.3.

Fiscal developments through 2010

Japan made significant progress in fiscal consolidation between 2002 and 2007, reducing its general government budget deficit from 8.2% of GDP (excluding one-off factors) to 3.1% (Table 2.1). Revenues increased by 2 percentage points of GDP, reflecting a hike in the social security contribution rate and buoyant corporate tax receipts during Japan's longest economic expansion of the post-war era. Spending fell by 3 points over that period, thanks primarily to public investment cuts, accompanied by reductions in government wages and other expenditures. The progress in reducing the deficit and strong output growth briefly reversed the upward trend in the debt ratio in 2006-07 (Figure 2.2).

Table 2.1. **Fiscal developments since 1992**[1]

	Per cent of GDP				Change in percentage points		
	1992	2002	2007	2010[2]	1992-02	2002-07	2007-10[2]
Total revenue	**33.3**	**30.7**	**32.8**	**31.7**	**–2.6**	**2.1**	**–1.0**
Direct taxes on households	7.7	5.1	5.3	5.2	–2.6	0.2	–0.1
Direst taxes on business	4.7	2.9	4.2	2.5	–1.9	1.3	–1.7
Social security contributions	8.5	10.5	10.9	11.6	2.1	0.3	0.7
Indirect taxes	7.8	8.4	8.4	8.8	0.7	0.0	0.3
Interest receipts	2.5	1.8	2.0	1.5	–0.7	0.2	–0.4
Others	2.1	1.9	2.0	2.1	–0.2	0.1	0.2
Total expenditure	**32.7**	**38.8**	**35.9**	**40.6**	**6.2**	**–2.9**	**4.7**
Government wage consumption	5.9	6.7	6.1	6.5	0.8	–0.7	0.4
Government non–wage consumption	7.9	11.2	11.8	13.2	3.3	0.6	1.4
Social security benefits paid	7.2	11.1	11.5	13.6	3.8	0.4	2.1
Government fixed capital formation	5.5	4.8	3.1	3.2	–0.7	–1.7	0.0
Interest payments	3.5	3.1	2.5	2.8	–0.5	–0.5	0.3
Other expenditures[3]	2.6	1.9	0.8	1.3	–0.6	–1.1	0.5
Budget balance	0.6	–8.2	–3.1	–8.9	–8.8	5.0	–5.7
Primary budget balance[4]	1.8	–6.8	–2.5	–7.6	–8.5	4.3	–5.1
Cyclically-adjusted budget balance	–0.2	–7.1	–3.8	–7.8	–6.9	3.3	–4.0

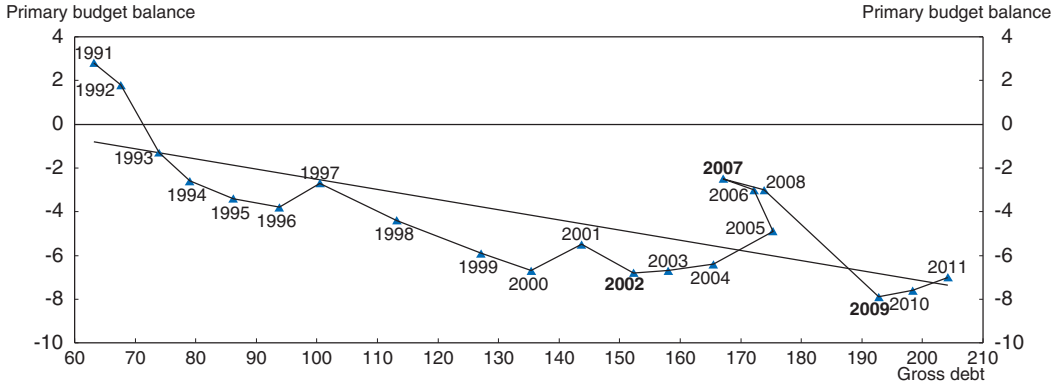
1. Excluding one-off factors, which ranged from –1% to +2% of GDP between 2002 and 2010.
2. OECD estimate for 2010.
3. Includes subsidies, other current payments, capital transfer payments and consumption of fixed capital.
4. Excluding net interest payments.

Source: OECD (2010), *OECD Economic Outlook*, No. 88 (November 2010).

The improvement occurred during the longest expansion in Japan's post-war history. However, the severe recession in 2008 in the wake of the global financial and economic crisis reversed the progress in fiscal consolidation (Figure 2.2). Tax revenue, particularly from corporate income, declined sharply, and Japan launched a series of fiscal stimulus packages. Total stimulus amounted to 4.7% of 2008 GDP, well above the OECD average (OECD, 2009), and helped Japan achieve a relatively strong recovery from its recession (Chapter 1). However, the budget deficit ballooned to 9% of GDP by 2009.

Figure 2.2. **Japan's fiscal path after the collapse of the bubble economy**

Primary budget balance[1] and gross government debt as a per cent of GDP[2]



1. Excluding one-off factors, which were about –5% of GDP in 1998 and ranged from –1% to +2% of GDP between 2002-11.
2. OECD estimates for 2009-10 and projections for 2011.

Source: OECD (2010), *OECD Economic Outlook*, No. 88 (November 2010).

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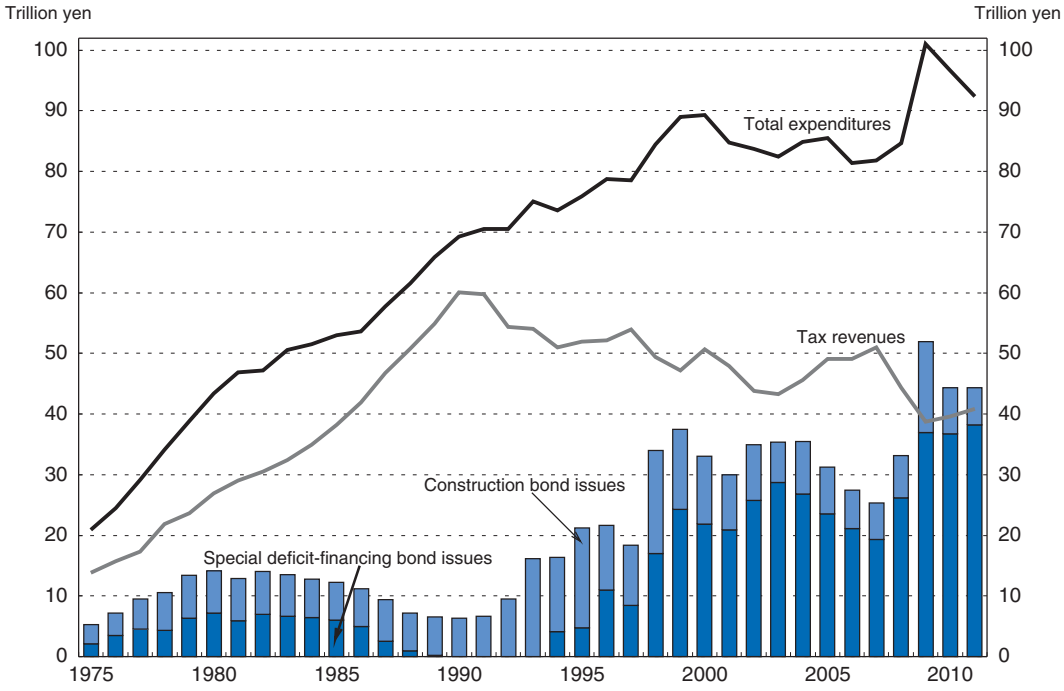
Fiscal policy of the new government

The new government that took office in September 2009, six months after the trough of the recession, faced a difficult budgetary situation. Indeed, borrowing exceeded tax revenue in the central government's general account budget in FY 2009 for the first time since FY 1946 (Figure 2.3). To sustain the economic recovery and overcome deflation, the government launched a stimulus package amounting to 1.5% of GDP in December 2009 (Table 2.2).[2] It was financed in part by scrapping some existing programmes included in previous packages, in line with the new government's objective of changing spending priorities. The new package focused on: *i*) boosting tax grants to local governments to offset declines in the local allocation tax;[3] *ii*) spending 1.2 trillion yen to expand credit guarantees for lending to small and medium-sized enterprises (SMEs) and provide other support; *iii*) extending subsidies for purchases of energy-efficient vehicles and home appliances and establishing subsidies to promote investment in energy-efficient housing; and *iv*) expanding the employment adjustment subsidy to encourage firms to retain employees, increasing support for unemployed in training programmes and establishing local community job creation programmes. These policies helped contain the rise in unemployment (Chapter 1).

As the recovery from the crisis paused in late 2010 (Chapter 1), the government responded with two pre-emptive fiscal stimulus packages in September and October 2010, amounting to 0.2% and 1.1% of GDP, respectively (Table 2.2). The first package extended the subsidy for purchases of energy-efficient home appliances and housing and included measures to support employment, including that of new graduates. It also included regulatory reforms that were intended to create new demand and employment in the priority areas of the New Growth Strategy (Chapter 3). The October package expanded outlays on the labour market, promotion of the New Growth Strategy, social security and welfare (including childcare support) and public works and regional support. The government estimated that the two packages together would boost real GDP by 1.0%. The packages were financed by unexpectedly high tax revenues stemming from a better economic outcome than assumed in the initial budget for FY 2010,[4] as well as surpluses

Figure 2.3. **Widening gap between expenditure and tax revenue**

General account of the central government in trillion yen[1]



1. The final budget for FY 1975-2009; the revised budget for FY 2010; and the initial budget for FY 2011.

Source: Ministry of Finance.

StatLink http://dx.doi.org/10.1787/888932388562

carried over from the previous year, lower-than-expected interest payments due to the fall in long-term interest rates and the reserve fund in the FY 2010 budget, in order to avoid additional bond issuance. Nevertheless, using revenue windfalls and reserves to finance additional spending, rather than reduce government borrowing, make it more challenging to achieve medium-term fiscal sustainability.

Table 2.2. **Fiscal stimulus packages under the new government**

Spending in trillion yen

Category	December 2009	September 2010	October 2010	Total
Employment support	0.6	0.1	0.3	1.1
Promotion of the New Growth Strategy and investment[1]	0.6	0.3	0.3	1.3
Promotion of the energy-efficient durable goods and housing	0.6	0.2	–	0.8
Financial measure, particularly for SMEs	1.2	0.0	0.6	1.8
Social security and welfare	0.7	0.0	1.1	1.8
Regional disaster prevention measure	0.0	0.2	0.3	0.5
Regional support[2]	3.5	–	2.2	5.7
Total	7.2	0.9	5.1[3]	13.2
Total as per cent of GDP	**1.5**	**0.2**	**1.1**	**2.7**

1. Includes a scheme to support the purchase of high-quality homes.
2. Includes transfers to local government (3.0 trillion yen in the December 2009 package and 1.3 trillion yen in October 2010).
3. Includes the frontloading of public investment (0.2 trillion yen).

Source: Cabinet Office and OECD Secretariat calculations.

The FY 2010 budget

The FY 2010 budget, the first compiled by the new government, called for a 4.2% rise in general account expenditures (Table 2.3). Extra spending was due in part to programmes promised in the election manifesto, notably the child allowance, free high school tuition, direct support for agricultural producers and the elimination of highway tolls (Box 2.1). In addition, social security outlays increased by almost 10%, reflecting population ageing, and transfers to local governments rose by 5%. Spending increases were partially offset by an 18.3% drop in public investment, the largest ever recorded. On the revenue side, tax receipts were expected to fall by 18.9% due to the negative impact of the crisis, forcing greater reliance on borrowing. Indeed, on an initial budget basis, borrowing exceeded tax revenue for the first time ever in Japan's post-war history, accounting for almost one-half of government revenue (Figure 2.3).[5] Non-tax revenues also increased sharply. About three-quarters of non-tax revenue are from special accounts and are considered to be temporary, except for the Foreign Exchange Fund (Table 2.4).

In 2010, the general government budget deficit (excluding one-off factors) remained close to 9% of GDP, compared to 3% in 2007 (Table 2.1). A decline in tax revenue accounted for only 1 percentage point of the deterioration, while the rest resulted from a run-up in government spending to a record high of around 40.6% of GDP due to large-scale fiscal stimulus and the new spending programmes under the incoming government. The growing deficit put the debt ratio on course to reach 205% of GDP in 2011.

The impact of the large debt, though, is mitigated by the low level of long-term interest rates, as the rate on ten-year government bonds has remained below 2% since 1998. Indeed, rates fell even as the debt-to-GDP ratio soared, resulting in a drop in the effective interest rate paid on government gross debt from an average of 4.6% in the 1990s to less than 2% in the 2000s (Figure 2.4). Consequently, gross government interest payments fell from 3.5% of GDP in 1993 to 2.5% by 2007. Long-term interest rates have been kept very low

Table 2.3. **The central government budget**

Central government general account in trillion yen

	(A)		(B)		(C)		Percentage change B/A	Percentage change C/B
	FY 2009 Initial	Share in %	FY 2010 Initial[1]	Share in %	FY 2011 Initial	Share in %		
Total expenditures	88.5		92.3		92.4		4.2	0.1
Debt servicing	20.2	22.9	20.6	22.4	21.5	23.3	2.0	4.4
Primary spending[2]	68.3	77.1	70.9	76.8	70.9	76.7	3.8	–0.1
of which:								
Social security	24.8	28.0	27.3	29.5	28.7	31.1	9.8	5.3
Transfers to local government	16.6	18.7	17.5	18.9	16.8	18.2	5.4	–4.0
Public investment	7.1	8.0	5.8	6.3	5.0	5.4	–18.3	–13.8
Total revenue	55.3		48.0		48.1		–13.1	0.2
Taxes	46.1	52.1	37.4	40.5	40.9	44.3	–18.9	9.4
Non-tax revenues	9.2	10.3	10.6	11.5	7.2	7.8	15.8	–32.2
Borrowing (public bonds)	33.3	37.6	44.3	48.0	44.3	47.9	33.1	0.0

1. The remaining 0.7 trillion yen of expenditures is the refund to the settlement adjustment fund, which is zero in FY 2009 and FY 2011.
2. Equals total expenditures minus debt servicing. According to the Fiscal Management Strategy, primary spending in each budget from FY 2011 to FY 2013 is not allowed to exceed the level in the initial budget for FY 2010 (70.9 trillion yen).

Source: Ministry of Finance.

Table 2.4. **Detailed components of non-tax revenues**

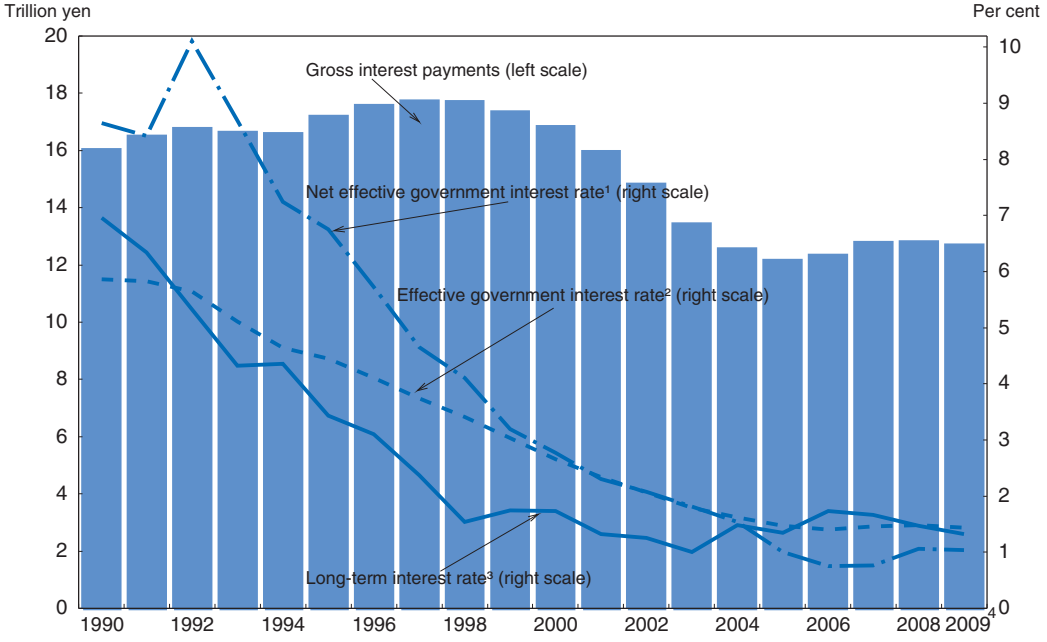
In trillion yen

	(A)		(B)		(C)		Percentage change B/A	Percentage change C/B
	FY 2009 Initial	Share in %	FY 2010 Initial	Share in %	FY 2011 Initial	Share in %		
Non-tax revenues	9.2	100.0	10.6	100.0	7.2	100.0	15.8	–32.2
Transfers from special account	7.0	75.7	7.9	75.0	4.3	59.5	14.1	–46.1
of which:								
Fiscal Loan Programme Fund[1]	4.2	46.1	4.8	44.9	1.2	17.1	12.2	–74.1
Foreign Exchange Fund[2]	2.4	26.1	2.9	26.9	2.9	40.7	18.8	2.9
Other	2.2	24.3	2.7	25.0	2.9	40.5	18.7	10.0
of which:								
Repayment by the JRCTTA[3]	0.0	0.0	0.0	0.0	1.2	16.7	–	–
Repayment by the Bank of Japan	0.7	7.3	0.3	3.1	0.3	4.0	–50.9	–12.9
Repayment by the Japan Racing Association	0.3	2.8	0.2	2.3	0.2	3.2	–7.1	–3.2
Public investment contribution from local government	0.2	2.0	0.1	1.4	0.1	1.8	–18.1	–11.9
Sale of government assets	0.2	2.1	0.1	1.2	0.1	1.6	–32.6	–9.2

1. Transfer of both remaining reserves and surpluses.
2. Includes transfer of ongoing surpluses in FY 2010 and FY 2011.
3. In order to ensure the government's contribution to the basic pension (2.5 trillion yen), the government asked the Japan Railway Construction, Transport and Technology Agency (JRCTTA) to return their surpluses.

Source: Ministry of Finance.

Figure 2.4. **Interest payments by the government**



1. Defined as interest payments minus interest receipts divided by net government debt.
2. Defined as interest payments divided by gross government debt.
3. Ten-year government bonds.
4. OECD estimate for interest payments and receipts in 2009.

Source: Cabinet Office and OECD Secretariat calculations.

StatLink http://dx.doi.org/10.1787/888932388581

Box 2.1. **The government's progress in achieving its 2009 election manifesto**

The government that took office in September 2009, after 55 years of nearly unbroken rule by the Liberal Democratic Party, won the election with a manifesto that promised to put "people's lives first" and to launch new spending programmes to increase household income. The cost of these initiatives, if fully implemented, would rise from 7.1 trillion yen (1.4% of GDP) in FY 2010 (Table 2.5) to 16.8 trillion yen in FY 2013. The major programmes are: *i*) a child allowance of 312 thousand yen (about $3 800) per year up to age 15; *ii*) an end to tuition fees for public high schools and equivalent subsidies for private high school students; *iii*) a new record-keeping system for pensions to resolve past problems; *iv*) direct support for agricultural producers; *v*) the abolition of the temporary hike in tax rates on fuel and motor vehicles; *vi*) elimination of highway tolls; and *vii*) expanding employment insurance to non-regular workers and assisting job applicants. Other objectives for which no price tag was attached in FY 2011 include raising the benefit for childbirth, revitalising health and long-term care, and pension reform. In the event, total spending to implement the manifesto in FY 2010 totaled 3.1 trillion yen – less than half the manifesto amount – and 3.6 trillion yen in FY 2011.

Table 2.5. **Spending promises**

Trillion yen

	FY 2010		FY 2011	
	Manifesto[1]	Initial budget	Manifesto[1]	Initial budget
Child allowance	2.7	1.7	5.5	2.2
Free public high school tuition	0.5	0.4	0.5	0.4
Pension record system	0.2	0.1	0.2	0.1
Direct support for farmers	–	0.6	1.0	0.6
Abolition of provisional tax rates on fuel and motor vehicles	2.5	0.2	2.5	0.2
Elimination of highway tolls	–	0.1	–	0.1
Employment support measures	0.3	0.0	0.8	0.0
Total	**7.1**	**3.1**	**12.6**	**3.6**

1. The total does not equal the sum of the components shown in the table.
Source: The Democratic Party of Japan, Ministry of Finance, and OECD Secretariat calculations.

The new spending programmes were to be financed by cutting wasteful spending (9.1 trillion yen), transfers from special accounts (4.3 trillion yen), sales of government assets (0.7 trillion yen) and reforming special tax treatments and tax exemptions (2.7 trillion yen) (Table 2.6). To cut wasteful spending, the Government Revitalisation Unit (GRU), which was established in September 2009 to pursue administrative reform, created a "Programme Review". In November 2009, it screened 449 government programmes in its review of the FY 2010 budget. A second round in the spring of 2010 examined 117 public-service corporations and 233 programmes. The third round in the autumn of 2010 examined all 51 special accounts and also conducted follow-up reviews of 112 programmes to ensure the effectiveness of the screening process.

Box 2.1. **The government's progress in achieving its 2009 election manifesto** *(cont.)*

The Programme Review was successful in cutting spending by 1 trillion yen (1.4% of primary spending in the general account budget) in FY 2010, on top of another 1.3 trillion yen at the earlier stage of budget requests. However, the FY 2011 screening led to an additional spending cut of only 0.3 trillion yen, indicating the difficulty of identifying wasteful spending. The main source of additional revenue was transfers of funds from special accounts and privatisation, which reduce government assets and are not a sustainable revenue source. In sum, additional revenue amounted to 11.5 trillion yen in FY 2010 and 8.7 trillion yen in FY 2011, well below the planned 16.8 trillion yen necessary to finance manifesto-related spending in FY 2013.

Table 2.6. **Revenue increases to meet the spending promises**

Trillion yen

	Manifesto	FY 2010 Initial budget	FY 2011 Initial budget
Cutting wasteful spending	9.1	2.3[1]	2.7[2]
Transfers from special accounts and government asset sales	5.0	8.1	4.4
Reform of special tax treatments	2.7	0.1	0.2
Refunds from independent administrative institutions[3]	–	1.0	1.4
Total	**16.8**	**11.5**	**8.7**

1. Includes cost reductions before the GRU's screening process in the budget request stage (1.3 trillion yen).
2. Includes cost reductions in FY 2010 (2.3 trillion yen), plus additional reductions in FY 2011 (0.3 trillion yen).
3. Includes refunds from public service corporations.

Source: The Democratic Party of Japan, Ministry of Finance, and OECD Secretariat calculations.

by a number of exceptional factors, including the persistence of deflationary expectations, the virtually zero policy interest rate since the end of the 1990s and the risk aversion of investors after a period of prolonged economic stagnation (Cabinet Office, 2010a). Consequently, the market has been able to absorb the large quantities of bond issuance, based on ample domestic savings and significant home bias (2009 *OECD Economic Survey of Japan*).

The 2010 Fiscal Management Strategy

The government announced the Fiscal Management Strategy in June 2010 in time to influence preparations for the FY 2011 budget and to achieve the long-run goals of the New Growth Strategy of realising a strong economy, robust public finances and a strong social security system. The Fiscal Management Strategy aims at stabilising and eventually reducing the public debt ratio by setting numerical targets to ensure the credibility of the government's commitment to fiscal consolidation under the three principles of prudent economic assumptions, flexibility in the face of economic fluctuations and transparency in communicating with markets. The Strategy includes:

- *Short-term target*: restrain the amount of new government bond issuance in FY 2011 to the FY 2010 level of around 44 trillion yen (9% of GDP).
- *Mid-term target*: halve the primary budget deficit of central and local governments, which was estimated at 6.4% of GDP in FY 2010, by FY 2015. To meet the target, central

government spending in the general account (excluding debt repayment and interest) between FY 2011 and FY 2013 is not to exceed the level in the initial budget for FY 2010. As for revenues, the Strategy calls for multi-year revenue measures based on a comprehensive tax reform including the consumption tax. Additional permanent tax revenue that is secured by tax reforms can be added to the overall expenditure limit. However, if additional tax revenue is temporary, it is expected to be used for reducing the amount of government bonds issued, rather than increasing expenditures.

- *Long-term target*: achieve a primary budget surplus for central and local governments by FY 2020, putting the public debt ratio on a downward trend from FY 2021.

An annual reduction of around 0.7 percentage points of GDP in the primary budget balance is required to halve the primary budget deficit by FY 2015 and achieve a small primary budget surplus by FY 2020. The government will examine progress made each year in reaching the targets and publish the results. The targets will be adjusted in case of an unexpected event, such as a major economic crisis.

In addition, the Strategy sets several basic principles of fiscal management: *i*) secure permanent revenue sources to implement new spending programmes and tax reductions (a pay-as-you-go rule); *ii*) reduce the budget deficit each year to achieve the targets; *iii*) secure stable revenue sources to finance structural outlays, such as ageing-related spending; *iv*) cut wasteful spending in all areas, including the special accounts, to give scope for changing budget allocation; and *v*) ensure co-operation between central and local governments to achieve fiscal consolidation and avoid shifting financial burdens to local government. The Strategy is based on a rolling three-year medium-term framework that will be revised each year for the three years ahead.

The FY 2011 budget

The draft budget built in the Strategy's targets of limiting primary spending to the initial FY 2010 level and maintaining bond issuance at 44 trillion yen (Table 2.3). In the budgetary guidelines set in July 2010, the government had instructed ministers to limit budget requests to 90% of the previous year to allow scope for spending in priority areas. As a result, the FY 2011 draft budget was able to include around 1.7 trillion yen (0.4% of GDP) for implementing the New Growth Strategy. However, given the rising spending on social security, the draft budget cut public investment.

With regard to revenues, tax receipts were projected to inch up in the context of an economic recovery, but will remain 11% below their FY 2009 level. Consequently, tax revenue will be less than bond issuance for the second straight year on an initial budget basis. Reliance on non-tax revenue drops somewhat after a large increase, but will still play a key role. For example, reserves held by an agency responsible for railroad construction will help finance the central government's FY 2011 payment for the basic pension that was decided in 2004. While the use of non-tax revenue helps meet the bond issuance target, running down reserves in special accounts raises government net debt by the same amount.

The FY 2011 tax reform included some important changes, notably a cut in the corporate tax rate from 40%, the highest in the OECD area, to 35%. This reduction, the first in 12 years, is in line with the recommendations in the 2008 *OECD Economic Survey of Japan* (Box 2.2). The government expects that it will boost real GDP by 0.2 percentage point by expanding domestic investment and employment. However, the corporate income tax rate

Box 2.2. **Recent progress in tax reform in Japan: the FY 2011 tax changes**

The 2008 *OECD Economic Survey of Japan* pointed out a number of weaknesses in the tax system and called for comprehensive reform. Despite some progress since then, many of the recommendations remain pertinent (Table 2.7):

Table 2.7. **Taking stock of structural reforms: the FY 2011 tax reform plan**

Recommendations in the 2008 *OECD Economic Survey of Japan*	Actions taken or proposed by the authorities
Consumption tax	
Boost the consumption tax rate from 5% to raise additional revenue and increase the share of indirect taxation.	No action taken.
Maintain a single consumption tax rate to avoid the complications inherent in multiple-rate systems.	No action taken.
Retain flexibility in allocating additional tax revenue.	No action taken.
As the consumption tax rate is increased, maintain the share that is allocated to local governments.	No action taken.
Corporate income tax	
Reduce the statutory tax rate by phasing out local taxes on corporate income.	The rate is to be reduced from 40% to 35% in FY 2011. The temporary cut in the national corporate rate for SMEs from 18% to 15% has reduced the tax base of the local inhabitant tax on corporations.
Broaden the corporate tax base by reducing the number and size of tax expenditures, particularly those that target specific industries and regions, thereby improving the allocation of resources.	Special tax measures for depreciation were reduced. In the FY 2011 tax reform, the government proposed to phase out 50 of 109 special tax measures.
Maintain incentives only if rigorous cost-benefit analysis demonstrates that they expand productivity-enhancing activities to socially optimal levels.	In the FY 2010 tax reform, 82 measures were reviewed, resulting in the abolishment or reduction of 41 measures, including those that apply to other taxes than the corporate tax.
Boost the share of firms paying corporate income tax by modifying generous exemptions in the tax code, while retaining loss carryover provisions.	Loss carryover provisions were reduced.
Personal income tax	
Raise additional revenue by broadening the income tax base, focusing on reducing the deduction for wage income and increasing the tax compliance of the self-employed.	The deduction for employment income for executives is to be cut in 2012 and a standard upper limit on the deduction for employment income was introduced.
Reform deductions and allowances in the personal income and local inhabitant taxes that encourage secondary earners to limit hours of work.	The exemption for adult dependents is to be reduced in 2012.
Reduce the preferential tax treatment of lump-sum retirement allowances in order to promote labour mobility.	The deduction for the retirement allowance is to be abolished for short-term executives in 2012.
Address income inequality primarily through the introduction of an earned income tax credit.	No action taken.
Reduce exemptions, which tend to benefit high income households, such as the mortgage deduction, to help reduce income inequality.	The exemption for adult dependents is to be reduced in 2012.
Strengthen pension taxation by reducing the deduction on benefits and taxing corporate-based pensions more strictly.	No action taken.
Broaden the base of the local inhabitant tax.	The tax credit for the retirement allowance will be abolished in 2012.
Continue to move toward a unified tax on financial income at a uniform rate to reduce distortions in the allocation of capital, while expanding the scope of loss offsets between various financial investments.	The reduced tax rates on dividends and capital gains were extended until end-2013. The introduction of an individual savings account was postponed until 2014.
Property and inheritance taxes	
Bring the assessment of property values used for tax purposes closer to market prices.	No action taken.
Strengthen the role of the inheritance tax by reducing the basic deduction and raising the top tax rate to promote equality.	The basic deduction was reduced, while the maximum tax rate was raised from 50% to 55%.

would still remain high compared to the OECD average. About half of the expected 1.2 trillion loss in revenue in FY 2011 will be offset by widening the tax base by reducing the special measures for depreciation and limiting the loss carryover for large companies. In addition, the government will introduce an environment tax on fossil fuels, such as coal, natural gas and crude oil in October 2011, generating 0.2 trillion yen of tax revenue per fiscal year.

Other major tax changes include: *i*) a further cut in the corporate tax rate for SMEs from 18% to 15% (0.1 trillion yen loss of tax revenue); *ii*) limiting deductions from taxable incomes for salaried workers with relatively higher incomes and for corporate executives (0.2 trillion yen of tax increase);[6] *iii*) extending the 10 percentage-point cut in the tax rate on dividends and capital gains from stock investment until 2013;[7] *iv*) reducing the basic deduction for inheritance tax, while raising the maximum tax rate from 50% to 55% (0.3 trillion yen of tax increase); and *v*) introducing tax credits to firms that increase employment. The net impact of the tax plan is estimated to reduce tax revenue by 0.3 trillion yen in FY 2011. Finally, the tax plan calls for a discussion of comprehensive tax reform, including a possible hike in the consumption tax.

The FY 2011 budget will be significantly affected by the 11 March 2011 Great East Japan Earthquake, which was the strongest ever recorded in Japan and triggered the country's worst disaster of the post-war era. The earthquake and accompanying tsunami resulted in an enormous loss of human life, as well as massive economic damage. A preliminary report by the government estimated the damage to social infrastructure, housing and private firms' fixed capital at between 16 trillion yen and 25 trillion yen (3.3% to 5.2% of 2010 GDP) (Cabinet Office, 2011b). The damage is much larger than that of the 1995 Hanshin-Awaji (Kobe) earthquake, which is officially estimated at 9.6 trillion yen (2% of GDP). The extensive damage of the March disaster creates a need for increased public investment. In the case of the Kobe earthquake, reconstruction spending by the central government amounted to 3.2 trillion yen (0.7% of GDP) in the year following the earthquake, while total outlays amounted to 5 trillion yen over a six-year period. While it is still too early to estimate the public cost of reconstruction in response to the March 2011 disaster, it may significantly exceed that of the Kobe earthquake. It is important to finance reconstruction spending by shifting expenditures and by short-term increases in revenues, thus limiting the deficit and the rise in the debt.

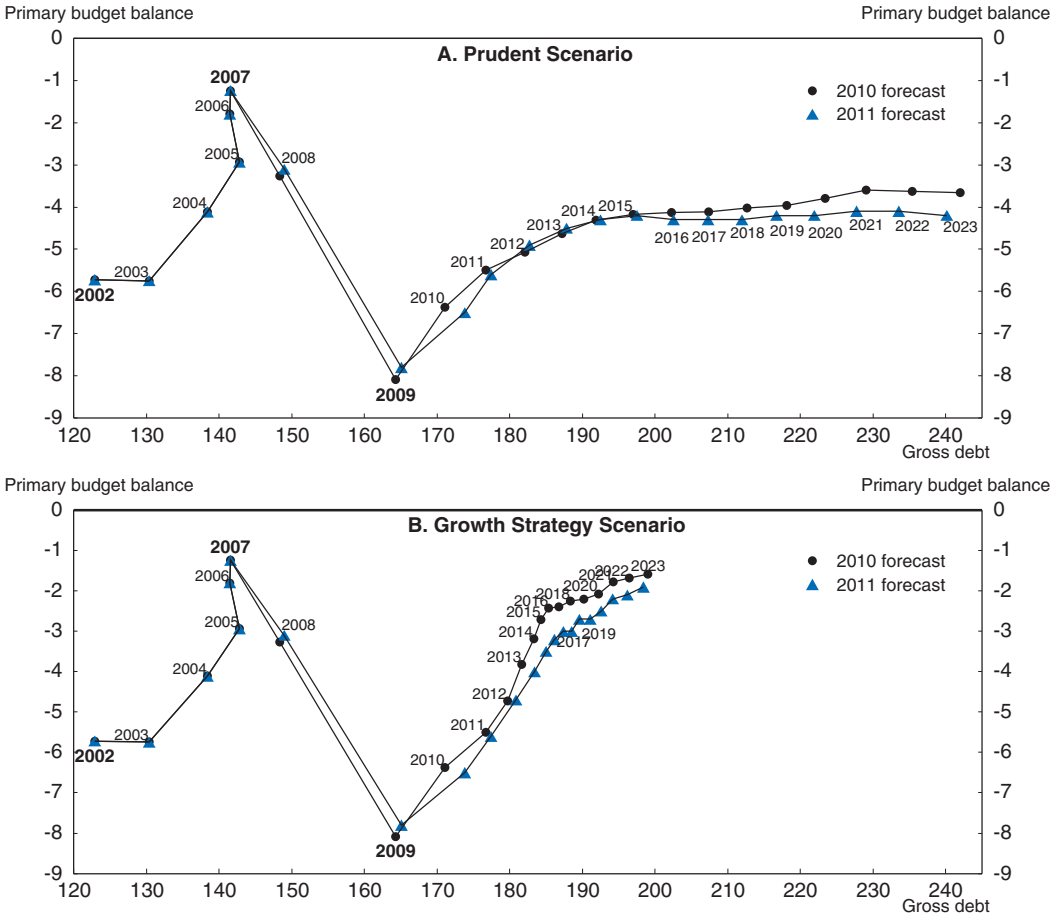
A preliminary evaluation of the Strategy

The first evaluation by the National Policy Unit (NPU) of the implementation of the Strategy took place in January 2011. It noted that the draft budget for FY 2011 did observe the pay-as-you-go-rule on the spending side. However, on the revenue side, the budget failed to secure enough permanent revenue to offset the corporate tax cut. In addition, the Cabinet Office's Economic and Fiscal Projections for Medium to Long Term Analysis (Figure 2.5) estimates the path of the deficit assuming that nominal primary spending is frozen during FY 2011-13 and then stays constant (excluding social security outlays) in real terms from FY 2014 to FY 2023. No explicit assumption is made about social security spending.[8] The Projections include two scenarios based on different assumptions about productivity, the labour force and world economic growth:

- Under the "Prudent Scenario" (Panel A), which shows nominal GDP growth of around 1½ per cent over the next decade, the primary budget deficit levels off at 4¼ per cent of GDP in FY 2014, thus failing to reach the FY 2015 or the FY 2020 targets.

Figure 2.5. **The government's long-term fiscal projection**

Primary budget balance and gross debt,[1] as a per cent of GDP, between 2002 and 2023[2]



1. The definition of gross public debt in this figure consists of central and local government bonds and loans by the "Special Account for Local Allocation and Local Transfer Tax". It is thus less than the OECD figure, which is based on general government according to SNA93. The difference between the Cabinet Office and OECD figures is primarily due to short-term bonds, the social security fund's debt and other liabilities that are not accounted for by the Cabinet Office.
2. Assumes that primary spending is frozen in nominal terms during FY 2011-13. For the following years, primary spending, excluding social security outlays, stays constant in real terms.

Source: Cabinet Office (2011a).

StatLink http://dx.doi.org/10.1787/888932388600

- The "Growth Strategy Scenario" (Panel B), based on the New Growth Strategy, shows a real growth rate of around 2% over the next decade, enabling output growth to reach 3% in nominal terms. Under this projection, the primary deficit meets the FY 2015 objective but remains sizeable at around 2.5% of GDP in FY 2020 and 1.9% in FY 2023.

In sum, spending restraint alone is insufficient to meet the budget surplus target for FY 2020 under either scenario. Consequently, gross government debt would rise by almost 50% of GDP under the Prudent Scenario and by almost 20% under the Growth Strategy Scenario.

The size of the primary budget balance necessary to achieve Japan's goal of stabilising the debt ratio depends on the relationship between the nominal interest rate and the nominal growth rate and the size of the debt ratio. The primary budget balance necessary

to stabilise the debt ratio is given by the formula: (r – g) * (debt/GDP), where r represents the nominal interest rate and g the nominal growth rate. In the Prudent Scenario, the long-term interest rate in FY 2020 is 3.2%, 1.4 percentage point larger than the 1.8% nominal growth rate. Such a gap matches Japan's average gap recorded between 1981 and 2008, given an average interest rate of 4% and nominal growth of 2.5%. If the gap were to be 1.4 percentage point, Japan would need a primary budget surplus of around 3% of GDP to stabilise the debt ratio. However, the gap between the interest rate and nominal growth could be larger, given Japan's unprecedented level of government debt. Moreover, other G7 countries recorded significantly larger gaps between interest rates and nominal growth over the 1981-2008 period.[9]

Potential risks of failing to reduce the deficit

Running primary budget deficits for more than a decade leaves Japan vulnerable to a loss of market confidence in the sustainability of its public finances. Indeed, there is a risk of a rise in real interest rates due to a higher risk premium as public debt rises further into uncharted territory, although several factors tend to mitigate this risk. *First,* the private sector has ample savings and a strong home bias, as noted above. About 95% of public debt, which is denominated in yen, is held domestically. *Second,* half of public debt is held by the Bank of Japan and government-related financial institutions.

Nevertheless, the sheer size of the financing requirement makes the risk of a rise in real interest rates a concern. Indeed, Japan's overall debt issuance in FY 2011, including refinancing bonds, is estimated to reach 170 trillion yen (34% of GDP). A marked increase in real interest rates would have negative implications for fiscal consolidation. With gross debt of around 200% of GDP, a 100 basis-point rise in the interest rate would boost interest payments by 2% of GDP, although the increase would be gradual as the average maturity of government debt is about five years. According to a government estimate, a one percentage-point increase in bond yields would add 1.0 trillion yen (0.2% of GDP) to debt-servicing costs in the first year, rising to 4.2 trillion yen (0.9% of GDP) in the third year. Such an increase would likely result in serious damage to the budget and the real economy. The challenge for Japan is to resolve the structural budget deficit problem before the period of low interest rates comes to an end and rising interest payments on the accumulated debt result in a further deterioration in the fiscal situation.

Overcoming the structural budget deficit and achieving fiscal sustainability

Given the size of the fiscal problem and further spending pressures, Japan needs to step up its efforts to achieve fiscal sustainability, while taking into account the need for reconstruction in areas devastated by the earthquake. The government should develop a more detailed fiscal consolidation plan, based on multi-year budgeting, that includes spending cuts and revenue hikes to maintain confidence in Japan's fiscal sustainability. The risks associated with inaction are large, making a detailed and credible fiscal consolidation plan to stabilise and then reduce the debt ratio a top priority. This section will first consider the appropriate budget target and then discuss specific spending and tax policies to achieve it.

An appropriate budget target

The Fiscal Management Strategy's target of halving the FY 2010 primary budget deficit from 6.4% of GDP by FY 2015 and of achieving a primary surplus by FY 2020 requires an improvement of 0.7 percentage point per year. As noted above, the primary surplus may

need to be as large as 3% of GDP to achieve the objective of stabilising the debt ratio. Similarly, the OECD medium-term scenario through 2025 projects that a primary budget surplus of 3.7% of GDP would be necessary (OECD, 2010). Both estimates imply that Japan needs to improve its budget balance by around 10% of GDP by FY 2020, implying an annual reduction of close to 1% just to stabilise the debt ratio. Reducing the debt ratio from FY 2021 would thus require an even larger surplus.

As noted above, the Strategy targets the balance of the central and local governments, rather than the entire general government balance, which determines the evolution of government debt. This would not be a concern if the social security balance were constrained to be zero, but that is not the case. Indeed, the social security balance deteriorated from a surplus of ½ per cent of GDP in FY 2000 to a deficit of 1½ per cent in FY 2009. Transfers from the central government fund about one-fifth of social security, making it possible to achieve the Strategy's target for central and local government by limiting the transfers and letting the social security deficit continue to rise. Thus, it is important to achieve the Strategy's objective of securing stable financing for social security and to refrain from shifting deficits to other accounts. To stabilise the debt ratio, a primary central and local government budget surplus must not be offset by a deficit for the social security fund.

Controlling social security spending in the face of rapid population ageing

The deterioration in the fiscal situation occurs as Japan faces pressure for more social security spending, as the number of persons over age 65 is projected to increase by 6.5 million (22%) by 2020, while the over-75 group rises by 4.5 million (31%). Social welfare spending in Japan was 19% of GDP in 2005, slightly below the 21% OECD average despite Japan's relatively elderly population, reflecting past measures to contain spending. Public health-care spending has been limited by cuts in medical fees and prices and hikes in co-payment rates (2009 *OECD Economic Survey of Japan*). As for public pensions, the 2004 reform aimed at ensuring the sustainability of the system for up to 100 years by hiking the contribution rate from 13.6% to 18.3% by FY 2017 and introducing a system of "macroeconomic indexation", which adjusts pension benefits based on changes in the number of contributors and life expectancy.[10] The pension replacement rate will fall from around 59% towards 50%. In addition, the pension eligibility age is being raised from 60 to 65 by 2025 for men and 2030 for women. Finally, the government contribution rate to the basic pension was increased from 36.5% in FY 2007 to 50% in FY 2009.

In the absence of further reforms, social security spending will increase rapidly. The pressure is reflected in the FY 2011 budget showing a 1.4 trillion yen (5.3%) increase in central government social security spending (Table 2.3). According to a provisional projection by the Ministry of Finance, it will rise by 1 trillion yen (0.2%) of GDP each year through 2020, a cumulative increase of 2%. In the absence of reform and offsetting spending cuts elsewhere, the consumption tax rate would have to rise by around 4 percentage points just to finance social security costs, without any reduction in the deficit. Reforms to limit the burden of social security spending on the central government and to bring the social security fund into balance are thus a priority.

