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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 2 March 2015. The draft report was then revised in the light of the discussions and given final approval as the agreed report of the whole Committee on 20 March 2015.

The Secretariat's draft report was prepared for the Committee by Randall S. Jones, Kohei Fukawa and Myungkyoo Kim under the supervision of Vincent Koen. Research assistance was provided by Lutécia Daniel.

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BASIC STATISTICS OF JAPAN, 2013

(Numbers in parentheses refer to the OECD average)*

LAND, PEOPLE AND ELECTORAL CYCLE

Population (million)	127.3		Population density per km²	336.8	(34.7)
Under 15 (%)	12.9	(18.2)	Life expectancy (years, 2013)	83.2	(80.2)
Over 65 (%)	25.1	(15.6)	Men	80.2	(77.5)
Foreign (%, 2012)	1.6		Women	86.6	(82.9)
Latest 5-year average growth (%)	-0.1	(0.6)	Latest general election	December 2014	

ECONOMY

Gross domestic product (GDP)			Value added shares (%)		
In current prices (billion USD)	4 925		Primary sector	1.2	(2.6)
In current prices (trillion YEN)	480.1		Industry including construction	26.1	(26.9)
Latest 5-year average real growth (%)	0.3	(0.8)	Services	72.6	(70.5)
Per capita (000 USD PPP)	36.2	(39.2)			

GENERAL GOVERNMENT

Per cent of GDP

Expenditure	42.3	(42.7)	Gross financial debt	220.3	(113.2)
Revenue	33.9	(38.3)	Net financial debt	122.9	(72.7)

EXTERNAL ACCOUNTS

Exchange rate (yen per USD)	97.5		Main exports (% of total merchandise exports)		
PPP exchange rate (USA = 1)	104.1		Machinery and transport equipment	57.9	
In per cent of GDP			Manufactured goods	13.2	
Exports of goods and services	16.2	(53.4)	Chemicals and related products, n.e.s.	10.6	
Imports of goods and services	19.0	(49.4)	Main imports (% of total merchandise imports)		
Current account balance	0.7	(-0.1)	Machinery and transport equipment	22.7	
Net international investment position	62.7		Manufactured goods	7.4	
			Mineral fuels, lubricants and related materials	33.8	

LABOUR MARKET, SKILLS AND INNOVATION

Employment rate for 15-64 year-olds (%)	71.7	(65.2)	Unemployment rate, Labour Force Survey (age 15 and over) (%)	4.0	(7.9)
Men	80.8	(73.1)	Youth (age 15-24, %)	6.8	(16.1)
Women	62.5	(57.4)	Long-term unemployed (1 year and over, %)	1.6	(2.7)
Participation rate for 15-64 year-olds (%)	74.9	(71.1)	Tertiary educational attainment 25-64 year-olds (%, 2012)	46.6	(32.2)
Average hours worked per year	1,735	(1 771)	Gross domestic expenditure on R&D (% of GDP)	3.5	(2.4)

ENVIRONMENT

Total primary energy supply per capita (toe)	3.6	(4.2)	CO_2 emissions from fuel combustion per capita (tonnes, 2012)	9.6	(9.7)
Renewables (%)	4.3	(8.8)	Water abstractions per capita (1 000 m^3, 2009)	0.6	
Fine particulate matter concentration (urban, PM_{10}, µg/m^3, 2011)	19.0	(28.0)	Municipal waste per capita (tonnes, 2010)	0.4	(0.5)

SOCIETY

Income inequality (Gini coefficient, 2011)	0.336	(0.308)	Education outcomes (PISA score, 2012)		
Relative poverty rate (%, 2012)	16.1	(11.1)	Reading	538	(496)
Median equivalised household income (000 USD PPP, 2010)	20.1	(20.4)	Mathematics	536	(494)
Public and private spending (% of GDP)			Science	547	(501)
Health care (2012)	10.3	(9.2)	Share of women in parliament (%, December 2014)	10.8	(26.7)
Pensions (2011)	12.5	(8.7)	Net official development assistance (% of GNI)	0.23	(0.37)
Education (primary, secondary, post-sec. non-tertiary, 2011)	2.9	(3.9)			

Better life index: www.oecdbetterlifeindex.org

* Where the OECD aggregate is not provided in the source database, a simple OECD average of latest available data is calculated where data exist for at least 29 member countries.

Source: Calculations based on data extracted from the databases of the following organisations: OECD, International Energy Agency, World Bank, International Monetary Fund and Inter-Parliamentary Union.

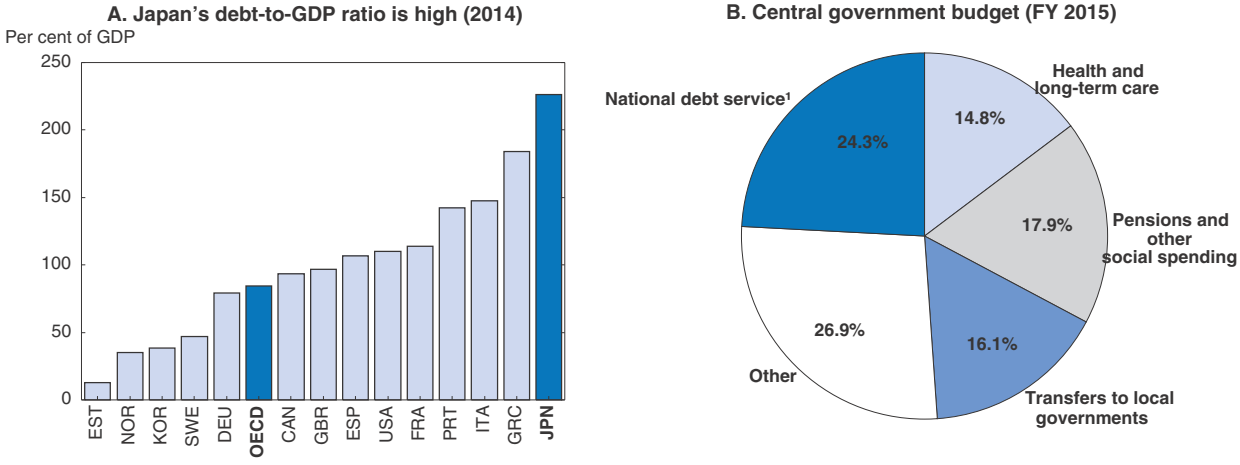
Executive summary

- *Main findings*
- *Key recommendations*

Main findings

Two decades of sluggish growth and persistent deflation have reduced Japanese living standards below the OECD average. Gross government debt has risen to 226% of GDP, the highest in the OECD, driven by rising social spending and inadequate revenues. Rapid population ageing is putting continued pressure on public spending, while pushing down Japan's potential growth rate to around ¾ per cent. Abenomics – bold monetary policy, flexible fiscal policy and a growth strategy to revitalise the economy and end deflation – had an immediate positive effect in 2013, thanks to the first two arrows. Growth was interrupted in the wake of the tax increase in April 2014, but resumed later in the year.

Japan's debt is the highest in the OECD, pushing up debt service costs



1. Debt service includes debt redemption, which is not included in general government spending.
Source: OECD Economic Outlook Database; Ministry of Finance.

StatLink http://dx.doi.org/10.1787/888933201711

Boost economic growth through bold structural reforms. Fundamental structural reforms – the third arrow – urgently need to be stepped up to raise output growth, which is essential for fiscal consolidation and improved living standards. The role of women is limited by a range of factors, including their concentration in non-regular jobs and disincentives in the tax system. Japan remains internationally isolated with the lowest share of inward foreign direct investment (as a per cent of GDP) in the OECD area. Low rates of firm creation and exit reflect a lack of economic dynamism in the business sector. Venture capital investment is at an early stage of development and the small and medium-sized enterprise sector is lagging.

The top fiscal priority is reducing government debt. With a primary deficit of nearly 7% of GDP in 2014, public debt remains on an upward path. The impact of the high debt is mitigated by low long-term interest rates, but weakening confidence would cause interest rates to rise substantially. A run-up in interest rates would increase debt rapidly and destabilise the financial sector and the real economy. Large-scale revenue increases are indispensable, although this will tend to temporarily hold back GDP growth. Constraining spending is difficult but crucial, given upward pressure on social outlays, notably for health and long-term care, and the need to promote social cohesion. Social spending, which is concentrated on the elderly, has only a limited impact on income inequality among the working-age population, whose relative poverty rate increased through 2012. This partly reflects the rising share of non-regular workers, who are paid much less than regular workers.

End deflation. Persistent deflation has been a headwind to growth and has exacerbated the fiscal situation by steadily reducing nominal GDP. The Bank of Japan has set a 2% inflation target and launched "quantitative and qualitative monetary easing", boosting its balance sheet to 65% of GDP.

Key recommendations

Effective implementation of all three arrows of Abenomics is required for its success.

Boost economic growth through bold structural reforms

The top priorities in this regard are to:

- Slow the trend decline in the labour force by:
  - Increasing female employment by expanding childcare, reforming aspects of the tax and social security systems that reduce work incentives for second earners and breaking down labour market dualism to reduce gender inequality.
  - Expanding the use of foreign workers.
- Participate in high-level trade agreements, notably the Trans-Pacific Partnership and a Japan-EU Economic Partnership Agreement.
- Improve the business climate to boost productivity growth by:
  - Upgrading corporate governance.
  - Promoting labour market flexibility and mobility.
  - Improving the entrepreneurial climate by ensuring second chances and developing entrepreneurial education.
  - Revitalising venture capital investment to promote firm creation and innovation.
  - Reducing government support for SMEs to promote the restructuring of viable firms and the exit of non-viable ones.
  - Moving to a more market-based agricultural system by measures such as reducing commodity-specific payments to farmers, accelerating the consolidation of farmland and reforming the role of agriculture co-operatives.

The top fiscal priority is reducing government debt while promoting social cohesion

- Set out a detailed and credible plan to constrain government spending and raise revenues so as to achieve the target of a primary surplus by FY 2020.
- Rely primarily on the consumption tax with a single rate and a broadening of the personal and corporate income tax base to boost government revenue, while raising environmental taxes.
- Reform pension and health and long-term care to limit spending growth in the face of population ageing.
- Improve the targeting of public social spending and introduce an earned income tax credit for low-income workers.
- Break down labour market dualism by increasing the coverage of social insurance and upgrading training programmes for non-regular workers, and reducing effective employment protection for regular workers, in particular by increasing transparency.