Health and long-term care reform

One key area for reform is the length of hospitals stays, which is four times the OECD average, reflecting in part the important role of hospitals in providing long-term care for

the elderly (2009 *OECD Economic Survey of Japan*). The introduction of long-term care insurance in 2000 has led to an increase in the number of long-term care facilities, but the shift of long-term care from hospitals to these lower-cost facilities and to home-based care needs to be accelerated by adjusting the fee schedule and improving the monitoring of patient classification. Reforms are also needed to reduce the length of hospital stays for acute care, which is about three times the OECD average. In particular, it is essential to move away from a *per diem* payment scheme through greater use of a "diagnostic-related group" approach, which sets an overall fee according to the illness, while promoting the standardisation of treatment and length of hospital stays. Efficiency in the hospital sector should be promoted by abolishing the rule requiring them to be directed by medical doctors and relaxing restrictions on equity finance. Encouraging the use of generic drugs by making them the standard for reimbursement would also reduce health spending.

Pension reform

Along with tax reform, the government is discussing a comprehensive reform of the social security system aimed at addressing the falling birth rate and widespread public scepticism regarding the sustainability of the basic pension system. The number of persons who refuse to join the plan or pay the pension contribution has surpassed three million (about 5% of total contributors), in part reflecting a loss of confidence following the loss of pension records. Consequently, the share of elderly without pension benefits will increase. Introducing a guaranteed minimum pension would resolve that problem and would also narrow the intergenerational gap, as the elderly would also bear the tax burden. However, it would require a significant increase in taxes. Moreover, shifting to a new system could create transitional problems and uncertainty about how past contributors to the basic pension would be treated under a guaranteed pension system. In the short run, the authorities should be cautious in launching an expensive new programme at the same time that greater tax revenues are needed for fiscal consolidation.

For the pension system as a whole, the average gross replacement rate (pension benefit as a share of gross wages for a couple with one earner) is now estimated to be 52% (OECD, 2011). This is already the fifth lowest in the OECD area and well below the 68% average. In 2009, the government made projections for the pension system based on a range of assumptions. As long-run projections are sensitive to economic and demographic assumptions, further reforms may become necessary in the future. In that case, rather than further cut the already-low pension benefit or further increase the rising contribution rate, the best option would be to further increase the pension eligibility age. Indeed, Japan has the longest life expectancy in the world, facilitating later retirement.

Achieving spending cuts in other areas

Total government spending in Japan is relatively low at an estimated 40.6% of GDP in 2010 compared to an OECD average of 46%, despite its relatively elderly population. Japan faces spending pressure in other areas as well, such as the government's spending commitments in its election manifesto and the New Growth Strategy. Indeed, the Strategy, launched in June 2010, calls for creating 123 trillion yen (26% of GDP) of additional demand in part through spending, tax measures and public lending (Chapter 3). In addition, reconstruction of areas devastated by the Great East Japan Earthquake will require an increase in government spending, as noted above. To control overall spending, the Fiscal Management Strategy should set detailed and credible targets for outlays in specific areas,

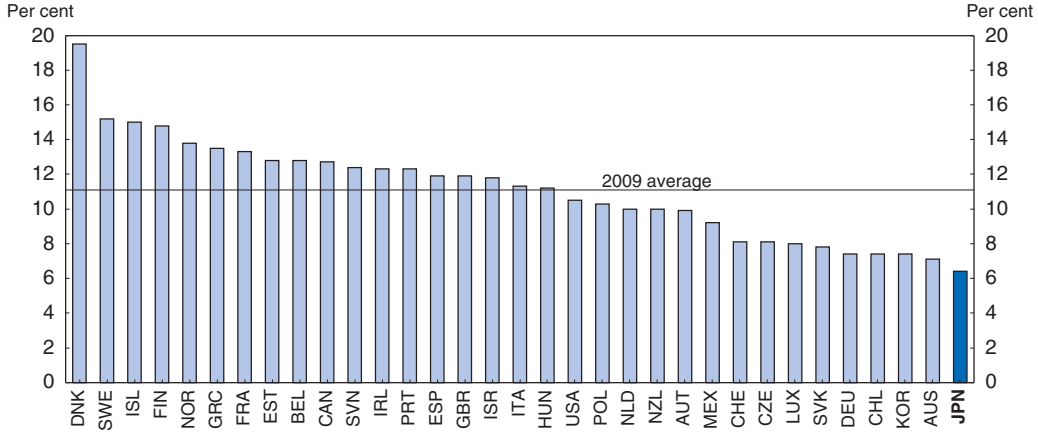
while continuing the Government Revitalisation Unit's screening process to increase the efficiency of spending and cut wasteful expenditures (Box 2.1). Areas with scope for spending cuts include government personnel costs and public investment.

Cutting the government's personnel costs

The new government has set an objective of reducing the total personnel costs of the central government by 20%, although it is already the lowest in the OECD area at around 6½ per cent of GDP (Figure 2.6).[11] Nevertheless, there may be scope for savings, given that the public sector has not undergone a restructuring similar to that in the private sector in recent years. Indeed, public-sector wages increased by 16% between 1996 and 2008 compared to 6% in the private sector, due in part to the rise in low-paid non-regular workers (Chapter 5) in the private sector (Figure 2.7). Moreover, the public sector has a steeper wage-tenure profile and stronger downward wage rigidity. On the other hand, public-sector employment has fallen markedly since 2000 as part of past reforms (Panel B). Consequently, reducing the total personnel costs of the central government should focus on reforming the rigid and closed wage and employment system rather than simply further cutting government employment. In particular, it is important to raise productivity in the public sector, in part by making the seniority-based wage curve flatter and reforming the retirement pay structure to encourage labour mobility. Introducing more flexible career paths and wage structures along with more active personnel exchanges with the private sector could enhance productivity. Such efforts should be extended to local governments, which account for more than 70% of total government personnel costs, and public enterprises. Regional variation in wages is smaller in the public sector, resulting in a significant gap between public and private-sector employees, notably in lower-income areas (Figure 2.8). In addition to wages, the government is planning to reform the retirement allowance and pension system for civil servants. In the FY 2011 budget, the central government's personnel costs declined by about 0.4%, while those of local governments fell by 1.9%.

Figure 2.6. **General government wages in OECD countries**

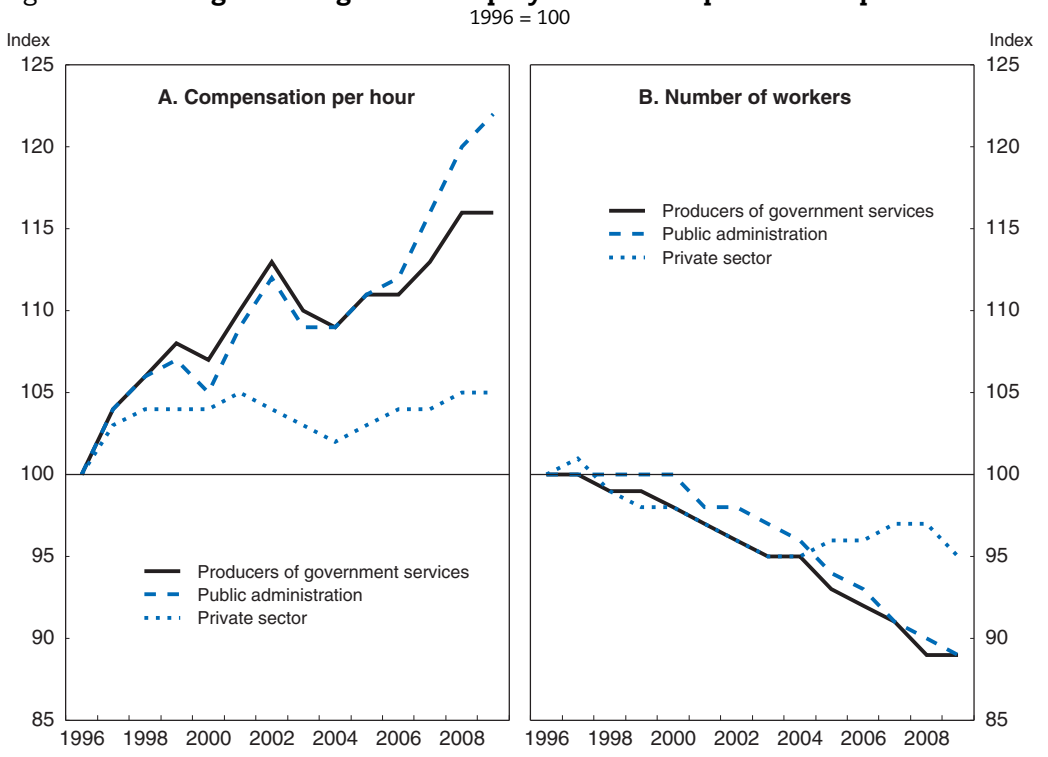
Per cent of GDP in 2009 or latest year



Source: OECD Economic Outlook Database.

StatLink http://dx.doi.org/10.1787/888932388619

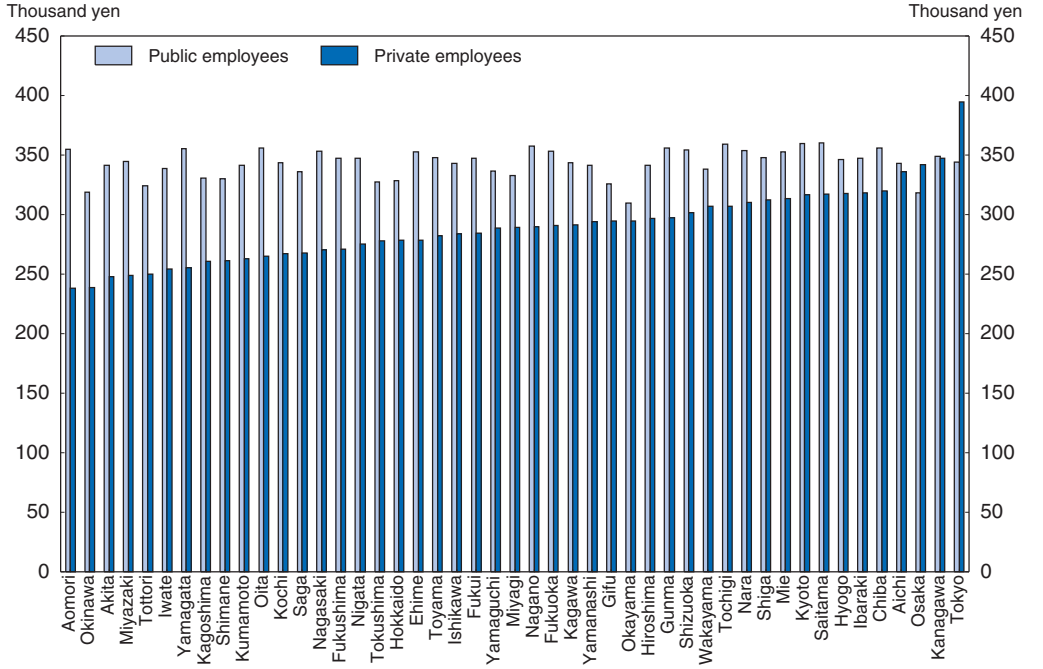
Figure 2.7. **Changes in wages and employment in the private and public sectors**



Source: Cabinet Office, *National Accounts*.

StatLink http://dx.doi.org/10.1787/888932388638

Figure 2.8. **Wage gap between private and public employees by prefecture**[1]



1. The private wage is the average scheduled cash earnings of private enterprises with ten or more employees. The public wage is the average monthly basic salary of employees engaged in general administration. As the type of job is not controlled, the difference in job characteristics affects the difference in wages between private and public employees.

Source: Ministry of Health, Labour and Welfare and Ministry of Internal Affairs and Communications.

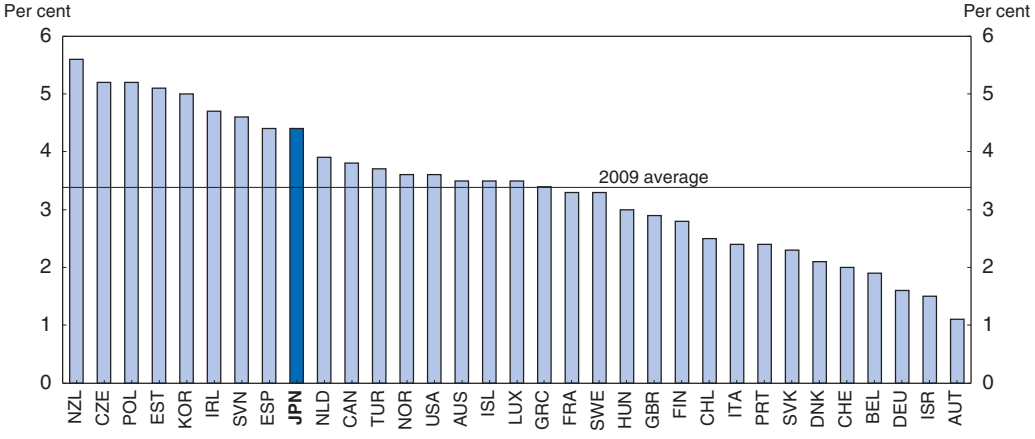
StatLink http://dx.doi.org/10.1787/888932388657

Raising public investment efficiency

Public investment, including by public enterprises, fell from a peak of 8.4% of GDP in 1996 to 3.9% in 2008, before rebounding to 4.4% in 2009 due to the fiscal stimulus packages. Despite the long downward trend, public investment as a share of GDP is still the ninth highest in the OECD area and one percentage point above the OECD average (Figure 2.9). While reconstruction of areas devastated by the Great East Japan Earthquake will boost public investment, particularly in FY 2011, there will be scope in the medium term for reductions in public investment to bring it closer to the OECD average as a share of GDP. However, significant reductions will be difficult to achieve, given increasing concerns about regional income disparities, as well as the rising share of spending needed to maintain and renew existing infrastructure, in part to make sure that it is properly earthquake-proofed (2009 *OECD Economic Survey of Japan*). As of mid-2010, for example, more than 10% of primary and middle schools in Tokyo had yet to be properly earthquake-proofed. The challenge is thus to sustain investment in productive infrastructure projects that will spur economic growth and promote public safety, while closing unnecessary public infrastructure to save maintenance costs. Moreover, the allocation of public investment should be driven more by economic criteria to improve low marginal productivity of public capital than the objective of balanced regional development. Regional inequality should be addressed through other measures, such as well-targeted social welfare programmes, tax transfers among prefectures and policies to boost productivity growth in services.

Figure 2.9. **Public investment in OECD countries**

Per cent of GDP in 2009 or latest year



Source: OECD Economic Outlook Database.

StatLink http://dx.doi.org/10.1787/888932388676

Increasing government revenue

Given the size of fiscal consolidation – around 10% of GDP to simply stabilise the debt ratio – and the difficulty in achieving major spending cuts, revenue increases appear to be inevitable to achieve fiscal sustainability. As noted above, even if the spending freeze were met, the government's projection shows a deficit of 4.2% of GDP in FY 2020 under the Prudent Scenario. Government revenue in Japan was estimated at about 33% of GDP in 2010, the fifth lowest in the OECD area and well below the 46% OECD average. The

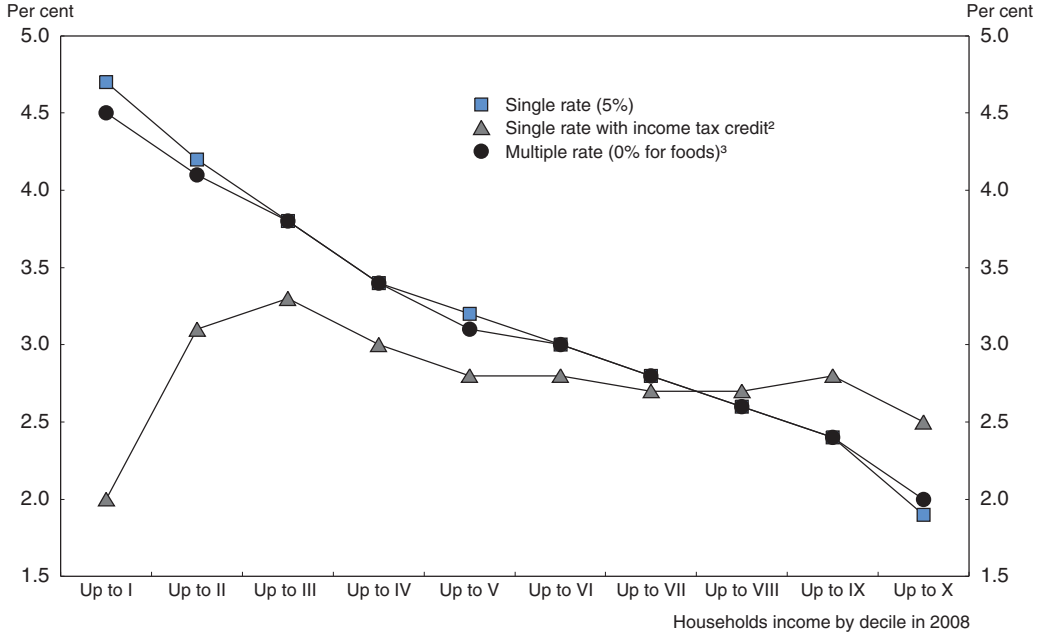
revision of the medium-term fiscal framework in the Fiscal Management Strategy in mid-2011 should incorporate a comprehensive tax reform to make fiscal consolidation more credible.

Revenue increases should come primarily from a hike in the consumption tax rate, which is a value-added tax (VAT). A VAT is acknowledged to be a relatively stable revenue resource, while at the same time is less harmful for economic growth, thus making it the most appropriate candidate for achieving the fiscal target. At 5%, Japan has the lowest rate among OECD countries with a VAT. To reach primary budget balance, the consumption tax rate would have to be raised by five to nine percentage points, while achieving a primary budget surplus large enough to stabilise the debt ratio may require another six percentage points, given that a one-point hike in the consumption tax generates revenue equivalent to ½ per cent of GDP. Japan's consumption tax rate would thus converge toward the 20% average in Europe. Moreover, reducing the debt ratio during the 2020s would require even more revenue. Thus, doubling the consumption tax rate to 10%, while necessary, is just a first step to restore fiscal sustainability.

The regressive nature of consumption tax raises equity concerns. Indeed, one study showed that the burden of the consumption tax for the lowest income decile is more than double that for the highest (Figure 2.10). If the consumption tax rate were to be raised three or four-fold, the regressive impact would be severely magnified, a serious concern in Japan, which has a high rate of relative poverty (Chapter 5). A common option is a multiple-rate VAT, with a lower or even zero rate for food and other necessities. However, such an approach would have almost no impact on the regressive nature of the consumption tax in

Figure 2.10. **Regressive nature of consumption tax and possible policy responses**[1]

Consumption tax payments as a share of income by income decile



1. Regressive nature is defined as a higher tax burden for lower-income households.
2. Assumes that the consumption tax rate rises to 12.2% to finance the tax credit.
3. Assumes a zero rate for food and 6.6% for other consumption goods.

Source: Hashimoto (2010).

StatLink http://dx.doi.org/10.1787/888932388695

Japan, since high-income households buy more goods in general and hence tend to benefit most from lower rates on some items (Figure 2.10). In addition, the introduction of multiple rates has other drawbacks. *First*, it would result in higher administrative costs and induce lobbying. *Second*, it would have to be compensated by a higher standard rate. *Third*, it would reduce the neutrality of the consumption tax, thus distorting consumption decisions and decreasing welfare.

The same study showed that the introduction of an income tax credit could reverse the regressive nature of a consumption tax (Figure 2.10). Another policy option would be an earned income tax credit (EITC), which is used in a number of OECD countries, to help offset the regressive impact of higher indirect taxes, while strengthening work incentives. Such an approach is likely to be effective in Japan, given its relatively wide earnings distribution, low taxes on labour and low benefits for the non-employed. The introduction of an EITC would be facilitated by the introduction of a single identification number for taxpayers and those contributing to social security, a proposal that is currently under discussion, to enhance transparency about income. Of course, an EITC would have to be offset by further spending reductions or tax increases.

The appropriate timing of tax increases

The revised medium-term fiscal framework to be announced in mid-2011 should have a clear timetable for tax increases that is co-ordinated and consistent with social security reform. Achieving the fiscal target requires a moderate and steady pace of deficit reduction – about 1% a year as explained above. Tax hikes, though, create fear of an economic downturn, with Japan's 1997 experience used as a case in point. However, the experience suggests two lessons. *First*, a well-crafted plan should have some flexibility in case of a major economic crisis, such as the 1997 Asian financial crisis, which was a major cause of Japan's 1997-99 recession, and other unforeseeable events outside government control, such as natural disasters. The fiscal plan should have an explicit feedback rule on how the plan will change as outcomes deviate from the path described in the projection. *Second*, consumption tax hikes may be easier to start in the early stage of an expansion. Indeed, the 1997 hike came some four years after the start of the 1993 expansion, so it was already well advanced by that stage. Given relatively short business cycles in Japan, tax reform should be spelled out and announced in FY 2011 and tax increases should begin as soon as possible, taking into account the need to reconstruct areas devastated by the earthquake. Otherwise, the opportunity to advance toward the FY 2020 target may be delayed, resulting in an even more daunting challenge.

Rather than focusing only on the risk of a recession, the authorities must also consider the cost of delaying consolidation in terms of the risks to credibility and long-term rates, as discussed above. While fiscal consolidation may undermine the expansion in the short term, there is evidence that suggests that credible fiscal consolidation would have a positive implication for economic growth in the medium and long run by boosting private-sector confidence (OECD, 2010). Ideally, increased tax revenue should not be earmarked to any specific expenditure category but should serve to reduce the deficit.

The government ruled out any increase in the consumption tax during the four-year term of the current Diet, which began in 2009, by promising a large reduction in wasteful spending. However, the government failed to cut outlays by as much as planned in the manifesto (Box 2.1), suggesting that it is necessary to find other resources not only for financing the government's new spending programmes but also for addressing the

structural budget deficit in Japan. If a consumption tax hike were not to be possible in the foreseeable future, other options to increase revenues should be considered, notably a carbon tax, which would reduce the budget deficit while helping to achieve the government's target of reducing greenhouse gases (Chapter 3). As with a consumption tax, the negative impact of a carbon tax on growth is smaller than direct taxes and would help support growth by encouraging investment in green innovation.

Broadening income tax bases would be another option to raise revenue. There is much scope for revenue increases given that less than one-half of firms pay corporate income tax and less than one-half of wage income is taxed in Japan (2008 *OECD Economic Survey of Japan*). Direct tax bases should be broadened by eliminating many special tax exemptions. Despite a gradual decline in the number of tax expenditures for the corporate income tax, the amount of foregone revenue has been rising since the late 1990s. In particular, the basic exemption for spouses should be eliminated to encourage female participation in the labour market (see Chapter 5). The government's effort to broaden the tax base is only at an early stage and should be part of a fundamental tax reform.

Reform of the fiscal policy framework

The primary need is to formulate concrete spending and taxation policies, as described above, to put the fiscal position firmly on a sustainable path. While this needs to proceed independently of any reforms to the larger policy framework, the size of Japan's fiscal problem and its deterioration over an extended period make a strong fiscal policy framework important. A framework adequate to reverse the deterioration in the fiscal situation is essential as the government needs to maintain public confidence. Indeed, Japan is exceptionally vulnerable, given the size of its debt and currently very low interest rates, to an increase in risk premiums. OECD experience suggests that a mutually reinforcing framework of budget procedures, fiscal rules and independent fiscal oversight can help countries achieve their fiscal objectives.

A fiscal plan that specifies a debt target combined with a spending and/or deficit rule gives the best results (OECD, 2010). Japan's Fiscal Management Strategy has only a vague debt target – bringing down the public debt ratio from FY 2021. Given the size of the problem and the length of the time needed to stabilise the debt ratio, such an objective may be appropriate for now. The Strategy also has a deficit target, but it is limited to central and local governments, excluding the social security fund. The deterioration in the social security balance in recent years points to the need to develop a comprehensive target, including social security. Thus, it is important to achieve the Strategy's objective of securing stable financing for social security. Finally, the Strategy's target is a primary budget surplus, without specifying the size. The target should be set at a surplus that is large enough to stabilise the debt ratio by FY 2020 at the latest, and to bring it down after that.

In addition to the content of the Strategy, its legal basis could be made stronger. At present, it is updated each June based on a Cabinet decision. Having the Strategy and its fiscal targets passed by both houses of the Diet would give it more weight. Of course, a subsequent administration could revise it, but at least it would have to explain its objections to the current strategy and how it should be improved. A similar legal basis for the "pay-as-you-go" rule would also be beneficial. As noted above, the revenue loss from the cut in the corporate tax rate will not be fully balanced by tax increases in FY 2011.

Responsibility for fiscal policy in Japan is divided between several institutions:

- The *Cabinet Office* is responsible for the economic forecast underlying the budget. It has a history of realistic forecasts. For FY 2011, for example, its initial outlook of 1.5% growth matched the private-sector consensus.
- The *Ministry of Finance* formulates the budget for each year.
- The *National Policy Unit* (NPU), created in 2009, sets the fiscal framework over the medium and long term.

The government has also created a number of advisory bodies. In November 2010, it established the "Academic Experts Committee on Social Security Reform" and in February 2011, it created the "Council to Promote Intensive Discussion on Social Security Reform", consisting of the prime minister, relevant ministers, business and labour leaders and academics. While these bodies are closely linked to the policy process, they include academics and social partners, private-sector experts, thereby providing independent views on social security reform.

There is still room for improvement in the budgeting process, in part by adopting a multi-year approach. It is difficult to create confidence in a Strategy that is to last more than a decade when each budget is shaped by the prevailing political powers in the legislature. The three-year spending ceiling included in the Strategy is a significant step forward, but it is insufficiently detailed. The multi-year budget plan should include spending cuts and tax increases by category, even if such plans have to be reconsidered in the event of unforeseeable exceptional circumstances.[12]

After establishing a better framework for the Strategy and a multi-year budgeting plan, there may be a role for an objective body, at arm's-length from the policymaking process, to evaluate the government's progress in meeting its fiscal targets. Such a body may thereby enhance the transparency and credibility of a fiscal consolidation plan, especially one that will need to continue for at least a decade. OECD experience shows that an independent fiscal institution can play an important role in assessing fiscal conditions and compliance with rules, with greater discipline on policy helping to maintain credibility (OECD, 2010). Interest in some OECD countries in such bodies is growing in the recent period of fiscal consolidation.[13] Given the size of Japan's fiscal problem and a fiscal strategy that will last at least a decade, it may be one of the countries that could most benefit from this approach.

In January 2011, the NPU reviewed progress in implementing the Strategy. While helpful, the NPU reports directly to the prime minister, and its current minister has a key position in the ruling party as chair of the Policy Research Committee. One of the lessons from fiscal councils is that they need to be independent from policymaking and appropriately resourced if they are to boost policy credibility (Hagemann, 2010). Japan already has several objective bodies with a role in the fiscal policymaking process, such as the Council of Economic and Fiscal Policy (CEFP), chaired by the prime minister with participation by relevant ministers, business representatives and academics, and the Fiscal System Council, consisting of scholars, which provides *ex ante* advice to the Minister of Finance. Neither council was fully independent, but the inclusion of private-sector representatives gave them some distance from policymaking. However, the Fiscal System Council is not playing a major role, while the CEFP was discontinued by the new government.

Conclusion

The unprecedented level of government debt poses a serious threat to the Japanese economy. Achieving fiscal sustainability requires an effective medium-term plan of spending cuts and revenue increases. There is a need to reduce outlays and reform the social security system to control spending in the context of population ageing. Much of the consolidation, though, will depend on the revenue side, focusing on the consumption tax. The size of Japan's fiscal problem and the risks attached to delaying consolidation make it important to spell out tax reform in FY 2011 and begin tax increases as soon as possible, taking into account the need to reconstruct areas devastated by the Great East Japan Earthquake. Recommendations to achieve fiscal sustainability are shown in Box 2.3. In addition, policies to boost economic growth (Chapter 3) are an important element of a strategy to stabilise the debt ratio.

Box 2.3. **Summary of recommendations to achieve fiscal sustainability**

- Limit the deficit and the rise in debt by financing earthquake-related reconstruction spending by shifting expenditures and by short-term increases in revenues, appealing to the Japanese people's solidarity.
- Cut spending in such areas as the government's personnel costs and public investment in the medium term to offset rising social security outlays.
- Continue the screening process to find ways to reduce low-priority and ineffective spending programmes.
- Reform social security to limit spending increases and provide a sound funding source for pensions.
- Promptly implement tax reform, taking into account the need to reconstruct areas devastated by the earthquake.
- Rely primarily on the consumption tax and other indirect taxes, such as environment-related levies, to raise revenue while introducing measures, such as an earned income tax credit, to offset its regressiveness.
- Set the FY 2020 primary budget surplus target at a level high enough, such as around 3%, to ensure that it is sufficient to stabilise the ratio of gross government debt to GDP.
- Include detailed and credible spending targets by category and a timetable for tax rate increases in the revised medium-term fiscal framework in the Fiscal Management Strategy to help maintain confidence and prevent a run-up in interest rates.
- Reform the fiscal policy framework through a multi-year budgeting plan, a stronger legal basis for the fiscal targets and an objective fiscal body at arm's-length from the policy-making process to monitor and evaluate progress in implementing the plan.

Notes

1. In January 2011, Standard and Poor's cut Japan's sovereign debt rating from AA to AA-, four levels below AAA. However, Moody's left Japan's rating unchanged in February 2011, while changing the outlook from stable to negative.
2. The new government introduced its first economic package in October 2009 to support employment in the context of a record high unemployment rate of 5½ per cent by mid-2009. Although the package did not involve additional fiscal spending, the government expected it to support and create 100 thousand jobs.

3. The local allocation tax is a fixed share of certain national taxes that are transferred to local governments.
4. Tax revenues, which were 37.4 trillion yen in the initial budget for FY 2010, were revised up to 39.6 trillion yen, providing about 2 trillion yen to fund the stimulus packages.
5. In the final budget for FY 2009, which includes the fiscal stimulus packages, borrowing accounted for 50% of revenue compared to only 39% for taxes.
6. The government will limit deductions from taxable income for workers with salaries of more than 15 million yen ($185 thousand) and significantly reduce the deduction amount for executives earning more than 20 million yen. This measure will partially offset the loss in corporate income tax revenue.
7. The tax break was originally introduced in 2003 for five years, but has now been extended for a second time. The tax rate will return to 20% in January 2014 when small-lot stock investments will start to be exempted under a programme modelled on the United Kingdom's Individual Savings Account system.
8. The government plans to present a new projection that shows assumptions for social security spending.
9. The gap between the interest rate and the growth rate in Japan is relatively small compared to 4.4 percentage points in Canada and 2.9 points in Germany (IMF, 2010). If Japan had a gap as large as Canada, it would require a primary budget surplus of about 9% of GDP to stabilise the debt ratio.
10. Macroeconomic indexation will be introduced once the consumer price index rises 1.7% above its 2005 level, a condition that has not yet been met due to continued deflation.
11. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.
12. Japan had some experience in the second half of the 2000s in setting multi-year expenditure targets for broad spending categories, such as social security. These were abandoned with the onset of the 2008 crisis.
13. The Swedish Fiscal Policy Council was established in August 2007. In May 2010, the United Kingdom decided to set up an independent agency, the Office of Budget Responsibility. More recently the ECB proposed creating an independent EU fiscal agency (OECD, 2010).

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Chapter 3

Japan's New Growth Strategy to create demand and jobs

The New Growth Strategy aims to create demand and jobs through regulatory reform and fiscal measures. The Strategy focuses on key challenges, notably climate change and population ageing, which can be turned into sources of growth. Given Japan's precarious fiscal position, it is essential to co-ordinate spending related to the Strategy with the medium-term fiscal plan, in part by increasing the emphasis on regulatory reform. Such measures should cover the entire economy, rather than being limited to the seven areas identified in the Strategy. Among those areas, effectively promoting green innovation will require market-based instruments to place a price on carbon, preferably through a mandatory and comprehensive emissions trading system, to promote private investment, accompanied by a range of other policies. Achieving deeper economic integration with Asia depends on reducing support for agriculture to facilitate more bilateral and regional trade agreements, while bringing down barriers to foreign direct investment and foreign workers. Policies to expand venture capital would help launch innovative firms.

Japan launched a New Growth Strategy in June 2010 that focuses on demand-led growth to achieve a strong economy, robust public finances and a solid social security system. It aims at boosting demand and employment by turning problems, such as climate change and population ageing, into opportunities for growth. Demand is to be stimulated by fiscal measures, including spending, tax measures and public lending, and the revision of regulatory and institutional frameworks. The Strategy differs from the reform efforts by past governments, which emphasised supply-side measures to boost productivity, and it argues that these reforms worsened unemployment and exacerbated income inequality. The Strategy's target is to boost Japan's potential growth rate to a 2% annual pace over the next decade in real terms and to achieve a nominal GDP growth rate of 3% by overcoming deflation. It also aims to reduce the unemployment rate to below 4%.

The Strategy identifies seven areas for growth: green innovation, health care and the financial sector (each of which were addressed in chapters in the 2009 *OECD Economic Survey of Japan*), Asian economic integration, local revitalisation, the innovation system, and employment and human resources. After an overview of the Strategy, this chapter analyses policies in the first five areas. The last two issues are discussed in the following chapters on education (Chapter 4) and the labour market (Chapter 5).

Overview of the New Growth Strategy

The weaker prospects for export-led growth in the wake of the global crisis highlight the need for a new growth model. Between 2002 and 2007, Japan achieved its longest expansion of the post-war era, with exports and business investment driving growth at a 2% annual pace. However, buoyant exports failed to ignite a self-sustaining expansion based on domestic demand. While exports grew at an annual rate of almost 10% between 2002 and 2007, private consumption growth was far behind at around 1%. Dependence on external demand left Japan especially vulnerable to the collapse of world trade in the wake of the global financial crisis. Looking ahead, demand from the United States and other industrialised countries may be constrained as firms and households continue to deleverage, while China's imports from Japan are unlikely to sustain the 14% annual average growth rate of 2000 to 2008. Moreover, the realignment of exchange rates since the 2008 crisis is less conducive to export-led growth in Japan.

Seven growth engines and 21 strategic projects

New sources of growth, led by domestic demand, are therefore essential to reduce Japan's reliance on exports. The government estimates that the Strategy will create around 123 trillion yen of demand (26% of 2009 GDP) and nearly 5 million jobs (8% of employment) by 2020 in green innovation, "life innovation" focused on health, Asian economic integration, and tourism and regional development (Table 3.1). The government expects this additional demand to boost the growth rate by around 1 percentage point, enabling Japan to achieve 2% average annual growth in real terms through the decade.

Table 3.1. **Creation of new demand and employment by area**

Area	Demand creation (trillion yen)	Job creation (thousand)
Green innovation (environment)	50	1 400
Life innovation (health)	50	2 840
Asian economic integration	12	190
Tourism and regional development	11	560
Total	**123**	**4 990**

Source: The Government of Japan (2010c), *The New Growth Strategy: Blueprint for Revitalising Japan*.

Meeting the increased demand requires supply-side measures to lift Japan's supply potential from the 0.8% annual growth rate that is the baseline for the 2010s in the Strategy. The rate is to be boosted by 0.7 percentage point by increased labour inputs and higher productivity. *First*, the negative impact of a shrinking population on labour supply is to be offset by raising the participation rates of women, young people and the elderly. *Second*, labour productivity growth is to be accelerated by accumulating additional human capital through improvements in education and vocational training.[1] In addition, Japan will place more emphasis on the development of science and technology, including making more use of information and communication technology (ICT), to increase efficiency. Total R&D spending is targeted to increase from an already high 3.8% of GDP in 2008 to over 4% by 2020 through tax and expenditure measures.[2] Finally, eliminating the output gap, which the government estimates at 5% in 2010, would provide an additional 0.5 percentage point of growth per year, thereby achieving the 2% target.[3]

The Strategy includes 21 projects (Table 3.2), with an implementation timetable for each through FY 2013 and targets to achieve by FY 2020. The selection of projects was based on three criteria; *i*) their impact on demand and employment; *ii*) their degree of priority in essential fields; and *iii*) their ability to achieve significant results with limited financial resources. In order to accelerate implementation, the "New Growth Strategy Realisation Promotion Council" was established in September 2010, chaired by the prime minister, with current participants including relevant ministers, the governor of the Bank of Japan, business and labour representatives, and private experts.

The New Growth Strategy and regulatory reform

The Strategy, which was announced at the same time as the Fiscal Management Strategy (Chapter 2), calls for creating new demand partly through fiscal measures, making it important to co-ordinate the two strategies. This will be challenging, given the central government's commitment to keep primary spending (*i.e.* excluding debt repayment and interest) from FY 2011 to FY 2013 below the FY 2010 initial budget and its difficulty in achieving its promise of significant cuts in "wasteful spending". Consequently, spending will have to be reallocated in line with the priorities of the Strategy. In the draft FY 2011 budget, around 1.7 trillion yen (2.4% of general account primary spending) was allocated to implement the Strategy. It is necessary to clearly spell out the budgetary consequences of the Strategy for the coming decade.

Given the fiscal situation, the Strategy will need to focus more on regulatory reform rather than on costly fiscal measures. While the Strategy criticises past reforms for "excessive market fundamentalism", such policies have provided important gains to consumers. The Cabinet Office estimated that regulatory reform raised consumer surplus by 17.6 trillion (3.5% of GDP) between 1995 and 2005.[4] The key to effective reform is to

Table 3.2. **Key areas and projects in the New Growth Strategy**

	7 strategic areas	21 national strategic projects
Demand-side policies	1. Green innovation	1. Introduce a feed-in tariff system to expand the renewable energy market 2. Use the Future City Initiative to promote the use of eco-products and services 3. Revitalise forestry and raise the self-sufficiency ratio to over 50%
	2. Life innovation	4. Expand options for patients by quick provision of new drugs and devices 5. Establish Japan's position globally as a provider of high-quality medical care
	3. Asian economic integration	6. Make Japan a major player in exports of infrastructure systems 7. Cut the corporate tax rate and promote Japan as an Asian industrial centre 8. Foster global talents and increase the number of talented foreign personnel 9. Strengthen the competitiveness of domestic firms by making Japanese standards global ones and increasing Japan's role as a content provider 10. Promote economic partnerships, particularly with Asian countries
	4. Tourism and local revitalisation	11. Create global strategic special zones and promote full "open skies" 12. Make Japan a tourism-oriented nation and attract 25 million visitors annually 13. Double the size of the market for existing housing and remodeling of housing 14. Open public facilities to the private sector and promote projects using private-sector partnerships
Supply-side policies	5. Science, technology and IT	15. Create "leading graduate schools" to enhance international competitiveness 16. Promote the use of ICT in the government and provide broadband to all households by 2015 17. Increase R&D investment to at least 4% of GDP
	6. Employment and human resources	18. Integrate childcare and kindergartens and develop quality childcare 19. Create a "National Vocational Qualifications" system and a "Personal Support Service" for the poor 20. Establish a new system of volunteer activity and charitable giving
	7. Financial sector	21. Create an integrated exchange for securities, financing and commodities

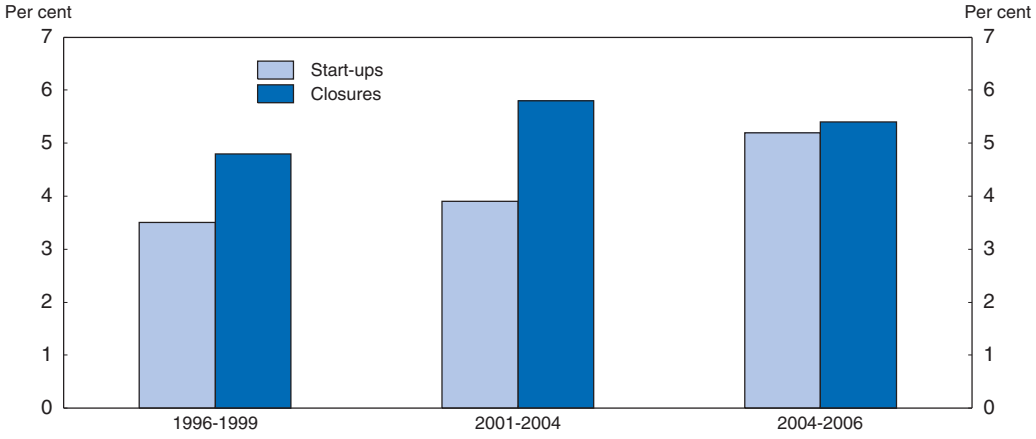
Source: The Government of Japan (2010c), *The New Growth Strategy: Blueprint for Revitalising Japan*.

eliminate entry barriers and reduce barriers to trade and foreign direct investment (FDI) in all sectors, not just those targeted in the Strategy. Such reforms would raise productivity at existing firms and promote the creation of new enterprises, thereby boosting wages and profits. Such supply-side reforms to boost productivity are more important than ever, as employment in 2020 will in all likelihood be less than in 2010, given the projected 10% drop in the working-age population. Achieving the 2% real growth target implies that labour productivity growth would have to rise well above the 1% average annual rate of the past decade. However, labour productivity in many of the targeted sectors, such as long-term care and forestry, is relatively low (Government of Japan, 2010c), making it important to boost productivity in all sectors through regulatory reform. The decision in January 2011 that "regulatory reforms in particular will be more vigorously promoted as policy tools to advance the New Growth Strategy" (Government of Japan, 2011) is certainly welcome.

Although business start-up rates in Japan have risen since the 1990s (Figure 3.1), they remain low compared to the 11.6% rate in the United States (Mukoyama, 2009) and below the firm closure rate in Japan. Compared to other countries, firm creation in Japan is complicated, time-consuming and costly. According to the *Doing Business 2011* report, Japan ranks 98th out of 183 countries in the difficulty in starting a business and 29th out of OECD countries (Table 3.3).[5] Moreover, Japan's ranking has fallen sharply from 44th in 2007.

Figure 3.1. **Business start-ups and closures of establishments**

As a per cent of existing establishments



Source: Ministry of Internal Affairs and Communications, *Establishment and Enterprise Census*, 2006.

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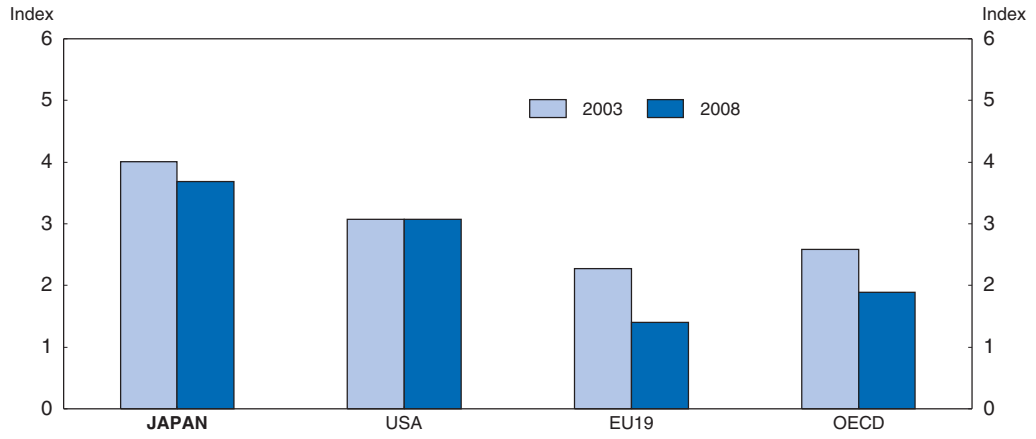
The high cost of business start-ups is especially harmful, given that new firms are a major source of productivity growth, notably in dynamic industries that are better placed to adopt new technology. Regulatory reform is particularly crucial for the service sector, where productivity growth has lagged behind that in manufacturing in recent years.[6] Given that services account for 70% of output and employment, policies to accelerate productivity growth in this sector should be a priority. Regulatory barriers to entry in network industries remain much more restrictive than in other OECD countries (Figure 3.2). In sum, a key shortcoming of the Strategy is the lack of emphasis on firm creation. On the other hand, Japan ranks first in the ease of closing establishments.

An easing of entry barriers should be accompanied by strengthening competition policy. In 2009, the Japan Fair Trade Commission (JFTC) launched 104 investigations, resulting in 24 cease-and-desist orders, ten warnings and 66 cautions. Although no

Figure 3.2. **Regulatory barriers to entry in network sectors**[1]



1. Includes electricity, gas, airline, rail, telecommunications and post. The index scale is from 0 to 6, with 0 the least restrictive.

Source: OECD (2010b), *Going for Growth, 2010*.

StatLink http://dx.doi.org/10.1787/888932388733

Table 3.3. **Ease of starting and closing a business in OECD countries**

	Starting a business					Closing a business
	World rank	Procedures (number)	Time (days)	Cost (% of income per capita)	Minimum capital (% of income per capita)	World rank
New Zealand	1	1	1	0.4	0.0	16
Australia	2	2	2	0.7	0.0	12
Canada	3	1	5	0.4	0.0	3
United States	9	6	6	1.4	0.0	14
Ireland	11	4	13	0.4	0.0	9
United Kingdom	17	6	13	0.7	0.0	7
France	21	5	7	0.9	0.0	44
Denmark	27	4	6	0.0	26.0	5
Slovenia	28	2	6	0.0	45.0	38
Iceland	29	5	5	2.3	12.0	17
Belgium	31	3	4	5.4	19.6	8
Finland	32	3	14	1.1	7.9	6
Norway	33	5	7	1.8	20.0	4
Hungary	35	4	4	8.2	10.2	62
Israel	36	5	34	4.3	0.0	40
Estonia	37	5	7	1.9	25.7	70
Sweden	39	3	15	0.6	14.7	18
Portugal	59	6	6	6.5	34.1	21
Korea	60	8	14	14.7	0.0	13
Chile	62	8	22	6.8	0.0	91
Turkey	63	6	6	17.2	9.9	115
Mexico	67	6	9	12.3	9.2	23
Italy	68	6	6	18.5	10.1	30
Slovak Republic	68	6	16	1.9	22.2	33
Netherlands	71	6	8	5.7	52.4	11
Luxembourg	77	6	19	2.1	23.8	45
Switzerland	80	6	20	2.1	27.2	41
Germany	88	9	15	4.8	0.0	35
Japan	**98**	**8**	**23**	**7.5**	**0.0**	**1**
Poland	113	6	32	17.5	14.7	81
Austria	125	8	28	5.2	53.1	20
Czech Republic	130	9	20	9.3	30.9	32
Spain	147	10	47	15.1	13.5	19
Greece	149	15	19	20.7	22.3	49
Average		**5.7**	**13.5**	**5.8**	**14.8**	

Source: World Bank (2010), *Doing Business 2011*.

criminal accusations were filed, the JFTC issued surcharge payment orders to 89 enterprises totalling 54.3 billion yen ($667 million), a record high. Several measures are necessary to strengthen competition policy. *First*, administrative fines, which are relatively low compared with other countries and with the potential gains from violating the Anti-Monopoly Act (AMA), need to be increased to strengthen the deterrent effect. Although the level of fines was raised 50% in 2009 on leading firms in cartels, they remain low overall. *Second*, explicit exemptions from the AMA in a wide range of business areas and special treatment of SMEs, which play a dominant role in the service sector, need to be scaled back. *Third*, the large number of trade associations should not be allowed to limit competition.

Policies in the New Growth Strategy by sector

Green growth and innovation

The Strategy targets the creation of 50 trillion yen of new demand and 1.4 million new jobs through the development and diffusion of green technologies, as well as to meet Japan's objective to reduce greenhouse gas (GHG) emissions by 25% by 2020 relative to 1990.[7] The objective is premised on the establishment of a fair and effective international framework that includes ambitious targets for all major countries. More specifically, the Strategy aims to: *i)* promote the spread of renewable energy through feed-in tariffs and investment in smart grids; *ii)* encourage green buildings and public transport; and *iii)* revitalise forestry (Table 3.2). In December 2010, the Ministerial Committee on the Global Warming Issue announced a package that includes the development of a feed-in tariff system, a CO_2 tax and an emissions trading system, and a "Green Innovation Strategy" to develop environmental and energy technologies. Achieving a substantial reduction in emissions requires shifting the economic structure towards lower-carbon activities, thereby creating new opportunities for investment and employment – so-called "green growth".

Creating a clear price for carbon through market-based instruments

To cut emissions and encourage innovation and investment, a top priority is market-based instruments to put a clear and credible price on carbon. The price signal is needed as early as possible to kick-start private-sector innovation in green growth, helping to make it a source of new growth and employment. It would not be profitable to invest in R&D and deploy new green technologies in the absence of a clear price for carbon, though government measures to promote R&D could also play a role in addressing market imperfections. The key should be to establish market instruments, preferably by creating a mandatory Emissions Trading System (ETS) based on cap-and-trade that is as comprehensive as possible (Box 3.1).

The use of market instruments – an ETS or a carbon tax – equalises marginal abatement costs across emitters, thereby enabling cost-effective emission abatement to achieve the reduction target. Such an approach is thus favourable for growth. While such policies take time to implement, a firm commitment to a time schedule for the introduction of a price on carbon would start to trigger green innovation in advance. In addition, introducing market instruments could generate additional revenue that would contribute to fiscal consolidation, thus reducing the need for increases in taxes that have a more negative impact on growth. The revenue that could be raised from auctioning permits is substantial; if all industrialised countries were to cut their emissions by 20% by 2020 relative to 1990 levels by using an ETS with full permit auctioning, the proceeds generated in 2020 could be as high as 2.5% of GDP on average across countries. In the case of Japan, the potential revenue is estimated at 1.4% of GDP, assuming Japan achieves its 2020 target of a 25% reduction in emissions (OECD, 2010c).

Japan's Kyoto Protocol commitment is to cut greenhouse gas emissions by 6% over 2008-12 relative to 1990. Emissions rose 1.7% between 1990 and 2008 despite various government policies to promote R&D and the use of energy-efficient products and regulations to increase energy efficiency, which help to reduce emissions (2009 *OECD Economic Survey of Japan*). However, Japan's efforts to reduce emissions thus far have relied primarily on voluntary measures, largely in the manufacturing sector, without binding commitments and price signals. A trial ETS was launched in 2008 and, by July 2010, had

Box 3.1. **Emissions trading systems (ETS) and carbon taxes: the pros and cons**

An ETS based on cap-and-trade and a carbon tax are the main instruments for putting a price on GHG emissions. Both meet the efficiency criteria, as they encourage emitters to adopt abatement solutions that cost less than the level of the tax or permit price, thereby ensuring that the least-expensive abatement options are fully exhausted. Both also reduce the current demand for energy and make the price of renewable energy sources more competitive. Furthermore, the two instruments give strong incentives for monitoring and enforcement by the authorities and, assuming that the permits are auctioned, generate revenues that can be used for fiscal consolidation or for reducing taxation on labour, thereby increasing efficiency.

The EU emission trading scheme that began in 2005 has developed considerable market size with an increased number of participants. Similar systems are now either in place or under development in most OECD countries. Carbon taxes have existed for a number of years in a few countries, including Sweden. More recently, some countries, notably Iceland and Ireland, have decided to introduce carbon taxes as part of fiscal consolidation.

A carbon tax has some advantages; it is easy to adopt from a technical standpoint, has lower transaction costs and guarantees the maximum and minimum cost, although the optimal tax rate can change over time. In comparison, an ETS is generally more costly to implement, mainly due to its more complex design. However, once start-up costs are overcome, it has a number of clear advantages. *First*, an ETS can secure a more targeted level of emission reduction than a carbon tax. Indeed, there is less certainty about the amount of emission cuts associated with a certain level of tax, and thus it may require several iterations to achieve the desired emission reductions. *Second*, an ETS facilitates linkages with foreign carbon markets, which could lower the cost of reducing emissions in Japan. Moreover, such linkages could lead to a common world price on carbon that would level the playing field for energy-intensive firms whose competitiveness might otherwise be affected by different carbon tax policies in different countries (OECD, 2010c). This would help alleviate concerns related to the international competitiveness of domestic firms. *Third*, the participation of firms in the market for permits creates a constituency for maintaining the system. *Fourth*, unlike a carbon tax, a trading scheme does not need to be adjusted for inflation or growth.

In sum, a comprehensive cap-and-trade ETS appears to be the better option than a carbon tax to control carbon emissions in Japan, despite the initial start-up costs. However, given that an ETS works best at the level of relatively large emitters, even a comprehensive ETS may exclude certain sectors, notably households and offices. Taxation, on the other hand, is the instrument of choice for small and diffuse sources such as households, farmers and small businesses, thus leaving scope for a carbon tax to co-exist with an ETS. It is important, though, to minimise overlap and complicated interactions between an ETS and a carbon tax that would raise uncertainty about the overall outcome (OECD, 2006b). In particular, the two instruments should be set to minimise differences in the explicit and implicit carbon prices across sectors (De Serres *et al.*, 2010).

around 600 participants, which had set targets. The government found no major problems in the trial ETS, although it needs some improvements related to target setting, monitoring and verification. The Basic Act on Global Warming Countermeasures, introduced in the Diet in 2010, would have required the establishment of the legislative framework for a cap-and-trade ETS within one year of its enactment, although it did not specify the date for launching the ETS. However, the Act has not yet been approved (Table 3.4).

Table 3.4. **Taking stock of structural reforms: improving policies to address climate change**

Recommendations in the 2009 *OECD Economic Survey of Japan*	Actions taken or proposed by the authorities
Continue efforts to achieve a comprehensive, fair and effective international agreement for the post-Kyoto framework that includes all developed and major developing countries.	Japan continues to promote agreement on a fair and effective international framework with ambitious targets for all major economies, as Japan's 2020 target is contingent on such an agreement.
Price-based instruments	
Shift from voluntary measures to market-based instruments to achieve GHG emission reduction targets in a cost-effective way.	A bill to require the creation of a legislative framework for a cap-and-trade ETS was submitted to the Diet in 2010 and is still under discussion. A Ministerial Committee is examining the impact of an ETS.
Put a price on carbon emissions by introducing a mandatory and comprehensive cap-and-trade ETS to provide a clear signal to market participants to make appropriate investment decisions.	The trial ETS is still under operation.
Implement a carbon tax in areas not covered by the ETS.	The government announced a plan to raise the tax rate on fossil fuel products, including oil and coal, in October 2011.
Use auctions to allocate the ETS permits and link Japan's ETS with those in other countries.	No action taken.
Expand the number and amount of projects in a streamlined and upscaled CDM with a high level of environmental integrity, while avoiding the diversion of ODA funds.	The total number of CDM projects approved by the government increased from 486 at the end of FY 2008 to 617 at the end of FY 2009.
Non-price instruments	
Rely on performance-based regulation and, in areas where price instruments are ineffective, technology-based standards.	No action taken.
Improve energy efficiency policies, such as the Top Runner Programme, in the short run, while phasing them out as market-based instruments become effective.	Cooling-only type air conditioners were excluded from the Programme in 2009.
Promote the innovation and diffusion of energy-saving and abatement technologies by supplementing private-sector R&D with public investment focused on infrastructure and basic research and by sharing the risk with the private sector.	The Science, Technology and Innovation Strategy Headquarters was created in 2010 to improve the R&D budget process, strengthen public-private participation and increase basic research capabilities.
Use transparent and efficient instruments to support the development of renewable energy in the short run, while relying on the pricing of GHG emissions in the long run	An expansion of the feed-in tariff system to all electricity from renewable energy sources was announced in 2010 and is expected to be implemented in 2012.

The Strategy also includes new or strengthened regulation to help create new demand for more energy-efficient products and green technologies. For example, higher energy standards for buildings and vehicles would create demand for products to conform to regulations. However, the use of regulation is the optimal policy tool only in areas where price instruments are ineffective. When regulations are necessary, it is important to ensure that they are targeted and efficient (OECD, 2010c).

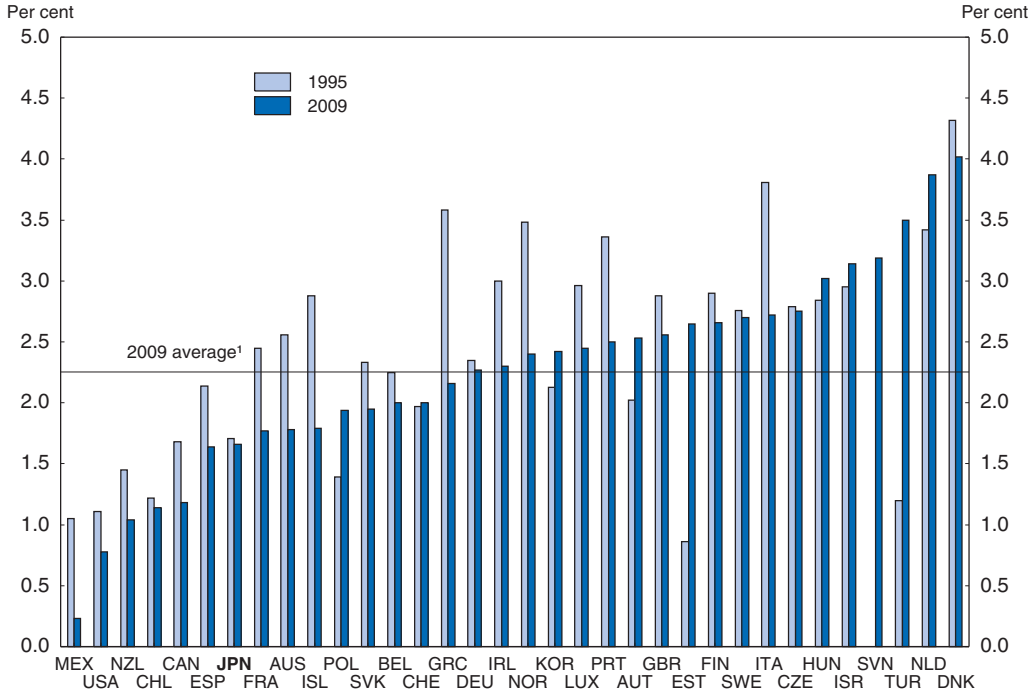
Making greater use of environmentally-related taxes

Japan has large scope to increase environmentally-related taxation; the revenues from such taxes amounted to only 1.7% of GDP in 2009, the seventh lowest in the OECD area (Figure 3.3). Moreover, the share has remained constant since 1995. Well-designed taxes put a price on the environmental damage, thus helping to overcome the externality problem by encouraging consumers and firms to invest in green solutions to reduce their costs. In addition, taxes can provide significant revenues for fiscal consolidation, while avoiding the negative impact associated with direct taxes on Japan's growth potential.

Instead of raising environmentally-related taxes, Japan has recently expanded tax benefits and subsidies on environment-friendly products (Chapter 2). Taxes on energy-efficient cars were reduced or eliminated in 2009 and favourable tax treatment will continue until 2012. In September 2010, the government extended the eco-point system for

Figure 3.3. **Revenues from environmentally-related taxes**

Per cent of GDP



1. While the arithmetic average is 2.3%, the weighted average is 1.6%.

Source: OECD/European Environment Agency Database on Economic Instruments Used in Environmental Policy.

StatLink http://dx.doi.org/10.1787/888932388752

energy-efficient home electric appliances and housing until March and December 2011, respectively. This system gives points to the purchasers of such goods, which can be exchanged for other goods and services. While such policies were useful to stimulate the economy, tax benefits on environment-friendly activities are generally a poor substitute for taxing activities with negative externalities. Especially considering the weak fiscal position in Japan, policy should focus on taxing harmful activities rather than subsidising good ones. The planned introduction of a CO_2 tax will impose an additional levy on fossil fuels such as coal, natural gas and crude oil, but the amount to be generated – 0.2 trillion yen (0.2% of general account revenues) – is quite small, suggesting the need for additional measures. Taxes are more effective when levied as close as possible to the source of environmentally-damaging activities and set at an adequate rate. Of course, the higher the level of the tax, the greater are the incentives for innovation. However, it should be noted that the predictability of the rate and the overall credibility of the policy framework also play an important role (OECD, 2010l).[8]

Developing and deploying renewable energy sources

Greater use of renewable energy sources is another component of the Strategy for creating new demand related to green growth. The share of renewables in total primary energy supply (TPES) in Japan was only 3.2% in 2009, less than half of the OECD average of 7.3% (IEA/OECD, 2010), suggesting significant scope for further development. An IEA study estimated the realisable potential contribution of renewables in Japan in 2020 at 244 TWh (IEA/OECD, 2008), equivalent to 24% of total electricity generated in 2009, when their actual

contribution share was only 10%. In particular, Japan has relatively large potential in hydropower (116 TWh), wind (35 TWh), solid biomass (28 TWh) and solar photovoltaics (26 TWh). Moreover, Japan has the highest number of patents related to renewable energy (OECD, 2010f).

In order to promote the development and deployment of renewables, the Strategy calls for the introduction of feed-in tariffs, which oblige electric utilities to purchase electricity from almost all renewable energy sources at a fixed price.[9] This approach was included in the December 2010 decision by the Ministerial Committee on the Global Warming Issue, as noted above. At present, electric utilities buy only surplus electricity from solar photovoltaics. The Ministry of Economics, Trade and Industry (METI) expects that the feed-in tariff system will increase the use of renewable energy sources by 32 to 35 TW (more than 10% of total capacity in 2010) and reduce CO_2 emissions by 24 to 29 million tonnes (2% of total CO_2 emission in 2008) within ten years of its introduction.

An alternative approach, an "electricity certificate system", is used in a number of OECD countries, including Belgium, Italy, Norway, Poland, Sweden and the United Kingdom (OECD, 2011b). This system requires electricity producers to purchase certificates equivalent to a certain proportion of their sales, thus creating a demand for certificates. Producers of electricity from renewable energy sources receive an electricity certificate for every megawatt-hour of electricity produced, thereby creating a supply for certificates. The price of the certificates depends on supply and demand and, in turn, on the size of the quota obligation. A major advantage of the certificate system is that it is market-based, as producers can choose among several technological options, thus encouraging innovation in technologies that have the lowest cost. In contrast, feed-in tariffs, which support renewables via a guaranteed price (that may vary by technology), do not necessarily encourage investment in technologies with the lowest costs. Empirical analysis shows that electricity certificate systems have a larger impact on innovation in renewables than feed-in tariff systems (Johnstone *et al.*, 2010), making it the preferred choice for Japan as well.

The Japanese authorities expect the renewable energy-related market to reach 10 trillion yen (2% of 2010 GDP) by 2020. The policy target is to raise the use of renewables to 10% of TPES by 2020, according to the Strategic Energy Plan released in June 2010. In addition to an electricity certificate system, achieving the target requires an effective and efficient policy design based on four principles (IEA/OECD, 2008):

- Remove non-economic barriers, such as administrative hurdles, obstacles to grid access, poor electricity market design, lack of information and training, and social acceptance issues.
- Establish a predictable and transparent support framework to attract investment.
- Introduce transitional incentives that decrease over time to foster and monitor technological innovation and move technologies quickly towards market competitiveness.
- Take account of the impact of large-scale penetration of renewable energy technologies on the energy system in terms of cost efficiency and system reliability.

The government should develop a flexible framework that increasingly applies market principles as a renewable energy technology advances (OECD, 2010c). Picking winners by providing government support for specific technologies is risky as it may lock in technologies that will not be economically efficient, given that the evolution of technology is difficult to predict. In sum, achieving a smooth transition towards a mass market for

renewables will require a profound evolution of markets so that renewable energy technologies can compete with other energy technologies on a level playing field.

Removing fossil fuel subsidies and tax expenditures

Another priority is to remove subsidies to and tax exemptions for fossil fuel-based energy consumption and production. An OECD study found that closing the gap between domestic and international fossil fuel prices could cut GHG emissions in the subsidising countries by as much as 30% relative to a business-as-usual baseline by 2050, and by 10% globally (Burniaux *et al.*, 2009). In the early 2000s, Japan shut down its last domestic coal mines, thus bringing an end to several decades of subsidised production. However, Japan continues to subsidise business activities related to fossil fuels, such as the exploration, refining and promotion of natural gas use, with the goal of securing a stable energy supply. Such subsidies amounted to 46.2 billion yen (0.1% of general account tax revenues) in FY 2007 (Table 3.5), a considerable amount considering that Japan does not produce oil. In addition, exemptions from excise duties are widely applied to fuels used in agriculture, forestry, fishery, mining, petrochemicals and manufacturing, and for heating (OECD, 2010h). Phasing out inefficient fossil fuel subsidies, in line with the G20 initiative, is an important step in putting the correct price on carbon to promote green innovation.

Table 3.5. **Energy subsidies in Japan**

Outlays in FY 2007 in million yen

Subsidy name	Purpose	Budget amount
Natural gas exploration subsidy	Promote natural gas exploration by mining companies	907
Subsidy for oil-refining technology programmes in oil-producing countries	Promote joint research with oil-producing countries on oil refining technologies	9 925
Oil prospection subsidy	Support geological surveys abroad	1 812
Oil-refining rationalisation subsidy	Assist the development of advanced oil-refining technologies	12 457
Oil product quality assurance subsidy	Support analysis of test-purchased petroleum products and development of analysis techniques	1 898
Subsidy for reform measures for petroleum product distribution	Assist business diversification and other structural reform measures by oil distributors	12 442
Large-scale oil disaster prevention subsidy	Support the construction and maintenance of oil fences and their transport in emergencies	800
Promotion of natural gas use subsidy	Help private firms convert coal-burning facilities to natural gas-burning ones	6 005
Total		**46 246**

Source: OECD (2010h), *OECD Environmental Performance Reviews: Japan*.

Health-care reform

The Strategy wants to transform health and long-term care from a financial burden on public finances into "growth-driving industries". The objective is to make Japan a "health-care superpower so people will live longer, healthier, and have more children" by promoting the entry of private firms, expanding basic and clinical R&D to develop new pharmaceuticals and medical devices and attracting foreign patients by making Japan a centre of medical tourism. In addition, the "drug lag" and "device lag" – the delay between their introduction in world markets and their entry into Japan – is to be resolved, as recommended in the 2009 *OECD Economic Survey of Japan* to broaden the range of options to patients (Table 3.6). Finally, the Strategy calls for strengthening health and long-term care insurance to lessen anxiety about the future, thereby raising spending and cutting saving.

There is scope to expand the quality and quantity of health care, as spending is relatively low despite Japan's comparatively elderly population. However, health-care policy should focus on outputs rather than inputs, and ensure that additional spending is cost-effective. Costs have been contained by requiring relatively high co-payments by patients and by controlling medical fees. However, as the government finances 86% of health-care spending, a sharp increase in outlays under the current framework would have a severe negative impact on public finances. To avoid higher fiscal costs, extra demand would, therefore, need to be concentrated in services and drugs not covered by the National Health Insurance (NHI), which is limited to providing what is considered to be "necessary and adequate" care to the entire population. Achieving the Strategy's goal to create 10% of GDP in new demand would require a structural transformation of the health and long-term care frameworks. At present, the scope for expanding services not covered by the NHI is limited by the ban on "mixed billing": patients that combine new medicines or treatments that are not included in the prescribed treatment of a certain illness in the NHI with services that are included must pay not only the cost of the additional treatments but also the cost of services normally covered by the NHI. Expanding the scope of mixed billing, as recommended in the 2009 *OECD Economic Survey of Japan*, would encourage more health spending while providing higher quality care to patients (Table 3.6). However, this would come at the cost of equality, an important priority in Japanese health care.

The other objectives of the Strategy – promoting the entry of private firms, reducing the drug and medical device lag, expanding long-term care and encouraging medical tourism – will be difficult to achieve under the current framework. *First*, for-profit firms are prohibited from establishing hospitals or long-term care centres. In practice, this regulation prevents the use of equity financing and slows restructuring through M&As. In any case, the scope for competition is limited by the fact that prices are fixed by the government and citizens cannot choose their health insurer. *Second*, the goal of resolving the problem of the drug and medical device lag will require a comprehensive approach of reducing the cost of clinical trials in Japan, accepting more results from other countries and ensuring that reimbursement levels are appropriate. *Third*, hospitals still play a major role in providing long-term care, which is profitable for them, but inefficient. Shifting long-term care away from hospitals toward more appropriate institutions and home-based care requires reforming the fee schedule and more closely monitoring the classification of patients in hospitals. *Fourth*, the international market for medical tourism is extremely competitive. Moreover, Japan already faces a shortage of doctors, with only 2.2 per thousand population, well below the OECD average of 3.2.

Asian economic integration

The Strategy emphasises increased economic integration with the Asian region through economic partnership agreements (EPAs) and the establishment of a Free Trade Area of the Asia-Pacific (FTAAP) by 2020, an idea proposed in 2006 by the Asia-Pacific Economic Co-operation. Such an agreement would build on on-going regional initiatives, such as ASEAN+3, ASEAN+6 and the Trans-Pacific Partnership (TPP), among others. The Strategy also has an objective of doubling the flow of people, goods and money by 2020 by reducing trade barriers, lifting restrictions on foreign investment and liberalising the movement of people into Japan. Other specific strategic projects in the area of Asian economic integration include boosting exports of packaged infrastructure systems, reducing corporate taxes to enhance the competitiveness of firms operating in Japan,

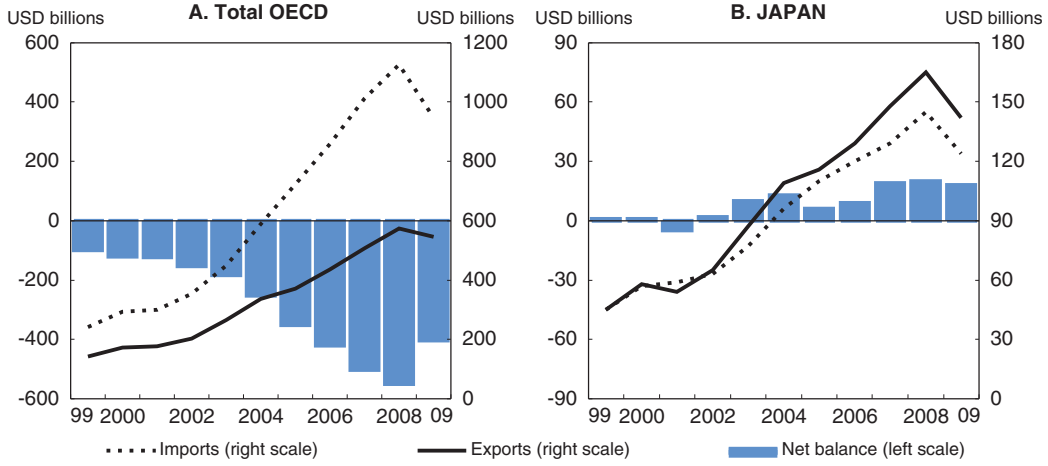
Table 3.6. **Taking stock of structural reforms: improving health care to limit costs and raise quality**

Recommendations in the 2009 *OECD Economic Survey of Japan*	Actions taken or proposed by the authorities
Containing the growth of spending and financing it efficiently	
Promote the shift of long-term care away from hospitals toward more appropriate mechanisms using the fee schedule and closer monitoring of the classification of patients in hospitals.	The government is trying to increase the number of beds in nursing homes by 160 thousand over FY 2009-11. The reimbursement of medical-care costs for long-term care patients in acute-care beds is now based on their daily medical status.
Improve the payment system by reforming the Diagnosis Procedure Combination, extending the case-mix based approach more broadly and modifying the reimbursement for outpatient care to reduce the number of consultations.	No action taken.
Expand the use of generic medicine, for example by moving towards making them the standard for reimbursement.	The FY 2010 fee revision introduced rewards for pharmacies in which generics account for more than 25% to 30% of their sales and for medical institutions where generic use is high.
Use monetary incentives, notably higher tobacco taxes, to encourage healthy ageing.	The tobacco tax rate was boosted by 3.5 yen per cigarette in October 2010.
Introduce gatekeepers to reduce the number of unnecessary consultations with specialists.	No action taken.
Implement electronic billing to reduce administrative costs.	The adoption rate reached 82.5% as of July 2010.
Consolidate health insurers to reduce administrative costs and increase quality, while strengthening effective competition for the Social Insurance Medical Fee Payment Fund.	No action taken.
Implement steps to collect and analyse hospital performance data.	In FY 2010, the government launched a programme to financially assist hospital associations that analyse their members' quality performance and publish such indicators.
Relax the rules that prevent equity finance to facilitate the restructuring of the hospital sector.	No action taken.
Implement reform initiatives to address the fragmentation of insurers.	The revision of the National Health Insurance Law in May 2010 will allow the setting of a standard premium rate in a prefecture.
Shift toward general tax revenue to finance health care for the elderly to avoid unduly increasing labour costs.	No action taken.
Enhance the quality of health care	
Shorten the drug and medical device lag by reducing the cost of clinical trials in Japan, accepting more overseas results and ensuring that reimbursement levels are appropriate.	The drug lag is to be resolved by allowing patients to use unapproved drug and medical devices in selected medical institutions, in conjunction with treatment included in the NHI.
Expand mixed billing to make treatments not yet covered by public health insurance more affordable, while addressing the inequality in premium payments in promoting equality.	No action taken.
Addressing the imbalances in the health-care system	
Set fees based on rigorous cost and productivity studies.	No action taken.
Reconsider wide usage of measures linking medical university education and the assignment of the working place of doctors.	No action taken.
Addressing the imbalances in the health-care system	
Improve compliance in paying premiums.	No action taken.
Ensure that low-income households – even those not qualifying for public assistance – receive health insurance benefits.	No action taken.
Increase the participation of non-regular workers in employee-based social insurance systems.	No action taken.

increasing acceptance of highly-skilled foreign personnel and promoting the adoption of Japanese standards as international norms.

Japan has been one of the countries that has benefited most from the rapid growth in Asia, particularly China. Indeed, the share of Japan's exports to China, including Hong Kong, China, doubled from 12% in FY 2000 to 25% in FY 2009. Japan has maintained a bilateral trade surplus with China, in contrast to the large and growing deficit of the OECD area with China (Figure 3.4). There appears to be a clear division of labour between Japan

Figure 3.4. **Merchandise trade with China**[1]



1. Including Hong Kong, China.

Source: OECD Economic Globalisation Indicators Database.

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and China, as Japanese exports tend to be higher value-added products. Further integration of Japan in the world economy would produce significant economic benefits, as demonstrated by economic theory and history. The gains are likely to be particularly large for Japan given that the level of import penetration, the stock of inward FDI and the share of foreign workers are all the lowest in the OECD area. However, the Strategy's strong focus on Asia is misplaced in an increasingly globalised economy. It is important to look beyond Asia, despite its buoyant growth performance, as an over-emphasis on one region would cause Japan to miss opportunities in other parts of the world.

Expanding free trade agreements with major trading partners

Increasing Japan's openness to trade is a key priority to strengthen competition and promote the diffusion of new technology, thereby raising productivity and creating new products and demand. Given the time necessary to complete multilateral trade agreements like the FTAAP and the WTO Doha Development Agenda, it is important to push ahead with EPAs. Japan enacted its first EPA with Singapore in 2002, followed by agreements with nine other countries, of which six were in Asia, plus an agreement with ASEAN (Table 3.7). In addition, Japan concluded EPA negotiations with Peru in 2010 and signed an EPA with India in February 2011.

Japan was one of the few countries in the world at the beginning of the 21st century without any bilateral or regional trade agreements. The EPAs currently in effect accounted for around 16% of Japan's trade in 2009. Even if the agreements with Australia, India and Peru were implemented, the coverage would rise to only 19.6% for exports and 24.1% for imports. In contrast, Korea's Free Trade Agreements, including those recently signed with the United States and the European Union, account for 45% of its exports and 35% of its imports. Moreover, the utilisation rate of EPAs in Japan is low. According to a 2009 survey of Japanese firms trading with Chile, Mexico and Malaysia, the share using the EPAs ranged from 12% for Malaysia to 33% for Mexico.[10] The main obstacles to using EPAs include the limited amount of trade with those countries, the difficulty in obtaining the certificate of origin required by the EPA and the small gap between the Most Favoured Nation tariff rate

Table 3.7. **Japan's Economic Partnership Agreements**

	Status	Share of exports in 2009 in per cent		Share of imports in 2009 in per cent	
		Total	Agriculture	Total	Agriculture
Singapore	Took effect in 2002	3.6	1.4	1.1	0.6
Mexico	Took effect in 2005	1.2	0.1	0.5	1.2
Malaysia	Took effect in 2006	2.2	1.3	3.0	0.8
Chile	Took effect in 2007	0.2	0.1	1.0	5.5
Thailand	Took effect in 2007	3.8	3.7	2.9	4.5
Indonesia	Took effect in 2008	1.6	1.7	4.0	6.0
Brunei	Took effect in 2008	0.0	0.0	0.6	0.0
Philippines	Took effect in 2008	1.4	0.8	1.2	2.1
ASEAN[1]	Took effect in 2008	13.8	11.1	14.2	15.3
Switzerland	Took effect in 2009	1.1	0.5	1.1	0.6
Vietnam	Took effect in 2009	1.1	2.1	1.3	1.2
Sub-total		**16.3**	**11.8**	**16.8**	**22.6**
Peru	Negotiations were concluded in 2010	0.1	0.1	0.3	1.5
India	Signed in February 2011	1.1	0.8	0.7	1.4
Australia	Negotiations are underway	2.1	0.7	6.3	12.4
Total		**19.6**	**13.4**	**24.1**	**37.9**

1. Includes Cambodia, Laos and Myanmar, in addition to the other ASEAN countries shown individually.
Source: OECD International Merchandise Trade Statistics Database.

and that under the EPA. Consequently, the number of firms reporting that the EPA increased costs (9.1%) was larger than the number reporting higher profits (7.5%) (Table 3.8). Nearly one-third of firms said that the EPA had no clear impact. To make EPAs more effective in expanding trade, Japan should negotiate agreements with its major trading partners and aim at removing all barriers to trade rather than just reducing tariff rates, which are already low in general. In addition, the cost of obtaining the certificate of origin should be simplified.

Table 3.8. **Effects of Japan's Economic Partnership Agreements**
Percentages of responses in a survey of Japanese firms trading with Mexico, Malaysia and Chile

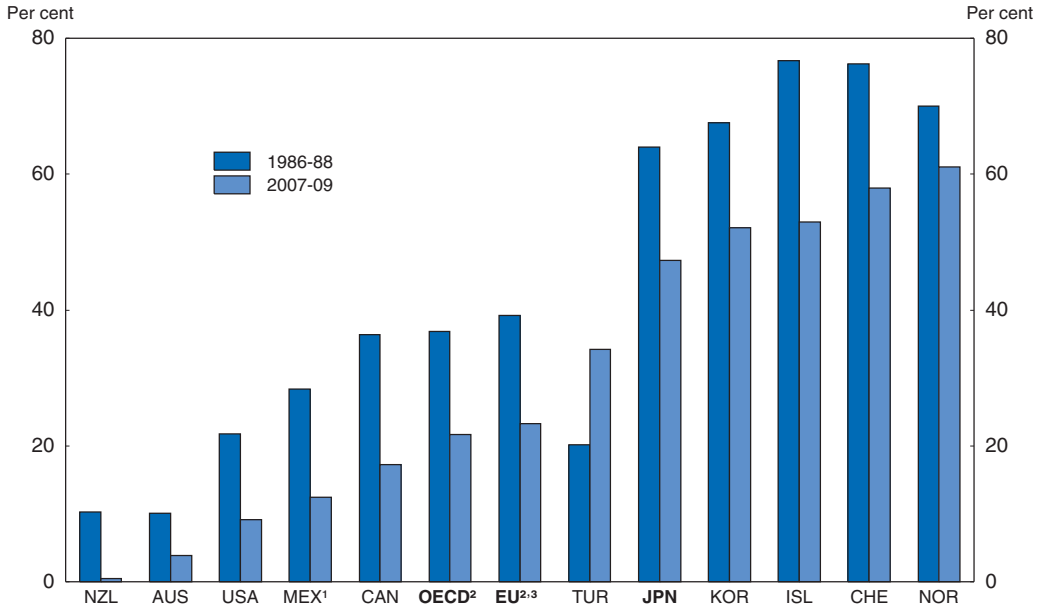
	Mexico	Malaysia	Chile	Average
Increase in exports	12.5	9.9	5.9	8.7
No change in exports	34.7	20.9	19.6	22.7
Increase in profits	4.2	14.4	2.0	7.5
No change in profits	9.7	8.8	3.9	6.9
Increase in costs	12.5	11.0	5.9	9.1
No change in costs	4.2	6.6	3.9	5.1
No clear effect thus far	27.8	24.2	35.3	29.5

Source: Takahashi and Urata (2009).

A major obstacle to increasing Japan's participation in comprehensive trade agreements is its high level of border protection for some agricultural products, including rice. In the negotiations with Mexico, for example, pork, beef, chicken and oranges were major obstacles.[11] Although the level of agricultural support, which includes border protection, has fallen from 64% of the value of agricultural production in 1986-88 to 47% in 2007-09, as measured by the Producer Support Estimate (PSE), it is still one of the highest in the OECD area and more than twice the OECD average (Figure 3.5). Moreover, the share of the most distorting types of support, *i.e.* those based on output and variable input use,

Figure 3.5. **International comparison of Producer Support Estimate for agriculture**

Per cent of gross farm receipts



1. For Mexico, 1986-88 is replaced by 1991-93.
2. Austria, Czech Republic, Finland, Hungary, Poland, the Slovak Republic and Sweden are included in the OECD total for both time periods and in the EU for 2007-09. The OECD total does not include the non-OECD EU member states.
3. EU12 for 1986-88 and EU27 for 2007-09.

Source: OECD (2010a), *Agricultural Policies in OECD Countries 2010: At a Glance*.

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accounted for 90% of the PSE. The share of the least distorting support, which does not include a requirement to produce, is less than 1%. Due to agricultural policies, prices received by farmers were 1.7 times higher than world prices in 2007-09, thus imposing heavy burdens on consumers (OECD, 2010a). A more market-oriented agricultural policy in Japan is a necessary condition for negotiating comprehensive trade agreements and raising productivity in agriculture. In addition to scaling back the level of support, its composition should be shifted away from policies based on output and towards direct support to farmers. Introducing a more market-oriented agricultural policy and expanding bilateral EPAs are essential to prepare for the FTAAP.

The Basic Policy on Comprehensive Economic Partnerships, announced in November 2010, acknowledged that Japan is falling behind other countries in establishing high-level EPAs. Japan will therefore step up its efforts to conclude the ongoing EPA negotiations with Australia, resume the currently suspended Japan-Korea EPA negotiations and promote regional economic partnerships such as the China-Japan-Korea FTA and the Comprehensive Economic Partnership in East Asia (CEPEA). In addition, Japan is to begin consultations concerning the TPP with the member countries, according to the Basic Policy. It acknowledged that agriculture is the sector most likely to be negatively affected by trade agreements and promised to first reform that sector. Indeed, a recent study estimated that the fall in output for primary industries in Japan, including agriculture, resulting from the FTAAP would be the largest among Asian and Pacific countries (Kawasaki, 2010).[12]

The newly-created headquarters to promote agricultural reform will announce policy directions in June 2011, followed by a medium and long-term action plan in late 2011. The aim will be to shift the burden of maintaining domestic production, currently borne by consumers, to taxpayers by introducing transparent fiscal measures. Efforts to improve the productivity of agriculture will have limited impact as long as the sector is protected from competition. Reforms that force farmers to operate in a more open and competitive environment would exploit Japan's advantages, such as its educated labour force and technological capacity (OECD 2009a). Successful reform depends on achieving a nationwide social consensus based on political leadership (Box 3.2). However, the goal of the new headquarters, as well as the Strategy is not just to promote high-level EPAs but also to increase Japan's food self-sufficiency ratio. The ratio may tend to fall as a result of regional integration that increases Japan's openness to low-cost food imports.

Box 3.2. **Managing the reform process: lessons from the OECD's study on *Making Reform Happen***

The New Growth Strategy blames Japan's failure to adequately implement past reforms on a lack of political leadership. The OECD's *Making Reform Happen* (OECD, 2010e) found a lack of political leadership to be a key problem preventing successful reform in a number of countries, along with a variety of other factors:

- An *electoral mandate* is the most important factor promoting reform. A mandate for agricultural reform in Japan is difficult given the over-representation of rural areas in the Diet. Indeed, the number of voters in some urban districts is up to five times greater than in some rural districts.
- Obtaining a strong mandate requires *effective communication*. Successful reforms have usually been accompanied by consistent and co-ordinated efforts to persuade voters and stakeholders of the need for reform and, in particular, to communicate the costs of failing to reform.
- *Sound public finances* are strongly associated with progress in reform.
- Policy reforms must be underpinned by *solid research and analysis*. The OECD study suggests that an evidence-based and analytically-sound case for reform serves both to improve the quality of policy and to enhance its prospects for adoption.
- *Appropriate institutions* are necessary to make the transition from decision to implementation of reform.
- *Unified leadership* is critical. The OECD study points to the importance of government cohesion in support of reform. On the other hand, a government that is not united in support of a reform proposal will send out mixed messages, allowing opponents to exploit its divisions.
- Successful structural reforms often take *time and several attempts*. The more successful reforms examined in the OECD study generally took several years to prepare and adopt, and far longer to implement. In contrast, many of the least successful reform attempts were undertaken in haste.
- It pays to *engage opponents of reform*. While consultative policy processes do not always prevent conflict, they pay dividends over time, not least by creating greater trust among the parties involved.

Box 3.2. **Managing the reform process: lessons from the OECD's study on *Making Reform Happen*** *(cont.)*

- *Concessions to potential losers* need not compromise the essentials of the reform. It is often possible to assist groups that will be negatively affected by a reform without contradicting its overall aims. The questions of whether, when and how to compensate losers from reform require careful consideration.

The OECD's study suggests that cross-national studies and international policy dialogue can speed up the process of "policy learning", enabling governments to learn from one another and thus avoid repeating the mistakes of others. In the case of Japanese agriculture, the lack of an electoral mandate, the differing views of some government ministries and the difficult fiscal situation are important obstacles to successful reform.