End deflation

- Continue monetary expansion to durably raise inflation to the 2% target, while monitoring risks.

Assessment and recommendations

- *Recent macroeconomic developments and short-term prospects*
- *Structural reforms to boost growth: The Japan Revitalisation Strategy (the third arrow)*
- *Reducing government debt: Flexible fiscal policy (the second arrow)*
- *Ending deflation: Bold monetary policy (the first arrow)*

During the past two decades, economic growth has been sluggish, reducing Japan's relative per capita income from a level matching the top half of OECD countries in the early 1990s to 14% below (Figure 1). The collapse of the asset price bubble in the early 1990s was followed by an extended period of corporate restructuring and a banking crisis. Weak growth has contributed to Japan's serious fiscal problem by limiting the growth of government revenue. Rising spending, driven by population ageing and frequent fiscal stimulus packages, has been financed largely by borrowing, boosting gross government debt to 226% of GDP in 2014 (Panel B), the highest ever recorded in the OECD. Net debt is also the highest at 129% of GDP. Upward pressure on the debt ratio continues, with a primary budget deficit of nearly 7% of GDP in 2014 (Panel C). Persistent deflation has contributed to the run-up in the debt ratio by reducing nominal GDP (Panel D), while acting as a headwind to output growth. The 2011 Great East Japan Earthquake – the worst disaster in Japan's post-war history – put further pressure on public finances.

In early 2013, Japan launched a three-pillar approach, the so-called three arrows of "Abenomics", to exit deflation and revitalise the country: a bold monetary policy; flexible fiscal policy; and a growth strategy. The first arrow was launched in early 2013 with the introduction of "quantitative and qualitative easing" (QQE). It was accompanied by the second arrow, which included two large fiscal packages. The third arrow – the Japan Revitalisation Strategy – was announced in June 2013 and revised a year later. The combined effects of fiscal and monetary policy expansion and structural reform were intended to strengthen business investment and private consumption, with a view to boost real growth to a 2% annual pace through 2022 and to achieve a 2% inflation target. The initial results of the first two arrows were encouraging; nominal GDP increased at a faster pace, aided by a pick-up in inflation, reflecting a large depreciation of the yen. Output growth reached 1.6% in 2013, as business and consumer confidence soared and the stock market rose by 57%. Following a contraction in the wake of the consumption tax hike, growth resumed in late 2014.

The third arrow of Abenomics is its most crucial component, without which the unprecedented monetary expansion and the fiscal effort will not succeed in putting Japan on a path to faster growth and fiscal sustainability. The ten key reforms in the Strategy include important measures to promote growth, but they need to be more ambitious and implemented rapidly. The top priorities are: i) stabilising the size of the labour force by boosting the participation of women and older people and expanding inflows of foreign workers; ii) enhancing Japan's integration in the world economy through trade agreements, notably the Trans-Pacific Partnership (TPP) and the Japan-EU Economic Partnership Agreement; and iii) improving the business climate by upgrading corporate governance, enhancing labour flexibility and mobility, promoting venture capital investment and improving policies for small and medium-sized enterprises (SMEs).

The key messages in this *Survey* are:

- Bold structural reforms are crucial to boost Japan's growth potential.

Figure 1. **Japan has faced low growth, rising government debt, large deficits and deflation**

1. Per capita GDP is calculated using 2005 prices and PPP exchange rates. Labour productivity equals GDP per hour of labour input. Labour inputs equal total number of hours worked per capita.
2. General government basis as a percentage of GDP. OECD estimates for 2014 and projections for 2015-16.

Source: OECD, *Going for Growth Database*; *OECD Economic Outlook Database*.

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- Increasing government revenue and keeping spending in check are essential to put government debt on a downward trend, while promoting social cohesion.
- QQE should continue until the 2% inflation target is sustainably achieved.

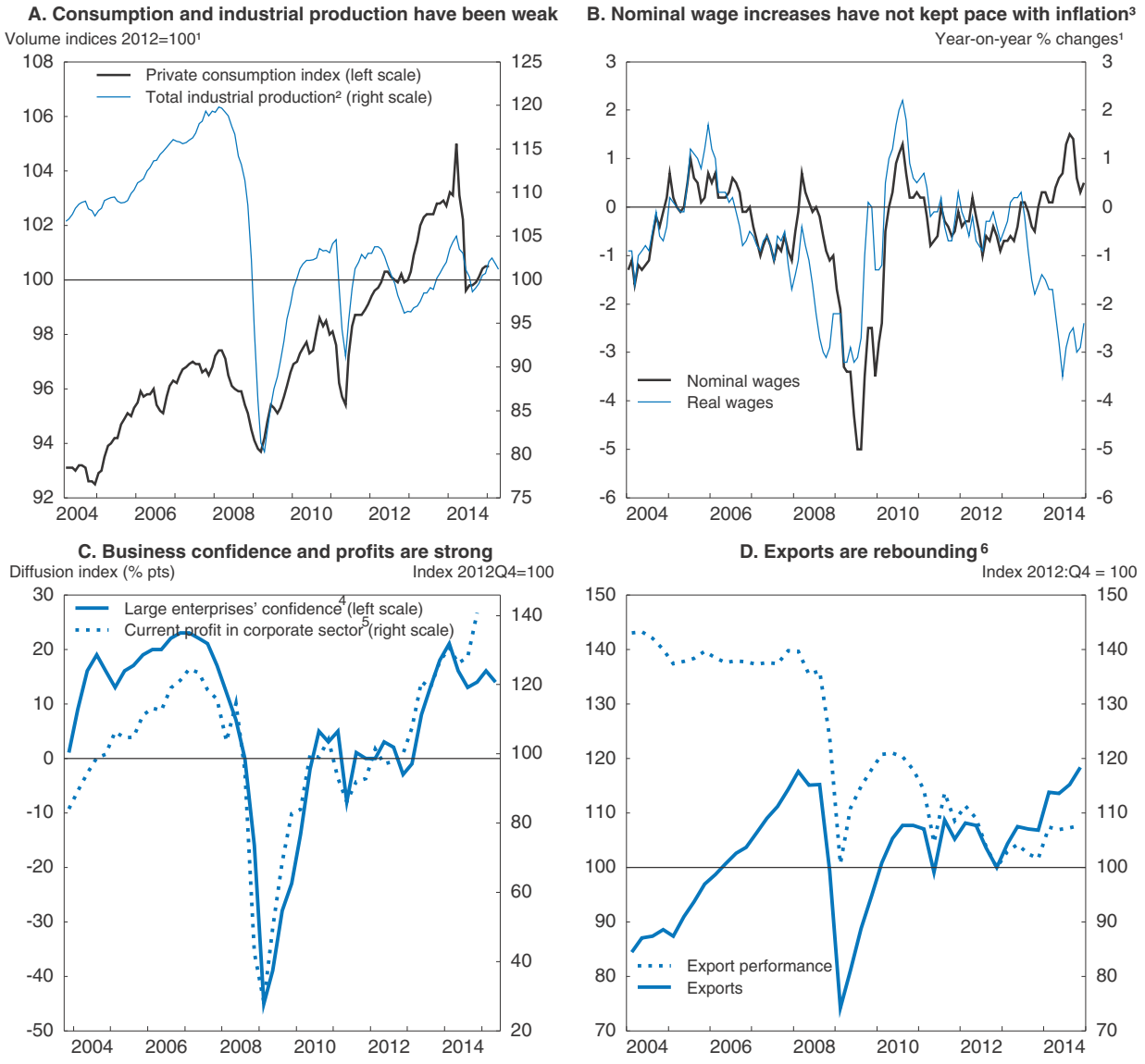
Recent macroeconomic developments and short-term prospects

The April 2014 tax hike resulted in a volatile quarterly growth pattern. Strong growth in private consumption and business investment in the first quarter was followed by declines of around 19% (seasonally-adjusted annual rate) in both components in the second quarter, despite a fiscal package of 1.1% of GDP. Output fell further in the third

quarter due to a large negative contribution from stockbuilding and weak domestic demand, plunging Japan into its fourth technical recession since 2008 and delaying the planned second hike in the consumption tax to 10% until 2017.

The 2014 downturn reflects, in part, the weak rebound in private consumption (Figure 2) as real wages fell (Panel B). While nominal wage growth turned positive in late

Figure 2. **Key macroeconomic indicators show a mixed picture**



1. Three-month moving average.
2. Producers' estimates for March and April 2015.
3. Total cash earnings (including bonuses).
4. Diffusion index of "favourable" minus "unfavourable" conditions. Numbers for 2015:Q2 are companies' projections made in March 2015.
5. Profits, which are for non-financial firms, are seasonally adjusted.
6. There is a statistical break in 2014:Q1, reflecting the shift from the *Balance of Payments Manual 5* to *Balance of Payments Manual 6*. Export performance measures the extent to which Japan gains or loses market share in foreign markets.

Source: Ministry of Economy, Trade and Industry; Cabinet Office; Ministry of Health, Labour and Welfare; *OECD Economic Outlook Database*; Ministry of Finance; OECD calculations.

StatLink http://dx.doi.org/10.1787/888933201730

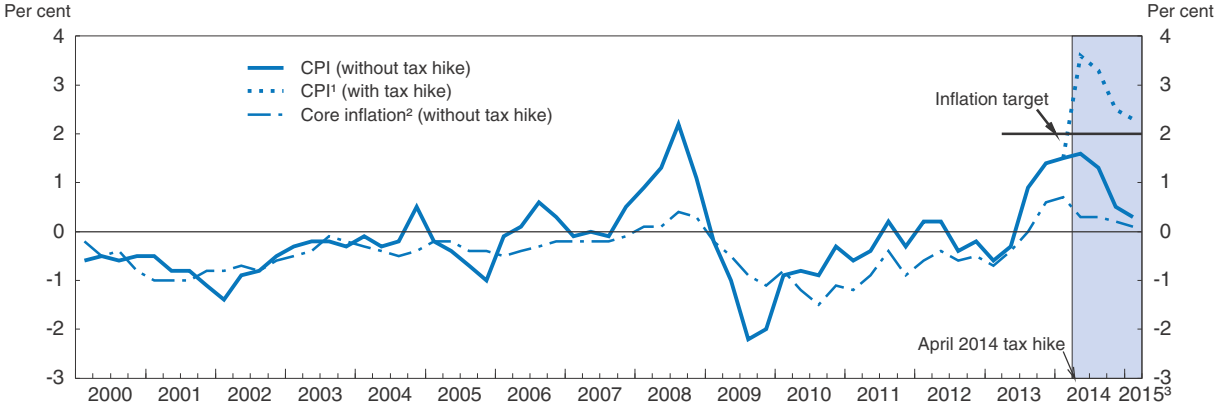
2013, it has lagged inflation (including the tax hike), reducing consumers' purchasing power and confidence. Faced with weak domestic demand, business investment declined for three consecutive quarters, despite still strong business confidence and high profitability (Panel C), reflecting the cut in the corporate income tax rate in 2014 and yen depreciation. The weaker yen helped increase export growth, reversing the longstanding downward trend in Japan's export market share (Panel D). However, the depreciation also squeezed households and small companies, partly offsetting gains in corporate profits and exports. Falling oil and commodity prices, combined with weaker output growth, have slowed inflation, which reached 1.5% (year-on-year, excluding the impact of the consumption tax hike) in early 2014, to ¼ per cent by the first quarter of 2015 (Figure 3).

Output growth is projected to pick up to 1% in 2015 (Table 1). The fall in oil and commodity prices has resulted in significant terms-of-trade gains that are promoting private consumption and investment. Indeed, the fall in oil prices from $85 per barrel in October 2014 to $60 in March 2015 is projected to boost output growth by about ¼ percentage points. Given that the energy component of the consumer price index fell only 4% during the second half of 2014, most of the gains for consumers and firms will be realised in 2015. In addition, the FY 2014 supplementary budget of 0.6% of GDP announced in January 2015, which includes support for households, small businesses and local governments as well as public investment, is expected to boost output growth by another 0.3 percentage points in 2015. Nevertheless, fiscal policy will be a headwind with a projected 2 percentage points of consolidation during 2015-16, even with the supplementary budget and the delay in the second hike in the consumption tax to 2017.

Wage growth is key to output growth. With the working-age population falling 1.5% a year and firms already reporting the highest level of labour shortages since the early 1990s, workers are likely to obtain significant pay increases in the spring 2015 wage negotiations, pushing real wage growth into positive territory and helping support private consumption. Indeed, the rise in bonus payments in mid-2014 was the largest in 30 years and the initial results from the 2015 wage negotiations are encouraging. Labour shortages and high

Figure 3. **Inflation fell during 2014**

Year-on-year percentage change



1. In April 2014, the consumption tax was raised from 5% to 8%.The tax hike added 2 percentage points to inflation according to estimates by the Bank of Japan and the Cabinet Office.
2. OECD measure, which excludes food and energy.
3. The average of January and February 2015.

Source: OECD Economic Outlook Database; Bank of Japan (2014); Cabinet Office (2014).

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Table 1. **Macroeconomic indicators and projections**[1]

	2011	2012	2013	2014	2015	2016
Demand and output (volumes)						
GDP	-0.5	1.8	1.6	0.0	1.0	1.4
Consumption						
Private	0.3	2.3	2.1	-1.2	0.7	1.6
Government	1.2	1.7	1.9	0.3	0.8	0.7
Gross fixed investment	1.4	3.4	3.2	2.6	-0.2	0.6
Public[2]	-8.2	2.7	8.0	3.7	-4.8	-19.1
Residential	5.1	3.2	8.7	-5.2	-2.6	6.8
Business	4.1	3.7	0.4	4.1	1.7	5.3
Final domestic demand	0.6	2.4	2.3	-0.1	0.5	1.2
Stockbuilding[3]	-0.2	0.2	-0.4	0.1	-0.1	0.0
Total domestic demand	0.4	2.6	1.9	0.0	0.4	1.2
Exports of goods and services	-0.4	-0.2	1.5	8.2	6.6	6.4
Imports of goods and services	5.9	5.3	3.1	7.2	3.0	4.7
Net exports[3]	-0.9	-0.9	-0.3	0.0	0.6	0.2
Inflation and capacity utilisation						
GDP deflator	-1.9	-0.9	-0.5	1.7	1.8	1.5
Nominal GDP	-2.3	0.8	1.1	1.6	2.8	2.9
CPI	-0.3	0.0	0.4	2.7	1.0	1.5
CPI[4]	-0.3	0.0	0.4	1.2	0.5	1.5
Core CPI[4]	-0.9	-0.5	-0.1	0.5	1.2	1.6
Unemployment rate	4.6	4.3	4.0	3.6	3.5	3.3
Output gap	-1.7	-0.7	0.4	-0.4	-0.3	0.2
Memorandum items						
World trade growth	6.7	3.0	3.3	3.0	4.5	5.5
Oil prices (spot Brent price in $)	111.2	111.6	108.7	101.4	60.0	60.0
Net government lending[5]	-8.8	-8.7	-8.5	-7.7	-6.8	-5.9
Net primary balance[5]	-8.0	-7.8	-7.8	-6.7	-5.8	-4.9
Gross government debt[5]	209.6	215.5	220.3	226.0	229.3	231.5
Net government debt[5, 6]	127.3	129.3	122.9	128.6	131.9	134.1
Household saving ratio (%)	2.7	1.2	-0.2	1.1	1.6	1.4
Current account (% of GDP)	2.1	1.1	0.7	0.6	2.2	2.4

1. The *OECD Economic Outlook* No. 96 projections have been updated by including the second estimates of GDP for 2014:Q3 and Q4 and the government and household sector accounts (through 2013) announced in December 2014. It also incorporates the FY 2014 supplementary budget, approved by the Diet in February 2015, and the fall in oil prices.
2. Including public corporations.
3. Contribution to GDP growth (percentage points).
4. Excluding the impact of the consumption tax hike in April 2014. See footnote 1 to Figure 3. The core CPI is the OECD definition, which excludes both food and energy.
5. General government basis as a percentage of GDP.
6. Net debt is gross debt less assets held by the government.

Source: OECD Economic Outlook Database.

profitability will also support investment, which will benefit from a further cut in the combined (central and local government) corporate tax rate to 31.3% in 2016. With a weaker yen, Japan is well-positioned for export growth as world trade picks up, which, along with the fall in oil and commodity prices, is projected to lift the current account surplus to around 2½ per cent of GDP in 2016. Inflation is projected to pick up to around 1½ per cent in 2016.

Many downside risks overshadow this projection. Sustained growth requires a virtuous circle of rising wages, prices and corporate earnings. Sluggish wage growth is the key risk in this regard. Given low labour mobility in the context of lifetime employment,

wages react slowly to changing labour market conditions. The fragile global economic situation also poses risks, such as slower-than-expected growth in China, uncertainty in the euro area and the impact of the anticipated US monetary tightening. The major concern, though, relates to Japan's unprecedentedly high level of public debt. In the absence of a credible plan to achieve its fiscal targets, Japan could face a loss of confidence in its fiscal sustainability that would result in a run-up in long-term interest rates. This could make fiscal consolidation nearly impossible and could destabilise the financial sector and the real economy. Such a development would have large spillovers to the world economy, given the size of the Japanese economy and its large stock of foreign assets.

Growth remains well below the targets set in the 2012 consumption tax legislation: 3% for nominal GDP, 2% for real GDP and 1% for the GDP deflator on average over 2013-22 (Table 2). These targets, which were adopted by the government and the Bank of Japan in a January 2013 agreement, require reversing the downward trend in nominal GDP and the GDP deflator over 1997-2012.

Table 2. **Japan's macroeconomic targets**[1]

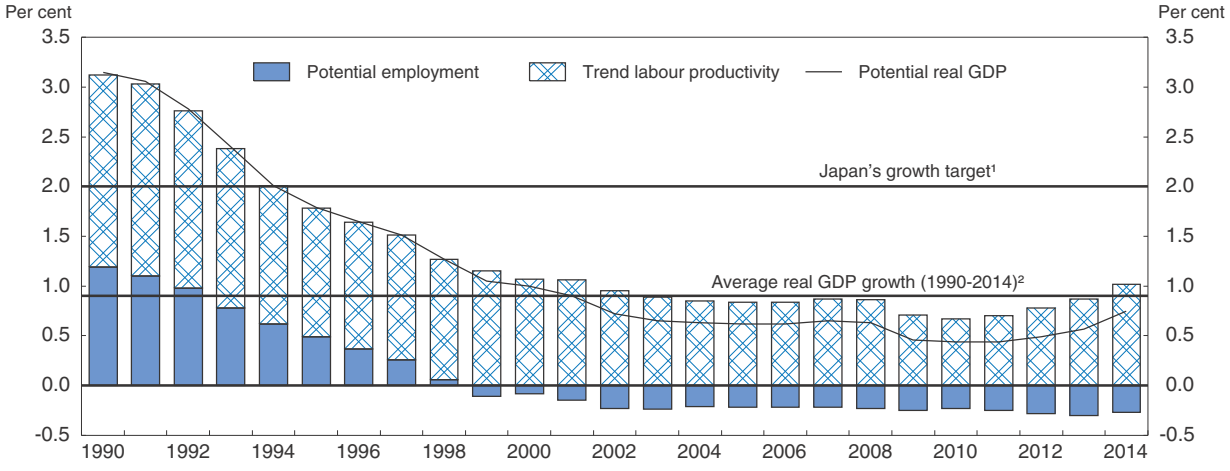
	Target (%)	Average over 1997:Q2 to 2012:Q2	Required increase[2]	Average over 2012:Q3 to 2014:Q3	Additional increase required[2]
Nominal GDP	3	-0.6	3.6	1.4	1.6
Real GDP	2	0.6	1.4	0.5	1.5
GDP deflator	1	-1.3	2.3	0.8	0.2

1. Included in the August 2012 consumption tax legislation and adopted by the Abe Administration.
2. Increase (in percentage points) in the annualised growth rate needed to meet the target.
Source: OECD Economic Outlook Database.