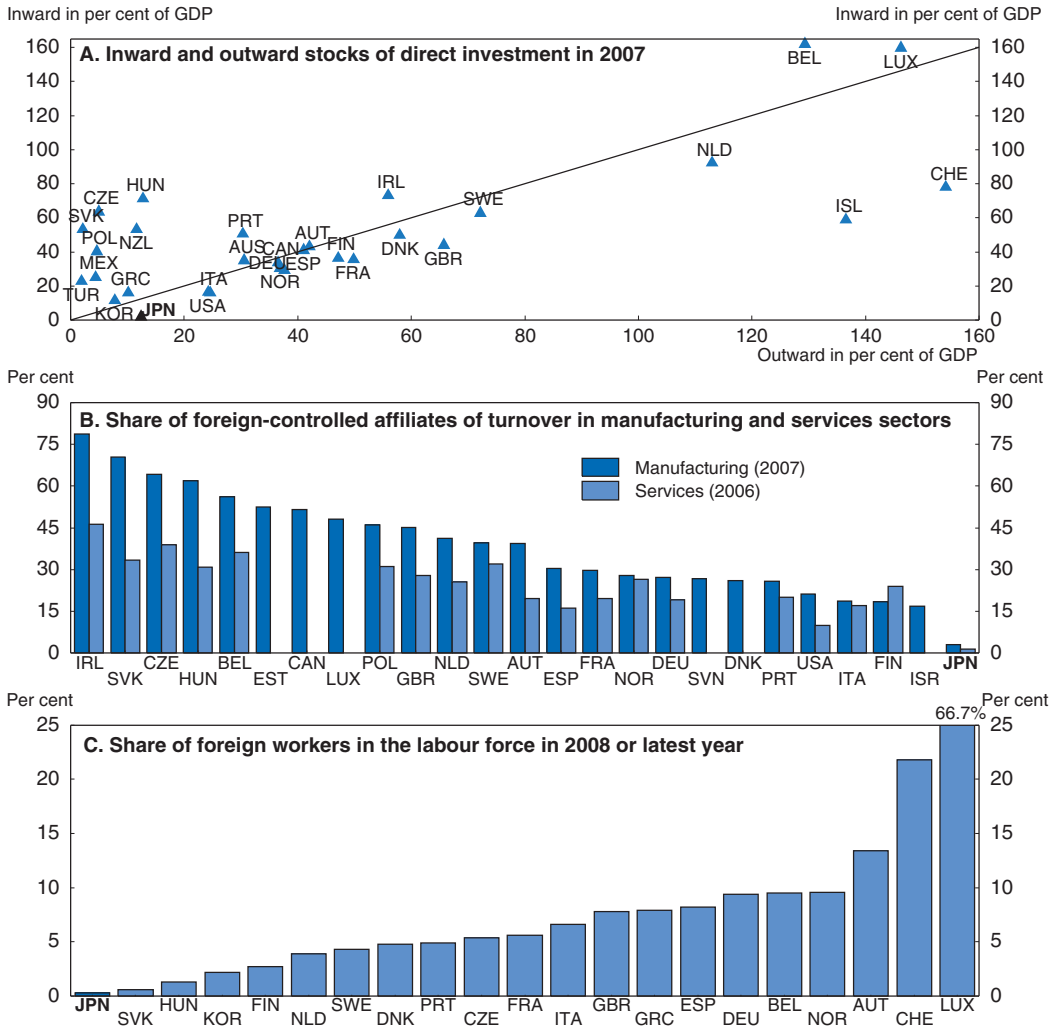
Improving the climate for inflows of foreign direct investment in Japan

FDI has become an increasingly important driver of economic integration as multinational enterprises implement global strategies. Worldwide FDI flows have grown faster than output over the past two decades. However, the inward stock of FDI in Japan was only 3% of GDP in 2007, the lowest in the OECD area (Figure 3.6). Consequently, the share of foreign-controlled affiliates was only 3.1% of total turnover in manufacturing, and 1.4% in services, both the lowest in the OECD (Panel B). One objective of the Strategy is to "invite foreign firms that bring high value-added products and services into Japan and double employment by foreign firms" by ensuring smooth flows of people, goods and funds. In addition, tax preferences are planned to induce firms to set up their Asian headquarters and R&D centres in Japan. In November 2010, the government announced the "Inward Investment Promotion Programme" to accelerate FDI as well as domestic investment by establishing the "world's best investment environment". The programme includes the corporate tax cut, economic partnerships with major countries, deregulation of investment procedures and incentives, such as preferential tax treatment and subsidies.

Greater FDI inflows would be beneficial, given the high level of total factor productivity, profitability, capital investment and spending on R&D by foreign affiliates in Japan compared to domestic firms (OECD, 2006a). An OECD study found that FDI spillover effects, defined as an increase in the productivity of domestic firms resulting from the presence of foreign firms, are strongest in the service sector. Given Japan's low productivity in services, the benefits of inward FDI are likely to be particularly important. Openness to trade is positively correlated with the stock of FDI in OECD countries. In addition, there is a significant and positive correlation between a country's trade openness and the gains it reaps from a foreign presence, reflecting two factors. *First*, openness to trade attracts relatively more productive foreign firms whose efficiency stimulates domestic firms to improve their productivity in order to compete. *Second*, the more intense competition resulting from openness to trade induces greater knowledge transfers from multi-national enterprises to their affiliates in order for them to compete (OECD, 2008). In sum, trade liberalisation is important to encourage inflows of FDI to Japan and to maximise the resulting benefits.

The low level of FDI in Japan is also explained by explicit barriers to FDI inflows. According to the OECD's FDI restrictiveness index, Japan is the fourth-most restrictive country in the OECD area, and has higher barriers than India (Figure 3.7). The index, which

Figure 3.6. **Economic globalisation indicators**



Source: OECD (2010g), *OECD Economic Globalisation Indicators*.

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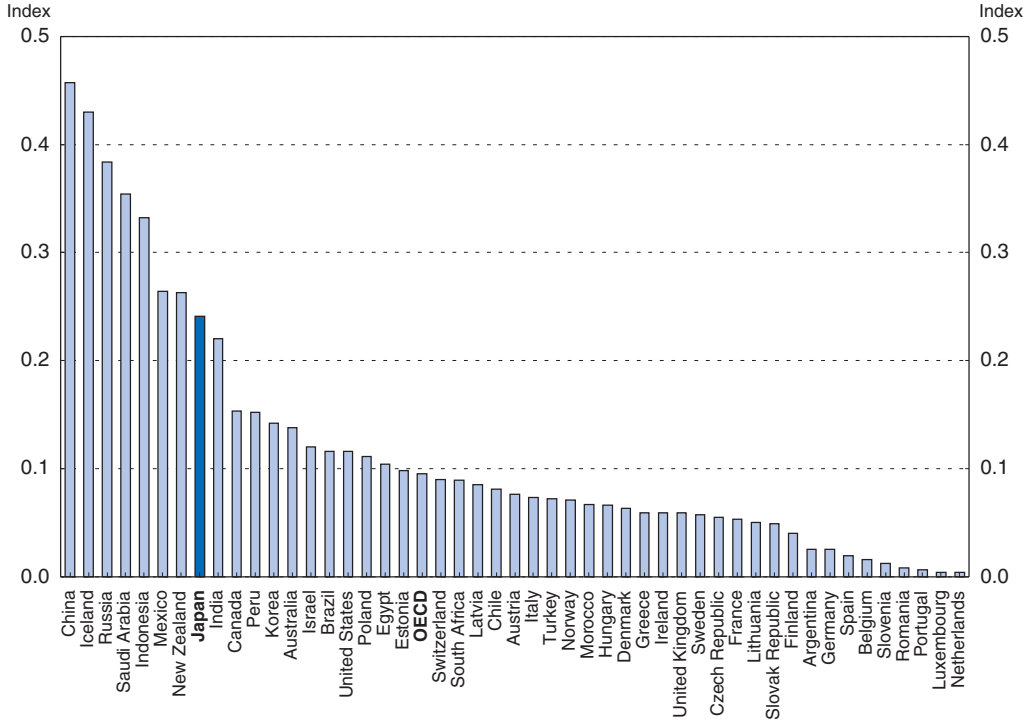
covers 22 sectors, measures: *i)* foreign equity limits; *ii)* screening and prior approval; *iii)* restrictions on foreign personnel; and *iv)* other restrictions on the operation of foreign-controlled entities. Japan has the strongest equity restrictions on foreigners in the OECD area, while other types of restrictions are relatively low. By sector, Japan is more restrictive in primary industries (which are almost completely closed), manufacturing, transport and telecommunications than the OECD average (OECD, 2010i).

A comprehensive approach is essential to promote greater FDI inflows into Japan, including: *i)* removing restrictions on FDI; *ii)* fully opening the M&A market to foreign firms; *iii)* accelerating regulatory reform in product markets, notably by removing entry barriers for foreign and domestic firms, in particular in health care, education, transport, electricity and professional services; *iv)* reducing the corporate income tax rate;[13] *v)* negotiating comprehensive EPAs with major trading partners to increase openness to trade; and *vi)* improving the business climate by making the labour market more flexible and simplifying administrative procedures. Such an approach would help offset some

Figure 3.7. **The OECD index of restrictions on FDI**



Source: OECD (2010i), *OECD's FDI Restrictiveness Index: 2010 Update*.

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inherent disadvantages of investing in Japan, which, according to a poll of senior business executives. include the language (30%), culture (12%) and the particularity of the market (10%) (Ernst and Young, 2008).

Promoting the inflow of foreign workers to Japan

The Strategy calls for doubling the number of highly-skilled foreign personnel in Japan by 2020. Foreign residents with work permits for high-skilled occupations totalled 212 thousand in 2008, accounting for only 0.3% of the total labour force, the lowest in the OECD area (Figure 3.6, Panel C). This low level reflects the fact that foreign workers are restricted to one to three years of employment in Japan, although permits can be renewed. Even though the stock of foreign workers increased by around 10% between 2004 and 2009, the inflow of foreign workers has declined by more than one-half since its peak in 2004, and net migration to Japan has been close to zero in recent years. In contrast, net migration accounted for 59% of population growth between 2002 and 2006 on average for OECD countries (OECD, 2010d). Many countries have followed a more welcoming stance to immigrants during recent decades, in part as they are expected to help cope with future demographic problems (OECD, 2009d) and to increase labour inputs, given that migration tends to be highly concentrated in the 15-to-39-age group (OECD, 2010d).

Liberalising restrictions on the inflow of foreign labour to Japan would have a number of positive effects. *First*, it would facilitate Japan's inclusion in high-level EPAs, given that labour mobility has been a key issue in EPA negotiations with some ASEAN countries (OECD, 2006a). *Second*, it would encourage inflows of FDI by expanding the supply of skilled labour. Indeed, a lack of internationally-qualified experts in some areas has been cited as

an obstacle to FDI in Japan (EBCJ, 2004). *Third*, greater inflows of foreign workers would boost the supply of highly-skilled workers and productivity growth. Japan ranks as one of the top five OECD countries in terms of its attractiveness for future migration, based on economic and demographic factors (OECD, 2010d). As the working-age population in Japan is projected to fall by 17% by 2030, more decisive measures to reduce barriers to immigration and attract skilled foreign workers are needed to address labour shortages. In particular, long-term nursing care is one area where shortages are likely, given population ageing. The Strategy's objective of increasing the number of foreign students from 123 thousand to 300 thousand by 2020 (see Chapter 4) could help attract highly-trained foreign workers if measures to improve their integration in the labour market after graduation were taken.

Regional development

Regional revitalisation through tourism, housing investment and agriculture is one of the seven areas in the Strategy, reflecting concern about depopulation and deteriorating economic conditions in regional towns and rural areas. Japan is one of the most geographically-concentrated countries in terms of GDP and population. Rural areas have a greater concentration of elderly persons, reducing their economic dynamism. Strategic projects to revitalise regional areas include: *i)* establishing new special zone initiatives that include fiscal support; *ii)* boosting the annual number of foreign visitors from 7 million in 2009 to 25 million by 2020 by easing tourist visa requirements, particularly for the Chinese, and creating appealing tourist attractions; *iii)* doubling the size of the market for existing homes and promoting housing investment and remodeling; and *iv)* encouraging public-private partnerships to manage existing infrastructure and provide new facilities.

The Strategy states that past regional development policies have "failed to foster regional individuality and autonomy", prompting the government to launch a "regional sovereignty strategy" in June 2010. Japan should emulate the shift in the regional policy paradigm in OECD countries from equity to efficiency, focusing more on competitiveness and growth (OECD, 2010k). Moreover, policies in many countries have changed from top-down, aid-based, investment-oriented, and targeted at designated problem regions to a programme-based approach that targets the entire country and is based on co-operation between different levels of government (Yuill *et al.*, 2008).

Improving the special zone system and enhancing decentralisation

The Special Zones for Structural Reform are geographic districts established at the initiative of local governments or private firms in which special regulatory reform measures are allowed. The zones act as a testing ground for reforms that can be later introduced at the national level, while contributing to regional development in the short run. The zones do not involve any fiscal support, such as tax exemptions or subsidies. By the end of 2009, 672 of the 4 858 reform proposals had been accepted (Table 3.9), either on a nationwide basis (451) or in a special zone (221), suggesting that this approach has been successful. However, the progress in achieving nationwide reform has weakened the incentive for local governments to propose special zones, as the expansion to the rest of the country ends the benefit to local economies. Moreover, many of the most attractive ideas for zones have already been taken. Consequently, the number of proposals for special zones has dwindled in recent years. In response, the policy emphasis has shifted towards regional revitalisation by allowing local governments to retain the special measures longer

Table 3.9. **The special zone initiative**

	Total number of proposals	Total number of reforms implemented	*Of which:* those implemented in special zones	*Of which:* those implemented nationwide
2002	426	204	93	111
2003	1 269	222	83	139
2004	642	80	18	62
2005	539	41	12	29
2006	643	34	5	29
2007	606	42	3	39
2008	285	18	1	17
2009	448	31	6	25
Total	**4 858**	**672**	**221**	**451**

Source: Office for the Promotion of Special Zones for Structural Reform.

before extending them nationwide. However, the uneven application of regulation across Japan creates distortions in resource allocation. Thus, it is important to maintain the initial policy objective of nationwide regulatory reform.

The use of Special Zones for Structural Reform will be further discouraged by the introduction of two new types of zones in FY 2011:

- "Comprehensive Global Strategic Special Zones" to create an internationally-competitive business environment in certain areas.
- "Comprehensive Special Local Revitalisation Zones" for agriculture, tourism and culture, the environment and social entrepreneurship to solve social problems.

Both will provide special tax breaks, subsidies and financial support from the government, which is likely to attract interest from local governments. However, the government should note that this initiative is more typical of developing countries. While special zones have some benefits, for example in India, where they help to overcome obstacles such as poor infrastructure and high levels of regulation (OECD, 2007b), they appear less appropriate in an advanced country, such as Japan. Public financial assistance to one zone may crowd out other regions, limiting the net benefit for the country as a whole. Moreover, such incentives tend to encourage rent-seeking behaviour by local governments, which should instead focus on measures to improve their business climate and promote innovation.

Many OECD countries have utilised regional innovation clusters – geographic concentrations of interconnected businesses, suppliers, and universities – to drive regional competitiveness (Mura *et al.*, 2010). In the past, Japan's programmes in this regard tended to favour national innovation objectives and had less local involvement. Programmes were primarily top-down initiatives, as the selection was made by central government officials and followed the strategic lines set out in national policy for industry and science (OECD, 2007a). However, in 2010, Japan adopted a new approach that promotes regional innovation through clusters, including two national-level programmes; *i*) the New Competitive Cluster Project Start-ups, led by METI, to support SMEs in specific fields; and *ii*) the Regional Innovation Cluster Programme, directed by the Ministry for Education, Culture, Sports, Science and Technology, centred around key universities to promote greater university-industry collaboration. Given the importance of clusters to a particular region's economy, the cluster programmes require stronger involvement by the local

authorities, who are better-placed to develop a sound and realistic vision of a development path through innovation.

More fundamentally, it is essential to allow local governments more autonomy. Enhancing the role of local governments would increase the emphasis on regions' individual characteristics and strengths, thereby promoting regional development through a more flexible, customised and bottom-up approach to policymaking. The government should also accelerate its regional sovereignty strategy of transferring more autonomy to local governments by increasing local tax revenue, reducing ear-marked grants and expanding block grants, and abolishing the regional offices of the national government, in line with the recommendations of the 2005 *OECD Economic Survey of Japan*. However, no legislation has been implemented thus far. Increased authority and finances for local governments should be accompanied by an upgrading in their capacity and quality.

Reform in the financial sector

The Strategy also includes reforms in the financial sector to support the real economy and to develop the sector itself. To achieve the latter goal, the government wants to make Japan's financial sector a "main market and main player in Asia", in part by integrating the exchanges handling securities, financing and commodities. An efficient financial sector is also needed to reallocate resources in favour of the priorities identified in the Strategy, such as green growth and health. To implement the Strategy, the government "will urge private-sector financial institutions to make active efforts, so that national financial assets will be effectively invested into growth sectors and regions". In addition, it will promote the use of public financial institutions and the Fiscal Investment and Loan Programme (FILP) for this purpose.

Government efforts to push private funds into specific sectors may distort the distribution of capital. In addition, increasing the role of public financial institutions and the FILP, the so-called second budget, which is about one-fifth the size of general account spending, is problematic. Rather than funnelling funds through the public sector, it would be better to reduce the role of public-sector lending. In addition, it is important to follow through on the privatisation of Japan Post, as recommended in the 2009 *OECD Economic Survey of Japan* (Table 3.10). This would help increase the availability of financing for high-

Table 3.10. **Taking stock of structural reforms: improving the efficiency of the financial sector**

Recommendations in the 2009 *OECD Economic Survey of Japan*	Actions taken or proposed by the authorities
Emergency measures taken in response to the crisis should be phased out as the economy normalises	
Reduce credit guarantees on SME loans, while curtailing their coverage and raising their premiums.	The credit guarantee system for SMEs was further expanded by temporary legislation in December 2009.
Scale back loans by public financial institutions.	The government requested public financial institutions to revise their loan terms to facilitate financing for SMEs. The fiscal packages in September and October 2010 provided support for SMEs through public financial institutions and credit guarantees.
Reduce purchases of equities using public money that are aimed at supporting the stock market.	The Banks' Shareholdings Purchase Corporation bought another 449 billion yen of equities between March 2009 and June 2010. The BOJ purchased 388 billion yen of equities between February 2009 and April 2010, but has since stopped buying.
Improve the regulatory framework to increase the resiliency of the banking system against shocks	
Upgrade the corporate governance of financial institutions through improved supervisory guidelines.	The supervisory guideline was revised in March 2010 to ensure the consistency of compensation and risk management.

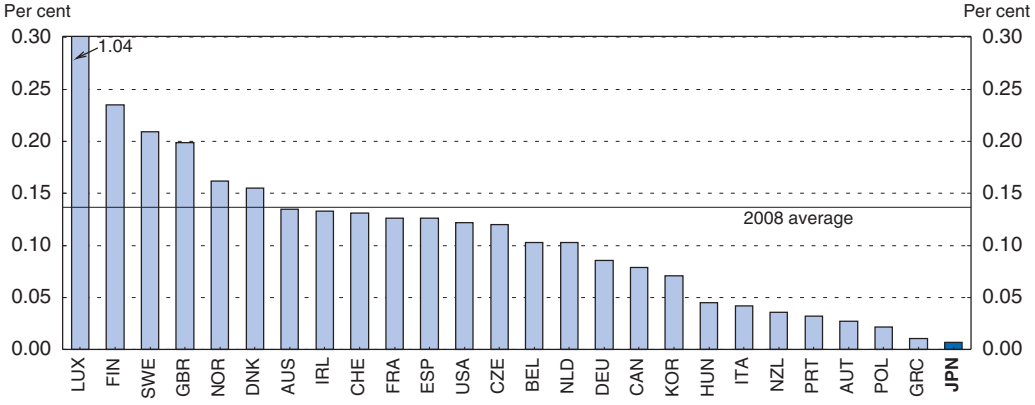
Table 3.10. **Taking stock of structural reforms: improving the efficiency of the financial sector** *(cont.)*

Recommendations in the 2009 *OECD Economic Survey of Japan*	Actions taken or proposed by the authorities
Enhance the transparency of securitised products to promote the stability of these markets.	The revised supervisory guideline ensures the traceability of underlying assets of securitised products.
Improve quality and fairness in the rating process by credit rating agencies, in part through rules that prevent conflicts of interest.	The 2009 revision of the Financial Instruments and Exchange Act established rules to promote quality and fairness and prevent conflicts of interest in the rating process.
Reform rules on capital adequacy to reduce their pro-cyclicality without unnecessarily harming banks' growth potential.	Japan is actively participating in an international effort to achieve financial reforms, including Basel III.
Reduce banks' holdings of equities.	The volume of equity holdings in domestic banks has fallen from 33 trillion yen in March 2006 to 21 trillion yen in March 2010.
Increase the efficiency of the financial sector	
Improve the taxation of financial income to make it fair and neutral and upgrade financial education to promote the development of capital markets.	In FY 2011, the 10% tax rate on dividend income was extended again for two years. The Japanese Individual Savings Accounts (a tax-exemption scheme for small investments) will be introduced in 2014.
Accelerate the privatisation of public financial institutions to reduce distortions and over-banking.	No action taken.
Encourage economies of scale in regional financial institutions to reduce costs and improve profitability.	Six cases of consolidation among regional banks were implemented between July 2009 and May 2010.
Abolish entry barriers to financial institutions in agriculture to boost efficiency in finance and agriculture.	No action taken.
Ensure that preferential regulatory treatment of regional financial institutions does not result in moral hazard.	No action taken.
Remove obstacles to the use of reverse mortgages to reduce liquidity constraints facing the elderly.	No action taken.
Promote defined contribution pension schemes to remove obstacles to labour mobility and enhance financial autonomy.	No action taken.

risk investment, which is essential to spark entrepreneurship in newly emerging sectors, such as green growth. The low rate of firm creation in Japan and the relatively small size of firms appear to reflect problems in the credit market (Mukoyama, 2009). In particular, the amount of venture capital investment in Japan, a key source of funding for innovative firms and technological start-ups, is the lowest as a share of GDP in the OECD area (Figure 3.8). Targeted tax measures and the provision of greater information to potential investors

Figure 3.8. **Venture capital investment in 2008**

Per cent of GDP[1]



1. Data for Japan are for 2006.

Source: OECD (2010j), *OECD Science, Technology and Industry Outlook, 2010*.

StatLink http://dx.doi.org/10.1787/888932388847

through a database containing the investment performance records of venture firms would help develop this market. In addition, it is important to broaden eligible collateral for securitisation to include intellectual property (IMF, 2010).

With the prompt policy response to the crisis and the economic recovery, the profitability of financial institutions has improved (Chapter 1). Beyond the crisis response, improving the regulatory architecture in the financial sector is essential to limit its vulnerability to crisis, as well as to achieve the Strategy's objective of sustaining growth and developing the financial sector as a growth industry. International discussions including Japan in the context of the BIS, the G20 and Financial Stability Board have led to agreement on key elements of a global reform package that includes the definition and the minimum required levels of bank capital (BIS, 2010). In Japan, the Financial Instruments and Exchange Act was revised in 2010 to improve the stability and transparency of financial system, thus protecting investors. At the same time, it is important to address unresolved challenges. The return on equity for regional banks has been consistently low in recent years, suggesting an overbanking problem. Consolidation among regional banks should accelerate. In addition, with the economic recovery, it is important to reduce the scale of guarantees for SME loans and relax the government's policy of encouraging banks to lend to SMEs, which create moral hazard risks and may slow restructuring in this sector. At the same time, reforms to promote entrepreneurship and increase venture capital would help develop a more dynamic SME sector.

Conclusion

The New Growth Strategy should play a positive role in promoting strong, sustainable and balanced growth in Japan, which would also help address the serious fiscal problem. However, it overlooks the importance of fostering entrepreneurship and a business-friendly environment in all sectors, not just the growth areas chosen by the Strategy. It is essential to identify structural and regulatory reforms that would encourage economy-wide investment and job creation. Creating a framework that spurs investment and hiring by firms will determine whether the Strategy's goal of boosting Japan's real growth rate to 2% can be achieved. Given the very limited scope for increasing government spending, the Strategy should emphasise regulatory reform. Any additional outlays should be integrated in a clear and credible medium-term fiscal plan to ensure Japan's long-run fiscal sustainability. Specific recommendations to improve the Strategy are summarised in Box 3.3.

Box 3.3. **Summary of recommendations for Japan's New Growth Strategy**

Improving the overall framework of the Strategy

- Carefully monitor the fiscal implications of the Strategy to ensure its coherence and consistency with the Fiscal Management Strategy and the needs of prolonged fiscal consolidation.
- Focus on accelerating regulatory reform, particularly in services, to encourage private investment.
- Promote entrepreneurship and a more business-friendly environment, particularly by reducing the administrative burden on start-ups.
- Strengthen competition policy by increasing fines on violators of the Anti-Monopoly Act (AMA) and reduce exemptions from the AMA, including the special treatment of SMEs.

Box 3.3. **Summary of recommendations for Japan's New Growth Strategy** *(cont.)*

Creating new demand

Green growth

- Set a price on carbon emissions by introducing market-based instruments, preferably a mandatory and comprehensive cap-and-trade ETS, thereby providing a clear price signal to encourage green-growth investment.
- Make greater use of environmentally-related taxes, particularly by introducing a carbon tax in areas not covered by the ETS, while ensuring the predictability and credibility of the tax framework.
- Encourage the development of renewable energy resources by removing non-economic barriers and creating a predictable and transparent support framework. The best option would be an electricity certificate system, with incentives that decrease over time.
- Phase out inefficient fossil fuel subsidies in line with the G20 initiative in order to ensure an appropriate price for carbon.

Health-care reform

- Shorten the drug and medical device lag by reducing the cost of clinical trials in Japan, accepting more overseas results and ensuring that reimbursement levels are appropriate.
- Expand mixed billing to make treatments not yet covered by public health insurance more affordable.
- Promote the shift of long-term care away from hospitals toward more appropriate institutions and home-based care using the fee schedule and closer monitoring of the classification of patients in hospitals.

Asian economic integration

- Accelerate the negotiation of comprehensive Economic Partnership Agreements with major trading partners and participate in the Trans-Pacific Partnership.
- Scale back the high level of agricultural protection and shift its composition away from price support towards direct support to farmers to facilitate regional economic integration.
- Improve the climate for FDI inflows by further liberalising trade, lowering barriers to investment and ownership, accelerating reforms of administrative procedures and relaxing labour regulations.
- Liberalise controls on immigration to allow more foreign students and highly-skilled workers in Japan.

Regional development

- Encourage use of the Special Zones for Structural Reform, focusing on nationwide regulatory reform, and ensure that any new special zones result in significant net benefit for the whole country.
- Allow local governments more autonomy and provide them with greater financial resources to promote regional development, including the creation of innovation clusters.

Box 3.3. **Summary of recommendations for Japan's New Growth Strategy** *(cont.)*

Reform in the financial sector

- Promote the supply of risk money, such as venture capital, for R&D and innovative business start-ups through policy measures to stimulate this market, which is relatively inactive in Japan.
- Scale back the size of public financial institutions, thereby reducing the flow of savings to the public sector and enhancing the availability of funds for venture business and new start-ups.
- Follow through on the privatisation of Japan Post.
- Reduce credit guarantees and relax the government's policy of encouraging financial institutions to increase lending to SMEs, with the economic recovery.

Notes

1. In 2009, labour productivity per hour of work in Japan was 27% below the average of the upper half of OECD countries (Chapter 1), suggesting ample scope for increasing it (OECD, 2011a).
2. According to the OECD measure, Japan is the fourth highest with R&D spending of 3.4% of GDP.
3. The OECD Secretariat estimates the gap at 2.2% in 2010, providing less scope to boost the growth rate.
4. The largest gains were achieved in service industries that experienced significant deregulation, notably electricity, trucking and telecommunications (Cabinet Office, 2006).
5. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.
6. The annual growth rate of labour productivity in the service sector was 0.7% during 2000-06, while the rate in manufacturing was 4.1%. For a discussion of policies to boost labour productivity in Japan's service sector, see the 2008 *OECD Economic Survey of Japan*.
7. The "Basic Act on Global Warming Countermeasures", submitted to the Diet in October 2010, also sets a long-term goal to cut Japan's emissions by 80% relative to the 1990 level by 2050.
8. Japan's experience with charges on SOx emissions in 1974 illustrates this point (see OECD, 2010l).
9. According to METI's draft, purchase prices are to be gradually reduced from 48 yen/kWh for solar power and 15 to 20 yen/kWh for other types of renewable electricity. The contract periods are to be set at ten years for solar power and 15 to 20 years for the others. The maximum monthly burden for households ten years after introduction is estimated at between 150 and 200 yen ($1.84 and $2.46) per month.
10. This survey, by the Research Institute of Economy, Trade and Industry (RIETI) and the Japan Chamber of Commerce and Industry (JCCI), included 1 688 companies in Osaka, Kyoto, Kobe, Tokyo and Nagoya.
11. In the end, Japan increased import quotas for these products, rather than removing tariffs, as is required in FTAs that are consistent with WTO rules. While Mexico opened its market to all imports from Japan, Japan opened its market to only 84% of imports from Mexico (Kawai and Urata, 2010).
12. According to this study, the FTAAP will boost real GDP of the APEC economies on average by 1.9% through trade liberalisation measures and by 0.4% through trade facilitation measures. The real GDP gain in Japan will be 1.1% in total, with the two factors contributing 0.9% and 0.2%, respectively.
13. The rate is to be reduced by 5 percentage points to 35% in FY 2011. However, it remains high relative to other Asian economies, such as Korea (24%), China (25%), Taiwan, China (19%) and Hong Kong, China (16%).

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Chapter 4

Education reform in Japan

While Japan has achieved outstanding scores on the PISA exams, further improving educational outcomes is important to sustain growth in the face of rapid population ageing. The government should step up investment in early childhood education and care and integrate childcare and kindergarten to improve its quality, while allowing some diversity in the type of institutions. Upgrading tertiary education, in part through stronger competition and internationalisation, is also important to increase human capital and boost the role of universities in innovation. Given the serious fiscal situation, reforms to further raise the efficiency of educational spending per student, which is above the OECD average for public and private outlays combined, are needed. The large share of private education spending, which accounts for one-third of the total, places heavy burdens on families, thereby discouraging fertility, and creates inequality in educational opportunities and outcomes. Reducing dependence on private after-school educational institutions known as juku would help reduce the burden and enhance fairness.

The education system played a central role in Japan's economic take-off in the post-war era. The share of the adult population that has completed tertiary education was the second highest in the OECD area at 43% in 2008. The high level of educational achievement, as reflected in international studies going back to the 1960s, continues with Japan ranked near the top of the OECD in the Programme for International Student Assessment (PISA). Further improving educational outcomes should be a priority given its important link to economic growth (OECD, 2010f). Countries with more human capital innovate faster, thereby achieving greater productivity gains. Relatively small increases in human capital can have a dramatic impact on future well-being, making it important to invest wisely and well in education. A priority on education is in line with the government's goal of shifting investment "from concrete to people".

The New Growth Strategy (Chapter 3), announced in June 2010, includes education policies. In particular, it aims to integrate childcare centres and kindergarten to upgrade the quality of education and to create "cutting-edge" universities to promote innovation and foster human resources. These policies, and others discussed in this chapter, are needed to help Japan address a number of challenges:

- Improving the quality of education to sustain growth in the context of rapid population ageing and a difficult fiscal situation.
- Increasing value for money spent on education to help reduce pressure on government spending.
- Reducing the financial burden of education on families, which bear a high share of the cost.
- Improving equity in educational opportunities and performance.
- Enhancing links between the education system and the labour market to reduce the high rate of unemployment among youth (Chapter 5).
- Expanding the tertiary sector's contribution to innovation to raise Japan's growth potential.

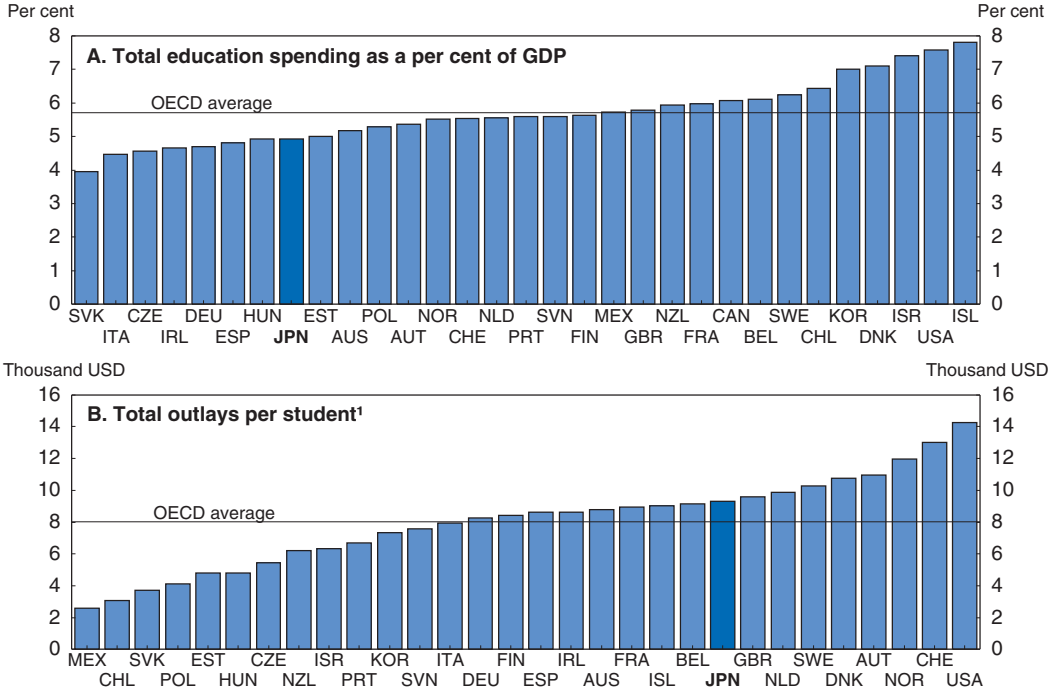
After a brief overview of the education sector, this chapter discusses policies to address these challenges. The chapter concludes with a summary of recommendations, shown in Table 4.12.

Overview of the Japanese education system

Spending on education

Japan's education system has produced outstanding results, with total spending on education – public and private (excluding outlays for after-school instruction) – below the OECD average as a share of GDP (Figure 4.1).[1] As Japan has a relatively small number of school-age children, spending per student in Japan in dollar terms was 13% above the OECD average in 2007 (Panel B). Private-sector spending on education in Japan is relatively high, accounting for one-third of the total in 2007, reflecting its large share at the pre-primary and tertiary levels (Figure 4.2). Indeed, the private sector accounted for two-thirds

Figure 4.1. **International comparison of total education spending in 2007**



1. For primary, secondary and tertiary education, based on full-time equivalents, in US dollars, converted using PPPs. The figures for Japan do not include spending on private institutions, known as *juku*, which are discussed below.

Source: OECD (2010a), *Education at a Glance 2010*.

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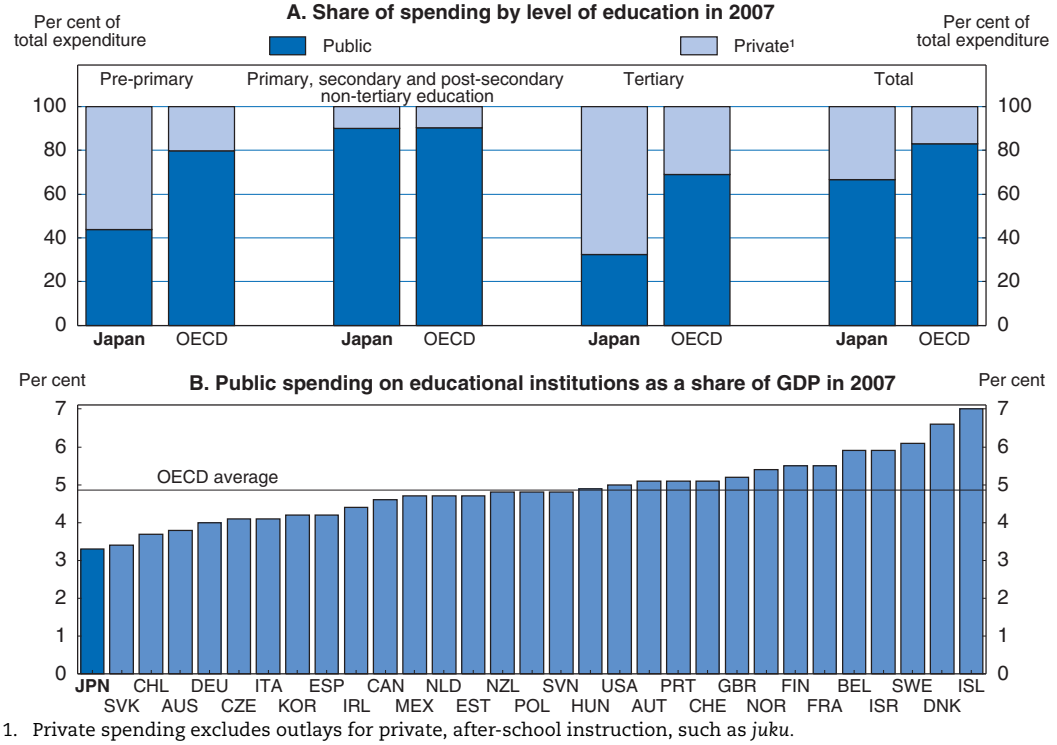
Figure 4.2. **The share of public spending on education is low in Japan**



1. Private spending excludes outlays for private, after-school instruction, such as *juku*.

Source: OECD (2010a), *Education at a Glance 2010*.

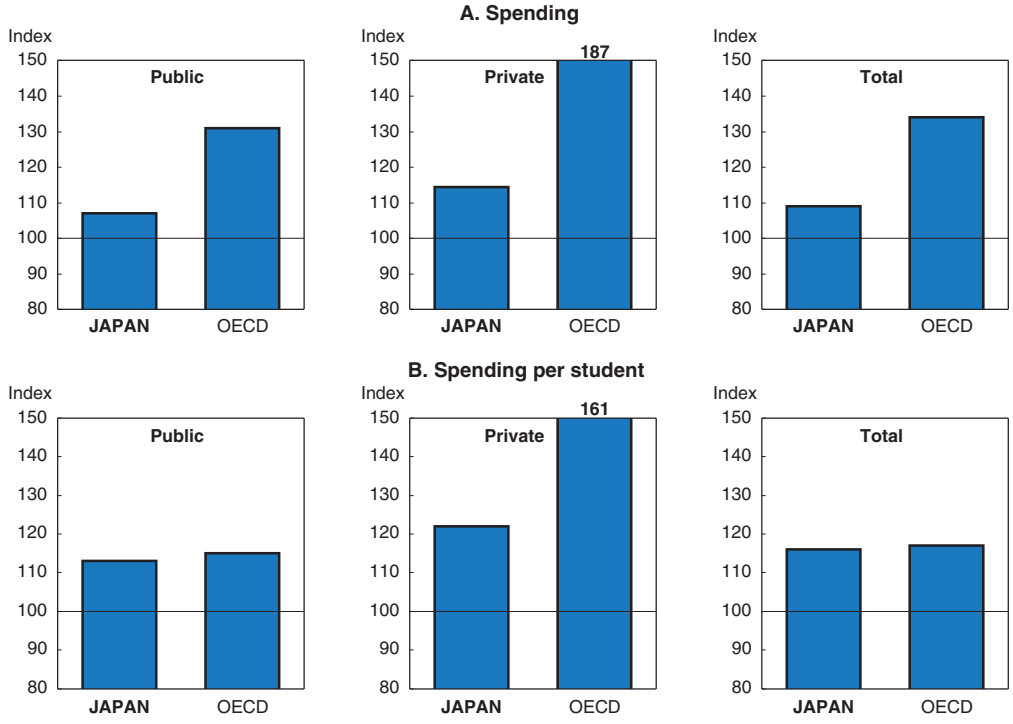
StatLink http://dx.doi.org/10.1787/888932388885

of tertiary education spending, matching the United States as the highest in the OECD area. While public spending on education was the lowest among 28 OECD countries in 2007 as a share of GDP (Panel B), it was only 3% below the OECD average in terms of public outlays per student.

Total education outlays in Japan rose 7% (adjusted for inflation) between 1995 and 2007, compared to an OECD average of 31% (Figure 4.3). However, spending differences largely reflect demographic trends: the number of students in Japan fell by 17% over that period, in contrast to an average increase of 6% in the OECD area. Consequently, the increase in total spending per student in Japan was close to the OECD average of 17% (Panel B). This conclusion holds when limited to public spending.

Figure 4.3. **Trends in education spending between 1995 and 2007**

Adjusted for inflation by the GDP deflator; 1995 = 100



Source: OECD Education Database and OECD Secretariat calculations.

StatLink http://dx.doi.org/10.1787/888932388904

The structure of Japan's education system

The current education system, established in 1947, includes nine years of publicly-financed compulsory education; six years of primary and three years of middle (lower secondary) school.[2] Only 1% of primary and 7% of middle school students attend private institutions. Students are allocated to high schools (upper secondary schools) based on their scores on entrance exams. The high school dropout rate is only 1.7%; consequently 96% of Japanese youth receive high school diplomas. Nearly one-third of high school students attend independent private schools in Japan, well above the OECD average of 5.5% in 2007. In April 2010, tuition payments by households for public high schools were eliminated and replaced by transfers from the central government to prefectures. In

addition, the central government launched a fund to reduce the burden of tuition at private high schools by paying subsidies to families.[3] About three-quarters of high school graduates continue on to tertiary education.

Early childhood education and care (ECEC)

ECEC is provided by childcare centres (*hoikuen*), which accept children below primary school age, and by kindergartens (*yochien*) for children between the ages of three and six. The two systems have developed independently and remain segmented, with separate facilities and different objectives. While childcare has a social welfare orientation, kindergarten is more focused on education. One-third of children aged two were enrolled in childcare in FY 2007 (Table 4.1). At age three, 38.8% entered kindergarten, with the same percentage in licensed childcare. The percentage attending kindergarten increased to above one-half for four and five-year-olds. By age five, 98% of children are enrolled in childcare or kindergarten.

Table 4.1. **Enrolment in early childhood education and care**

Percentage of children enrolled by age group in FY 2007

Age	Kindergarten	Childcare centre	Other[1]	Number of children[2]
0	0.0	14.6	85.6	1 085.5
1	0.0	24.8	75.2	1 064.5
2	0.0	33.0	67.0	1 072.5
3	38.8	38.8	22.3	1 105.5
4	54.1	40.7	5.2	1 134.5
5	57.3	40.3	2.4	1 157.5
Total	**25.8**	**32.2**	**42.0**	**6 721.0**

1. Includes children cared for by their families or enrolled in unlicensed childcare centres and informal care.
2. In thousands.

Source: Ministry of Education, Culture, Sports, Science and Technology (2009b), *ECEC System in Japan*.

The childcare system (Box 4.1) includes licensed centres, almost evenly divided between public and private institutions, and unlicensed centres, some of which are recognised by local governments:

- *Public centres* enrolled 945 thousand children in 12 thousand centres in 2007 (Table 4.2).
- *Private licensed centres* enrolled 1.1 million children in 2007 in 11 thousand centres. These centres, which are run primarily by private social welfare organisations, are subject to regulations governing their physical features and the number and training of teachers in order to ensure their quality.[4] Indeed, the quality of licensed private centres is higher than public ones for several reasons (Noguchi and Shimizutani, 2003). *First*, they have more qualified workers and the number of children relative to the staff is lower. *Second*, they provide better service in terms of education, flexibility of hours and care for ill children than public centres, according to surveys of parents.
- *Private unlicensed "recognised" centres* are an alternative for children who are not given places in licensed centres. To ensure quality, local governments in some urban areas have certified childcare facilities that meet local government standards and provide subsidies if fees are kept within ceilings.[5]
- Another option is *private unlicensed centres*, which are subject only to registration and on-sight inspections by the prefectures.