Structural reforms to boost growth: The Japan Revitalisation Strategy (the third arrow)

Reversing the fall in Japan's potential growth rate, which slowed from over 3% in the early 1990s to around ¾ per cent in 2014 (Figure 4) requires additional steps to: i) slow the

Figure 4. **Japan's potential GDP growth rate has fallen sharply since 1990**



1. The 2% target was set in 2009 and maintained by subsequent governments.
2. Average annual GDP growth in real terms in Japan between 1990 and 2014.
Source: OECD Economic Outlook Database.

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decline in the labour force or even reverse it; and ii) boost labour productivity growth, which will depend to a large extent on innovation. The government aims to boost real annual output growth to 2% through 2022 (2.4% in per capita terms), well above the 0.9% rate of the past two decades. In December 2014, the government stated that "Japan must aim to become the most innovative country in the world by carrying out social and economic structural changes". The ten key reforms in the Strategy that was revised in June 2014 (Table 3), which have been addressed in previous *OECD Economic Surveys of Japan*, contain many important measures. However, the implementation of the third arrow has lagged behind the first two arrows. It is essential that Japan implement the planned reforms. Moreover, further reforms are needed to achieve the 2% target. The issues discussed below include the priorities in the 2015 edition of the OECD's *Going for Growth*: i) relaxing barriers in the service sector, in part through foreign direct investment;

Table 3. **Ten key reforms in the Japan Revitalisation Strategy**

Reform	Objective	Actions taken
1. Enhance corporate governance: Aiming for sustainable growth in corporate value.	Sustained growth in corporate value through enhanced corporate governance as well as improved management and strengthened fundamentals supported by financial institutions.	The JPX-Nikkei Index 400 was launched in January 2014, followed by a Stewardship Code in February. A draft corporate governance code would require listed firms to have at least two outside directors on a "comply or explain basis".
2. Reforms for management of public and quasi-public funds.	Steadily implement reforms for management of public and quasi-public funds, based on the recommendations presented by the expert panel.	The Government Pension Investment Fund decided in 2014 to increase the share of equities in its portfolio and reinforce its governance structure.
3. Promotion of venture business: Creating an entrepreneur-friendly environment.	A 'Venture ecosystem' (virtuous cycle of venture funding and business creation), leading to globally competitive companies.	The tax system for business angels was made more user-friendly and measures to promote crowd-funding were promulgated in 2014.
4. Corporate tax reform: Bettering the business environment for all companies.	Strengthen Japan's competitiveness as a global business location by reforming the corporate tax rate to a globally competitive level.	The FY 2015 tax reform will reduce the combined corporate income tax rate from 34.6% to 31.3% in FY 2016.
5. Stimulate innovation through science and technology and a "Robot Revolution": Japan as a technology frontier.	Promote innovation of science and technology and develop infrastructure that links innovative technology with new business.	The budget for science and technology, which had been managed by a number of ministries, was centralised in the Council for Science, Technology and Innovation to promote effective R&D.
6. Enhancing women's participation and advancement.	Provide a working environment conducive to women with/caring for children and improve the business environment to enhance women's career advancement at workplaces.	An additional 0.4 million childcare places are being added to eliminate waiting lists, together with another 0.3 million places in after-school care for school-age children. These measures have contributed to a 3.9% rise in female employment since late 2012.
7. Enable flexible working practices: Improving the talent pool.	Develop more creative working practices where performance is evaluated over number of hours worked. Spread and promote model cases of "diversified regular employment" focusing on job duties, etc. Develop a transparent and globally recognised labour dispute resolution system.	Subsidies to maintain jobs are being shifted to promoting labour mobility. Measures against overwork will be reinforced and the government will review flex-time and discretionary working-hour systems. The government will propose a system to evaluate high-level professionals based on performance rather than working hours.
8. Attract talent from overseas: A society where foreign workers play an active role.	Create an environment where skilled professionals from overseas can play an active role. Conduct a drastic review of the Technical Intern Training System for foreign workers in Japan.	Foreign trainees, who are allowed to stay in Japan for three years, will be allowed an additional two years.
9. Aggressive agricultural policy.	Aim to double the income of farmers and farming communities by making agriculture a growth industry. Draw on corporate experience while accelerating private- sector participation in agriculture.	The production quotas for table rice are being phased out over a five-year period by FY 2018. Reforms to agricultural co-operatives are planned.
10. Healthcare industry and high quality services: A stronger healthcare industry and improved services.	Secure a sustainable social security system and revitalise the healthcare industry by establishing a structure to provide efficient and high quality services as well as streamlining insurance benefits coverage.	A new health insurance scheme will be introduced to give patients faster access to new treatments that are yet to be covered by public health insurance. A new institution to manage R&D in healthcare was created.

Source: Government of Japan.

ii) reducing producer support for agriculture; iii) improving the efficiency of the tax system by raising the consumption tax and cutting the corporate tax; iv) raising female labour participation; and v) reforming employment protection.

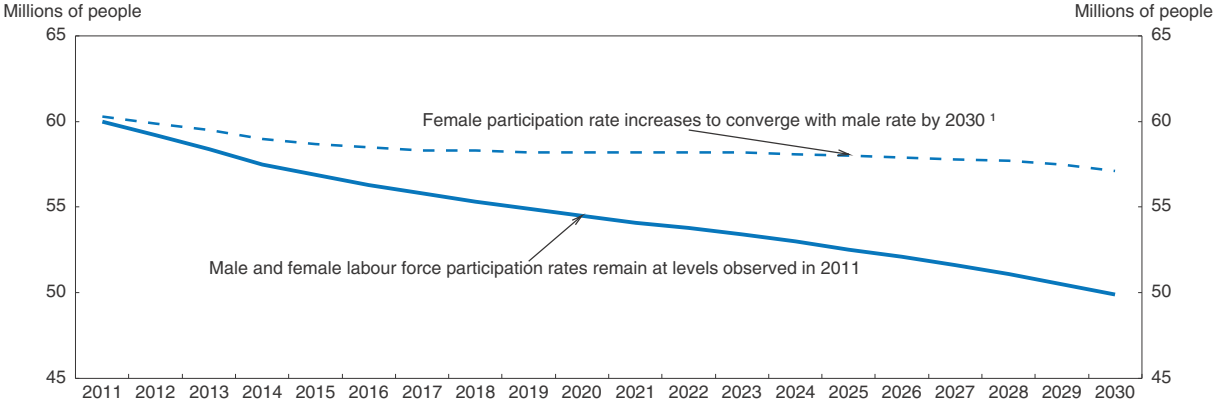
Sustaining the labour force in the face of a falling population

Two of the key reforms in the Strategy – increasing women's participation and advancement and talent from overseas – would limit the decline in the labour force. The working-age population (15-64) is already falling by more than one million per year and is projected to decline by 17% by 2030 and by nearly 40% by 2050. The ratio of working-age persons to the elderly will plummet from 2.5 in 2013 to 1.3 in 2050, remaining the lowest in the OECD. Japan already faces worker shortages. Greater gender equality is needed to mitigate declines in the labour force. The male labour participation rate, at 85%, is 20 percentage points above that of women. If the female participation rate were to converge to those of men by 2030, the labour supply would decline by only 5% (Figure 5), increasing GDP by almost 20% compared with unchanged participation rates. Gender imbalances represent a substantial opportunity cost, given that 63% of young women (25-34 years) in 2011 had a university degree compared with 55% of young men.

The gender gap in employment reflects the fact that only 38% of women remain in the labour force after having a baby. Japan spends about one-third as much as Sweden and the United Kingdom, as a share of GDP, on childcare and after-school care (although spending more would require more tax or social contribution revenue). To facilitate work by mothers, the Strategy plans to boost the number of childcare places by about 0.4 million by March 2018 and to create 0.3 million places in after-school care for older children by March 2020. Expanding childcare may also boost the fertility rate, which was only 1.4 in 2013 (D'Addio and Mira d'Ercole, 2005). Other reforms are needed: i) the tax and benefit systems should be reformed to make them neutral with regard to work decisions by secondary earners in households; and ii) work-life balance needs to be improved by changing the culture of long working hours. Indeed, Japan's well-being index shows that its work-life balance is one of the worst in the OECD, which contributes to its low birth rate (Figure 6).

Figure 5. **Increasing female employment can help avoid looming labour supply shortages**

Projected size of the labour force, working-age population (15-64)



1. Assuming that the labour force participation rate for men remains constant from 2011 to 2030.

Source: OECD (2014d).

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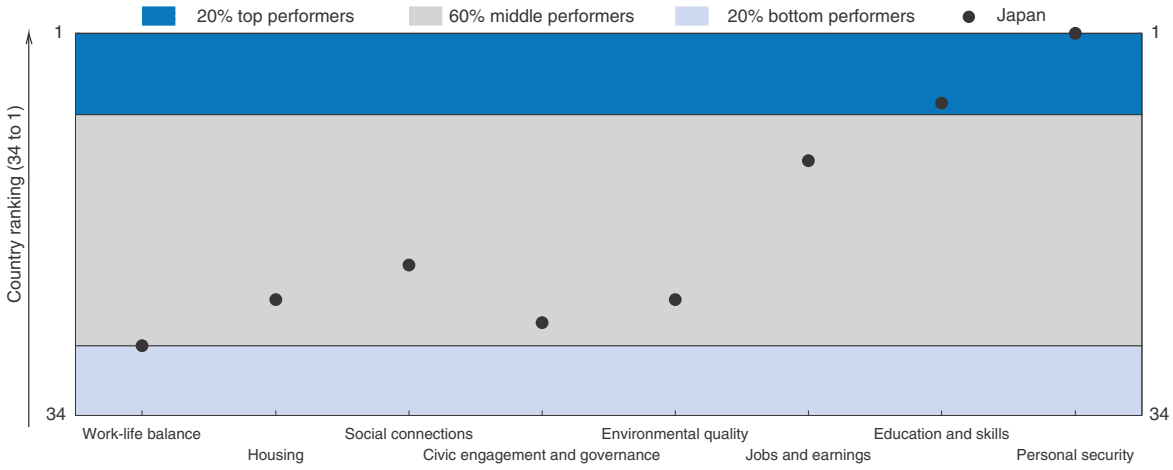
Figure 6. **Japan's well-being performance lags behind in a number of dimensions**



Source: OECD (2014c).

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In addition, the large gender wage gap, which is 27% at median earnings, the third highest in the OECD, discourages women from working. Women hold only 2.1% of seats on boards of directors in Japan, compared with 36% in Norway, around 30% in France and Finland and about 20% in Canada and the United States. Women filled only 3.3% of managerial positions in the central government in 2014, which is even lower than their 7% share in local governments. The government is still pursuing its 2003 target of having women occupy 30% of "leadership" positions by 2020, and now requires listed companies to disclose the number of women in executive positions. The gender wage gap is also closely linked to labour market dualism. Women make up 70% of the relatively low-paid non-regular workers, while men make up 70% of regular workers, limiting opportunities for highly educated women. Indeed, the employment rate for women with a university education was the third lowest among OECD countries in 2013, even though Japan's rate for all women in the 15-64 age group is above the OECD average (63% versus 58%).

Raising the employment rate for older people would also mitigate demographic pressures. Most firms still impose mandatory retirement at age 60, reflecting steep seniority-based wage profiles and the cost of dismissing regular workers. While many retirees are re-employed as non-regular workers, the employment rate of the 65-69 group was only 39% in 2013, versus 77% for the 55-59 group. Given Japan's long life expectancy, mandatory retirement at age 60 is not appropriate. Later retirement would also facilitate a rise in the pension eligibility age, thereby improving the sustainability of public pensions. The government should abolish the right of firms to set a mandatory retirement age and move to a flexible employment and wage system, based on ability rather than age.

The Strategy set a goal of making Japan "a society where foreign workers play an active role" but no quantitative measures were mentioned. Foreign workers account for less than 2% of Japan's labour force, well below the average of 10% in European countries and 16% in the United States. The net annual inflow of foreign workers slowed from 76 000 in 2009 to 35 000 in 2013 (0.03% of Japan's population). This includes high-skilled workers who enter Japan on a points-based system. However, only around 1 500 people have been admitted to Japan under this system. In principle, Japan does not accept low-skilled workers, although foreign trainees (around 140 000) can stay for three years. Expanding the use of foreign

workers would help mitigate the trend decline in the labour force, although large-scale inflows could create challenges for social cohesion. Cohesion may also be put under strain by the uneven impact of demographic change. While a few major urban centres are expected to continue gaining population, many regions and cities are likely to experience even faster ageing and population decline than the country as a whole. The government has been taking action to revitalise rural areas.

Boosting labour productivity by deepening Japan's integration in the world economy

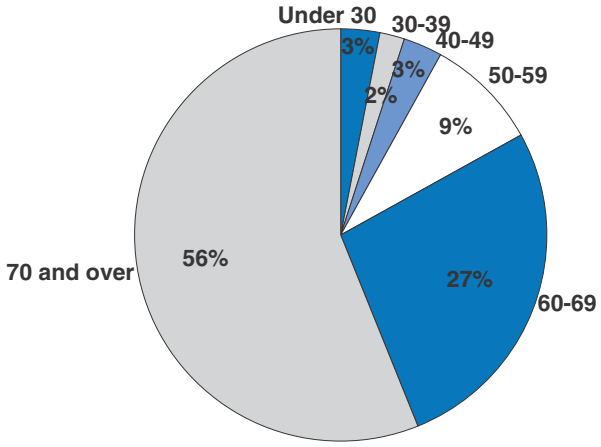
The liberalisation of barriers to international trade and investment strengthens competition, promotes restructuring and spurs innovation by broadening the scope for technological transfers across borders (Jaumotte and Pain, 2005). While Japan has signed 15 Economic Partnership Agreements (EPAs) since 2002, they cover less than a quarter of its trade. The Strategy seeks to raise the share of Japan's trade with countries with which it has an EPA or a FTA from 19% in 2012 to 70% by 2018. This requires agreements with key trading partners, such as the United States, China and the European Union, as well as the Trans-Pacific Partnership. One area where trade agreements would spur needed structural adjustment is agriculture, as they would necessitate cutting border measures on farm goods, such as the tariff on rice. Such measures contribute to the high level of agricultural assistance: the Producer Support Estimate was 54% in Japan in 2011-13, three times the OECD average. Consumer spending on agricultural products was 1.8 times what it would have been in the absence of government policies.

The Strategy calls for an "aggressive agricultural policy" that aims to double the income of farmers and farming communities within ten years and double exports by 2020 (Table 3). Japan decided to phase out production quotas for table rice by FY 2018 and to abolish direct payments for rice in 2018. However, subsidies for manufacturing and feed rice, and for other crops, such as barley and wheat, were increased to fully utilise paddy fields to increase food self-sufficiency. Such an approach will keep the rice price high by limiting its supply. Commodity-specific support accounts for around 90% of producer support in Japan, compared with 32% in the European Union (OECD, 2014a). It is essential to shift away from commodity-specific payments, which isolate farmers from market forces, and allow farmers to make their own production decisions in response to market demands (Jones and Kimura, 2013).

Fundamental agricultural reform requires shifting from self-sufficiency targets to a multi-faceted approach to food security that includes a more competitive domestic agricultural sector, diversified sources of imports, sufficient emergency food reserves and the conservation of an adequate agricultural resource base. This should be accompanied by farm consolidation to boost productivity. Farmland consolidation will be promoted by the regional government-supported institutions established in each prefecture in 2014. However, their impact will be limited by existing policies, such as price supports, which discourage farm exit. The advancing age of farmers provides an opportunity for bold reform: in 2010, the average age of rice farmers was 68.5 and 56% were 70 or over (Figure 7).

Trade liberalisation would also promote foreign direct investment (FDI) (Thangavelu and Findlay, 2011). Japan's stock of inward FDI has stayed below 4% of GDP since 2008, keeping it the lowest in the OECD. The Strategy aims to double the stock of inward FDI from 18 trillion yen in 2012 to 35 trillion yen in 2020, echoing the 2003 plan to double FDI over

Figure 7. **Japan's farm workforce is elderly: the age distribution of rice farmers in 2010**



Source: Ministry of Agriculture, Forestry and Fisheries, *2010 Census of Agriculture and Forestry.*

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five years. Foreign firms have identified the key factors that have hindered FDI inflows (Expert Group of the Cabinet Office, 2014 and EBC, 2014):

- The low level of corporate mergers and acquisitions, a key channel for FDI.
- The high corporate income tax rate.
- The lack of clarity and accountability in Japan's corporate governance framework.
- An unclear regulatory environment.
- Inflexible employment and termination rules for labour and the lack of mid-career mobility.
- Rules restricting the entry of foreign workers.

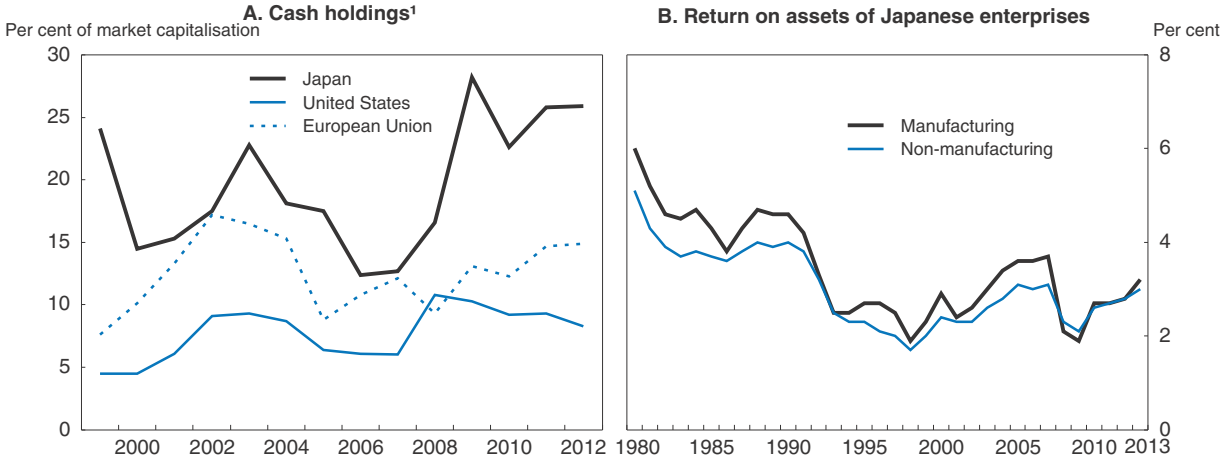
Boosting labour productivity by promoting innovation

While Japan spends heavily on education and R&D, reforms are essential to increase the return on such investments by: i) creating an appropriate framework that strengthens competition and improves resource allocation; ii) upgrading the science and technology system; iii) expanding the role of venture capital-backed firms, which play a key role in commercialising innovation; and iv) making SMEs a source of growth. Greening growth would also be beneficial for growth and productivity.

Framework conditions for innovation

Appropriate framework conditions are needed to encourage greater innovation by firms (OECD, 2010). Japan's corporate sector holds a large amount of cash compared to other advanced economies (Figure 8). Indeed, cash holdings reached 62% of GDP in FY 2012 and may play a role in Japan's low return on assets, which have been on a long downward trend (Panel B). High cash holdings have restrained aggregate demand and limited potential output growth (Shinada, 2012). Cash holdings can be reduced in one of three ways: greater investment, increased dividend payments and faster wage growth. Promoting investment and innovation requires a change in the business environment to modify firms' incentives.

Figure 8. **The corporate sector has high cash reserves and falling returns on assets**



1. Cash and marketable securities of listed companies as a percentage of market capitalisation in each country or region. For Japan – Topix 500 Index; US – S&P 500, euro area – Bloomberg Europe 500.

Source: Bloomberg; OECD calculations; Ministry of Finance.

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The first key reform in the Strategy, enhancing corporate governance, would help address these challenges. The gradual unwinding of cross-shareholdings provides an opportunity to improve governance and increase pressure on firms to innovate and invest their cash. Japan's governance framework lags behind global standards, according to foreign firms in Japan (EBC, 2014). Cross-country studies show that good governance tends to reduce corporate cash holdings (Aoyagi and Ganelli, 2014). Japan has taken steps to reform corporate governance, including the Stewardship Code introduced in 2014. The planned introduction of a corporate governance code offers an opportunity to introduce best practices, in line with the OECD Principles of Corporate Governance, which are currently being revised. In particular, Japan's draft code requires firms to have at least two outside directors. It is essential to ensure their independence.