Box 4.1. **Early childhood education and care in Japan**

Childcare centres provide eight hours of care per day under the responsibility of the Ministry of Health, Labour and Welfare (MHLW), while kindergartens provide a standard four hours per day under the responsibility of the Ministry of Education, Culture, Sports, Science and Technology (MEXT). Enrolment in childcare is limited to children whose parents work (Table 4.2). All children from age three can enrol in kindergarten, which is part of the education system, although it is not compulsory and requires tuition payments by parents. Government spending on childcare and kindergarten in 2005 amounted to 0.2% and 0.1% of GDP, respectively (Table 4.2). The amount of spending per child in childcare was three times higher than for kindergarten, reflecting that it includes many younger children and has longer operating hours. The curricula of childcare centres and kindergartens were revised in 2008 and made more consistent. Moreover, three-quarters of childcare staff are qualified to teach the kindergarten curriculum and *vice versa*, further blurring the once strict separation of childcare and kindergarten. Among nursery teachers graduating in 2009, 85% were qualified to teach kindergarten. The staff-child ratio is 1:3 for children under age one and 1:6 for those aged one and two years, but jumps to 1:20 at age three and 1:30 at age four, as childcare staff shift to the role of educators.

Table 4.2. **A comparison of childcare centres and kindergarten in 2007**

	Childcare centres	Kindergarten
Age	0 to 6	3 to 6
Eligibility	Children whose parents work[1]	Open to all children
Standard hours per day	Eight	Four
Governing body	Ministry of Health, Labour, and Welfare	Ministry of Education, Culture, Sports, Science and Technology
Number of facilities[2]		
Public	12 000 (52.2%)	5 500 (39.3%)
Private	11 000 (47.8%)	8 500 (60.7%)
Number of children[2]		
Public facility	945 000 (46.9%)	338 000 (19.8%)
Private facility	1 071 000 (53.1%)	1 368 000 (80.2%)
Government spending		
Share of GDP	0.2%	0.1%
Per child (thousand yen)	800.2	258.8

1. Or their parents cannot take care of them due to pregnancy, injury or the need to care for other family members.
2. This is limited to licensed facilities. In addition, there were 11 153 unlicensed facilities caring for 233 thousand children in 2009.

Source: Ministry of Education, Culture, Sports, Science and Technology (2009b), *ECEC System in Japan*.

Childcare

Historically, the government has taken primary responsibility for providing childcare services. The number of children in childcare centres and the number of centres fell during the decade to 1995. During the following decade, though, the number of children in childcare rose by a quarter (JETRO, 2005). The decline in the number of centres was reversed in 2000, reflecting several initiatives such as the Angel Plan (1995-99), the New Angel Plan (2000-2004) and the Zero Waiting List initiative (2001). In particular, the number of private licensed centres increased thanks to their greater efficiency and lower labour costs (OECD, 2003).* While public centres are primarily staffed by civil servants working as regular employees, private centres have more part-time, non-regular employees. The vast majority of private licensed centres are run by "social welfare corporations". For-profit entities, which were permitted in 2000, operated only 215 centres in 2010, accounting for less than 2% of private licensed firms.

Box 4.1. **Early childhood education and care in Japan** *(cont.)*

Kindergarten

In contrast to childcare centres, the number of kindergarten students fell by around 70 thousand (6%) over the decade to 2005. Meanwhile, the number of kindergartens has been declining by about 100 a year over the same period (a 4% drop overall), with public kindergartens accounting for most of the closures. Around 80% of the children in kindergarten attend private institutions, which are more than three times more expensive for parents on average than public institutions (Table 4.3). Indeed, parents paid 250 thousand yen per student (about $3 000) in 2009, well above the 156 thousand yen per year provided by the new child allowance. Government subsidies from the central, prefectural and municipal governments cover 44% of the cost. For public kindergartens, municipalities pay 81% of the costs. The number of kindergartens has fallen with the decline in the number of pre-school age children and increased competition from childcare centres. At the same time, shortages of kindergarten places have emerged in some urban areas (Palley and Usui, 2008). In case of excess demand, entry to the less expensive public kindergartens is decided by lottery or other methods.

Table 4.3. **Financing of kindergarten in 2009**

	Unit[1]	Public kindergartens	Private kindergartens	Ratio[2]
Number of students	Thousand	310	1 320	4.3
Payments by parents	Billion yen	25	330	13.3
Payment per student	Yen	80 000	250 000	3.1
Payment per student	Dollar	983	3 072	3.1
Total government payment	Billion yen	105	260	2.5
Municipalities	Billion yen	105	40[3]	0.4
Prefectures	Billion yen	0	170	n.a.
National	Billion yen	0	50[4]	n.a.
Total government payment				
Per student	Yen	340 000	200 000	0.6
Per student	Dollar	4 177	2 457	0.6
Total payments	**Billion yen**	**130**	**590**	**4.5**
Payment per student	Yen	420 000	440 000	1.1
Payment per student	Dollar	5 160	5 406	1.1

1. Values in yen are rounded.
2. Ratio of private to public kindergarten.
3. Payments to private kindergartens to provide a fee reduction for three-year-old children.
4. This includes a 30 billion yen subsidy to private kindergartens and a 20 billion yen payment to private kindergartens to provide a fee reduction for children between the ages of three and four.

Source: Ministry of Education, Culture, Sports, Science and Technology (2009a), *Concerning Making Pre-Primary Education Free*.

* In addition, regulatory reform removed some obstacles: i) the restriction that all staff work full-time was relaxed to allow part-time employees; ii) subsidiary centres that do not meet all national and local standards (such as having a kitchen) were allowed to open if they were within 30 minutes of another centre operated by the same provider; and iii) small-scale centres with less than 30 children were allowed to open.

Parents apply at the municipality for licensed care, which is subsidised by the government. The municipality decides which children to admit and assigns them to a public or private centre, which charge the same fee set by the municipality. Overall, parents pay 40% of the cost (to the municipality), although the actual amount depends on their ability to pay, based on income and number of children. The remainder is paid by the government.[6] Excess demand for licensed childcare is a major issue. The waiting list

totalled 26 thousand children in 2010, about 1% of the 2.1 million children enrolled nationwide. However, in the Tokyo metropolitan area, the rate was 5%. The number of children on waiting lists has remained stable while the number in childcare has expanded, suggesting a large amount of hidden unmet demand (OECD, 2003). In other words, many more parents would apply for licensed childcare services if the waiting lists were not so long (Zhou and Oishi, 2005). Private entities that wish to run a licensed care centre must apply at the prefectural government. However, the municipal government may be reluctant to assume the cost of running the centre or may have difficulty procuring a site.

To meet the unmet demand, 233 thousand children were cared for in 11 153 private unlicensed centres (recognised and unrecognised) in 2009, exceeding the number of private licensed centres. This category includes almost 4 000 facilities located within firms. Unlicensed centres are concentrated in urban areas, where the demand for licensed centres exceeds supply, and tend to be small, with only 21 children per centre on average, compared to 88 in licensed centres. The number of unlicensed centres (excluding those in firms) fell by 1% in 2009, despite the waiting lists for licensed care, perhaps reflecting pressure from existing centres not to allow new entry. The fee paid by parents tends to be higher, as they receive smaller government subsidies or none at all. The quality of unlicensed centres varies substantially, as they do not have to meet national standards, but on average appears to be lower (Shiraishi and Suzuki, 2003 and Noguchi and Shimizutani, 2003). However, unlicensed centres perform better in terms of flexibility in operating hours and their care of ill children.

"Centres for ECEC" were created in 2006 to provide co-operation between childcare and kindergarten for children, regardless of whether their parents worked.[7] These centres have proven popular with parents – 80% evaluate them positively – because they allow greater time flexibility, are available to non-working parents and provide a richer educational environment. In addition, they have a number of advantages. *First*, outside of urban areas, the number of children in many of the separate childcare centres and kindergartens is smaller than optimal for children's development so the centres for ECEC can improve education. *Second*, the centres for ECEC reduce excess capacity in non-urban areas, thus limiting costs. *Third*, the centres help shorten waiting lists for licensed childcare in urban areas by using existing capacity in kindergartens.

However, despite their advantages, only 532 centres for ECEC have been established thus far, reflecting a number of problems. Most importantly, the application procedure and financial regulations are too complicated, given that they are subject to control by both MHLW and MEXT. In addition, financial support is insufficient. As a result, ECEC remains fragmented and the quality of services varies significantly. The government plans to increase the number of ECEC centres to 2 000 by March 2013 by expanding financial support and unifying and simplifying administrative procedures. In addition, the New Growth Strategy plans to integrate childcare centres and kindergartens (see below).

Primary and secondary education

Local government spending on education is largely financed through earmarked grants that are conditional on compliance with strict and detailed operational standards set by the central government. Norms and regulations covering *inter alia* school curriculum, textbooks and teacher qualifications are used to secure minimum education standards throughout the country. Full equality of opportunity has long been a priority in education, at the cost of limiting local governments' ability to respond to local needs by introducing innovative approaches. For example, local governments' flexibility in setting teachers' wages is limited

by a law that requires them to be higher than other local government employees. The central government has long paid half of teachers' salaries for primary and middle schools, although its share was cut to one-third in FY 2006. Moreover, the construction costs of school buildings are paid by the central government if the local government complies with strict conditions, such as floor size. In terms of school autonomy, Japan ranks the second lowest in the OECD and is last in the categories of personnel and resources, according to the OECD's index of decentralisation (Sutherland and Price, 2007).

Spending on primary and middle schools has remained stable at around 2% of GDP since 1995, despite declines of 17% in the number of students and 7% in the number of schools. Falling student populations have helped to reduce the average number of students per class in primary schools from 28.4 in 1995 to 26.1 in 2005 and in middle schools from 33.3 to 30.7. Nevertheless, class sizes remained large by OECD standards, with Japan ranking third highest for primary schools in 2008 and second highest for middle schools.[8] However, some studies have found that class size does not have a statistically significant impact on educational outcomes in Japan (Oshio *et al.*, 2010a). On the other hand, some studies do find a significant relationship (NIER, 2010). It is difficult to isolate the impact of class size as many factors influence educational outcomes. Schools have been criticised as being excessively uniform, rigid, restrictive of children's freedom, focused on entrance examinations and concerned with inculcating knowledge at the expense of self-motivated inquiry and creative thought (Cave, 2007).[9] These criticisms led to the *yutori* reform in 2002 (Box 4.2). In any case, the performance of Japanese 15-year-olds on the PISA test has been generally outstanding since it began in 2000. In 2009 Japan ranked second among OECD countries in science, fourth in math and fifth in reading (Figure 4.4).

Box 4.2. **Recent reforms in Japan's education system**

Japan is in the midst of a third educational reform. The first reform occurred early in the Meiji period as Japan tried to catch up with the western world. The second, following the Second World War, was aimed at democratising and modernising schools. Since the 1980s, there has been dissatisfaction with certain aspects of education. The "*Ad Hoc* Council on Education", established by the prime minister in the mid-1980s, pushed for reform based on the principles of individuality, internationalisation, lifelong learning and information technology. These principles were the basis of a third wave of reform toward *yutori kyoiku* (relaxed education) and the incorporation of national universities.

The *yutori* reform

The *yutori* reform was based on an emerging consensus that the school system was too rigid and that a new approach was needed to encourage creativity, as Japan had reached the world technology frontier. The key change, announced in 1998 and implemented in 2002, was a 30% cut in the school curriculum, the most radical overhaul since its inception in the 1950s, and the introduction of a five-day school week. In addition, the government relaxed grading practices and introduced "integrated learning classes" without textbooks in an effort to help students think independently and reduce the importance of rote learning (Goodman, 2003). Reducing the pressure from school was also intended to encourage children to spend more time with their family and in the community, helping them to acquire social skills. Another negative aspect of Japanese education, "examination hell", which subjects students to severe pressure, has eased as the number of applicants has fallen due to demographic trends (Hood, 2003). Some universities now accept students on the basis of teacher recommendations.

Box 4.2. **Recent reforms in Japan's education system** *(cont.)*

The incorporation of national universities

Private and public universities have been subject to government controls on *inter alia* the educational curriculum, student-teacher ratios, enrolment quotas, admission procedures, library holdings and the area of school buildings. Government regulations were accompanied by subsidies to private institutions, amounting to 11% of their funding in 2005. Although regulations were relaxed in 1991 to give universities more freedom, a recent OECD report concluded that private universities in Japan are not comparable to those in some other OECD countries (OECD, 2009b).

The incorporation of national universities in 2004 was intended to change their culture and behaviour by providing them incentives to become more agile, responsive to societal needs, innovative, creative and enterprising. In short, they were expected to become more competitive, in terms of teaching and research quality, with the best in the world. With the transformation of national universities into independent entities, their staff was no longer civil servants guaranteed jobs for life and paid according to fixed schedules. National universities now have the power to hire and fire, and to set budgets and salaries. In the past, faculty councils chose the university president and exercised veto power over the president's decision. Since the 2004 reform, presidents are chosen by a broader-based selection committee and are answerable to a board of directors with a majority of external members. The objective is to shift from consensus-based management to leadership by the president. Greater autonomy is accompanied by greater transparency and public accountability, including certification from certified third parties. Moreover, MEXT no longer covers their budget deficits and has cut operational subsidies by 7% since FY 2004.

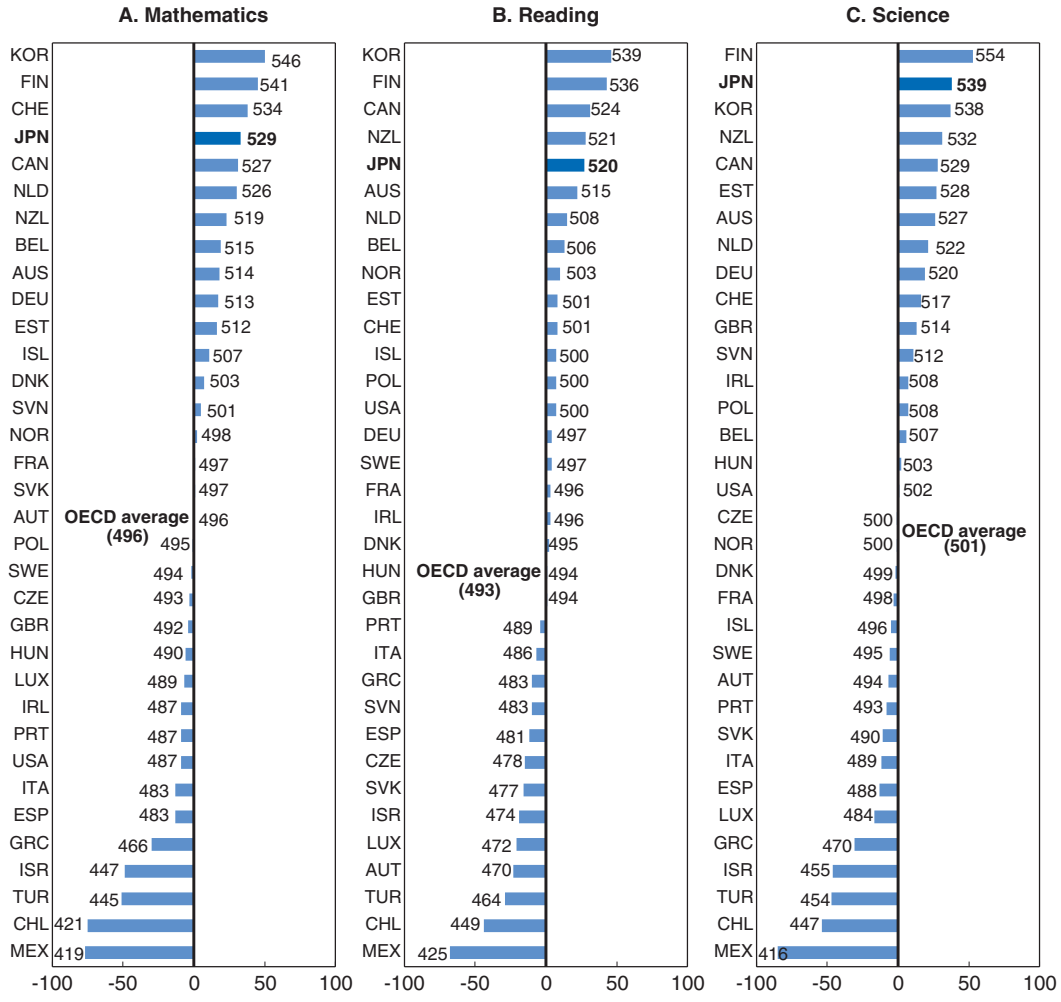
The 2005 report by the Central Council for Education stated that the government would shift from "plotting tertiary education plans and implementing various regulations" to the "presentation of future visions and provision of policy guidance". National universities were required to submit a range of mid-term performance measures to MEXT for FY 2004-09 and to provide annual operating plans to MEXT to evaluate their progress. In 2011, MEXT will announce their evaluation of each national university's progress in meeting their mid-term objectives to improve the efficiency of management. MEXT established a second round of mid-term goals for FY 2010-16 for universities in 2010 following negotiations with each institution. Despite these reforms, the extent of national universities' autonomy remains limited as MEXT still sets tuition fees, to promote equal educational opportunity, and the student enrolment cap. In addition, the majority of changes at the department or programme level still require approval from MEXT.* Such controls are defended by MEXT on the grounds that universities receive public funds and play important public roles.

In sum, the 2004 reforms have been characterised as a gradual shift from control to supervision. According to a recent OECD study, "Japanese national universities continue to exercise less strategic initiative with respect to hiring and setting wages, reallocating resources, and exploiting opportunities than do comparable universities in the United States, United Kingdom and the Netherlands" (OECD, 2009b). In addition, some universities have been reluctant to use their newfound authority, reflecting in part their risk-averseness and a lack of skilled administrators.

* Of the 838 academic re-organisations in 2005, 482 required MEXT approval, with the remainder requiring notification.

Figure 4.4. **International comparison of student performance on the PISA test**

Student performance at age 15 in 2009



Source: OECD (2010d), PISA *2009 Results: What Students Know and Can Do*, Volume I.

StatLink http://dx.doi.org/10.1787/888932388923

The 47 prefectural governments are primarily responsible for high schools, which provide three types of curricula:

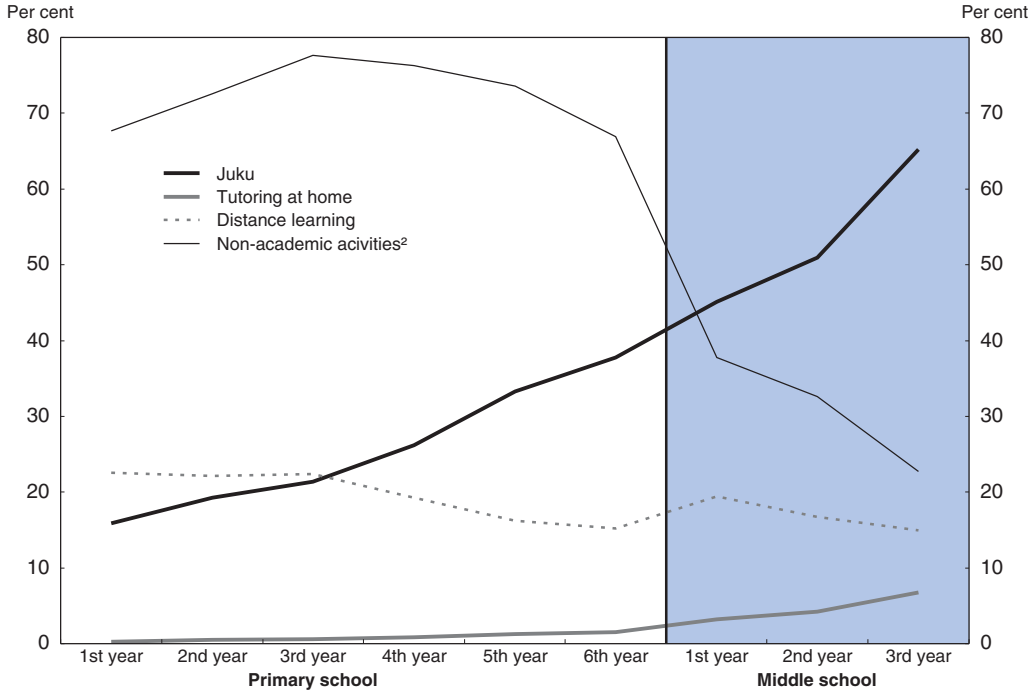
- *General* curriculum (72% of students) for those intending to advance to higher education. Indeed, in FY 2009, 85% of these students entered tertiary education while 9% found jobs. The proportion of students in general courses has risen from 59% in 1970.
- *Specialised* curriculum (24% of students) to provide vocational education to students in specific areas, such as industry (35%), commerce (31%) agriculture (11%) and home economics (6%). In FY 2009, 51% found jobs while 43% entered tertiary education.
- *Integrated* curriculum (4% of students), which combines general and specialised courses.

As for primary and middle schools, the number of high schools fell 5% between 1995 and 2008, while the number of students dropped by 29%. Nevertheless, spending has remained about 1% of GDP since 1995.

The shadow education system: the role of private tutoring institutions

In 2007, nearly one-quarter of primary school students and one-half of middle school students received private, out-of-school academic instruction at institutions known as *juku* (Figure 4.5).[10] Another 19.5% of primary students and 17.1% of middle students participate in distance learning, and 0.9% and 4.7%, respectively, in tutoring at home.[11] The high level of participation in such activities is driven in part by the severe competition to enter the top universities and the benefits from attending such institutions. Academic credentialism – the emphasis on where a person studied rather than on what they studied – is strong in Japan. Universities' traditional role has been to provide a sorting mechanism for entry into elite professions. The rate of return to a university education varied from 2.5% to 15.6% for men, depending on the prestige of the university (Ono, 2004). Consequently, the applicant-entrant ratio at the national universities remained high at 4.1 to one in 2006 and 5.3 at the public universities. *Juku* are considered by many parents to be useful in helping students succeed in the battery of tests that determine admission, in addition to providing other services that schools do not provide (Box 4.3).

Figure 4.5. **Participation in after-school education in 2008**[1]



1. Some students participate in more than one type of after-school education.
2. The major activities include piano (29%), swimming (27%), calligraphy (23%), foreign-language conversation (11%), soccer (11%) and martial arts (11%).

Source: Ministry of Education, Culture, Sports, Science and Technology (2008), *Report on Children's Out-Of-School Learning Activities*.

StatLink http://dx.doi.org/10.1787/888932388942

The competition for university starts well before age 18, in part as many of the top institutions are vertically-integrated with primary and secondary schools. The largest share of out-of-school instruction takes place in *juku*: the share of children attending *juku* in 2008 rose from 16% in the first grade of primary school to 65% in the third year of middle

school (Figure 4.5). According to other estimates, 64% of middle school students attend *juku* (MEXT, 2006). *Juku* are thus a major service industry in Japan, as an estimated 50 thousand firms provide instruction to up to 2 million students at both the primary and middle school levels, with 21 *juku* large enough to be publicly-listed on the stock exchange.[12]

The share of students attending after-school lessons in Japan is one of the highest in the OECD area (Figure 4.6). Indeed, the share studying math ranks second. With very high rates of participation in after-school lessons in national language, science and other

Box 4.3. **The role of *juku* in education: the views of parents and students**

A primary objective of attending *juku*, according to the parents of primary school students, is to help them to prepare or review school lessons (39%) and study for school entrance exams (23%), according to a 2008 survey by MEXT. Only 11% attended *juku* to catch up on their studies. In middle school, *juku* attendance was even more focused on school lessons (50%) and preparing for school entrance exams (43%). In contrast, home-based tutoring is the major tool to help students catch up in their studies.

For primary school students, the main subjects studied in *juku* were arithmetic (76% of students), Japanese (62%) and English (35%), although that language was not taught at the primary level prior to FY 2010. For middle school students, English was the major subject (88%), followed by math (86%), Japanese (49%), science (43%) and social science (40%). The emphasis on scholastic competition is reflected by the fact that 21% of middle school students attending *juku* expressed concern that they are too focused on grades and academic ranking.

Dissatisfaction with schools appears to be an underlying motivation for parents to send their children to *juku*. For parents of middle school students, 26% said that "school classes alone could not adequately prepare children for school entrance exams" and 14% said that "school classes alone were not sufficient". Another 33% said *juku* were necessary for children to fulfil their aspirations. The poor study habits of children was another issue; parents reported that they send their middle school children to *juku* because they have trouble studying alone (33%) and at home (32%).

Students' views of extra-school studies were fairly positive, as nearly half reported that they really like or somewhat like their *juku*, although the share dropped with age. While social factors play a role, the most important reasons cited were that the teachers are easy to understand and present material not covered in school, suggesting that the *juku* are succeeding in ways that the schools are not. Of the middle school students who reported that "they did not like *juku* very much" or "disliked *juku*" (13.5% of all students), 70% stated that attending *juku* "was too tiring". In addition, they complained that attending *juku* had reduced time for playing outside (29%) and watching television and spending time with their family (20%). While three-quarters of primary students participate in sports, music, calligraphy and other non-academic subjects, the share falls to one-third for students in middle schools (Figure 4.5).

Parents had a number of concerns about the negative side effects of *juku* (Table 4.4), including their impact on students' daily life (43.0%) and their health (37.2%), the financial burden (40.7%), reduced time for recreational activities (38.6%), excessive competition (34.0%) and neglect of school lessons (30.7%).

Box 4.3. **The role of *juku* in education: the views of parents and students** *(cont.)*

Table 4.4. **Problems associated with attendance at *juku*[1]**

	Total	Parents of primary school students	Parents of middle school students
Long commutes and night-time travel to *juku* has a negative influence on student's daily life	43.0	45.2	38.7
Juku impose a significant economic burden on parents	40.7	39.1	43.8
Time for normal life experiences, such as play, family and local activities, is insufficient because of *juku*	38.6	45.0	26.7
Long commutes and night-time travel to *juku* has a negative impact on students' health and energy	37.2	39.2	33.5
Excessive competition in school entrance exams has a negative impact on children's character	34.0	37.2	28.1
The focus of parents and children on their *juku* studies leads them to neglect their school lessons	30.7	33.4	25.5
The impact of the parents' income on the academic ability of their children has become too large	29.9	30.2	29.2
The emphasis on outstanding results ignores students' desires and distorts their career choices	24.5	24.5	24.5
Students' thinking ability and desire for individual study are not cultivated	20.9	20.1	22.3
Participation in school training activities is reduced	12.0	12.4	11.2
Increased eating at restaurants due to *juku* attendance has an adverse impact on children's health	9.3	10.2	7.5
Differing instructions given by the school and the *juku* create confusion and insecurity in children and parents	7.8	8.6	6.4
The commute to *juku* creates opportunities for misconduct by children	6.2	6.6	5.5
Severe competition between *juku* has led to unfair advertising and troubles with contracts	5.5	5.2	6.0

1. Percentage of parents citing the following issues in response to the question "What are the problems resulting from increasing attendance at *juku*?".

Source: Ministry of Education, Culture, Sports, Science and Technology (2008), *Report on Children's Out-Of-School Learning Activities*.

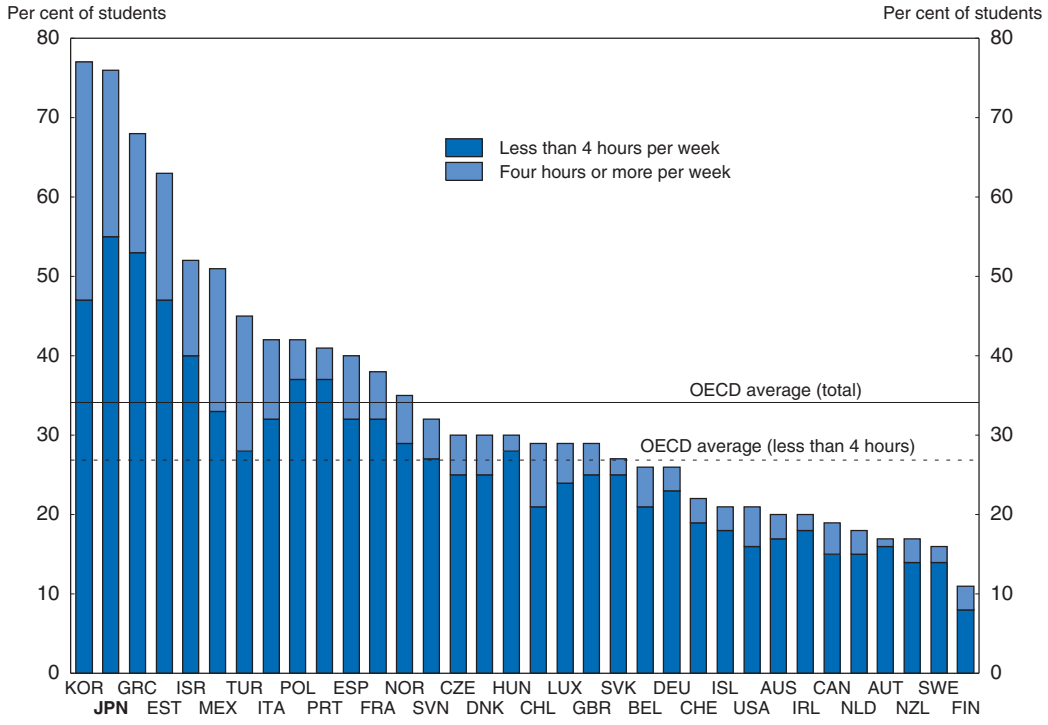
subjects,[13] the number of hours spent each week in *juku* may be considerable. Interestingly, after-school lessons play a small role in Finland, the top OECD performer in the PISA test.

The share of students enrolled in *juku* has risen compared to 1985, despite the sharp reduction in the number of high school graduates that makes tertiary education available to virtually all students who wish to attend (see below). The proportion increased from 16% in 1985 to 26% in 2007 at the primary level and from 44% to 53% at the middle school level. In a 2008 survey by MEXT, parents attributed the growing role of *juku* to: *i)* concern that learning at school alone is not sufficient (67%); *ii)* growing importance of academic backgrounds in Japan (60%); *iii)* rising investment per child in the context of a falling birth rate (39%); *iv)* the diversification of the private education industry (15%); and *v)* the increasing educational background of parents (13%).

In sum, the growing investment in *juku* suggests that they positively influence students' school performance and their success rate on school entrance exams, while developing students' study habits and interest in learning. In addition, they may also

Figure 4.6. **The percentage of students attending after-school lessons in math**

By hours per week



Source: OECD (2010d), *PISA 2009 Results: What Students Know and Can Do*, Volume I.

StatLink http://dx.doi.org/10.1787/888932388961

contribute to Japan's results on the PISA assessments. Nevertheless, *juku* can have a number of negative effects:

- *Juku* create and perpetuate inequality, given that the high cost limits use by low-income families.
- *Juku* unduly dominate children's lives and restrict their leisure activities in ways that are detrimental to their well-rounded development.
- To the extent they duplicate school curricula, *juku* may use resources that could be used more efficiently elsewhere. In some cases, *juku* substitute for schools, crowding out school lessons.
- *Juku* impose heavy financial burdens on families.
- *Juku* can disrupt classroom learning by upsetting the sequence of learning and exacerbating disparities between students, causing some to lose interest in classroom activities (Bray, 2009).

The tertiary sector

Around three-quarters of high school graduates enter tertiary education, a proportion slightly above the OECD average. In 2008, 48% enrolled in "tertiary-type A" programmes (primarily at universities), while another 29% entered "tertiary-type B" programmes, which are typically shorter and focus on practical, technical or occupational skills for direct entry into the labour market. Japan's tertiary sector is characterised by wide diversity in the types of institutions (Table 4.5), although there is considerable overlap between them. The

Table 4.5. **Japan's tertiary education institutions in 2008**

Category	Universities	Junior colleges	Specialised training colleges[1]	Technical colleges[2]	Total
National[3]	86	2	11	55	154
Public[4]	90	29	206	6	331
Private	589	386	3 184	3	4 162
Total	765	417	3 401	64	4 647
Percentage private	77.0	92.6	93.6	4.7	89.6

1. The specialised curriculum in these institutions is included in tertiary education.
2. These five-year colleges enrol students from age 15. Only students in the final two years are included in the tertiary sector.
3. Funded directly by the national government.
4. Funded at the local and regional government level.

Source: Ministry of Education, Culture, Sports, Science and Technology.

government has encouraged each type of institution "to clarify its own individuality and distinctiveness" (Central Council for Education, 2005). A second distinctive feature is the large role played by the private sector in tertiary education. In 2008, 89.6% of tertiary institutions were private. The public sector's share of spending on tertiary education was the fourth lowest in the OECD area at 32.5% in 2007 (Figure 4.2), down from 38.5% in 2000, resulting in heavy reliance on tuition fees to finance tertiary education. Tuition fees at private universities, which accounted for 53.3% of their total revenue, averaged more than $9 000 in 2009.[14] Tuition was around $5 700 at public universities (MEXT, 2009c), close to the US average. Consequently, households accounted for slightly over half of the cost of tertiary education in Japan.

Tertiary institutions enrolled almost 3.7 million students in 2008 (Table 4.6).[15] The system is segmented, with little scope for transferring between different types of institutions (Ishida, 2003).[16]

- *Graduate schools* accounted for 7% of tertiary students, with almost two-thirds enrolled in national or public institutions. Less than one-third of graduate students were women.
- *Universities* accounted for 69% of tertiary students, with 77.4% of them enrolled in private institutions.

Table 4.6. **Number of students by type of tertiary institutions**

Thousands of students in 2007[1]

Category	Graduate schools	Universities	Junior colleges	Specialised training colleges	Technical colleges	Total
National	153.9	454.7	0.1	0.7	53.2	662.4
(Per cent)	(58.5)	(18.0)	(0.1)	(0.1)	(89.4)	(18.0)
Public	14.7	114.1	10.6	27.6	4.2	171.1
(Per cent)	(5.6)	(4.5)	(6.1)	(4.2)	(7.1)	(4.7)
Private	94.2	1 951.8	162.1	629.2	2.1	2 839.4
(Per cent)	(35.9)	(77.4)	(93.8)	(95.7)	(3.5)	(77.3)
Total	262.7	2 520.6	172.7	657.5	59.5	3 673.0
(Per cent)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)
Memorandum item:						
Share of women (%)	30.7	41.2	88.9	54.4	15.6	44.9

1. Percentage of students attending national, public, and private institutions is shown in parentheses.

Source: Ministry of Education, Culture, Sports, Science and Technology, *Basic Survey on Schools, 2007*.

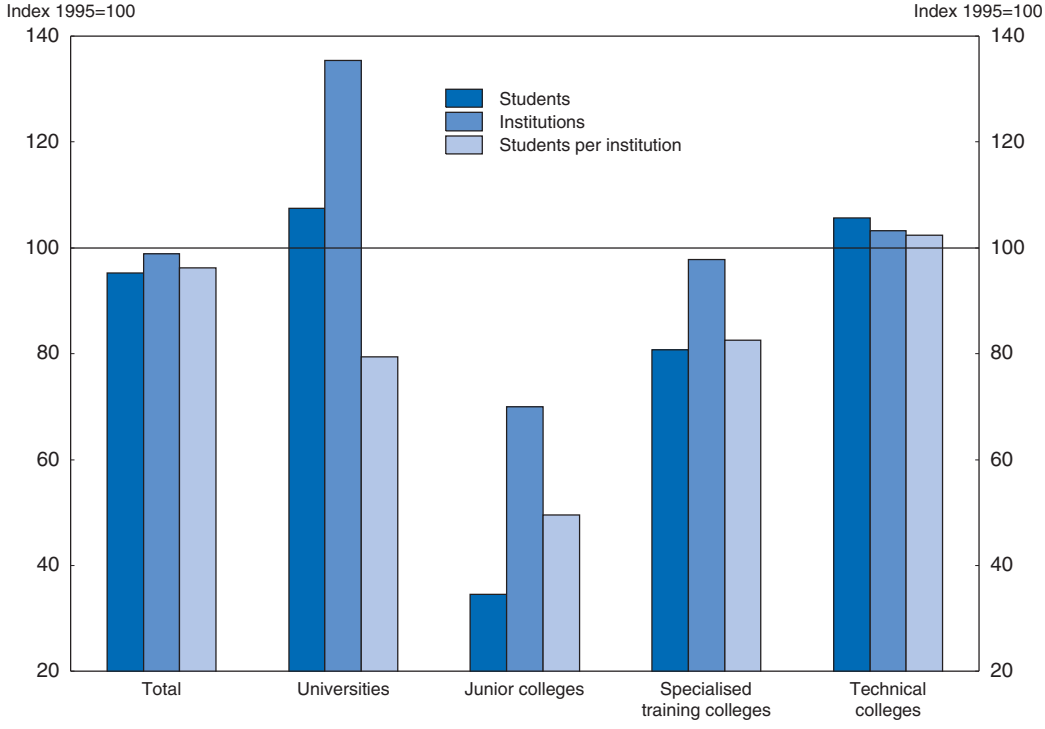
- *Junior colleges* accounted for 5% of tertiary students, with 93.8% of them in private institutions. Junior colleges, which offer two-year degrees, are more oriented toward vocational skills, such as teacher training, than four-year universities. Almost 90% of junior college students are women.
- *Specialised training colleges* (*senmongakko*),[17] which are also predominately private, offer practical vocational education to provide skills and qualifications that are accepted directly by employers.[18] These institutions are very responsive to changing demand from employers and some even guarantee jobs to students who complete their courses. These institutions accounted for 18% of tertiary students, with more than 40% of them studying health-related subjects.
- *Technical colleges*, which are primarily public institutions, accounted for 2% of tertiary students. These colleges offer five-year courses on vocational subjects, specialising in engineering, for students from age 15.

Enrolment by gender differs significantly between institutions. While females accounted for 88.9% of junior college students, they are under-represented in universities and graduate schools. In addition, students' field of specialisation differs substantially by gender.

The number of 18-year-olds graduating from high school has fallen from its peak of 1.8 million in the 1990s to 1.1 million in 2010. Although this was largely offset by the rising participation rate, the number of tertiary students has declined by about 5% since 1995, while the number of institutions fell by only 1% (Figure 4.7). Consequently, the overall capacity of tertiary education is roughly in line with the number of applicants.

Figure 4.7. **Trends in Japan's tertiary education sector**

In 2008, 1995 = 100



Source: Ministry of Education, Culture, Sports, Science and Technology.

StatLink http://dx.doi.org/10.1787/888932388980

In addition, the composition of the tertiary sector has changed significantly in recent years. While the number of tertiary students has fallen nearly 5% since 1995 as noted above, university enrolment rose by 7.5% (Figure 4.7). Meanwhile, the number of universities has risen by 200 since 1995, in part due to the conversion of junior colleges into universities. Consequently, there has been a sharp contraction in tertiary institutions more focused on vocational education and training, notably junior colleges and specialised training colleges, which recorded a combined 37% fall. In addition to competition from universities, the fall in enrolments in junior colleges and specialised training colleges reflects the rising educational aspirations of young people, especially women. One side effect is a 50% fall in the number of students per junior college, pushing some into financial trouble, given that they are funded primarily by tuition fees.

While university enrolments are rising, the increased capacity has also reduced the number of students per institution, forcing even prestigious universities to lower their admission standards to maintain enrolments. Universities face a number of challenges. *First*, fiscal constraints limit the scope for additional public expenditure on education. *Second*, demographic changes pose a serious challenge to the continued viability of many private institutions, and to the efficiency of public institutions. Enrolment in about one-third of private universities is below the student quotas set by MEXT, reflecting the low birth rate, which is in part blamed on high education costs. *Third*, universities must adapt to a new labour market context in which firms want to hire workers who have already acquired the necessary skills. Universities confront these challenges in a new regulatory context that allows them more autonomy than in the past.

Japanese universities do not rank high in international comparisons. For example, five Japanese universities ranked in the top 200 in the World University Rankings 2010-11, compared to ten in 2005.[19] There was a common understanding that in accepting students, a university has an obligation to graduate them, suggesting a lack of rigour (Goodman *et al.*, 2009). Indeed, 93% of entrants graduate, the highest in the OECD area and well above the OECD average of 70%.[20] Many of the dropouts reportedly enrol in specialised training colleges to obtain vocational education recognised by firms.

Another important development is the 71% expansion in the number of graduate students between 1995 and 2008. Traditionally, graduate school was viewed primarily as a preparation for an academic career. The share of the population holding master's degrees in the United Kingdom was five times higher than Japan and twice as high for doctoral degrees. However, the share of university graduates continuing on to graduate school has risen from 9% to 12%, facilitated by expanding capacity. Indeed, the number of universities with graduate schools rose from 385 to 569 between 1995 and 2005. In addition, there was a sharp rise in the number of professional graduate schools following the introduction of the legal framework for this type of institution in 2003. By 2006, there were 140, of which two-thirds were in the private sector. More than one-half are law schools, which were introduced in 2004. Despite the increased number of graduate students, there were ten undergraduate students for every graduate student in Japan, well above the ratios of seven to one in the United States and five to one in the United Kingdom.

Policies to improve educational outcomes

There has been widespread concern about the deterioration in the quality of education since the end of the 1990s. The decline in Japan's PISA results in 2003 and 2006

intensified the sense of crisis in Japan, which had long prided itself on its performance in education.[21] The so-called "PISA Shock" played a role in the decision to reverse, at least in part, the *yutori* reform launched at the beginning of the decade. However, in the 2009 PISA test, Japanese students improved in absolute terms and relative to other OECD countries in all three subjects, and rank high in each (Figure 4.4). Japan's performance in reading (relative to 2000), math (relative to 2003) and science (relative to 2006) remain broadly unchanged. In addition, the PISA shows improved performance on tasks requiring open-ended, higher-order thinking skills, one of the objectives of the *yutori* reform. One lesson is to avoid reading too much into statistically insignificant changes in international comparisons.

Improving educational outcomes remains a priority, given the economic benefits. Moreover, while Japan ranks very highly among OECD countries, it faces increasing competition from emerging economies. In the 2009 PISA results, the Shanghai province of China and Hong Kong, China ranked above Japan in each of the three subjects. In addition, improvements in education are demanded by a large proportion of parents. For example, a 2006 survey by the Cabinet Office reported that only 27% of parents are "very satisfied" or "satisfied" with the school that their youngest child attends, while 34% were "dissatisfied" or "very dissatisfied" (Oshio *et al.*, 2010b). This section identifies priorities for improving educational outcomes: investing more in ECEC, reforms to raise the quality of primary and secondary schools and measures to improve tertiary education.

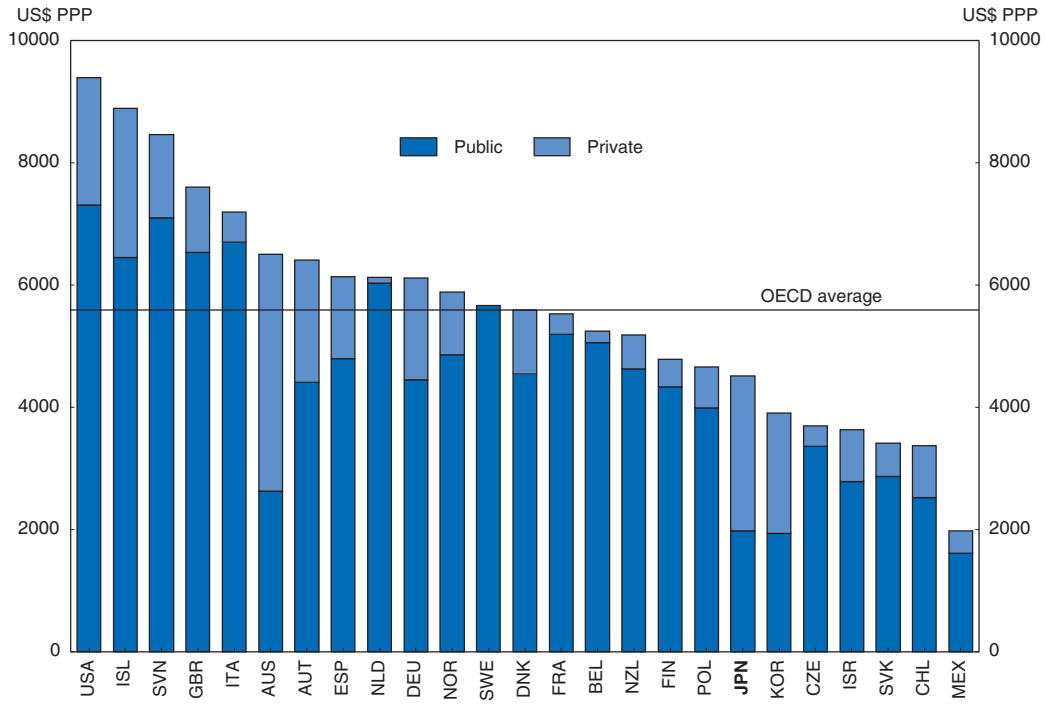
Investing more in early childhood education and care

ECEC is crucial for improving the educational development of children as well as increasing the labour force participation of women (Chapter 5). A large body of empirical work has established that fundamental cognitive and non-cognitive abilities are created well before the age of five (Heckman and Masterov, 2007). Given that ECEC provides an important foundation for subsequent learning, high-quality programmes enhance later school achievement, resulting in very high rates of return from pre-primary education. In addition, ECEC also contributes to reducing social inequality as children from disadvantaged families receive much less cognitive and emotional stimulation.

In 2007, spending on pre-primary education per student in absolute terms was 17% below the OECD average (Figure 4.8). In addition, the public-sector share was only 44%, compared with an OECD average of 80% (Figure 4.2). Consequently, public expenditure on pre-primary education was the third lowest among OECD countries. Moreover, it is relatively low compared to spending at other levels of education; outlays per student in pre-primary education were only 62% of that in primary school and 52% of that in secondary school, well below the OECD averages of 81% and 66%, respectively.

It is important to increase both the quantity and quality of ECEC to improve educational outcomes and meet the needs of parents. The government plans to expand the capacity of licensed childcare centres by 12%, from 2.15 million in FY 2010 to 2.41 million by FY 2014, by increasing the number of places for children age three and under. The target, which aims at eliminating the waiting list, is based on an analysis of demand by the municipalities. This would help achieve the New Growth Strategy's objective of raising the employment rate of women in the 25-to-44-age group from 66% in 2009 to 73% in 2020 (Chapter 5). To raise the supply of childcare, the central government has expanded a fund to help construct childcare facilities. In addition, it plans to spread the cost of childcare

Figure 4.8. **Spending per student on pre-primary education is low in Japan**[1]



1. Annual spending based on full-time equivalent students in 2007.

Source: OECD (2010a), *Education at a Glance 2010*.

StatLink http://dx.doi.org/10.1787/888932388999

more broadly by requiring firms and workers to contribute as well. However, increasing the burden on Japanese firms is problematic.

Even assuming that the planned 260 thousand increase in childcare capacity is fully matched by a rise in the number of women in the labour force, the female employment rate for the 25-to-44-age group would only rise to around 67.3%, well short of the Strategy's target of 73%. Moreover, providing generously-subsidised licensed childcare to only a portion of the population raises serious equity issues. Rather than gradually increasing the number of licensed centres, more ambitious measures to expand the capacity of childcare should be a major priority. These could include:

- Private providers should be able to freely set their fees to cover their up-front investment and operational costs, as well as to make profits. However, the fees should be capped for those who receive public subsidies to ensure that public money is not misused for profit-making purposes.
- Competition policy should ensure the absence of entry barriers. An easing of minimum standards could be considered to increase the number of licensed or recognised providers.
- Initial start-ups for childcare centres or kindergartens wishing to become ECEC centres should be supported through, for example, ear-marked subsidies for renovation of empty classrooms of primary school buildings and a loan system with low interest rates.

- An effective information system on providers and quality standards should be built and effectively communicated to providers and users so that they can make well-informed decisions.
- Seed-funding could be given to those providers aiming to foster innovations in offering high-quality ECEC services.

Each of these options require effective steering and monitoring to ensure quality and the adequate provision of ECEC services, especially for disadvantaged families.

A large expansion of childcare driven by private suppliers requires paying the subsidies to parents rather than to childcare providers, an approach that has a number of advantages. *First*, it gives more choice to parents in selecting a childcare supplier and does not favour one type of provider over another. *Second*, it strengthens competition among childcare providers and raises their cost-consciousness. At present, licensed centres face little pressure to keep costs low or to respond quickly to the changing needs of parents. *Third*, it promotes quality, assuming that payments are conditional on children attending approved facilities. The amount of subsidies to families could be related to income levels, as is the case now, to achieve equity objectives and enhance work incentives among low-wage earners. The Australian system provides a useful example[22] that would be more effective than past government programmes.[23]

Ensuring consistent quality across Japan's fragmented ECEC system requires common curriculum guidelines and standards and effective measures to ensure that they are followed. As noted, the curricula of childcare centres and kindergartens were made more consistent in 2008 and three-quarters of staff are qualified to teach in both types of institution. However, further measures are needed to provide a high-quality early learning environment to all children in ECEC. The government's New Growth Strategy, announced in June 2010 (Chapter 3), set an objective to integrate childcare and kindergarten by measures to "Eliminate facility categories such as kindergartens and nursery schools (childcare centres) and integrate these facilities into children's schools, which will provide both early childhood education and child care". While this is an ambitious target and cannot be accomplished overnight, it is consistent with OECD work showing that a systemic and integrated approach to policy development and implementation will help deliver high quality ECEC services (OECD, 2006). While integration of ECEC often encounters some resistance, Chile, Denmark, Finland, New Zealand, Norway, Slovenia, Sweden and the United Kingdom have integrated the services under one lead ministry. Meanwhile, Austria, France, Germany, Hungary, Italy, the Netherlands, and the United States have been integrating services at the local authority level.

Integration is not an end in itself, but instead a means to achieve better policy outcomes. The countries' reasons for integrating ECEC include improving quality, increasing participation in ECEC, promoting fairness and ensuring policy coherence and streamlined management by eliminating a dual approach. Integration of ECEC can take place along different dimensions. The current policy discussion in Japan mainly focuses on administrative (*e.g.* financing) and delivery aspects (*e.g.* location, age coverage, and fee-setting). Other dimensions of closer integration can include: *i)* setting out explicit and coherent policy goals; *ii)* integrating staff qualifications, education and training, and working conditions; *iii)* unifying financial sources; *iv)* setting out common curriculum guidelines or standards; *v)* establishing a common quality assurance mechanism; and

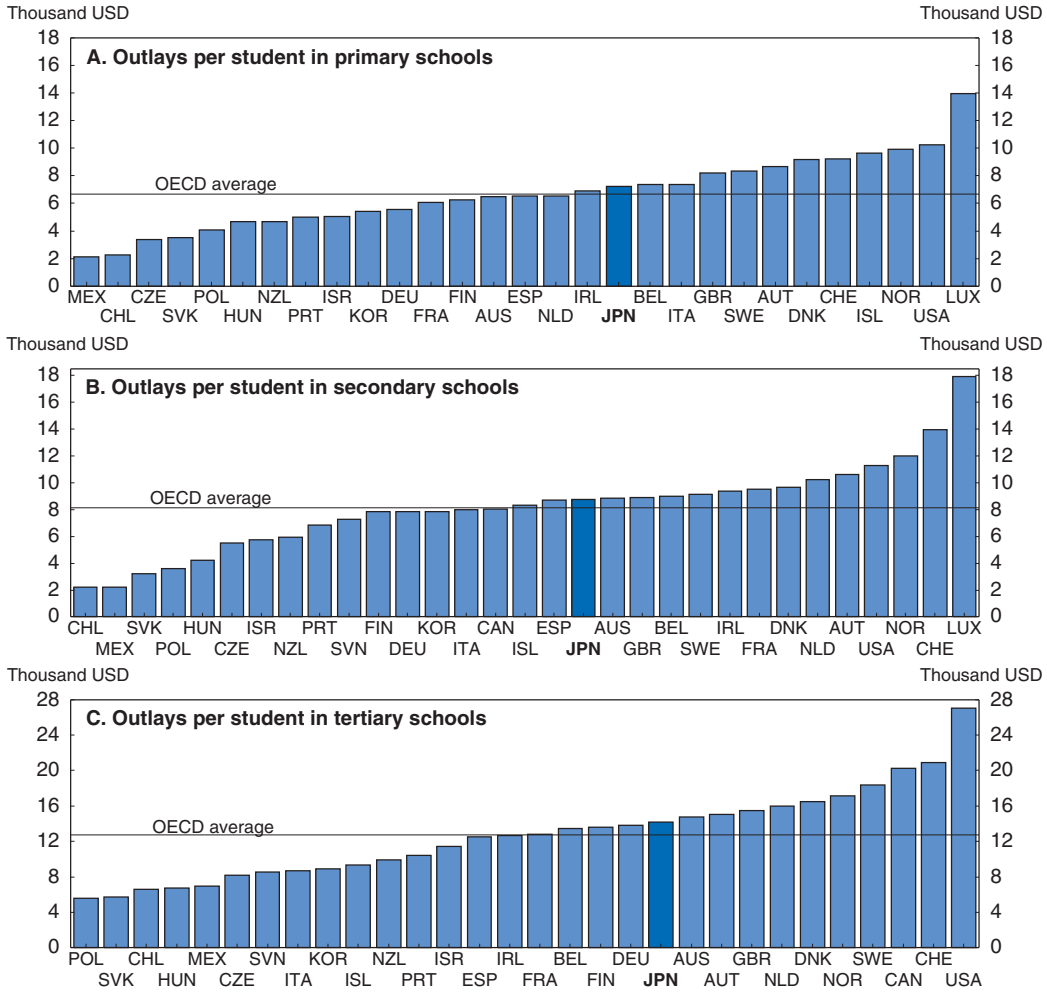
vi) setting consistent rules for parental fees. Each aspect has different cost implications, requiring more investment.

Achieving the goals of expanding the quantity and quality of ECEC will require additional public spending.[24] Integrating childcare and kindergartens, as stated in the Strategy, would allow some cost savings by streamlining the existing dual system administered by two different ministries. Additional revenue would require some rebalancing of spending. One option would be to use part of the child allowance introduced in FY 2010 – 13 000 yen (about $160) per child per month up to the age of 15 (Chapter 2), with an increase planned in FY 2011. Shifting part of the allowance to an in-kind benefit for ECEC would help boost investment in pre-primary education, while reducing the financial burden on households.

Improving the quality of primary and secondary schools

Spending per student at the primary and secondary levels is 8% and 7%, respectively, above the OECD average (Figure 4.9), suggesting that greater spending on these institutions

Figure 4.9. **Spending per student in Japan is above the OECD average**[1]



1. In 2007, based on full-time equivalents, in US dollars converted using PPPs.

Source: OECD (2010a), *Education at a Glance 2010*.

StatLink http://dx.doi.org/10.1787/888932389018

is not a priority. Moreover, the level of spending on education does not appear to be the determining factor in the quality of education, which varies widely among countries with similar spending levels. The sharp rise in education spending in many countries over the period 1970 to 1994 was not reflected in improved performance in many OECD countries (McKinsey, 2010). However, there is significant scope to address weaknesses in schools, as the heavy reliance on *juku* suggests that there are factors that prompt parents to turn elsewhere. It is important to address weaknesses rather than relying on *juku*, with their associated costs and implications for equity. To improve schools, the emphasis should be placed on raising academic standards and expectations, decentralisation and expanding the scope for school choice.

Raising academic standards and expectations

Many parents complain that the education standards in schools have fallen significantly, particularly since the introduction of the *yutori* reforms, and are now too low. The government appears to agree, as it is expanding curricula and class hours. Indeed, primary school textbooks have been expanded by almost a quarter. In addition, class time will be increased by one to two hours to cover the lengthier curriculum beginning in FY 2011 for primary school and from FY 2012 for middle school. This would boost the length of compulsory instruction time per year in Japan, which is 3% below the OECD average for primary school and 2% below for middle school (OECD, 2010a), to slightly above the average. One study found that increased class hours was the only policy option available to a school that made a statistically significant difference to the university admission rates of its students, after controlling for its students' academic skills and the attributes of the school (Oshio *et al*., 2010a). The expanded curriculum should be implemented to help raise performance, although it is not clear how such a large expansion in the curriculum can be covered by a relatively short increase in class time. It is thus important to provide teachers with the information and training necessary to make the new curriculum effective. At the same time, Japan should try to maintain the benefits of the *yutori* reform.

Greater decentralisation of education

According to the OECD's 2008 *Education at a Glance*, the percentage of decisions related to the "organisation of instruction" taken at the middle school level in Japan is the lowest among member countries and third lowest for personnel management.[25] OECD research demonstrates that educational performance is better in countries where decentralisation is more pronounced (Sutherland and Price, 2007). Moreover, a recent international study comparing 20 different school systems found that decentralisation was the key to turning good education systems into excellent ones (McKinsey, 2010). Greater devolution of authority to schools would thus likely lead to better outcomes. However, greater autonomy in terms of resources must be accompanied by increased school accountability (OECD, 2010d).

Expanding school choice at the primary and secondary level

Promoting competition among schools by allowing greater school choice has been found to improve educational outcomes in the OECD area (Sutherland and Price, 2007). In the 2009 PISA results, competition and performance do seem related among schools within an OECD country. However, the relationship weakens once the socio-economic profile of

students is taken into consideration, as more privileged students are more likely to attend schools that compete for enrolment (OECD, 2010g). School choice has been permitted in Japan since 2000, but only 14% of municipal education boards allowed it in 2006, with the remainder relying on residence-based selection criteria. While experience with school choice is limited, initial studies point to some gains. One study found that the university advancement rate of students in public schools in urban areas is higher in districts allowing school choice, with no negative effect on rural schools (Akabayashi, 2006). Another study of the Adachi area of Tokyo found that its academic results have improved, while between-school differences have not risen (Yoshida *et al.*, 2009). The success of school choice depends on the availability of publicly-provided information, making it important to ensure that adequate information is available. However, while school choice may be beneficial for individual schools, it is important to avoid negative externalities in other schools. Moreover, it is important that financial costs related to changing schools do not limit the ability of low-income households to exercise school choice.

Raising the quality of tertiary education

The development of human resources through tertiary education needs to be exploited fully in the face of demographic pressures and the fiscal problem. Increasing quality to create world class institutions is thus a priority. There have been some recent reforms that should help in this regard. In particular, certified evaluations by third-party organisations were introduced in 2004, the number of national universities using a grade-point average system to evaluate students rose from 36 in FY 2005 to 51 in FY 2008 and the number using student evaluations of teachers increased from 45 to 83. The keys to improving quality are strengthening competition between institutions and promoting their internationalisation.

Stronger competition in the university sector through greater transparency

Japan is in an unprecedented situation where the supply of and demand for tertiary education are broadly in balance. Consequently, in much of this sector, apart from elite institutions, competition for entry into tertiary institutions has been replaced by competition among institutions for students. In this context, consumer choice could be a powerful force to steer institutions towards best practices. The key is reliable and detailed information for prospective students about the quality of individual institutions. The government requires universities to provide public information on their activities, faculty and fees beginning in 2011. The mandatory information should be expanded to include the longer-term labour market outcomes of each university's graduates to enhance student choice and institutional competition. MEXT could also strengthen competition by raising the share of funding that is linked to a university's performance. In FY 2006, only 18% of the budget for tertiary education was allocated on a competitive basis.

Promoting the internationalisation of the tertiary sector

The tertiary education system has only a limited degree of internationalisation, given the relatively low number of students from overseas and a near absence of foreign higher education institutions operating in Japan. The share of foreign students in tertiary education in Japan in 2008 was only 3.2%, well below the OECD average of 8.5%. The number of foreign students in tertiary education rose from 10 thousand in 1983 to 133 thousand by 2009, reflecting the worldwide trend toward international education. In

addition, the government has implemented plans to increase international students, such as the 1983 Plan for 100 000 Foreign Students and the 2008 Plan for 300 000 Foreign Students. Chinese students account for three-fifths of foreign students in Japan. Half of all foreign students are university undergraduates. A survey of privately-financed foreign students found that three-quarters were employed part-time. Meanwhile, the number of Japanese students studying overseas has dwindled over the past decade.[26]

Accelerating the internationalisation of Japan's tertiary education is a priority to improve its quality. The aim should be to attract outstanding students to leading graduate schools, rather than simply recruiting foreign students to fill empty chairs. In 2008, the government launched the Global 30 project to help achieve the target of increasing the number of foreign students to 300 thousand by 2020. The project was to support the efforts of 30 universities, with a total budget of 3 billion yen (about $37 million). Given the strict qualifying criteria, though, only 13 have been selected thus far (McNeill, 2010). A new programme, Campus Asia, was launched in April 2010 with China and Korea, and aims at promoting exchanges by establishing common guidelines on credit transfers and grading policies. Increasing the share of foreign students requires an effective system for attracting high-quality overseas students and boosting the share of classes taught in English to the targeted level of 30%.

Attracting accredited foreign providers to the tertiary sector would also be an effective way to stimulate competition and upgrade the competitiveness of Japanese universities by introducing best practices. However, the number of branch campuses of foreign universities in Japan fell from around 40 in the early 1990s to four at present. Moreover, none have been recognised as a "university". The ministry created a new status of "foreign university" in 2004 and so far five universities have been thus designated.

Investing more in tertiary education

Public spending on tertiary education was the second lowest in the OECD area in 2007 at 0.5% of GDP, while the private sector funds two-thirds of outlays in Japan. The dominant role of the private sector is appropriate, as much of the return to higher education accrues to students.[27] However, achieving the New Growth Strategy's objective of creating "cutting-edge" universities may require some additional public investment (OECD, 2009b). Any such increase in public spending should be based on a clear statement of its strategic aims, including R&D and the quality of teaching. The steering instruments established in the wake of the incorporation of the national universities (Box 4.2), which increase both the autonomy and accountability of institutions, should guide any increased investment (OECD, 2008). Cost savings from the consolidation of public tertiary institutions, with due regard to universities' autonomy, should be used to help finance additional spending. Finally, any increase in spending should be conditional on: *i)* closer linking of funding to institutional performance; *ii)* further diversification of the structure of tuition fees by institution; and *iii)* the adoption of management practices in universities that promote efficiency (OECD, 2009b).

Increasing efficiency: more value for money in education

Japan's difficult fiscal situation makes spending cuts necessary (Chapter 2). Indeed, central government outlays on education are to be reduced by 2% in the FY 2011 budget, while local allocation tax grants, which help finance local government education outlays, are to be cut by 4%. The fiscal situation makes measures to increase public spending

efficiency in all areas, including education, more important than ever. The government has imposed an annual 1% reduction in management expense grants to national universities, which account for about 40% of their revenue. Other reforms, including the integration of childcare and kindergarten, consolidating educational institutions, allowing universities more autonomy, and increasing the teaching time of teachers, could also help boost efficiency in education spending.

Integrating childcare and kindergarten to reduce costs

The integration of childcare centres and kindergarten proposed in the New Growth Strategy has the potential to reduce costs by using excess capacity in primary schools and kindergartens to increase childcare places. Combining childcare and kindergarten would also cut the administrative and overhead costs of running two parallel systems, in part by allowing them to be housed in the same facility. In addition, the fact that most teachers are qualified to teach both childcare and kindergarten would allow savings in personnel costs. Looking ahead, the scope for consolidation is large, given that the number of children age four and under is projected to drop by a third between 2008 and 2030.

Consolidating schools

The falling number of school-age children has resulted in a significant decline in the number of primary and secondary schools during the past 15 years. With the number of youth in the 5-to-19-age bracket projected to fall by 35% between 2008 and 2030, further declines are inevitable. An OECD study found that small school size is associated with inefficiency (Sutherland and Price, 2007). In addition to pushing up the cost per student, allowing class and school sizes to dwindle below their optimal size could have negative effects on the quality of those children's education. In the PISA 2009 results, students in cities of more than one million people scored 36 points (1.5 standard deviations) higher than those in towns with 3 000 to 15 000 residents, after adjusting for socio-economic factors (OECD, 2010e).

While school consolidation is a local government responsibility, MEXT's working party on primary and middle schools is calling for the central and prefectural governments to provide advice and financial support.[28] Such advice could draw on the experience of other countries, such as Portugal, which has closed around 3 000 small schools in a three-year period while establishing new school clusters and a school transport network. It could also involve developing tools for the careful analysis of the costs and benefits of keeping small schools open compared to alternative education options for the children in each school. In particular, there should be funding to cover transport costs in school districts that pursue consolidation. In addition, the payment that municipalities are required to make to the national government when they close schools built with public subsidies should be abolished, thereby allowing the buildings to be used productively, such as for providing childcare. However, such an approach would require new collaboration arrangements between MEXT, which manages primary schools, and other ministries, such as MHLW, which is responsible for childcare.

At the tertiary level, a government council stated that "capacity reduction and the consolidation or integration of the national university corporations or their departments is promoted if necessary to improve the academic level" (Education Rebuilding Council, 2007). Since 2002, 29 national universities have been merged into 14. Nevertheless, most universities remain very small (Table 4.7) compared to some other countries. For example, public universities in the United States have an average of almost 11 000 students, and 18%

Table 4.7. **Students per university in Japan**

Students enrolled at all course levels

	National	Public	Private	All universities
1960	2 698	866	2 883	2 557
1970	4 128	1 519	3 821	3 682
1980	4 373	1 532	4 315	4 115
1990	5 402	1 645	4 168	4 208
2000	6 304	1 489	4 202	4 222
2005	7 217	1 452	3 820	3 946
2009	7 230	1 488	3 508	3 682

Source: Ministry of Education, Culture, Sports, Science and Technology .

have more than 20 000 students.[29] The United Kingdom has more than 50 public universities with an enrolment of more than 20 000 (Higher Education Statistics Agency, 2010). The small average size of national and public universities in Japan suggests there is already scope to consolidate the sector so as to promote institutional excellence, if they fail to reform by rationalising the use of resources and better managing costs. Furthermore, without further consolidation, the projected one-third drop in the university-age population would reduce the average number of students at national and public universities to around 5 000 and less than 1 000, respectively, within about two decades, according to OECD estimates. This would further reduce institutions' capacity to maintain excellence, achieve economies of scale and compete successfully at a global level. Against this backdrop, a more strategic approach to addressing these challenges for the overall tertiary sector will be needed to achieve the government's broader objectives of a high-performing tertiary sector within a difficult public finance context.

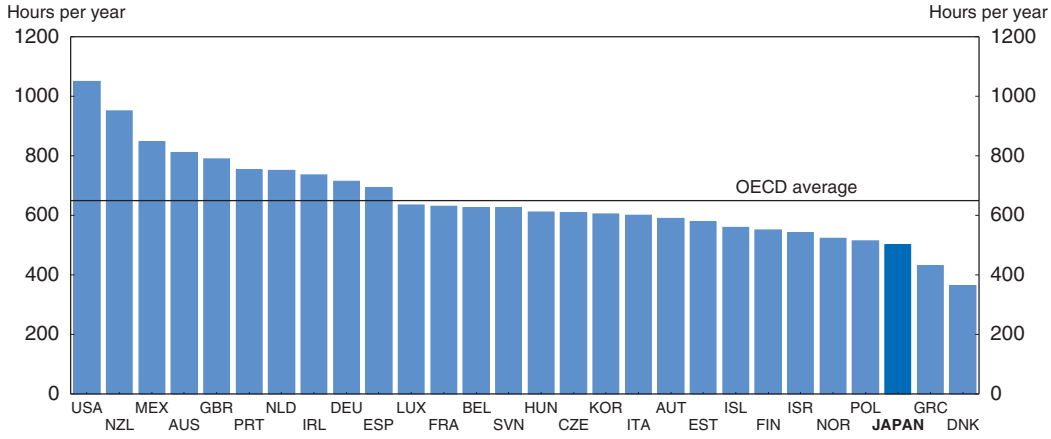
There is also considerable scope for consolidation among private tertiary institutions. Already in 2003, annual income did not cover operating costs for 29% of private universities and 46% of private junior colleges. In addition, 38% of private universities do not fill their current enrolment quotas, which is problematic as these institutions are funded primarily by tuition payments (OECD, 2009b). The establishment of 200 universities since 1995 in the face of the rapid drop in the number of high school graduates adds to pressure for consolidation. Beginning in 2005, the government has appropriately allowed private universities to go bankrupt based on a framework that permits students to transfer to nearby universities (Yonezawa and Kim, 2008) and such consolidation should be allowed to continue.

Using teachers more effectively by allowing them to focus more on teaching

Teacher salaries are relatively high in Japan, reflecting the legal requirement that they earn more than other civil servants. In 2008, their pay was 44% above GDP per capita at the primary, middle and high school levels, compared to OECD averages of 16%, 22% and 29%, respectively (OECD, 2010a). As the most expensive resource in schools, using their time effectively should be a priority. However, teaching time in Japan is relatively short; at the high school level, teachers have 23% less teaching time than the OECD average (Figure 4.10). The combination of high salaries and short teaching times results in wages per hour that are 37% above the OECD average for high school teachers.[30] The relatively short teaching time is due in part to other demands, such as meetings, writing reports, clerical work, supervising extra-curricular activities and counselling students. Non-teaching staff account for 20% of employment in schools, compared to 43% in the United

Figure 4.10. **International comparison of teaching time of teachers**

Net teaching time per year in general programmes at upper secondary level in 2008



Source: OECD (2010a), *Education at a Glance 2010*.

StatLink http://dx.doi.org/10.1787/888932389037

Kingdom. A recent survey reported that 90% of teachers do not have enough time to prepare lessons and 80% said that time spent dealing with parents and local residents is increasing (MEXT, 2009c). MEXT has been encouraging schools to review their meetings and events to increase efficiency. There appears to be scope to shift non-teaching assignments, particularly clerical work, to lower-paid staff and increase the use of IT, particularly given the planned increase in teaching time by one to two hours per week. Such an approach would limit costs by allowing teachers to focus more on teaching.

Liberalising regulations on tertiary institutions

MEXT sets a standard annual tuition level for national universities, but allows them to charge up to 20% more. However, almost all universities charge the standard amount, perhaps reflecting concern that tuition hikes would be offset by a reduction in government payments. As a result, tuition fees are largely unrelated to the quality of education, its cost or the earnings of graduates. The undifferentiated level of tuition fails to encourage the most efficient use of resources. Limits on tuition fees aim at encouraging university access for low-income families. However, at the same time, the lack of variation in tuition fees also raises equity issues, as students entering prestigious national universities, who tend to come from affluent families, benefit from the high salaries accorded to the graduates of those universities. For these reasons, universities should thus be allowed greater autonomy in setting tuition fees, while at the same time expanding student loan programmes to ensure access for all qualified students, which in Japan may require some time (see below). More generally, while assuring quality, the government's efforts to relax remaining restrictions, such as enrolment caps and the requirement for MEXT approval for programme changes, should continue. This also requires that Japan develop a professional group of managers capable of effectively leading more autonomous universities.

Reducing the burden on families

Households accounted for 21% of spending on educational institutions in 2008, the fourth highest in the OECD area, even before taking account of outlays for *juku*. For a child attending public institutions from kindergarten to university, annual expenditures amount to nearly 10% of average annual disposable income per household (Table 4.8). The share is

Table 4.8. **Household spending on education**

Millions of yen in 2008 for six cases by whether institutions are public or private[1]

	Type of educational institution						
	Kindergarten	Primary school	Middle school	High school	University[2]	Total	Per cent of household income[3]
Case 1	0.7	1.8	1.4	1.5	4.3	9.8	9.7
Case 2	0.7	1.8	1.4	1.5	3.9	9.4	9.3
Case 3	1.6	1.8	1.4	1.5	6.2	12.7	12.5
Case 4	1.6	1.8	1.4	2.9	6.2	14.0	13.8
Case 5	1.6	1.8	3.7	2.9	6.2	16.3	16.1
Case 6	1.6	8.3	3.7	2.9	6.2	22.8	22.5

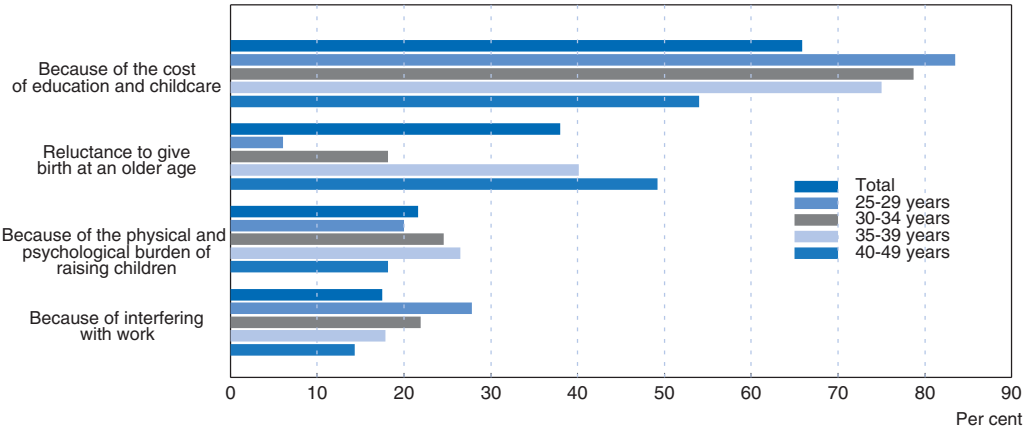
1. Shaded area is for private educational institutions.
2. Average of the cost of: *i*) when students live at home; and *ii*) when they have separate lodging. Case 1 is for national universities and case 2 is for public universities.
3. Total expenditures per year (*i.e.* the total divided by 17) as a per cent of disposable income per household in 2008.

Source: Ministry of Education, Culture, Sports, Science and Technology (2009c), *White Paper on Education, Culture, Sports, Science and Technology*, 2009.

more than double if a child attends private institutions. Indeed, the cost of two children in a private university amounts to half of average household income. The high share of private spending on education is also a source of inequality in outcomes (see below).

The heavy burden of educational expenses on households is one factor explaining Japan's low fertility rate of 1.4, the second lowest in the OECD, and well below the desired number. A government survey found that 44% of married women between 20 and 39 wished to have two children and 39% preferred to have three or more. When asked what steps were needed to boost the fertility rate, 55% of parents cited policies to reduce the economic burden of children, just behind the 59% that mentioned better work-life balance. Indeed, around 80% of those in the 25-to-35-age group identified the high cost of education and childcare as a reason why they had fewer children than they would have liked (Figure 4.11). The survey results are supported by an econometric study showing that education costs have a significant impact on birth rates (Kato, 2000). Areas with scope to reduce the burden on families include ECEC, *juku* and tertiary education.

Figure 4.11. **Reasons why the actual number of children is less than the desired number**[1]



1. A survey of parents in the 25-to-49-age group.

Source: Ministry of Education, Culture, Sports, Science and Technology (2009c), *White Paper on Education, Culture, Sports, Science and Technology*, 2009.

StatLink http://dx.doi.org/10.1787/888932389056

Raising the public share of spending on early childhood education and care

The share of public spending on pre-primary education is the third lowest in the OECD, as noted above. Average net childcare costs are around 14% of average family income for dual-earner families compared to the OECD average of 12% (OECD, 2007). In 2007, 60% of the cost of kindergarten was borne by the private sector, compared with an OECD average of 20% (Figure 4.2). For women in the 20-to-49-age group with children, 68% mentioned the need to reduce the cost of kindergarten as a key to increase the birth rate (MEXT, 2009a). The cost of one year of ECEC free of charge to parents was estimated at 800 billion (0.2% of GDP) in 2009, only one-half of the 1.7 trillion yen spent on the child allowance in FY 2010. Most European countries provide at least two years of free, publicly-funded education before primary school (OECD, 2010b). The additional outlays could be covered at least in part by cost savings from integrating childcare and kindergarten.

Reducing dependence on juku

One of the major concerns related to *juku* is the financial cost for families (Table 4.9). The average expenditure per student more than doubled in real terms between 1985 and 2007, reaching 21.3 thousand yen per month (about $3 150 annually), excluding the cost of commuting, around 11% of per capita income. Spending on *juku* is about 6% higher for boys than girls and increases with age. Indeed, spending on middle school students was more than double that of the first three grades of primary school. By the third year of middle school, 13% of households paid more than 40 thousand yen monthly per student (about $5 900 annually). While *juku* are expensive, the cost of home tutoring is even higher. Not surprisingly, there is a link between the number of children and spending on *juku*. For children in the sixth year of primary school, spending on *juku* exceeded 20 thousand yen per month for 41% of those who were only children compared to only 16% for those who had three siblings (NIER, 2008).

Table 4.9. **Spending on out-of-school instruction**

Spending per student in 2007 in thousand yen

	Total	Boys	Girls	Grades 1 to 3	Grades 4 to 6	Middle school
Juku	21.3	21.9	20.7	12.0	18.5	26.1
Tutoring at home	24.8	26.3	23.5	13.0	22.6	26.3
Correspondence courses	5.6	5.7	5.5	3.8	5.1	8.4
Non-academic activities[1]	6.6	6.1	7.1	6.4	6.2	8.0

1. The major activities included piano (29%), swimming (27%), calligraphy (23%), foreign-language conversation (11%), soccer (11%) and martial arts (11%).

Source: Ministry of Education, Culture, Sports, Science and Technology (2008), *Report on Children's Out-Of-School Learning Activities*.

The contribution of *juku* to educational outcomes is uncertain, given that the biggest rise in PISA performance in Japan has occurred on open-ended higher-order thinking tasks, not in the reproduction of subject matter that is the focus of *juku*. Although reducing the role of *juku* is not a government objective, it would ease the burden on households and increase equity in educational outcomes (see below). *First*, it is important to improve school quality so that children can acquire sufficient education without attending *juku*. Indeed, dissatisfaction with school quality is one of the reasons given by parents for sending their children to *juku* (Box 4.3). In Korea, for example, where *juku* (called *hagwon*) also play a prominent role (Figure 4.6), time spent at *juku* tends to fall as the quality of schools

increases (2008 *OECD Economic Survey of Korea*). *Second*, reducing the reliance on multiple-choice school entrance exams may also help diminish the dependence on *juku*, given that one of their primary roles is to prepare students for such exams. Larger weight could be give to other criteria, such as recommendations and extra-curricular activities, as well as school grades. Nevertheless, given the severe competition to enter prestigious universities and the large returns available, *juku* will continue to play an important role in Japan.

Lightening the burden of tertiary education on parents

During the past 30 years, tuition fees increased four-fold at private universities and 15-fold at national universities, while the consumer price index doubled. Increased access to public loans would reduce the burden on parents, while making loan repayment contingent on income (see below).

Reducing inequality in education

Japan has had a tradition of relatively egalitarian education outcomes, reflecting the nationwide standardisation of the curriculum and textbooks and a relatively equal distribution of educational facilities and resources. The 2009 PISA tests found that socio-economic factors explain 9% of the variation in student performance, compared to an OECD average of 14%. At the same time, disadvantaged students that attend disadvantaged schools tend to perform worse than expected in Japan, and by a larger margin than in many other OECD countries (OECD, 2010e). However, improving equality is a challenge in the context of Japan's rising income inequality and relative poverty rate, which is the sixth highest in the OECD area (Chapter 5). Educational results are positively related to income levels; as household income rises from less than 2 million yen annually to more than 15 million yen, the proportion of correct answers by sixth-grade primary students in math rose from 63% to 83%, with a similar improvement in the Japanese language test (Figure 4.12). In addition, test scores are positively related to spending on after-school lessons. The share of correct answers rises 25 percentage points as spending on after-school lessons increases to more than 50 thousand yen per month (Panel B). Not surprisingly, spending on after-school lessons is positively related with family income (Panel C). Among households earning more than 15 million yen a year, 72% spent more than 20 thousand yen per month for their children to attend *juku*, compared to only 5% of households earning less than 2 million yen a year. Econometric studies also suggest that family income is a key determinant of *juku* attendance (Oshio and Seno, 2007).

The high test scores achieved by students from wealthier households translate into higher entry rates to university. For high school graduates with parents earning less than 4 million yen per year, one-third enter four-year universities and another third begin working (Figure 4.13). In households earning more than 10 million yen, almost two-thirds enter university, 11 times more than the number entering the labour market. Moreover, students from high-income families tend to attend more prestigious universities, which have a significantly higher return (Oshio and Seno, 2007). University attendance, in turn, is a critical factor determining employment status and income. A government survey found that more than half of men under the age of 30 with university degrees were hired as regular employees, while only 14% were hired as non-regular employees (Figure 4.14). The situation was reversed for men with only high school degrees: 21% were hired as regular employees and 34% as non-regular workers. The pattern for women is similar, although

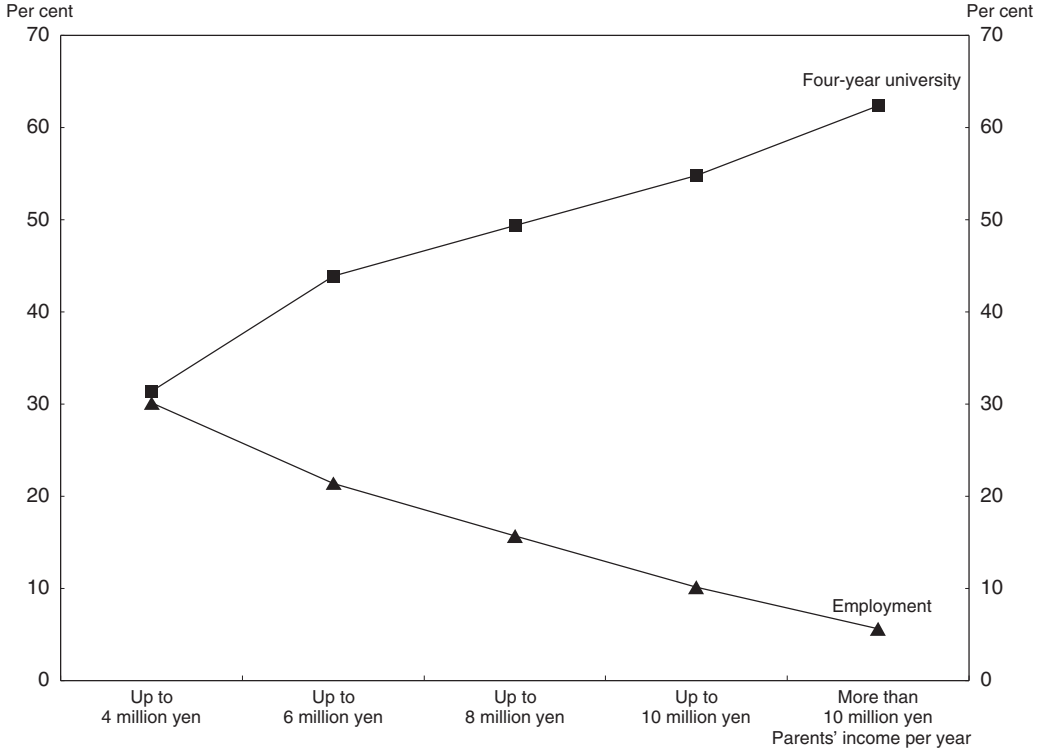
Figure 4.12. **The link between household income, spending on after-school lessons and academic performance**

1. Percentage of correct answers on exams taken by primary students in sixth grade (age 11) to test basic knowledge.
2. In million yen.
3. In thousand yen per month.
4. Percentage of students in each income level by amount of spending on after-school lessons per month.

Source: Ministry of Education, Culture, Sports, Science and Technology.

StatLink http://dx.doi.org/10.1787/888932389075

Figure 4.13. **Path following high school graduation**



Source: Ministry of Education, Culture, Sports, Science and Technology (2009c), *White Paper on Education, Culture, Sports, Science and Technology*, 2009.

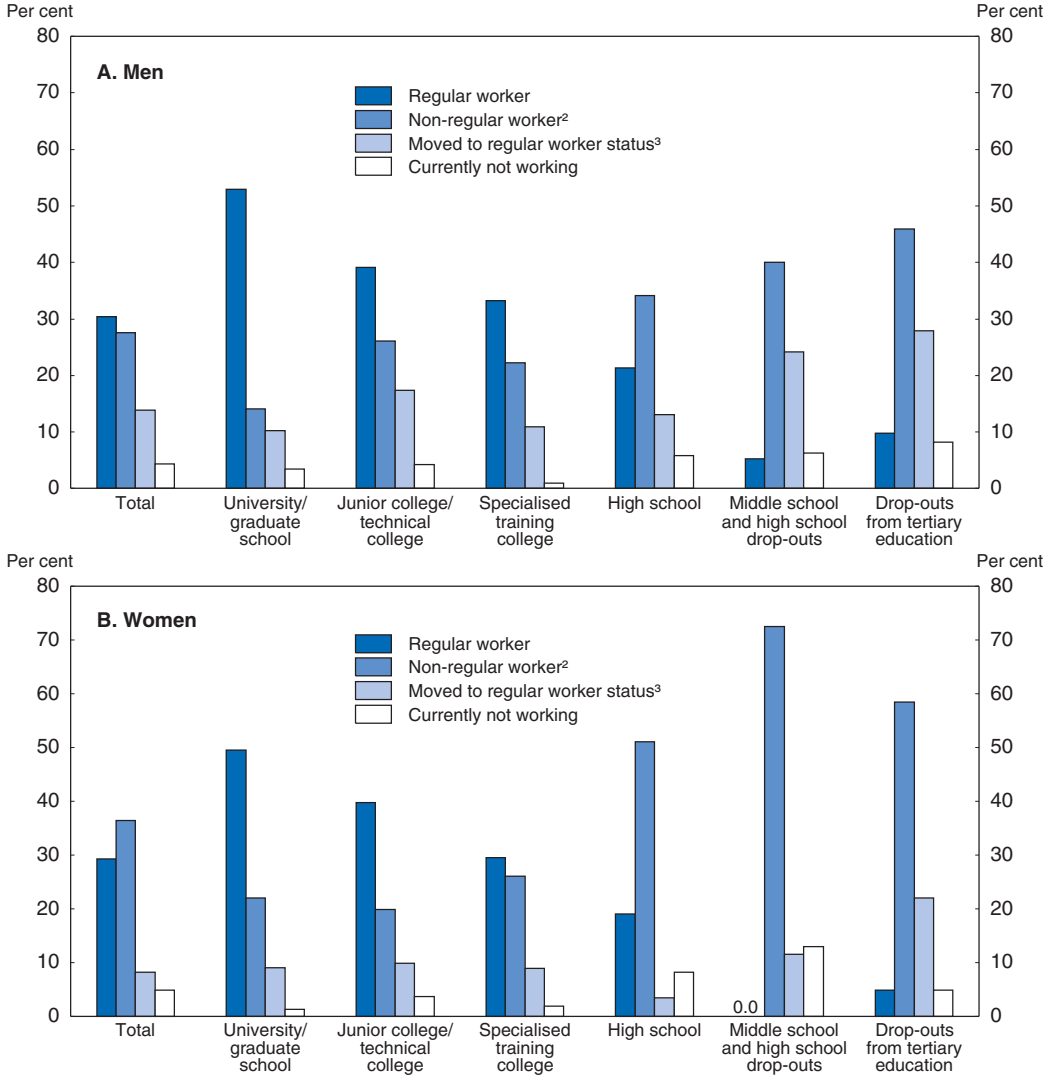
StatLink http://dx.doi.org/10.1787/888932389094

they are more likely to end up in non-regular employment than men at each level of educational attainment (Panel B). In sum, as household income rises, students tend to receive more training in *juku* and higher test scores, are more likely to attend university and have a greater probability of being hired as a regular worker rather than as a non-regular worker, who receive less training, are paid substantially less, receive less coverage from the safety net and are employed in precarious jobs (Chapter 5).