Another priority is to reduce product market regulation (PMR). Studies show a significant relationship between PMR and productivity at the aggregate level (Bouis et al., 2011). Less restrictive PMR promotes: i) private investment in innovation; ii) the effective diffusion of knowledge from both domestic and overseas sources (Westmore, 2013); iii) improved managerial performance; and iv) entry by new firms. The 2013 Industrial Competitiveness Enhancement Act, which established the Strategy, cited over-regulation as a major distortion limiting competitiveness and pledged to "realise accelerated regulatory reforms". While Japan's score on the OECD's 2013 PMR index indicates that regulation is less stringent than the average, it lags behind the best performers (Koske et al., 2015). To promote reform in specific sectors and geographic areas, the government has launched "National Strategic Special Zones". Their effect would be enhanced by extending the reforms nationwide. Finally, competition policy should be upgraded by reducing exemptions to the Anti-Monopoly Act and increasing administrative fines.

Innovation also requires the continuous reallocation of labour within and across firms and sectors. Employment protection has a major impact on labour flows and reduces productivity by hindering the ability of innovative firms to attract resources (Martin and Scarpetta, 2012). Moreover, it reduces R&D expenditure (Andrews and Criscuolo, 2013).

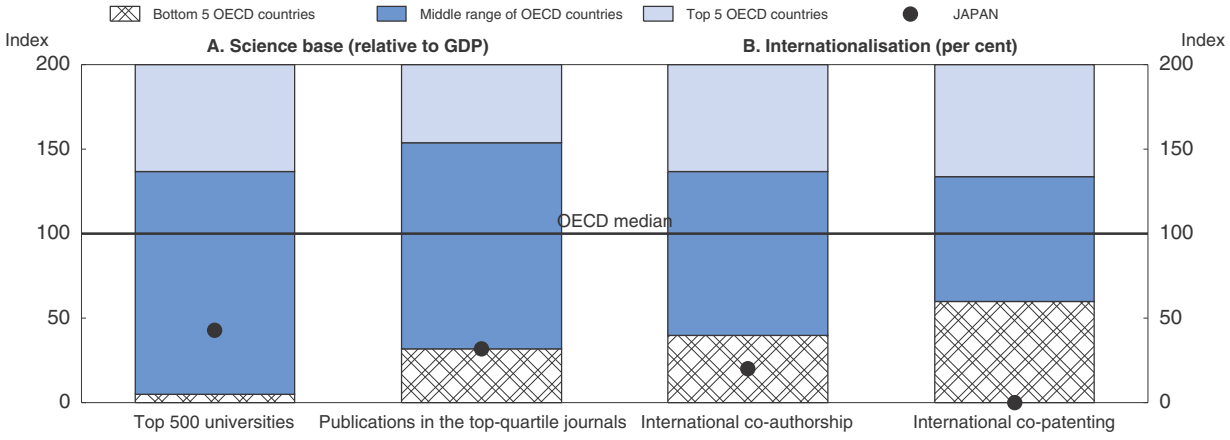
Japan's Strategy states that the country needs to shift "from an excessive employment stability policy to a policy of supporting labour movement to enable individuals to smoothly change jobs". Companies have increased employment of non-regular workers (including fixed-term and dispatched workers, i.e. sent from private employment agencies) from 16% of employees in 1985 to 37% in 2014 to enhance employment flexibility and avoid the cost of laying off regular workers, who receive higher employment protection. Indeed, firms that face greater uncertainty in their sales have a higher share of non-regular workers (Matsuura et al., 2011). However, the reliance on non-regular workers, who receive less firm-based training, has negative consequences for growth, as well as equity (see below).

Upgrading the science and technology system

Japan's gross domestic expenditure on R&D was the fifth highest in the OECD in 2012 at 3.4% of GDP. Moreover, business R&D, which has the greatest impact on total factor productivity (TFP) growth (Westmore, 2013), is particularly high. Nevertheless, Japan's TFP growth has been well below the OECD average in recent years, suggesting that Japan's return on its investment is low. One problem is a lack of skilled labour in science and engineering. By 2007, there were 4.5 job offers for each graduate in science and engineering, compared to a nationwide average of 1.5.

In addition, it is important to upgrade the quality of universities and strengthen their links with firms and expand international collaboration in innovation. The number of Japanese universities ranked in the top 500 worldwide (relative to GDP) was well below the OECD median in 2014 (Figure 9), suggesting scope to improve quality. The keys to improving quality include promoting internationalisation of universities and strengthening competition. The share of foreign students in Japanese universities was only 4%, in 2012, half of the OECD average of 8%, and the number of branch campuses of foreign universities in Japan fell from around 40 in the early 1990s to five at present. Strengthening competition depends in part on increasing transparency about the quality of tertiary institutions and raising the share of public funding that is linked to a university's

Figure 9. **Japan ranks low in some areas of its national science and innovation systems (2014)**



Note: Normalised index of performance relative to the median values in the OECD, which are set at 100. The top performer is set at 200 and the lowest at zero. The fifth-highest performer in the case of the "Top 500 universities" had a score of 137 relative to the OECD median, while the fifth lowest had a score of 5. Japan, with a score of 43, was in the middle range.
Source: OECD (2014e).

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performance, thereby ensuring that consolidation results in the restructuring and closure of the weakest institutions (Jones, 2011). Under Japan's 2014 university reform plan, universities are to be divided into three categories. The 22 universities in the top category are expected to compete with the top institutions of higher learning in the world.

Improving the quality of universities would enable them to make a larger contribution to innovation. Only 0.5% of business-financed R&D in 2013 was carried out at universities, indicating weak linkages between academia and business (Table 4). Moreover, only 2.6% of research performed at universities was funded by firms (Panel B). Spending on R&D performed in universities rose by only 12% (adjusted for inflation) in Japan over 2000-12, compared with 50% in Germany and 59% in the United States. Under the new Innovation National System (the Amari Plan), government research institutes (GRIs) are to play a bridging role to promote exchanges between business, academia and the government. Labour mobility will be facilitated by allowing researchers to have cross-appointments in universities, GRIs and enterprises.

Table 4. **Flows of R&D funds in 2013**

A. R&D funding

Source of funding		Allocation of R&D spending by sector performing it			
	Share of total R&D spending	Government	Universities	Business enterprises	Total
Government[1]	18.1	54.4	40.2	5.4	100.0
Universities	5.9	0.6	99.3	0.1	100.0
Business enterprises	75.5	0.6	0.5	98.9	100.0
Foreign sources	0.5	9.6	1.6	88.8	100.0

B. Sector performing R&D

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]	10.4	94.5	0.3	4.7	0.5	100.0
Universities	13.5	54.1	43.2	2.6	0.1	100.0
Business enterprises	76.1	1.3	0.0	98.1	0.6	100.0

1. Includes private non-profit institutes.
Source: OECD R&D Statistics Database.

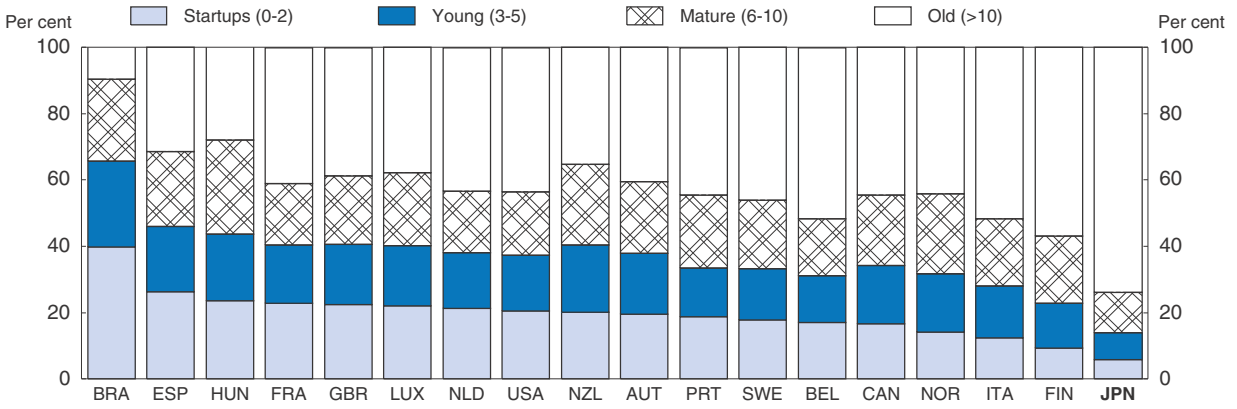
In addition, Japan needs to become more integrated in global innovation networks. Only 0.5% of the R&D carried out in Japan in 2013 was financed from abroad (Table 4), one of the lowest shares in the OECD, while the share of immigrant scientists in Japan is also among the lowest (Franzoni et al., 2012). Consequently, the levels of international co-authorship of academic papers and international co-patenting are among the lowest in the OECD area (Figure 9, Panel B).

Expanding the role of venture capital-backed businesses

Start-ups play a major role in economic growth and innovation. Firms less than five years old, regardless of size, accounted for less than a fifth of total non-financial business employment but generated half of all new jobs in the OECD over 2001-11 (OECD, 2013b).

Figure 10. **Small firms in Japan are relatively old**

Share of small firms (fewer than 50 employees) by age (in years) over 2001-11



Source: Criscuolo et al. (2014).

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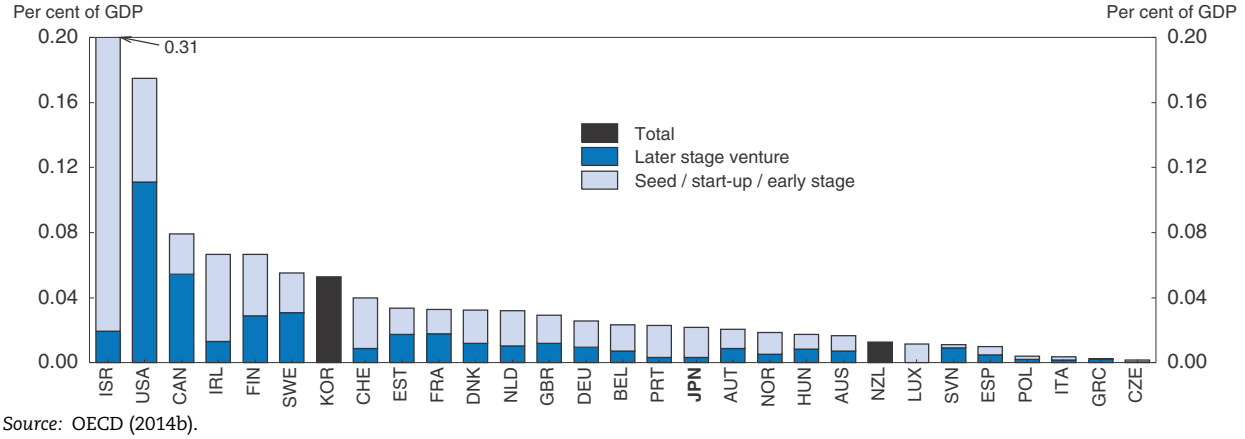
Japan's Strategy set a target of raising the business start-up and closure rates from the 4.5% average over 2004-09 to the 10% rate recorded in the United States. Given the low firm birth rate, Japan is dominated by older companies: three-quarters of small firms are more than ten years old compared with less than half in most OECD countries (Figure 10).

Venture capital-backed firms, which are important in promoting innovation, play a relatively minor role in Japan. Although the sharp decline in venture capital investment over 2006-09 has been reversed, it remains below earlier peaks. Moreover, the level (0.02% of GDP) is slightly below the OECD median and far behind leading countries such as Israel, the United States and Canada (Figure 11). To expand the role of venture capital, policies should: i) encourage entrepreneurship by implementing entrepreneurial education in schools; ii) reduce the stigma attached to failure to promote second chances; iii) enhance the role of venture capital firms and business angels, which together currently account for about one-third of venture capital investment in Japan; and iv) promote a more active M&A market to encourage venture capital investment by allowing investors to realise their gains.

Figure 11. **Venture capital investment as a share of GDP is relatively low in Japan**

2013 or latest year available



Source: OECD (2014b).

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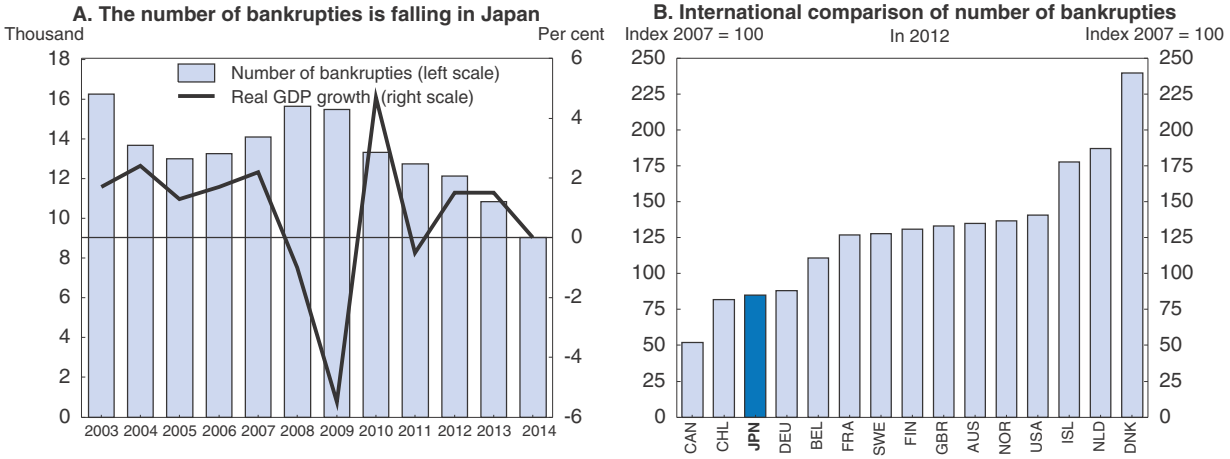
Making SMEs a source of growth

SMEs, which accounted for 99.7% of registered firms, 74% of employment and more than 50% of value added in 2012 (SMEA, 2014), also need to play a more prominent role in innovation. However, they have long suffered from low productivity, weak profitability and high leverage. Indeed, their net profit margin is only 1.5%, against 6.2% for large firms, and less than a third reported a profit in FY 2012 (Lam and Shin, 2012). The problems in the SME sector are linked to the weakness of services, given that more than three-quarters of SMEs are in that sector. Efficiency in services is crucial as they account for almost 40% of Japan's exports on a value-added basis (OECD, 2014f).

SMEs receive substantial government support. The government provides about 10% of financing for SMEs, and its share rises to 20% including guarantees, which are much higher than in other OECD countries. However, high public support for SMEs has negative side effects. *First*, it hinders the development of market-based financing. *Second*, generous government support delays restructuring by keeping non-viable enterprises (so-called "zombie" firms) afloat (Caballero et al., 2008). Even though the Japanese economy contracted sharply in 2008-09 and 2011, the number of bankruptcies has fallen since the crisis and by 2014 was a third below its 2007 level (Figure 12). Indeed, it dropped below 10 000 for the first time since 1990. In contrast, bankruptcies increased by an average of 66% in OECD countries over 2007-12 (Panel B). *Third*, there is little evidence that government financial support improves SME performance (Ono and Uesugi, 2014). *Fourth*, SMEs are discouraged from expanding and thereby losing government assistance. Indeed, only a fifth of Japan's largest companies (by market capitalisation) have been created since the 1960s, compared with three-quarters in the United States (Shirakawa, 2013).

Government support should be scaled back and guarantees focused on young firms for limited periods. Financial supervisors should tighten standards requiring financial institutions to conduct regular credit reviews of SMEs, publicly announce the results, and prepare restructuring plans for non-viable firms. Pressure on banks to ease lending terms for SMEs should be reduced. In addition, market-based financing for SMEs should be developed.

Figure 12. **The number of bankruptcies in Japan has fallen since 2008 despite two crises**



Source: OECD (2014b); *OECD Economic Outlook Database*.

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Promoting green growth and restructuring the electricity sector

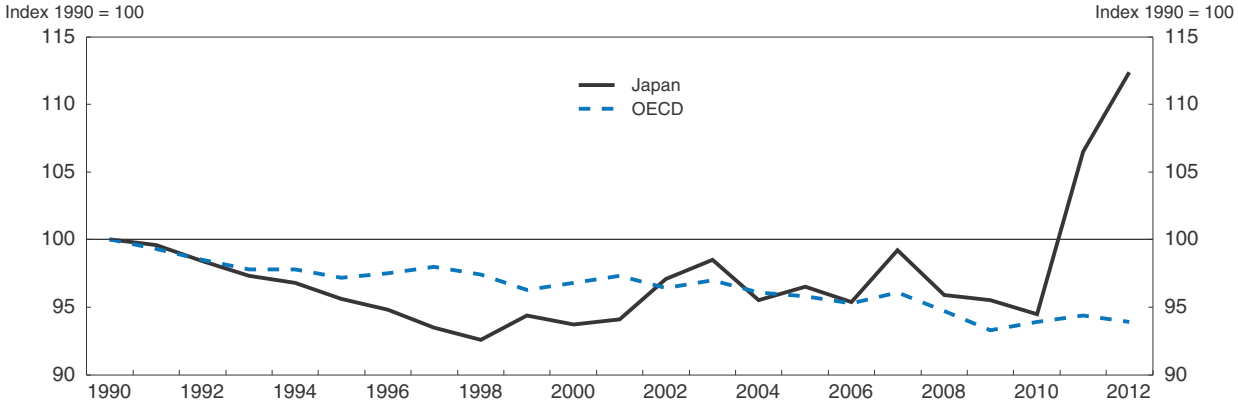
The 2011 nuclear accident led to the shutdown of Japan's 48 remaining nuclear power plants. Greater reliance on thermal energy resulted in a sharp spike in the carbon intensity of Japan's energy mix (Figure 13). The 2009 objective of reducing greenhouse gas emissions by 25% from their 1990 level was revised in 2013. The new target calls for cutting emissions by 3.8% from their 2005 level, implying a 3% rise from the 1990 level. Whatever the target, it is important to achieve it efficiently by placing a price on carbon through an emissions trading system or a carbon tax (2013 *OECD Economic Survey of Japan*).

Japan's 2014 Energy Plan views nuclear power as an important and low-carbon baseload source. However, dependence on nuclear power generation is to be reduced to the extent possible through energy saving and expanding renewables. Given that regulatory failure contributed to the nuclear accident, the government created a new supervisory body, the Nuclear Regulatory Authority, to carefully review compliance of nuclear power plants with the new regulatory standards (Jones and Kim, 2013). After the accident, it is more important than ever to promote renewable energy, which accounts for only 12% of electricity, as against the OECD average of 21%. Expanding the role of renewables, while enhancing their cost efficiency, would promote green growth. The Feed-in-Tariff system, introduced in 2012, has resulted in a 70% expansion in renewable energy capacity. At the same time, the fixed long-term contracts at high prices offered for renewables risk creating a serious financial burden on consumers and the government, as has occurred in some OECD countries.

The use of renewables is limited by the structure of the electricity sector, which is dominated by ten regional, vertically-integrated monopolies, resulting in inadequate interconnection facilities and weak market mechanisms. The government has launched reforms to expand competition in power generation and the retail market, including the introduction of "legal" or "management" unbundling of generation, transmission and retailing by 2020. However, it would be better to require ownership unbundling to eliminate all incentives for cross-subsidisation between generation and transmission. The government should also break down regional monopolies and create a competitive, nationwide electricity market.

Figure 13. **Carbon intensity of the energy mix**

Energy sector carbon intensity index, 1990 = 100[1]



1. The IEA Energy Sector Carbon Intensity Index tracks how many tonnes of carbon dioxide (CO2) are emitted for each unit of energy supplied (total primary energy supply).

Source: IEA (2014).