Reducing dependence on *juku* through the policies discussed above is a key to promoting equality. Nevertheless, *juku* will continue to play an important role, as noted above, making it important to provide their benefits more broadly and at lower cost. For example, outstanding *juku* teachers could be paid to teach courses in schools after classes. Moreover, schools could offer after-school activities to compete with *juku*. Korea, for example, introduced after-school programmes in 1995 that help students prepare for university entrance exams. The programmes appear to be achieving their goal of providing extra instruction for low-income students and reducing outlays on private tutoring (Bae *et al.*, 2001). In addition, greater use could be made of Internet-provided services, which are a rapidly growing component of the private education service industry (Ventura and Jang, 2010) and tend to be much less expensive. In Japan, distance learning costs only one-quarter as much per student as *juku* (Table 4.9). Finally, greater use could be made of NHK, the public broadcasting station, which already offers a number of programmes for the 128 "Distance High Schools".

The high level of tuition in Japan is another obstacle to university for students from low-income households. Japan has two types of means-tested loans (Table 4.10). The first is an interest-free loan for students from families facing severe financial difficulty and who rank

Figure 4.14. **Employment status by educational background**[1]



1. Based on a survey of 2 000 people between the ages of 18 and 29 in Tokyo.
2. Part-time, fixed-term contract and dispatched workers.
3. Workers who moved from non-regular worker or self-employed to regular worker status.

Source: Ministry of Education, Culture, Sports, Science and Technology (2009c), *White Paper on Education, Culture, Sports, Science and Technology*, 2009.

StatLink http://dx.doi.org/10.1787/888932389113

in the top third of their class. The second is a loan based on the prime rate up to a maximum of 3%. In FY 2010, 34% of university students received loans, with total lending amounting to 0.2% of GDP. According to the government, almost all applicants who fulfil the requirements receive loans. In contrast, more than three-quarters of university students receive public loans and/or scholarships and grants in Australia, the Netherlands and the United States, as well as in Denmark, Norway and Sweden, where public universities do not charge fees.

The loan take-up ratio in Japan is still limited by risk aversion by potential students, who are worried that they would not be able to meet the fixed re-payment schedule, which takes no account of their post-graduation income. Moreover, some students may borrow less by taking a shorter, less costly course of study than is optimal. Indeed, in 2009, only 60% of students found regular full-time employment, compared to a rate of more than 80%

Table 4.10. **Japan's student loan scheme**[1]

	Interest-free loans	Low-interest loans
Number of loan recipients	460 thousand students	631 thousand students
Loan amount	272.1 billion yen	527.8 billion yen
Monthly loan amount	Fixed amount based on institution[2]	Variable[3]
Loan criteria		
Academic ability	Above 3.5 GPA at high school (on 5.0 scale) Maintain class rank in top third at university	Above average Recognised to be excellent in a certain field of study High motivation to study
Family income	Less than 9.97 million yen[4]	Less than 13.43 million yen[4]
Repayments	Up to 20 years after graduation	Up to 20 years after graduation
Interest rate	No interest	Prime rate (currently 1.3%)

1. Data are for 2006. Loans are available for students in all types of tertiary education (see Table 4.5).
2. For example 64 thousand yen for a student to attend a private institution away from home.
3. For example, in the case of universities, students can receive between 30 thousand and 100 thousand yen (about $370 to $1 230) per month.
4. For a student enrolled in a private institution living at home in a family of four where one parent is an office worker. The income limits are equivalent to $122 thousand and $165 thousand, respectively.

Source: OECD (2009b), *OECD Reviews of Tertiary Education: Japan*.

prior to the collapse of the bubble economy. Around 2.4 million former students – almost 7% of the 25-to-45-age group – are behind in their loans. While the government has introduced measures in the wake of the crisis to ease loan repayments, Japan should expand the loan system by making repayments contingent on income to encourage students, particularly from low-income households, to invest in higher education. Greater transparency about income would enhance the success of an income-contingent loan system by limiting the scope for self-employed to hide income.

Strengthening vocational education and training

Vocational education and training (VET) plays a crucial role in preparing people for work and responding to labour market demands (OECD, 2010c). Japan's vocational education and training have been considered a model in many respects, thanks to the variety of institutions, including colleges of technology and specialised training colleges (OECD, 2009b). However, the major role of tertiary education was to signal the capacity of students for a lifetime of skill accumulation within the firm rather than to train students for specific occupations (Oshio and Seno, 2007). In a survey of university graduates four years after graduation, 47% of Japanese graduates reported "little use" of knowledge gained in school, compared to an average of 19% for ten European countries (Teichler, 2007).

However, firms are shifting from long-term employment in which they train employees themselves to hiring workers with specific qualifications (Chapter 5). Meanwhile, unskilled jobs are fast disappearing as structural change shifts the industrial structure toward higher value-added activities. At the same time, the role of traditional vocational training institutions has been evolving. *First*, the "academic drift" is severe as the share of high school students choosing the general education track that leads to university has been increasing. *Second*, tertiary institutions focused on vocational training have seen a decline in enrolments, as students shift to university. Consequently, it is important to enhance the vocational training role of universities by increasing their links to the business sector. In 2010, the government launched a new initiative to encourage universities to enhance students' employability by providing more career guidance. This initiative also involves firms and unions in developing vocational education curricula. In addition, it is essential to achieve the New Growth Strategy's goal of creating qualifications that are recognised by firms.

Increasing the role of the education system in innovation

R&D spending in Japan was the second highest in the OECD area at 3.8% of GDP in 2007. However, the university sector, which employs a majority of PhDs in natural science, plays a limited role, accounting for only 5.6% of R&D spending that year (Table 4.11). The third Science and Technology Basic Plan for FY 2006-10 aimed at increasing the role of tertiary education in innovation by strengthening ties between industry, universities and the government, in particular through greater support for university intellectual property headquarters and technology licensing organisations (TLOs). While 12.6% of R&D was performed in universities in 2007, the share funded by the business sector was only 3%, half of the OECD average. The share may have increased in the past few years, as research funds received by universities from the private sector rose by 10% between FY 2005 and FY 2009, reaching 41 billion yen (around $500 million). However, the number of TLOs is on a downward trend as universities' intellectual property headquarters play a bigger role. In FY 2008, universities received 990 million yen ($12 million) in license income, well below the 2.5 billion spent to apply for patents according to the government. Japanese universities apply for patents for only 24% of their technologies, compared to 51% in the United States and 61% in Europe (*Asahi Shimbun*, 1 October 2010). Moreover, only 20% of the patents owned by universities are used by firms. Another worrisome trend is a decline in the number of papers published in academic journals by researchers at national universities in recent years.

Table 4.11. **Flows of R&D funds in 2007**

A. R&D Funding

		Allocation between R&D actors[2]			
	Share of total R&D spending	Government	Universities	Business enterprises	Total
Government[1]	16.4	54.0	40.5	5.5	100.0
Universities	5.6	0.3	99.6	0.1	100.0
Business enterprises	77.7	0.8	0.5	98.7	100.0
Foreign sources	0.3	13.7	1.9	84.4	100.0

B. Sector performing R&D

		Funding source for R&D performed				
	Share of total R&D performed	Government	Universities	Business enterprises	Foreign sources	Total
Government[1]	9.5	92.8	0.2	6.6	0.5	100.0
Universities	12.6	52.6	44.3	3.0	0.1	100.0
Business enterprises	77.9	1.2	0.0	98.5	0.4	100.0

1. Includes private non-profit institutes.
2. By which sector performs the R&D.

Source: OECD R&D Statistics Database.

Discoveries that originate at universities can become the seeds for innovation and promote economic growth. It is imperative to promote co-operation between universities and the industrial sector, including joint research, with the government playing a facilitating role. The third Basic Plan also emphasised the importance of enhancing the mobility of researchers by expanding the use of fixed-term contracts and performance

evaluation at universities and by requiring young researchers to change their organisational affiliation at least once after graduation before obtaining a permanent position. Finally, the share of government R&D funding for universities that is allocated competitively should be increased to enhance its effectiveness.

Conclusion

Implementing educational reform is challenging, given its central role in every country and the magnitude of what is at stake. Making reform happen depends on a number of factors. *First*, it is important to actively engage stakeholders – particularly parents, teachers, students and school administrators – in formulating and implementing policy responses. In particular, teachers need reassurance that they will receive the tools that they will need to be successful. *Second*, it is necessary to clearly explain the underlying principles and aims of reform. *Third*, reform should be based on clear evidence. Given the complexity of the education system, there are no simple action plans that can lead to substantial improvements. Moreover, even with good policies, improved educational results usually take a long time to achieve, and clear evidence of the improvements takes even longer. It is necessary, therefore, that all stakeholders have realistic expectations about achieving better education results. Nevertheless, upgrading the education system is crucial, as small improvements can have enormous positive impacts. Key elements of the comprehensive reform discussed above are summarised in Table 4.12.

Table 4.12. **Summary of recommendations**

Objective	Early childhood education and care	Primary and secondary schools	Tertiary education
Improve educational outcomes	• Invest more in ECEC to expand quality and quantity • Integrate childcare and kindergarten, as outlined in the New Growth Strategy, to enhance the quality of ECEC • Expand the role of private providers of ECEC, in part by providing payments directly to families	• Effectively implement the planned increase in curriculum and school hours, while retaining the advantages of the *yutori* reform • Increase the autonomy of schools • Expand school choice to encourage schools to excel, while increasing information about performance	• Increase transparency about performance, including labour market outcomes of graduates, to strengthen competition • Promote internationalisation by increasing the number of foreign students • Encourage the establishment of more foreign tertiary institutions in Japan
Increase value for money	• Reduce costs by integrating childcare and kindergarten	• Support an efficient framework to cope with school consolidation • Use teachers' time more effectively	• Facilitate the consolidation of the tertiary sector • Liberalise restrictions, including those on tuition, student caps and programme changes, while assuring equity and qualty
Reduce burdens on household	• Raise the public share of spending on ECEC	• Reduce dependence on *juku* • Lower the burden of out-of-school education by developing low-cost alternaives	• Expand public loans for tertiary education to cover a higher share of students
Reverse the rising trend in inequality	• Invest more in ECEC to reduce the disadvantages of children from low-income families	• Reduce dependence on *juku* • Make the benefits of *juku* more widely available and at lower cost, notably to students from low-income families	• Expand public loans for tertiary education to cover a higher share of students • Make repayment of loans income-contingent
Enhance links between labour market and education		• Create vocational qualifications that are recognised by firms, as planned in the New Growth Strategy	• Expand the vocational training role of universities, which are educating an increasing share of young people
Expand the contribution of tertiary sector to innovation			• Enhance co-operation between university research and industry • Increase public investment to create leading universities • Boost the share of public research funds for universities that is allocated competitively

Notes

1. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.
2. This chapter will use the terms middle school and high school, which correspond best to the Japanese terms 中学校 and 高等学校 .
3. The tuition deduction ranges from 118.8 thousand yen to 237.6 thousand yen (about $1 500 to $3 000) depending on household income. The payment for public school tuition and the fund for private-school students do not cover other charges, such as textbooks and school trips.
4. Such regulations cover *inter alia* total area per child, play areas, kitchens and safety features. The minimum standards set by national governments are upgraded in some municipalities.
5. For example, local governments in the Tokyo area established a system of "certified" centres in 2001 to reduce waiting lists for licensed childcare. Two types were created: *i*) centres for children up to primary school age established by private companies; and *ii*) centres for children up to age two run by individuals. The regulations are less strict than for licensed centres. The costs are split between the Tokyo metropolitan government and parents, with fee ceilings that vary with the age of the child.
6. For a private licensed centre, the government's share since 2004 is paid by the central (50%), prefectural (25%) and municipal governments (25%). For a public centre, the government's share is paid by the municipality, making them more expensive from the perspective of the municipality.
7. Nevertheless, Centres for ECEC are still categorised as "kindergarten-type", "childcare type" and "integrated" centres.
8. Class size statistics in the OECD's *Education at a Glance* exclude special education schools. By this measure, Japan averaged 28.1 children per primary school class in 2008, compared to the OECD average of 21.6. For middle school, Japan had 31.2, compared to the OECD average of 23.9.
9. As one expert wrote, "One has to think of education in Japan as an enormously elaborated, very expensive testing system, with some educational spin-offs, rather than as the other way around" (Dore, 1982).
10. The government does not conduct surveys on high school students' participation in out-of-school education.
11. The term *juku* covers institutions teaching a wide range of topics, including technical training or the arts. This chapter focuses on academic (*gakushu*) *juku*. Within that category, there are also a number of distinctions, such as between *shingaku juku*, which are aimed at high-performing students who want to improve, and *hoshu juku*, which help students to catch up in school work (Roesgaard, 2006).
12. Business Week (2005). For example, Kumon, which was established in 1954, has 4 million students in 46 countries (Mori and Baker, 2010).
13. Japan ranks second in the share of students taking after-school lessons in the national language (64%), first in science (61%) and first in other subjects (76%).
14. Public universities rely more on government funding (excluding hospital revenues) – 55% of their revenue compared to only 11% for private universities in 2005 – and less on tuition fees (16%) (OECD, 2009b).
15. This does not include 256 thousand students taking correspondence courses at the university level and 28 thousand at the junior college level in 2005.
16. In 1999, the education law was relaxed to allow graduates from specialised training colleges to transfer to a junior college or university. By 2005, though, only about 2 000 students had transferred. However, there are "double schoolers" – students enrolled simultaneously in a specialised training college and a university, prompting some universities to establish specialised training colleges (Goodman *et al.*, 2009).
17. Specialised training colleges offer a specialised curriculum, which is part of tertiary education, as well as a general and high school curriculum, which is not. The term "specialised training college" in this chapter refers only to their tertiary role.
18. The teaching of English illustrates the difference between specialised training colleges and universities. While universities focus on literature, the specialised training colleges emphasise

developing oral skills. Consequently, students who need a qualification in spoken English (the so-called Eiken qualification), such as students planning to become airplane pilots, tend to prefer specialised training colleges to universities.

19. The *Times Higher Education* ranking is based on 13 indicators covering citations in academic papers, research, teaching, the international mix and industry income. The ranking gives a 32.5% weight to citations, 30% to research, 30% to teaching, 5% to the international mix and 2.5% to industry income.

20. Similarly, 84% of entrants to tertiary-type B institutions graduate, compared to the OECD average of 62%.

21. Japan fell from first in mathematics in 2000 to sixth (among OECD countries) in 2006, from second to third in science and from eighth to 12th in reading comprehension.

22. Australia has a Child Care Benefit (CCB), a voucher given to families to help with the cost of care. It varies with family income, the number of children in childcare centres and the type of care received. Receiving the CCB is contingent on using childcare centres that meet quality standards. Following the introduction of the scheme, the number of childcare places rose from 114 thousand in 1989 to 700 thousand in 2008, contributing to the large increase in the female workforce from 3.1 million to 4.8 million over that period.

23. In July 2006, for example, METI announced the "New Strategy for Economic Growth", which selected six areas; childcare, health/welfare, tourism, business services, software content and distribution/logistics. The specific target was to increase their market size by 70 trillion yen (14% of GDP) by 2015, based on a detailed action plan, entitled "Toward Innovation and Productivity Improvement in Service Industries".

24. Many OECD countries have increased spending on ECEC in recent years. *First*, governments have started to consider public spending on ECEC not as "consumption" but as an "investment" to improve the development of children. *Second*, ECEC contributes to reducing social inequality, reducing child poverty, and promoting inter-generational mobility as children from disadvantaged families receive much less cognitive and emotional stimulation. *Third*, the provision of affordable, quality childcare services has allowed most OECD countries to maintain or increase female labour participation (OECD, 2006).

25. In contrast, the PISA survey of school principals, which are at the high school level in Japan, reported a high level of school autonomy with regards to instructional policies.

26. In particular, the number of Japanese undergraduates at American universities has fallen by one-half since 2000 (McNeil, 2010).

27. Taking into account both higher average earnings and lower risks of unemployment, university graduates stand to earn substantially more over their working lifetime than people who end their education at secondary level. The "private internal rate of return", which takes account of these and other factors, including the time taken to earn a degree, tuition costs and taxes (which have a negative impact on returns), is higher than real interest rates in all OECD countries. It is estimated for men at between 10% and 15% in Denmark, France, the Netherlands, Sweden and the United States and 17% in the United Kingdom (OECD, 2002). In addition, there is a benefit to society. On average across OECD countries, a man with a tertiary education will generate an additional $119 thousand in income taxes and social contributions over his working life, compared to a man with an upper secondary education (OECD, 2010a).

28. A summary of the working group's report can be found at: *www.mext.go.jp/component/b_menu/shingi/giji/__icsFiles/afieldfile/2009/10/02/1282486_1.pdf*.

29. Enrolments in the Fall of 2007, excluding two-year institutions (NCES, 2010).

30. At the middle and primary levels, teaching time in Japan is 13% and 9% less, respectively, than the OECD average. Consequently, the salary per hour of teaching is 35% above the OECD average for middle school teachers and 38% higher for primary school teachers.

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Chapter 5

Labour market reforms to improve growth and equity

Traditional Japanese labour market practices, which benefited both workers and firms during the high-growth era, are no longer appropriate in the context of slow economic growth and rapid population ageing. Reforms are needed in light of the upward trend in non-regular employment to break down labour market dualism and to encourage greater labour force participation by women, the elderly and youth. A comprehensive approach that includes improving the social insurance coverage of non-regular workers and upgrading training programmes for them, preventing discrimination against non-regular workers and reducing effective employment protection for regular workers would increase labour market flexibility and human capital. Moreover, such reforms would increase equity across different segments of the labour force. Drawing more women into the labour force requires removing financial disincentives to work, creating more family-friendly workplaces and increasing the availability of childcare. The labour force participation of the elderly should be raised by promoting continuous employment and abolishing mandatory retirement. More effective vocational training is needed for younger workers.

The sharp drop in the number of non-regular workers in the wake of the crisis has brought renewed attention to Japan's labour market. Traditional labour market practices, such as long-term employment, seniority-based wages, firm-based training, flexibility in wages and working time and mandatory retirement, date back to Japan's high-growth era and contributed to its economic take-off. However, these practices are no longer appropriate in an era of slower economic growth, increased diversity in desired working patterns and the need to boost female labour participation. In particular, intensified global competition and the downsizing of many industries have prompted firms to reduce fixed costs, including labour. To enhance employment flexibility, firms have increased the share of non-regular workers, reducing labour costs at the same time.

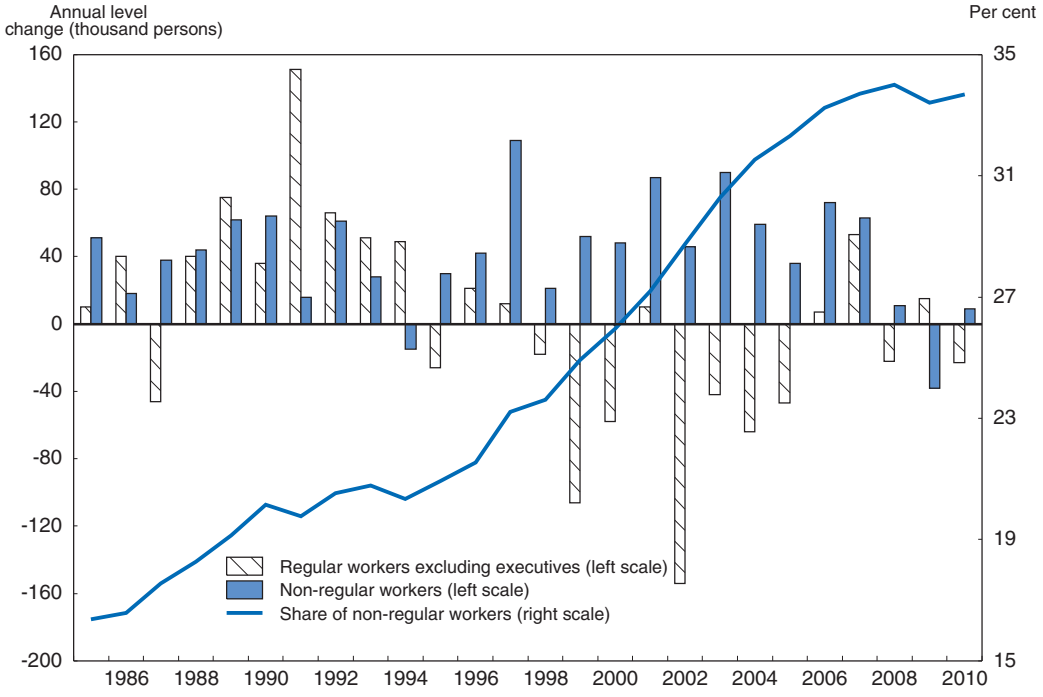
While regular employment has a number of drawbacks, the rising share of non-regular workers has its own serious shortcomings. Non-regular workers receive less firm-provided training and accumulate less human capital, lowering their productivity and Japan's growth prospects. Equity is another concern as non-regular workers are paid substantially lower wages, bear the brunt of cyclical changes in employment and are not fully covered by the social insurance system. These factors, as well as population ageing, contribute to the high rate of relative poverty in Japan. The segmentation of the labour market may also tend to discourage women from working, at a time when rapid population ageing makes it important to boost their labour force participation rate. This chapter begins by analysing the increase in non-regular workers and suggests policies to address it and then considers measures to increase labour force participation, particularly of women, the elderly and youth. Policy recommendations are summarised in Box 5.1.

Labour market dualism

Traditional labour market practices remain strong in Japan, protected by the legal framework. In 2009, three-quarters of workers in the 55-to-59-age group at firms with more than 1 000 employees had been at the same firm for at least 20 years, and two-thirds had been there at least 30 years (Yashiro, 2010b).[1] Long-term employment is supported by seniority-based wages, which tie workers to the firm. Japanese male manufacturing workers with 20 to 29 years of experience earned 72% more than new entrants, significantly higher than the 41% in Germany and the 29% in France and the United Kingdom (JILPT, 2010). Most long-term workers are regular workers – full-time employees with indefinite contracts and a high level of job security.

However, firms have reduced the role of long-term employment by doubling the number of non-regular workers between 1990 and 2008, boosting their share to a record high of 34% in 2008 (Figure 5.1). In contrast to regular workers, almost all non-regular workers have fixed-term contracts of some type. In addition to the upward trend in the number, there has been a diversification in the types of non-regular workers (Table 5.1): *i)* the share of part-time workers[2] in non-regular employment has fallen from 80.6% in 1990 to 67.3% in 2010; *ii)* temporary workers' share has risen to 19%; and *iii)* the share of

Figure 5.1. **The share of non-regular workers is rising again**[1]



1. Data is as of February until 2001 and as of the first quarter since 2002.

Source: Ministry of Internal Affairs and Communications, *Special Survey of the Labour Force*, from 1984 to 2001 and the *Labour Force Survey (Detailed Tabulation)* since 2002.

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dispatched workers – persons employed by temporary worker agencies who are sent to firms on a fixed-term basis – also rose sharply to 8.3% in 2008 following the 1999 reform that allowed them to work in most sectors and job categories, with some exceptions, notably construction and health care.[3] The number of temporary worker agencies increased from 12 thousand in 1993 to around 83 thousand at present (Duell *et al.*, 2010).

Table 5.1. **Employed persons by status**[1]

	Total	Non-regular workers		*Of which*			
				Part-time workers	Temporary workers[2]	Dispatched workers	Other
	Million	Million	Per cent	Per cent	Per cent	Per cent	Per cent
1990	43.7	8.8	20.2	80.6	19.4	–	–
1995	47.8	10.0	20.9	82.4	17.6	–	–
2000	49.0	12.7	26.0	84.7	12.6	2.6	–
2005	49.2	15.9	32.3	68.8	17.4	6.0	7.8
2006	50.0	16.6	33.2	67.4	17.0	7.3	8.4
2007	51.2	17.3	33.7	67.5	16.9	7.0	8.6
2008	51.1	17.4	34.0	65.8	17.8	8.3	8.0
2009	50.9	17.0	33.4	66.6	18.7	6.8	7.8
2010	50.7	17.1	33.7	67.3	19.0	5.7	8.0

1. Data are as of February each year until 2000 and as of the first quarter since 2005. The data exclude executives.
2. From 1990 to 2000, data include both dispatched workers and other.

Source: Ministry of Internal Affairs and Communications.

However, the number of dispatched workers fell sharply in the wake of the 2008 crisis, triggering a national debate about the non-regular worker issue.

A comparison of regular and non-regular workers

A 2007 government survey found that non-regular workers tend to be older, less educated and concentrated in the service sector (Table 5.2).

- In 2007, 16.4% of non-regular workers were in the over-60 age group, which accounts for 8% of employees (Panel A). In contrast, only 2.9% of regular workers were over 60.

Table 5.2. **A comparison of regular and non-regular workers**

In per cent unless indicated otherwise

A. Age	Under age 30	30 to 59	Over age 60
All employees	15.7	76.3	8.0
Regular workers	15.0	82.1	2.9
Non-regular workers	16.8	66.7	16.4
B. Gender	Male	Female	Female's share of:
Regular workers	76.3	42.2	27.9
Non-regular workers	23.7	57.8	63.0
C. Education[1]	Middle school	High school	University
Regular workers	3.5	39.7	36.7
Non-regular workers	7.8	57.3	11.8
D. Occupation[2]	Clerical workers	Management	Professional/technical workers
Regular workers	35.4	19.1	19.4
Non-regular workers	26.1	2.7	10.3
E. Sector[3]	Manufacturing	Services	Construction
Regular workers	70.3	54.3	85.7
Non-regular workers	29.7	45.7	14.3
F. By size of establishment[3] **(number of employees)**	More than 1 000	30 to 999	5 to 29
Regular workers	74.2	61.8	61.3
Non-regular workers	25.8	38.2	38.7
G. Wage payment system	By hour	By day	By month or year
Regular workers	0.1	5.7	91.1
Non-regular workers	64.5	9.3	22.3
H. Monthly payment in yen	Less than 100 thousand	100 to 200 thousand	More than 200 thousand
Regular workers	0.2	11.8	86.8
Non-regular workers	40.5	37.4	21.5
I. Tenure[4]	Less than 1 year	1 to 10 years	More than 10 years
Regular workers	3.7	45.1	49.4
Non-regular workers	21.0	64.3	12.8
J. Main income earner	The worker	Spouse	Parents
Regular workers	84.9	8.8	5.0
Non-regular workers	45.4	41.5	8.1
K. Coverage by social insurance	Employees' pension scheme	Employees' health insurance	Employment insurance
Regular workers	98.7	99.7	99.2
Non-regular workers	46.6	48.6	60.0

1. Highest level of education attained. University includes graduate schools. The remainder (20.2% for regular workers and 23.1% for non-regular workers) are graduates of specialised training colleges and colleges of technology.
2. For the top three occupations for regular workers.
3. Figures show the percentage of regular and non-regular employees in each sector and for each size of establishment.
4. Figures shown are from the 2003 survey, as this question was not included in the most recent survey in 2007.

Source: Ministry of Health, Labour and Welfare (2008b), *General Survey of Diversified Types of Employment, 2007*.

- More than half of female employees are non-regular workers (Panel B). Consequently, women account for 63.0% of non-regular workers, but only 27.9% of regular workers.
- Non-regular workers tend to be less educated; only 11.8% have at least a university degree compared to 36.7% for regular workers (Panel C).
- The proportion of non-regular workers is high among clerical workers, while they are under-represented among professional and technical workers and in management (Panel D).
- Non-regular workers account for almost one-half of employees in the service sector but less than one-third in manufacturing (Panel E).
- Non-regular workers are more prevalent in companies with less than 1 000 workers (Panel F).
- Most non-regular workers are paid an hourly wage while regular workers usually receive a monthly or annual salary (Panel G).
- Almost 80% of non-regular workers are paid less than 200 thousand yen (about $2 450) a month, while 86.8% of regular workers are paid more than that amount (Panel H).
- The lower wages of non-regular workers reflect their shorter tenure. Only 12.8% have worked more than ten years in the same firm, compared to 49.4% for regular workers (Panel I).
- Nearly half of non-regular workers are the main income source for their family (Panel J).
- Non-regular workers receive significantly less coverage by the social insurance system (Panel K).

Factors explaining the rise in non-regular employment

In a 2007 government survey that asked firms why they hire non-regular workers, the most important reasons were related to employment flexibility. Close to a third of firms reported that they hired non-regular workers to cope with fluctuations in demand (Table 5.3, Column B). In addition, around one-fifth did so to facilitate adjustment to business fluctuations and another fifth to reduce working time (Columns F and H). As Japan's average growth rate slowed during the past 40 years, the cost to firms of keeping excess workers has risen significantly. A recent study found that the increase in the responsiveness of employment to output trends over the past two decades in Japan is a

Table 5.3. **Reasons given by firms for hiring non-regular workers**[1]

Year of survey	To reduce wage costs	To cope with daily or weekly fluctuations in demand	To hire work-ready and experienced workers	To work on skilled tasks	Difficulty in finding regular workers	To facilitate adjustment to business fluctuations	To cut non-wage costs	To cope with long business hours	To re-employ older workers	To specialise regular workers in key tasks
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)
1999	61.0	29.6	23.7	23.8	11.6	30.7	–	20.6	10.3	15.8
2003	51.7	28.0	26.3	23.1	20.1	26.5	22.5	18.1	14.2	15.4
2007	40.8	31.8	25.9	24.3	22.0	21.1	21.1	18.9	18.9	16.8
Part-time	41.1	37.2	11.6	12.7	17.6	18.0	21.3	21.7	7.9	15.3
Dispatched	18.8	13.1	35.2	20.2	26.0	25.7	16.6	3.4	2.6	20.4
Temporary	28.3	4.5	38.3	43.6	18.2	15.6	8.1	6.4	11.0	10.6

1. Firms were allowed to give multiple answers. The figures for part-time, dispatched and temporary workers are for 2007.
Source: Ministry of Health, Labour and Welfare (2008b), *General Survey of Diversified Types of Employment, 2007*.

result of the rise in non-regular employment (Steinberg and Nakane, 2011). Another study of 8 000 Japanese firms between 1994 and 2006 showed that the greater the volatility of a firm's sales growth, the greater the share of non-regular workers in the firm (Morikawa, 2010). The effect is strongest in manufacturing and for dispatched workers. Moreover, among firms facing highly volatile sales, the ratio of non-regular workers has a significantly positive relationship with total factor productivity. In sum, firms hedge against uncertainty about business conditions by using non-regular workers to enhance employment flexibility, which depends on the level of employment protection. Economic theory suggests that employment protection reduces productivity by distorting firms' production decisions. Indeed, a recent study found that firms in prefectures with tighter employment protection based on judicial decisions had lower total factor productivity, in part by discouraging innovation (Okudaira *et al*, 2008).[4] The authorities believe, however, that other factors explain this variation between prefectures.

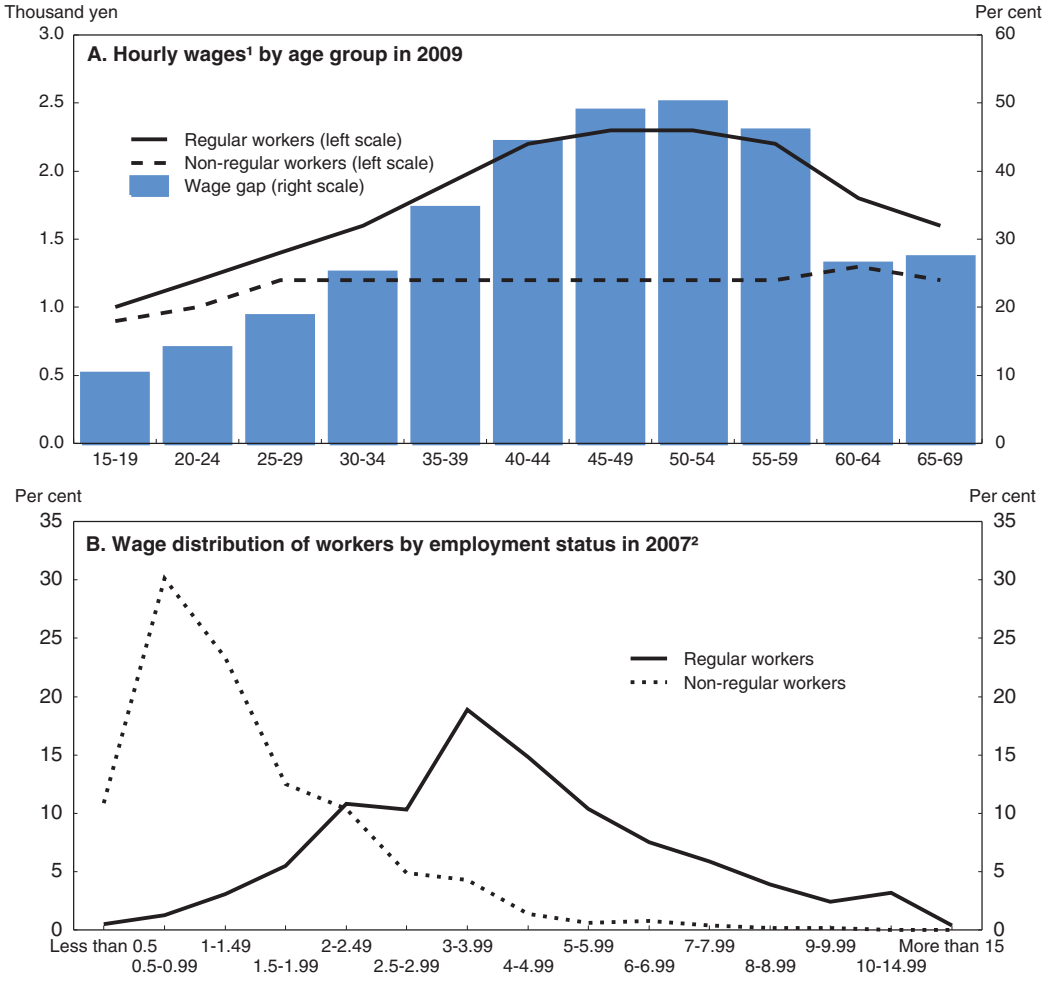
One consequence is that non-regular workers play an important role as a buffer in protecting regular workers in whom firms have invested significantly. Non-regular workers effectively played their intended role in the wake of the 2008 crisis, as their number dropped by 0.4 million (1% of total employees) between 2008 and 2009, accounting for two-thirds of the fall in dependent employment over that period. The reduction mostly came from cuts in dispatched workers and the non-renewal of temporary employment contracts. Consequently, the unemployment rate of persons who had previously worked as dispatched workers tripled from 6% in 2007 to 18% in 2009. The impact of the 2008 recession on non-regular workers was significantly different than the recessions that began in 1997 and 2000, which recorded large reductions in regular workers (Figure 5.1).

In the 2007 government survey, cutting wage costs was another important reason for hiring non-regular workers, cited by 40.8%, of firms, although its importance has declined significantly during the past decade (Table 5.3, Panel A). Indeed, non-regular workers are paid only 60% of regular workers per hour (excluding bonus payments). Although the gap is smaller for younger workers, regular workers' earnings rise sharply with experience, given the seniority-based wage system (Figure 5.2).[5] For the 50-to-54-age group, their hourly wages are double those of non-regular workers, who are penalised by their relatively short tenure in the same firm (Table 5.2, Panel I).

In addition to lower hourly wages, non-regular workers receive smaller bonus payments or none at all, further widening the earnings gap. The total income of non-regular workers, including bonuses and overtime, is only 54% of that of regular workers. On an annual basis, more than 70% of non-regular workers were paid less than 2 million yen ($24 600), compared to 10% of regular workers (Figure 5.2, Panel B). Moreover, some non-regular workers are not included in the retirement allowance paid by firms.[6] A related reason for hiring non-regular workers was to reduce non-wage costs (Table 5.3, Column G). Less than half of non-regular workers are included in employees' pension and health insurance, while less than two-thirds are covered by employment insurance, in contrast to virtually complete coverage of regular workers (Table 5.2, Panel K).[7] Employing non-regular workers not covered by any social insurance scheme saves firms 13% in non-wage costs.

The 2007 survey also asked workers why they chose non-regular employment (Table 5.4). The responses tend to fall into three categories. *First*, a number of workers, particularly part-time workers, cited the flexibility and reduced pressure of non-regular employment: *i)* to work at convenient times (Column A); *ii)* to balance work with family

Figure 5.2. **Significant wage gaps between regular and non-regular workers**



1. Scheduled earnings excluding overtime and bonus payments.
2. Wages in million yen.

Source: Ministry of Health, Labour and Welfare (2009), *Basic Survey on Wage Structure*, 2009 and Ministry of Internal Affairs and Communications (2007), *Employment Status Survey*, 2007.

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Table 5.4. **Reasons given by workers for choosing non-regular employment**[1]

Year of survey	To work at convenient times	To support the family budget	To balance family and other activities	To reduce commuting time	To obtain discretionary income	Cannot find regular employment	To limit working time	To make use of professsional qualifications and skills	To work on easy and less responsible tasks	To avoid being tied down by the company	Easy to adjust hours and earnings
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)
1999	32.8	34.2	29.4	30.5	–	14.0	26.3	10.9	11.7	8.7	–
2003	30.9	35.0	22.6	28.1	24.6	25.8	23.2	14.5	9.4	8.6	9.5
2007	42.0	34.8	25.3	23.2	20.8	18.9	15.5	14.9	9.4	6.6	5.5
Part-time	55.9	42.4	32.0	19.2	22.7	12.2	19.2	9.0	8.6	5.8	7.1
Dispatched	17.7	16.1	15.9	8.8	17.4	37.3	8.8	18.5	12.4	12.3	1.6
Temporary	13.5	18.5	11.3	9.3	13.5	31.5	9.3	37.0	6.2	7.0	2.1

1. Workers were allowed to give multiple answers. The figures for part-time, dispatched and temporary workers are for 2007.
Source: Ministry of Health, Labour and Welfare (2008b), *General Survey of Diversified Types of Employment, 2007*.

and other activities (Column C); *iii)* to reduce commuting time (Column D); and *iv)* to limit working time (Column G). Regular employment is demanding, with long hours, overtime, intense pressure and frequent transfers to other work locations, making it difficult to balance family life with regular jobs for both parents. *Second*, 34.8% said that they worked as non-regular workers to support the family budget (Column B) and 20.8% that they did so to obtain discretionary income (Column E). Such workers presumably would have been happy to receive the higher wages and benefits of regular workers if it fit their schedule.

A *third* reason for choosing non-regular employment is the failure to find regular employment (Column F). This proportion fell from 25.8% in 2003 to 18.9% in 2007, reflecting the strength and duration of the economic expansion. According to the same survey, the share of part-time workers who wished to become regular workers increased from 7% in 1999 to 21% in 2007, while the share rose from around 20% to over 50% for temporary and dispatched workers over the same period. For non-regular workers between ages 20 and 25, over 60% wish to become regular workers. These results point to a dichotomy between part-time workers, most of whom prefer the flexibility and low demands of non-regular employment despite lower wages, and temporary and dispatched employees, many of whom are involuntarily employed as non-regular workers.

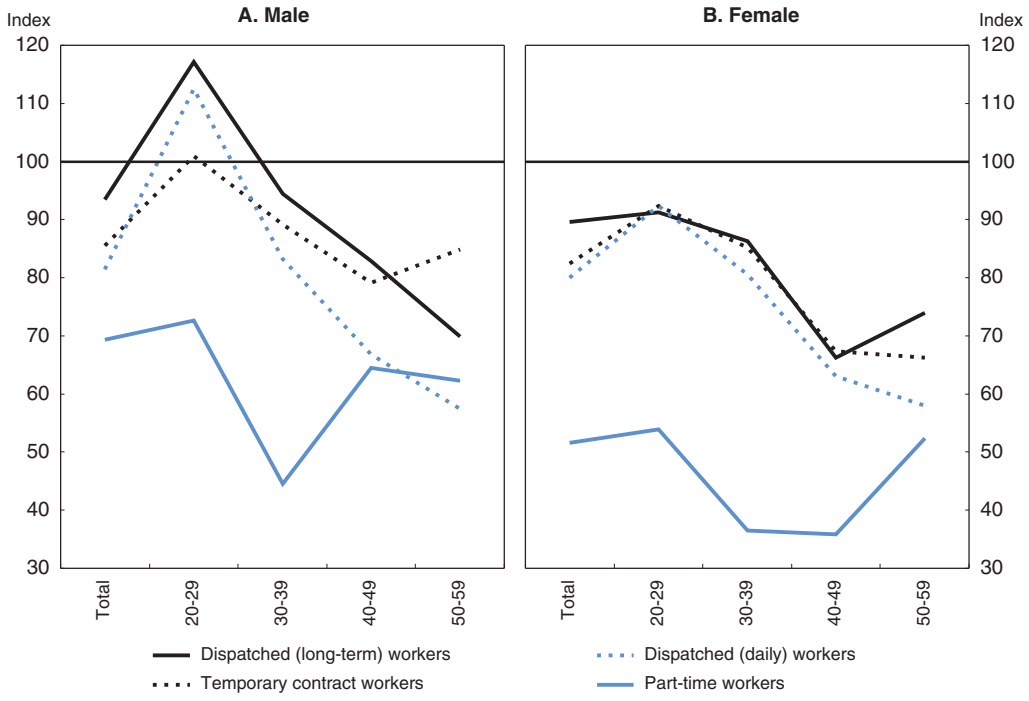
Problems associated with the rising share of non-regular workers

The falling share of regular workers has positive aspects, particularly for firms in terms of flexibility and labour costs, and for workers preferring more flexible work patterns. However, the increased reliance on non-regular workers also has negative implications for economic growth and equality:

- *Less firm-based training:* The short tenure of non-regular workers reduces the incentive for firms to invest in training them. Only 28% of firms provided systematic on-the-job training to non-regular workers, less than half the proportion for regular workers. In addition to the impact on the workers, the rising share of workers receiving limited training has negative long-term implications for growth.
- *A significant wage gap:* Even after adjusting for workers' type of job and educational attainment, the gap between the hourly wages of full and part-time workers is 31% for males and 48% for females (Figure 5.3). The gap is less pronounced for other types of non-regular workers, ranging from 7% to 20%. The fact that nearly half of firms hire workers to reduce wage costs also suggests that the gap in productivity does not match the wage difference. The upward trend in income inequality among the working-age population in Japan since the mid-1990s is largely explained by the increasing proportion of non-regular workers, as well as by population ageing (Cabinet Office, 2009).[8] Non-regular employment also boosts the relative poverty rate; the 15% rate in Japan in the mid-2000s was the sixth highest in the OECD area (Figure 5.4).[9]
- *Precarious employment:* Non-regular workers accounted for two-thirds of the fall in dependent employment between 2008 and 2009. Moreover, they face consistently higher unemployment rates.
- *Less coverage by the social safety net:* Around 40% of non-regular workers are not covered by employment insurance, even though that group is most vulnerable to unemployment during downturns. In addition, the share of households headed by someone of working-age receiving public assistance was only 0.7% in Japan in 2008. The rate ranges from around 1% to 7% in other OECD countries, with a median of about 3% (Duell *et al.*, 2010).

Figure 5.3. **Wage differentials by employment status adjusted for employee characteristics**[1]

Regular workers' wage (monthly wage excluding bonus payments) = 100 in 2007



1. Controlling for employees' education and the industry in which they are employed.

Source: Asao (2010).

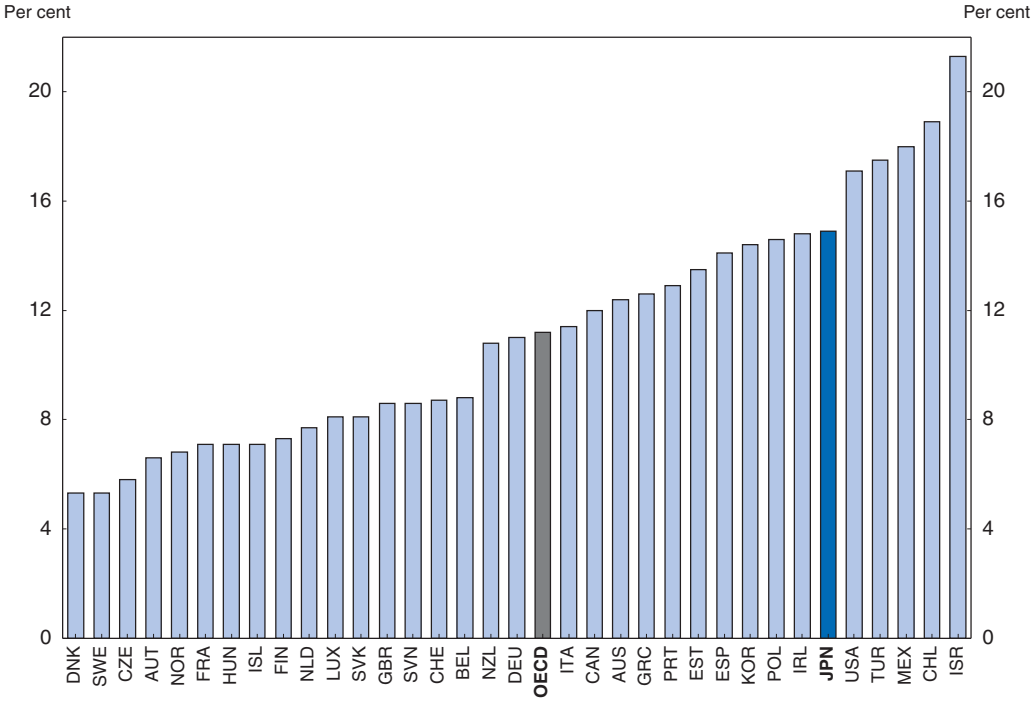
StatLink http://dx.doi.org/10.1787/888932389170

Moreover, less than half of non-regular workers are covered by employees' pension insurance, and thus receive smaller benefits after retirement.

Labour market segmentation: the lack of mobility between non-regular and regular employment

The negative consequences of dualism are exacerbated by the limited mobility between the segments of the labour market, in contrast to many other OECD countries, where a large share of temporary workers moves into permanent employment (OECD, 2006). Since 2002, only 370 thousand non-regular workers a year on average – about 2% of the total – become regular workers. Indeed, a recent study found that 23.7% of workers remained at the firm that hired them directly from school and retained their regular status, while another 11.9% had retained their regular status while moving from one firm to another (Table 5.5). In contrast, only 13.9% had shifted from non-regular to regular status, of which one-fifth had been promoted within the same firm. The study also showed that a smaller proportion of women are hired as regular workers and fewer females who are non-regular workers make the transition to regular status than males. Movement in the other direction is even smaller; only 3.8% were non-regular workers who had previously been regular workers, reflecting reluctance to lose the advantages attached to regular status. In sum, non-regular employment is not a stepping stone into regular jobs. Instead, a worker who accepts non-regular employment faces a high probability of never escaping this category, with its accompanying low wages, reduced training, precarious jobs and limited social insurance coverage.

Figure 5.4. **International comparison of relative poverty rates in the mid-2000s**[1]



1. Poverty rates are defined as the share of individuals with equivalised disposable income less than 50% of the median for the entire population. Countries are ranked, from left to right, in increasing order of poverty rates. The income concept used is that of household disposable income adjusted for household size.

Source: OECD (2011), *Income distribution questionnaire*.

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Another recent study, which included around 23 thousand non-regular workers, found that 10.3% became regular workers. This study identified the characteristics that hindered or facilitated this transition (Figure 5.5):

- Part-time workers were the least likely to become regular workers, perhaps reflecting the fact that many prefer the flexibility associated with such employment. However, even the proportion of temporary and dispatched workers, who as a group are more desirous of regular status, is relatively low (Panel A).

Table 5.5. **Employees by past employment history**

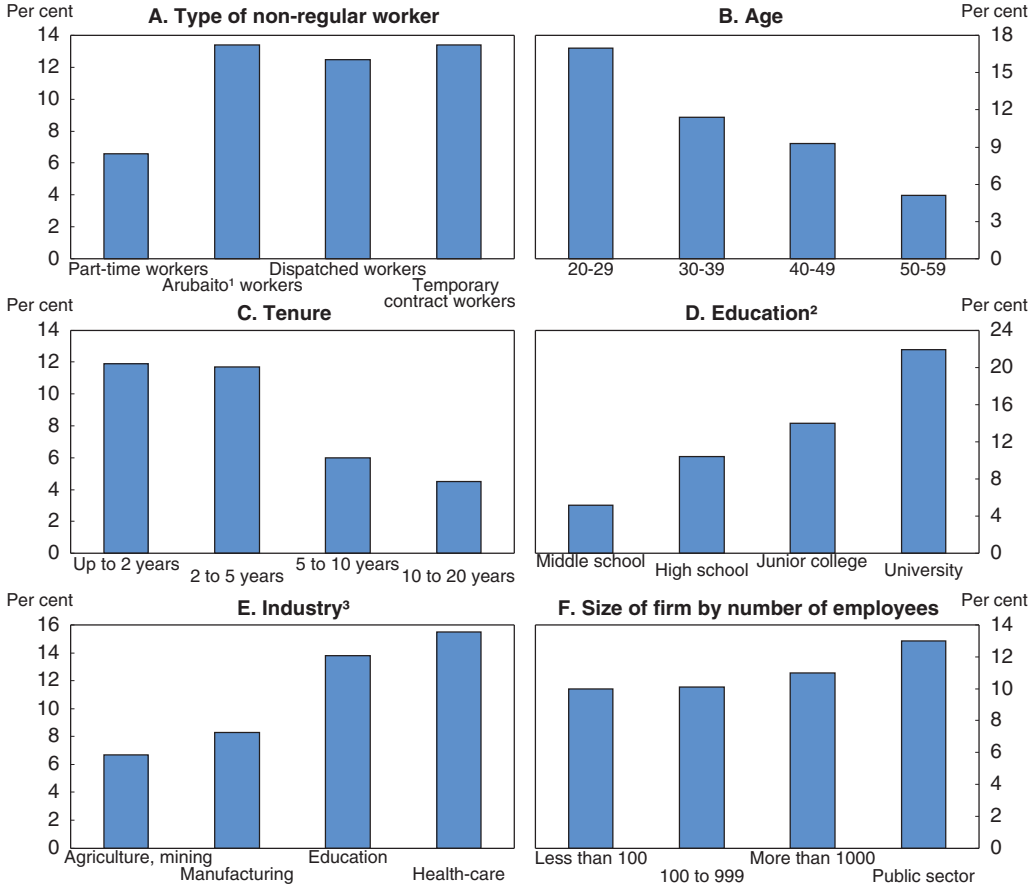
Survey of 4 000 workers between the ages of 25 and 44, in per cent

	Men	Women	Total
Regular workers	75.0	34.9	58.4
Workers hired directly from school who maintain regular status	30.9	13.5	23.7
Workers who changed jobs while maintaining regular status	17.7	3.7	11.9
Non-regular workers who became regular workers in a different firm	11.5	9.6	10.7
Non-regular workers who became regular workers in the same firm	3.6	2.5	3.2
Workers who were self-employed or voluntarily unemployed	11.3	5.7	9.0
Non-regular workers	8.6	53.8	27.3
Workers with experience as regular workers	1.3	7.4	3.8
Workers who have remained non-regular workers	3.9	31.1	15.2
Self-employed, executives and family workers	16.4	11.4	14.3
Workers with experience changing from non-regular to regular status	1.7	1.1	1.5

Source: Kosugi (2010).

Figure 5.5. **Workers making the transition from non-regular to regular status**

Based on a survey of around 23 thousand non-regular workers



1. *Arubaito* refers to part-time work by students.
2. By the highest level of education completed. The junior college category also includes graduates of specialised training colleges, while the university category also includes graduate school education.
3. This panel selects the two highest and two lowest of 13 industrial categories.

Source: Genda (2010).

StatLink http://dx.doi.org/10.1787/888932389208

- The probability of making the transition to regular workers is higher for younger workers. Beyond the age of 40, less than 10% make the transition (Panel B).
- The relationship between age and the transition to regular status is linked to tenure; the longer an employee remains a non-regular worker, the harder it is to find regular employment. After five years, less than 6% of non-regular workers make the transition to regular status (Panel C).
- Educational attainment is key. While 22% of non-regular workers with a university education make the transition, only 5% of those with only a middle school education do (Panel D).
- The possibility of becoming regular workers varies widely between sectors. It is only 8% in manufacturing, compared to more than 14% in health care and educational services (Panel E).
- The size of the firm, in contrast, has little influence on whether a non-regular worker becomes a regular worker. However, the chances are higher in the public sector (Panel F).

Another study found that workers who were initially unemployed after graduation had a better chance of being a regular worker than those who accepted non-regular jobs during the first 15 years after graduation, by which point the probabilities of finding regular employment converge (Esteban-Pretel *et al.*, 2009). The stigma attached to such jobs in a labour market segmented between regular and non-regular workers sends negative signals to potential employers. Nevertheless, it is not easy for unemployed workers to get regular jobs, as only 20% of large firms treat past graduates equally with new graduates (Cabinet Office, 2006). During economic downturns, the number of graduates who find jobs thus falls sharply, as reducing the hiring of new graduates is another way for firms to adjust employment without dismissing regular workers. Given that graduation is the key point of entry to regular employment, the timing of graduation from school has a major impact on lifetime earnings, as non-regular workers have significantly lower wages, bonus payments, retirement allowance and pension payments.

Policies to address the upward trend in labour market dualism

Revisions to labour law

The government plans to take steps by FY 2013 to achieve the New Growth Strategy's goal of "equal and equitable treatment" of all workers, as well as to promote the shift of non-permanent workers to permanent status. In addition, the Labour Policy Council, a government advisory body, began deliberations in 2010 on fixed-term employment contracts with a goal of recommending reforms by 2012. One option under review is to put limits on the renewal of non-regular contracts. However, Spain's experience with limits on short-term contracts shows that firms tend to dismiss temporary workers, even when satisfied with their performance, to avoid the costs associated with permanent workers, leading to higher turnover and unemployment (Wölfl and Mora-Sanguinetti, 2011). In addition, the Japanese government proposed a law in 2010 to legally restrict the use of dispatched workers for less than two months. The use of dispatched workers for less than one year in manufacturing would also be prohibited. This would be accompanied by policies to promote their continued employment.[10] Regular workers strongly support rules on the use of temporary workers, who substitute for regular workers, while non-regular workers are opposed in general to restrictions on such work.[11] In essence, labour market dualism can be viewed as a conflict between regular and non-regular workers.

Given the importance that firms attach to employment flexibility, restrictions on the use of non-regular workers may not necessarily prompt them to hire more regular workers. Instead, they may rely more on increased overtime by current employees, capital deepening or shifting production overseas.[12] Nevertheless, the negative implications of the rising share of non-regular workers call for reform. Indeed, the 2007 survey cited above suggests that almost 4 million employees are involuntary non-regular workers, well above the number of unemployed. Moreover, after declining in 2009, the number and share of non-regular workers resumed its upward trend in 2010 and the government expects that it will continue to increase.

Revisions of the Employment Insurance Law in 2009 and 2010 relaxed the eligibility requirement from workers employed at least one year to those employed 31 days or more. The priority now should be to improve the enforcement of the extended coverage. While the 2010 revision extended coverage to an additional 2.6 million workers, the number of contributors during the first six months of FY 2010 increased by only about 0.75 million (Duell *et al.*, 2010).

Allowing the authorities to compare the wage bill an employer declares when calculating corporate or entrepreneurial taxable income with the wage bill on which social insurance contributions have been paid would promote compliance.[13] Unifying the collection of taxes and social insurance contributions would also be one way of improving compliance.

The government has introduced a number of policies to prevent discrimination against non-regular workers. *First*, the 2007 revision of the Part-time Workers Law encourages "balanced treatment" of part-time workers relative to regular workers and the shift from part-time to regular employment through a system of internal promotions and transfers. It also prohibits discriminatory treatment of part-time workers who have the same job description, job rotation and type of labour contract, *i.e.* indefinite, as regular workers. However, it is difficult to determine in practice when unequal treatment constitutes discrimination. The Minister of Health, Labour and Welfare can recommend that firms change labour practices but no penalties are imposed on firms that fail to provide equal treatment and the revised law still allows firms to pay non-permanent workers less than regular workers even if they perform the same job. *Second*, the government subsidises firms that offer permanent jobs to non-regular workers. Between April 2010 and January 2011, subsidies were given to firms that promoted a total of 30 thousand non-regular workers to regular status. However, the number of workers was around 0.8% of non-regular workers who wish to become regular workers according to the surveys cited above, suggesting that the impact of the subsidies was more symbolic than real. In general, subsidies to firms are not the preferred option, given high deadweight costs.

Employment protection

Another aspect of reducing non-regular employment is to relax effective employment protection for regular workers so that firms do not have to hire non-regular workers in order to have the flexibility to adjust employment over the business cycle. The Labour Standards Law requires firms to give prior notice of 30 days or pay 30 days of salary when they dismiss employees, with no mandatory severance pay, conditions that are not particularly onerous. Overall, Japan ranks below the average of member countries in the OECD index of employment protection.[14]

However, the key problem of employment protection in Japan is not its strength but its ambiguity. The 2007 revision of the Labour Contract Law states that any dismissal of workers that is not objectively justifiable and that is not considered to be acceptable by society's standards shall be deemed an abuse of power and is therefore invalid. The vagueness of the law leaves the legal system broad scope for interpretation. Judicial precedents have set four criteria to determine whether employment adjustment as a result of corporate downsizing can be deemed an abuse of power by a firm: *i*) the necessity of the firm reducing its workforce; *ii*) whether efforts were made to avoid dismissals, such as by taking alternative measures that could achieve the necessary reduction; *iii*) whether the selection of employees for dismissal was reasonable and objective; and *iv*) whether the overall dismissal procedure was judged to be acceptable. If a dismissal fails to meet these criteria, it may be rendered invalid.[15] When firms have to reduce the number of regular workers, they tend to use "honourary retirement", accompanied by benefits for departing workers, which does not always achieve the desired goals.[16]

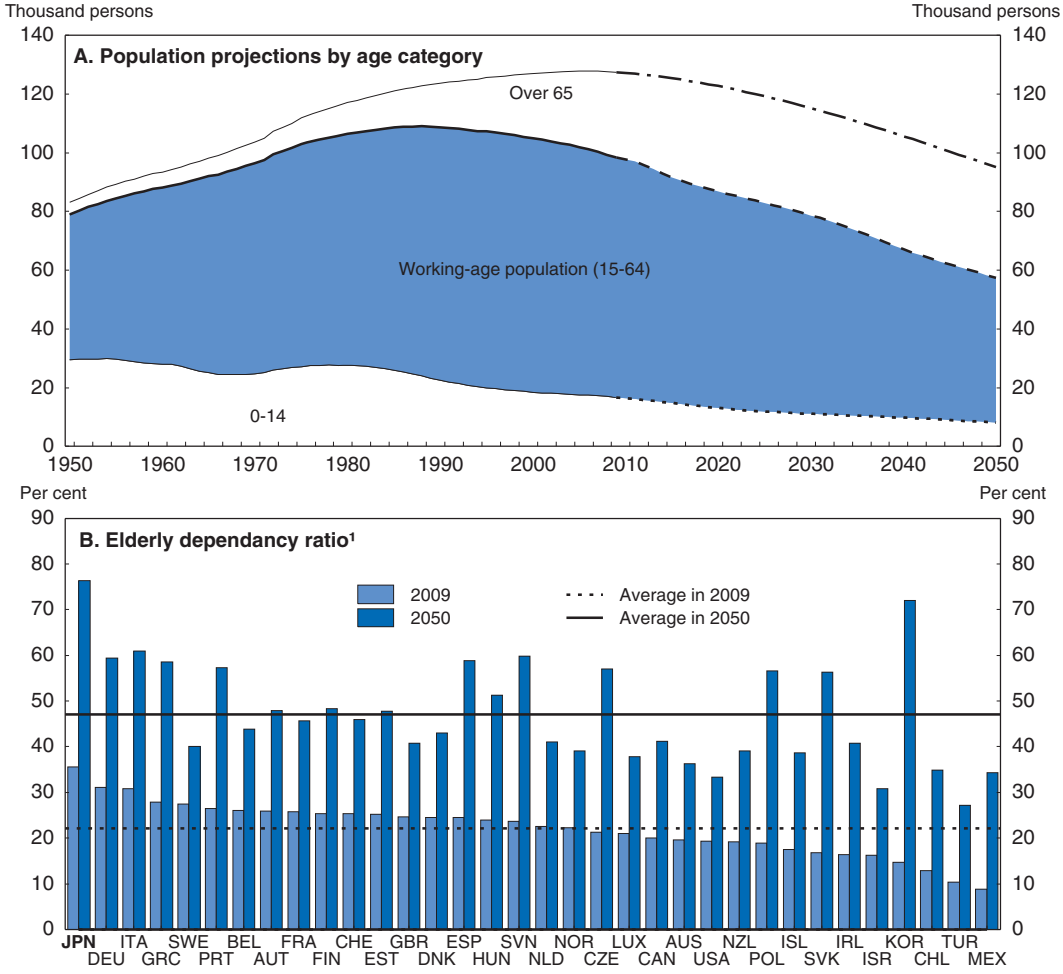
The unpredictability of judicial procedures to review *ex post* employment adjustment increases the cost and uncertainty for firms, thus discouraging them from hiring workers on indefinite contracts.[17] Indeed, international evidence demonstrates that the creation of

temporary jobs is a common response by firms to high costs of reducing permanent jobs (Kahn, 2010). Some observers in Japan have proposed mitigating the problem by introducing a new type of contract. Under this third option, workers would accept less employment protection than regular workers but would receive higher wages than non-regular workers. However, such a system would be complicated to implement in practice and is likely to be strongly resisted by regular workers, who would view it as a first step to eventually reducing their employment projection as well. In short, further segmenting the labour market by introducing a "third way" does not appear to be feasible.

Encouraging greater labour market participation

Population ageing presents an important challenge to Japan. Its population between the ages of 15 and 64 fell by 5% between 1994 and 2008, although the upward trend in the labour force participation rate offset almost 90% of the impact on the size of the labour force (Figure 5.6). The government projects an additional 10% decline in the working-age

Figure 5.6. **Rapid population ageing in Japan**



1. The over-65 population as a share of the working-age (15 to 64) population.

Source: National Institute of Population and Social Security Research, *Population Projection for Japan* (December 2006 version), and *OECD Society at a Glance Database*.

StatLink http://dx.doi.org/10.1787/888932389227

population by 2020 and a nearly 40% fall by 2050. Rapid population ageing will keep Japan's elderly dependency ratio the highest in the OECD area (Panel B). The ratio of working-age persons to the elderly will fall from 2.8 in 2009 to 1.3 in 2050. Immigration could partially offset falling population (see Chapter 3), although it would have to rise by a factor of 54 to stabilise the population (Nyce and Schieber, 2001).[18] The priority therefore should be to boost labour force participation, particularly among women, the elderly and youth. The New Growth Strategy set an objective of increasing the female employment rate in the 25-to-44-age group from 66% to 73% by 2020 and raising the share of women who remain in the labour force following the birth of their first child from 38% to 55%.[19]

Boosting female labour force participation

The participation rate of prime-age women (the 25-to-54-age group) rose from 65% in 1994 to 71% in 2009. The increase has smoothed the M-shaped pattern of female labour force participation, which reflects the withdrawal of a majority of women at the time of childbirth and their later return (Figure 5.7). Rising female participation reflects a change in the economic and social environment, the delayed age of marriage, the fall in the birth rate and institutional reforms aimed at promoting equal employment opportunities for female workers and "work-life balance". Despite the increase, the participation rate of prime-age women in 2009 was the sixth lowest in the OECD area, reflecting the fact that around 60% of female workers still withdraw from the labour force when their first child is born, generally between the ages of 25 and 34.[20] Moreover, the rise in the participation rate

Figure 5.7. **Changes in labour force participation and the share who are non-regular workers by age and gender**[1]

1. The share of non-regular workers is available for six age groups: 15-24, 25-34, 35-44, 45-54, 55-64 and over 65.

Source: Ministry of Internal Affairs and Communications, *Labour Force Survey*, and *Labour Force Survey (Detailed Tabulation)*.

StatLink http://dx.doi.org/10.1787/888932389246

since 1994 has been driven by a growing number of young non-regular workers, which accounted for more than 90% of the increase in female employees in the 25-to-34-age group, indicating a relatively tenuous connection to the labour market.

The government should address factors that discourage female labour force participation. One priority is to enhance the availability of affordable and high-quality childcare, in part by integrating childcare and kindergarten (Chapter 4). A second key is to reform the tax and benefit system to remove disincentives to work by secondary earners. Spouses with annual earnings below 1 million yen (about 30% of average full-time earnings) are exempt from income tax, and can be claimed as a tax deduction by the primary earner. Many family allowances paid by firms are based on this threshold. In addition, second-earners are covered by the primary-earner's pension, health and long-term nursing care insurance, without paying contributions themselves, if their earnings are below 1.3 million yen. A survey of married part-time workers reported that a quarter reduced working hours to avoid taxes and social insurance contributions.

More fundamentally, the traditional labour market system, which is based on a model of one earner in a household working long hours, makes it difficult for both parents to work as regular workers, leaving most women to work part-time or not at all. In 2008, 24% of all employees worked 49 hours or more per week and one-fifth of male employees in their thirties worked at least 60 hours. The participation rate for university-educated women, at 68% in 2009, is only 4 percentage points higher than for women with a high school degree. For the OECD area, the rate for university-educated women is 82%, more than 11 percentage points higher, reflecting the higher opportunity cost of not working for women with higher education (OECD, 2010). Female workers employed as regular workers prior to interrupting their careers for children are likely to end up in non-regular employment, with its negative aspects. Moving away from traditional labour market practices is thus key to promote female employment.

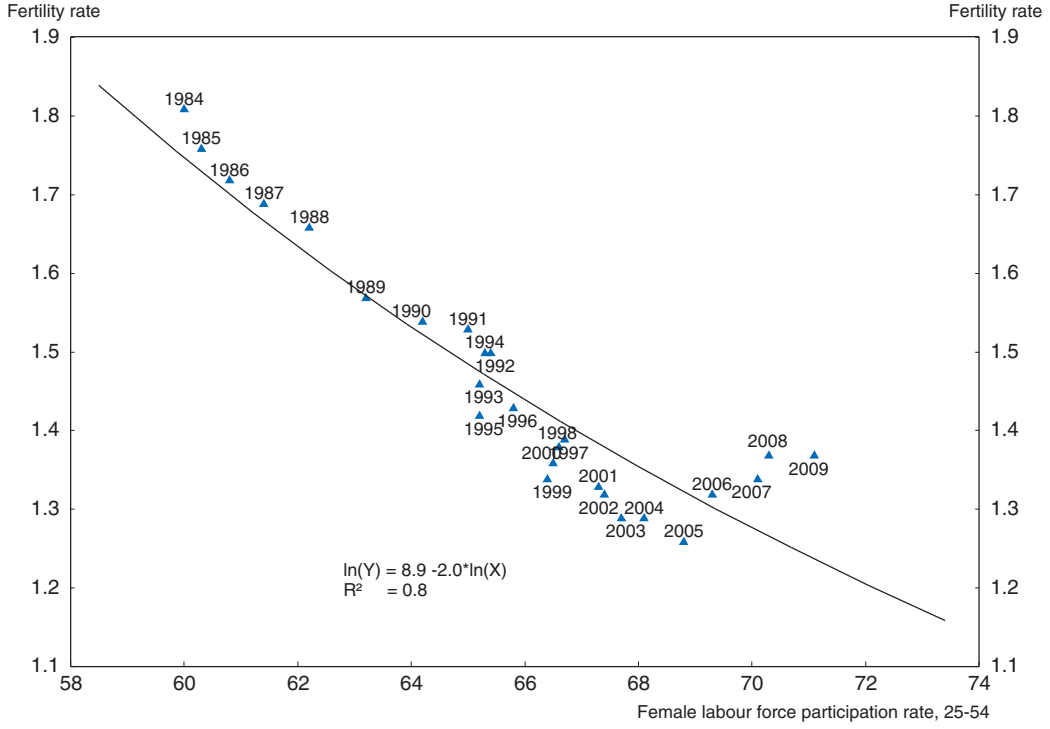
One priority is thus to improve work-life balance to facilitate female employment, especially as regular workers. The government and private sector addressed this issue in the 2007 Work-Life Balance Charter, which aims at creating a society where people can achieve economic independence with jobs, have sufficient time to enjoy healthy and affluent lives and choose diverse work styles (Cabinet Office, 2010). The revision of the Childcare and Family Care Leave Law that took effect in 2010 expanded childcare leave from 12 to 14 months if both parents take leave.[21] It also established five days of leave for employees to care for one family member and ten days for those who care for two or more family members. In addition, it limits overtime work and shortens working hours for parents with a child less than three years old. In April 2011, the requirement that firms draw up an action plan to promote work-life balance was expanded from firms with more than 300 workers to those with more than 100. In addition, the government provides subsidies to family-friendly companies.

In 2010, the government revised its 14 quantitative targets for 2020 that measure progress toward work-life balance.[22] However, Japan is on track to achieve only four of the 14 targets by 2020, notably those related to increasing the employment rate and reducing working hours. The number of days of annual leave taken as a share of the total entitlement is below 50% in recent years, far below the 70% target. Meanwhile, only 1.7% of men took childcare leave in 2009, compared with the target of 13%. In sum, traditional workplace practices and the culture of long hours make it difficult to achieve work-life

balance. More effort to ease the combination of work and family life by changing workplace practices is necessary to boost female participation.

The rise in female participation since 1984 has been accompanied by a sharp fall in the fertility rate to 1.4 (Figure 5.8), although it has risen slightly from 1.3 in 2005. Achieving the government's goal of boosting both the fertility rate and female labour force participation requires expanding the availability of childcare. Indeed, OECD studies have found a positive relationship between childcare and female employment (OECD, 2009a) and between childcare and the fertility rate (D'Addio and Mira d'Ercole, 2005). In addition, improving work-life balance would help Japan attain both targets. On the other hand, policies that reduce the direct cost of children, such as the child allowance that was introduced in Japan in 2010 (Chapter 2), tend to boost fertility rates while reducing female employment (Jaumotte, 2003).

Figure 5.8. **The fertility rate and female labour force participation in Japan**



Source: OECD ELS Database and *OECD Country Statistical Profiles 2010 Database*.

StatLink http://dx.doi.org/10.1787/888932389265

Promoting more efficient use of older workers

The employment rate for older workers (aged 55 to 64) in Japan was 65.5% in 2009, well above the OECD average of 54.5%, reflecting in part relatively low pension benefits (OECD, 2009c). Employment is high despite mandatory retirement (the *teinen* system), which most firms set at age 60.[23] Mandatory retirement is a key element of traditional Japanese labour practices. *First*, given that employment protection makes it difficult to dismiss regular workers, firms rely on mandatory retirement to reduce staff. *Second*, firms agree to steep seniority-based wage profiles on the condition that they can force older workers to retire when wages surpass productivity. However, a large number of retirees are re-employed as

non-regular workers: the share of non-regular workers in the over-65 age group was 70% in 2010, an increase of almost 20 percentage points since 1994.

Despite rising non-regular employment, the employment rate falls with age from 75% of the 55-to-59 group in 2010 to 57% of the 60-to-64 group and 36% of the 65-to-69 group. Given that Japan has the longest life expectancy in the OECD, at 82.6 years, mandatory retirement at age 60 is not appropriate. With the gradual increase in the eligibility age for the flat-rate portion of the pension to age 65 by 2025 for men and 2030 for women, a 2004 law gave firms a choice of: *i*) raising their retirement age; *ii*) abolishing their mandatory retirement age; and iii) introducing a continuous employment system in which firms allow some workers to continue working until the pension eligibility age. In 2010, 41% of firms rehired older workers without any condition, while the remainder require certain standards, such as health and performance. In 2009, 82% of firms maintained their retirement age at 60 and introduced a continuous employment system, while only 15% raised their retirement age and 3% abolished it. This helped lift the employment rate for the 60-to-64-age group from 53% in 2006 to 57% in 2010. The New Growth Strategy set a goal of raising it further to 63% by 2020.

The current system has a number of drawbacks. *First*, mandatory retirement requires firms to dismiss efficient workers whose productivity is still above the seniority-based wage at age 60, while high employment protection forces them to hoard inefficient workers until age 60. *Second*, the ability to hire retired workers on fixed-term contracts (mostly one-year) increases participation, but at the same time, the accompanying 30 to 40% drop in wages prompts many workers to leave the labour force. Moreover, another government survey reported that only half of firms have a continuous employment system beyond age 65, suggesting that many older workers are forced to retire at that age regardless of their preferences or ability.

The government should reduce disincentives to continued work by older persons, including those over 65, by improving work opportunities (OECD, 2004). Rather than encourage a higher retirement age, the objective should be to abolish the right of firms to set mandatory retirement and move to a flexible employment and wage system that is based on ability rather than age. This would encourage productive workers to remain employed and reduce the number that retire once they reach age 60. In addition, firms should be discouraged from setting age limits in job announcements. In 2007, 36% of announcements included age limits, although this was a big drop from 65% in 2004 (Duell *et al.,* 2010). Promoting higher participation of older workers would enhance Japan's growth potential and help sustain the social security system.

Labour force participation of youth and the problem of NEETs

The labour force participation rate for youth (aged 15 to 24) was 43.9% in 2009, well below the OECD average of 48.5% (OECD, 2010). Labour market conditions have worsened over the past 15 years, in part due to slow economic growth. *First*, the youth participation rate has declined from 47.6% in 1994, in contrast to the upward trend in other age groups, although this is partly due to higher participation in tertiary education. *Second*, the rate of new graduates hired fell from 68% to 56% over the same period. *Third*, the proportion of non-regular workers in the 15-to-24-age group doubled from 22% to 47%. The experience of other OECD countries shows that a high level of employment protection for permanent workers hinders the integration of young people in the labour market (OECD, 2008c). In addition, youth who are engaged "neither in employment nor in education nor in training"

(NEETs) have emerged as a major problem. The number of NEETs in the 15-to-34-age group rose from 0.4 million in 1994 to 0.6 million in 2009, about 2% of the age group.[24] The New Growth Strategy aims to place 100 thousand NEETs in jobs between FY 2011 and FY 2020 using "Local Youth Support Stations".

Most students have one opportunity – at the time of graduation – to enter a firm as a regular worker, as noted above. Consequently, employment status when leaving school has a large role in determining an individual's subsequent career. To provide more opportunities for youth, the government set a guideline in 2010 to encourage companies to treat persons who graduated during the preceding three years on equal ground as new graduates in making hiring decisions. The reduced hiring of new graduates as regular workers in recent years has pushed more youth into non-regular work or unemployment. At the same time, the share of firms that have hired non-regular workers due to difficulty in finding regular workers nearly doubled from 11.6% in the 1999 survey to 22.0% in the 2007 survey (Table 5.3, Column E). This suggests a problem of mismatch, given the rising number of involuntary non-regular workers. Better vocational education and measures to facilitate the school-to-work transition are needed to address this problem (Chapter 4). Practical work experience needs to be promoted through co-ordinated efforts by educational institutions, businesses and the government, as well as by encouraging tertiary schools to expand internship requirements. Such policies would also facilitate the transition from non-regular to regular contracts.

The role of job training outside of firms is relatively limited in Japan, as job training has been primarily a company responsibility, especially in large enterprises, in the context of long-term employment. Indeed, public spending on training in Japan was only 0.04% of GDP in FY 2008, less than one-third of the OECD average of 0.14% (OECD, 2010). It is essential to provide adequate training opportunities to non-regular workers, who account for almost one-half of employment between the ages of 15 and 24. Both the public and private sectors provide vocational training, with the public sector accounting for one-third of facilities and one-fifth of expenditures. In the private sector, schools and for-profit companies account for over half of training facilities, with non-profit organisations and foundations providing the rest, in co-operation with the central government. In FY 2010, public vocational training covered 220 thousand unemployed (around 7% of the total), 130 thousand employed and 23 thousand new graduates. Public institutional training is mainly focused on vocational skills in manufacturing and construction, while training for other sectors is contracted out to private training institutions, which number around 175 thousand (Duell *et al.*, 2010). Public training for the unemployed, which lasts up to six months, in most cases, is free of charge. In FY 2009, 74% of the participants in public institutional training were employed three months after the end of the programme, close to the target of 80%.

In addition to traditional training programmes, the government has launched several initiatives focused on youth that combine practical work experience with training to enhance the transition from non-regular employment and NEETs to regular jobs.[25] Perhaps most important is the Job Card system, which combines new and existing programmes targeted on recent graduates, *freeters* (young people who hold a series of non-regular jobs), women who left the labour force to care for children, and single mothers.[26] The Job Card is a document that records the individual's education, training and employment history, and can be used for further training and job search (Duell *et al.*, 2010). The New Growth Strategy

targets an increase in the number of Job Card holders from about 0.4 million in 2010 to 3 million by 2020.

The Job Card system covers participants in the Japanese Dual System, introduced in 2004, in which time spent in a training institution is matched with employer experience, as well as other types of training. OECD experience indicates that a dual system helps to integrate disadvantaged young people into the labour market, assuming that the training programme has a good reputation among employers. In the New Growth Strategy, the government pledged to create a "Japanese national vocational qualification system" as one of the 21 National Strategic Projects, following the British example, which utilises a Job Card System. A standardised system of recognition of acquired skills is a priority. The success of these initiatives in improving training and establishing a system of skill recognition depends on their acceptance by firms, suggesting a need for close links between government programmes and the labour market. Successful implementation of these measures would improve employment conditions for youth and help develop the secondary market for experienced workers.

In 2009, the government introduced "life security benefits" for participants in labour market training programmes who do not receive unemployment benefits and whose annual income from other sources does not exceed 2 million yen (about $25 000) and have assets of less than 8 million yen (about $100 thousand). The programme is targeted mainly at former non-regular workers who were dismissed due to non-renewal of a temporary employment contract. Support can take the form of a benefit of 100 thousand yen ($1 250) per month. This programme, which is part of the so-called "second safety net", compensates for the limited coverage of social assistance in Japan, as noted above, and the short duration of unemployment benefits, which are limited to half a year in most cases. While the government provides counselling to guide participants to appropriate training, making income support conditional on participation in training creates a risk of unnecessary training.

Conclusion

With Japan's working-age population projected to decline by nearly 40% by 2050, it is essential to make efficient use of the country's human resources. *First*, it is important to reverse the rising share of non-regular workers, with its negative implications for growth and equity. *Second*, it is essential to raise women's labour force participation rate and make better use of older workers and discouraged youth. Resolving these problems requires a comprehensive approach that is summarised in Box 5.1.

Box 5.1. **Summary of recommendations to reform the labour market**

Breaking down labour market dualism

- Expand the coverage of non-regular workers by workplace-based social insurance systems, notably by improving compliance, to reduce the cost advantages of non-regular workers and improve their security.
- Increase training and career consultation to enhance human capital and the employability of non-regular workers as well as to promote their transition to regular employment, thereby improving Japan's growth potential.
- Prevent discrimination against non-regular workers.

Box 5.1. **Summary of recommendations to reform the labour market** *(cont.)*

- Reduce the effective employment protection for regular workers so that firms can realise adequate employment flexibility without hiring increasing numbers of non-regular workers.
- Be cautious in legally restricting the use of short-term dispatched workers as it may aggravate the cost of inflexibility and reduce overall employment.

Encouraging labour market participation of women, elderly and youth

- Reform aspects of the tax and social security system that reduce work incentives for secondary earners.
- Encourage better work-life balance, in part by better enforcing the Childcare and Family Care Leave Law.
- Increase the availability of affordable, high-quality childcare, while avoiding generous child-related transfers that may weaken work incentives.
- Encourage greater use of flexible employment and wage systems to improve working conditions for older workers, in part by abolishing mandatory retirement at age 60.
- Emphasise practical training, combining on-the-job and classroom learning, in part through expanding the Job Card system, to equip youth with the skills needed in the labour market.
- Promote the development of a standard system of recognition of acquired skills to ensure effective training.

Notes

1. Long-term employment emerged in large firms during the 1950s, based on the mutual understanding that employers would invest in their employees' human resources and avoid dismissals, while regular employees would remain with the company until retirement. Long-term employment is less prevalent at small enterprises; for firms with five to nine employees, only 43% had been at the firm at least 20 years.
2. Defined as those working less regular hours on a daily or weekly basis than regular workers in the same workplace. However, 30% of part-time employees work as many hours as full-time workers. In general, 35 hours a week is taken as the dividing line between full and part-time workers.
3. Dispatched workers were first allowed in 1985 for 13 specific job categories.
4. High employment protection in Spain was also found to reduce productivity, leading to recent reforms to relax employment protection (Wölfl and Mora-Sanguinetti, 2011).
5. Under the seniority-based wage system, wages are below productivity for younger workers. The fact that wages will eventually surpass productivity gives workers an incentive to remain at the same company.
6. Moreover, the shorter tenure of non-regular workers also reduces the size of the allowance, which is set at a minimum of one month of pay for each month of work.
7. Employees who work less than three-quarters of the hours worked by regular employees in a firm (on a daily, weekly or monthly basis) are exempt from employees' pension and health insurance contributions. Employees working less than 31 days or 20 hours a week are exempted from employment insurance.
8. In addition, it has reduced labour's share of income and squeezed household income growth.
9. The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

10. The revised law would also request dispatched worker agencies to implement measures to shift dispatched workers from fixed-term to indefinite-term contracts and provide subsidies to the receiving firm to hire them directly, as well as to disclose the gap between the wages received by a dispatched worker and the fee paid to the dispatching company.

11. See the survey of non-regular worker views published by the Social Science Research Institute at the University of Tokyo (*web.iss.u-tokyo.ac.jp/jinzai_20100927.pdf*).

12. Spain's experience in tightening restrictions on temporary contracts in the 1990s did not have much impact on permanent employment (Wölfl and Mora-Sanguinetti, 2011).

13. Japan has reportedly been rather tolerant of companies that evade payments for social insurance premiums, with almost no criminal indictments against firms evading payments (Duell *et al.*, 2010).

14. The OECD index of the strictness of employment protection legislation for regular employment covers eight indicators related to the procedures involved in individual dismissal, such as the prior notification requirement, severance pay provision, and remedial measures for an unfair dismissal.

15. In that case, the court usually orders reinstatement with back pay. There is no time limit on when former workers can make a claim of unfair dismissal. Moreover, it is difficult to dismiss a worker for incompetence. Given the importance of firms in the skill development of its employees, courts have ruled that it is the firm's fault if a worker is incompetent.

16. Japan Airlines Group, facing $25 billion in debt and a bloated workforce, filed for bankruptcy in January 2010. Its restructuring plan, which included reducing employment by 16 thousand, was accepted by the Tokyo District Court in August 2010. However, only 1 460 employees accepted the offer of early and voluntary retirement. At the end of 2010, the company fired 165 employees to make up part of the difference. However, 146 of those employees filed a suit challenging the dismissal on the grounds that Japan Airlines Group's earnings are recovering.

17. Moreover, it may discourage the renewal of fixed-term contracts. Japanese case law interprets repeated extension of contracts, or even a reasonable expectation of continued employment, as sufficient to treat refusal of renewal as dismissal and thus subject to case law concerning proper dismissal.

18. The assumptions in the 2001 study – a fertility rate of 1.4 and net migration of 56 thousand – were close to the 2009 figures of 1.4 and 54 thousand, respectively.

19. An additional objective is to increase the share of fathers who take child-care leave from 2% to 13%.

20. About 26% of women who left their job at the time of pregnancy or childbirth stated that they faced difficulties in continuing to work while raising a child and 9% of them said that they were dismissed or encouraged to leave the job.

21. The proportion of female workers taking child-care leave increased from 56% in FY 1999 to 86% in FY 2009.

22. The targets, which were originally set in 2007, are: 1) the employment rate; 2) labour productivity growth; 3) the number of part-time workers; 4) the ratio of firms providing labour-management consultations; 5) the share of employees who work more than 60 hours a week; 6) the take-up rate of annual paid leave; 7) the share of firms that provide mental-health care; 8) the number of teleworkers; 9) the share of firms that provide a short standard work system; 10) the ratio of workers pursuing self-development, including education; 11) the job continuity rate of female workers after their first child; 12) the share of children with access to care services; 13) the share of male workers who take childcare leave; and 14) hours of housework by male workers who have a child younger than age six.

23. The government has prohibited firms from setting the mandatory retirement age at less than 60 since 1998.

24. The Ministry of Health, Labour and Welfare defines "NEETs" as those aged between 15 and 34 who are not in the labour force or education and not engaged in housework.

25. These programmes include: i) "Community Youth Support", which provides counselling services and career development programmes in connection with local support networks based on government and educational institutions; ii) "Youth Independence Camps", which provide a three-month residential training programme; and iii) "Job Cafés" – one-stop service centres, which were visited by 1.6 million youth in FY 2007, with 88 thousand finding jobs.

26. The Job Card system is described at *www.mhlw.go.jp/english/policy/affairs/dl/job_card_eng.pdf*.

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