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Key recommendations to boost economic growth through bold structural reforms

- Slow the trend decline in the labour force by:
  - Increasing female employment by expanding childcare, reforming aspects of the tax and social security systems that reduce work incentives for second earners and breaking down labour market dualism to reduce gender inequality.
  - Expanding the use of foreign workers.
- Participate in high-level trade agreements, notably the Trans-Pacific Partnership and a Japan-EU Economic Partnership Agreement.
- Improve the business climate to boost productivity growth by:
  - Upgrading corporate governance.
  - Promoting labour market flexibility and mobility.
  - Improving the entrepreneurial climate by ensuring second chances and developing entrepreneurial education.
  - Revitalising venture capital investment to promote firm creation and innovation.
  - Reducing government support for SMEs to promote the restructuring of viable firms and the exit of non-viable ones.
  - Moving to a more market-based agricultural system by measures such as reducing commodity-specific payments to farmers, accelerating the consolidation of farmland and reforming the role of agriculture co-operatives.

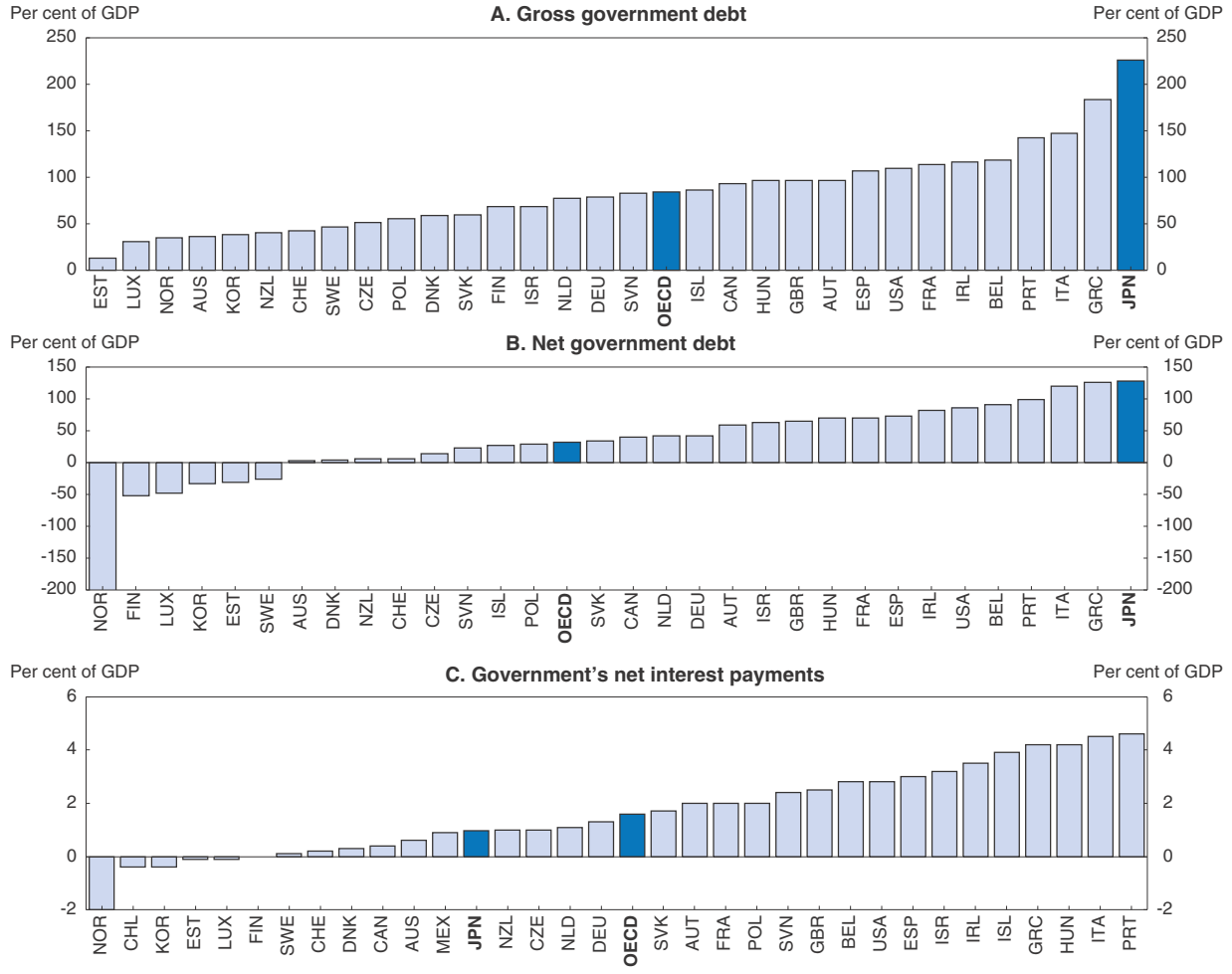
Reducing government debt: Flexible fiscal policy (the second arrow)

Twenty-two consecutive years of budget deficits have driven gross government debt to 226% of GDP in 2014, by far the highest in the OECD (Figure 14). Even after taking account of government assets, net debt is also the highest, at 129% (Panel B). The impact of such high debt on government interest payments has been mitigated thus far by exceptionally low interest rates. Indeed, the effective interest rate on government debt is the lowest in the OECD at 0.9%, limiting net interest payments to 1.0% of GDP, below the OECD average of 1.6% (Panel C). The low interest rate partly reflects government bond purchases by the BoJ, which now holds nearly a quarter of the stock. The Quantitative and Qualitative Easing introduced in 2013 (see below) has further lowered the yield on 10-year government bonds to around 40 basis points. In addition, persistent deflation and the risk aversion and "home bias" of investors have contributed to low interest rates. Moreover, Japan's large stock of net external assets helps maintain confidence in its ability to meet its debt obligations. Around 90% of government debt is domestically held and the government's external debt (including the BoJ) was less than $1 trillion in mid-2014, compared to $6.6 trillion for the United States and $4.2 trillion for the euro area.

Japan's persistent deficits are a structural problem stemming from rising public social spending together with chronically weak nominal output growth that has limited government revenues. Public social spending doubled from 12% of GDP in 1990 to 24% in 2013, and now accounts for about half of general government spending. However, total government revenue in Japan in 2012 was unchanged from its 1990 level of one-third of GDP. While central government tax revenue has been rising since 2009, it still finances only about half of spending (Figure 15).

Figure 14. **Japan's government debt is the highest but interest payments on the debt are low**

General government basis in per cent of GDP in 2014



Source: OECD Economic Outlook Database.

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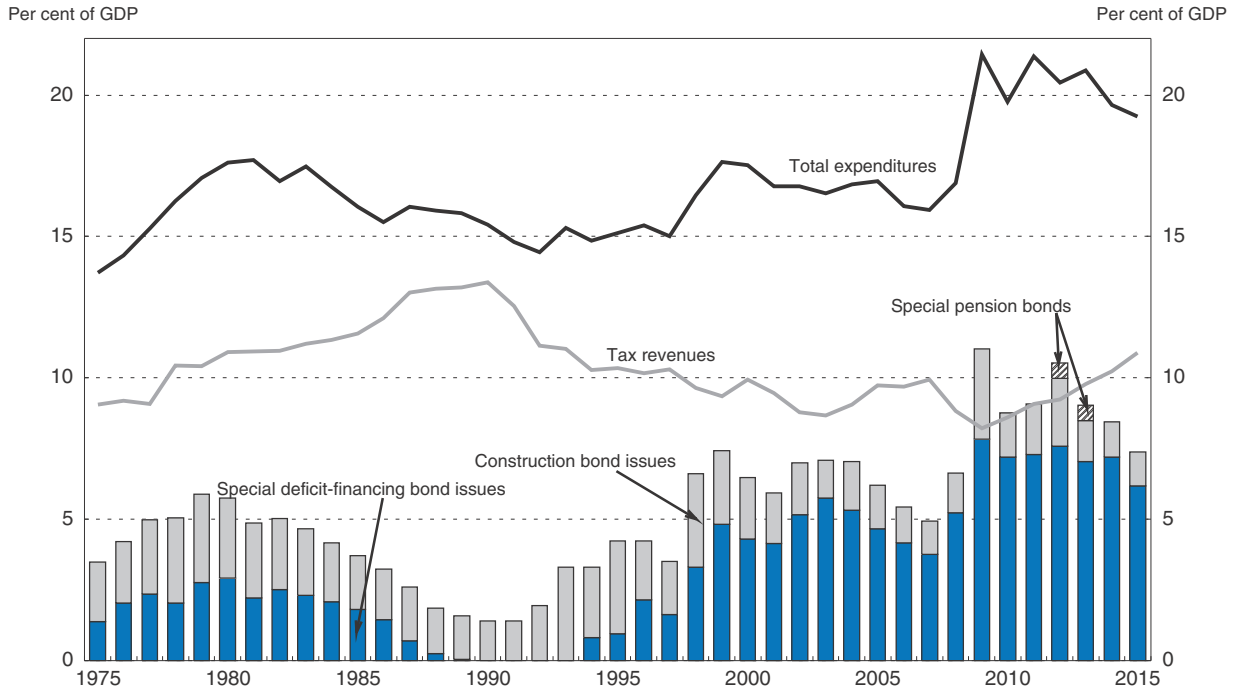
However, the financing of large government deficits at low rates by Japanese savers will not continue indefinitely, leaving Japan vulnerable to rising interest rates. A normalisation in the government's effective borrowing rate from the current 0.9% in 2014 to 3%, for example, would expand the deficit from 8.5% of GDP in 2013 to around 13%. In addition to the fiscal consequences, banks, which hold about a third of government bonds, would also be destabilised by falling bond prices (Jones and Urasawa, 2013).

In 2013, the government adopted a medium-term fiscal plan whose targets are broadly in line with the fiscal strategy laid out in 2010: i) halving the primary deficit of central and local governments from 6.6% of GDP in FY 2010 to 3.3% by FY 2015; ii) achieving a primary surplus by FY 2020; and iii) putting the debt ratio on a downward trend thereafter. However, there was little progress over 2010-14, as the primary deficit remained around 7% of GDP (on a general government basis), in contrast to large reductions in the United States (7 percentage points) and the euro area (3 points). After the Great East Japan Earthquake in 2011, reconstruction spending amounting to 5% of GDP slowed fiscal consolidation. In addition, the government launched a 10.3 trillion yen (2.2% of GDP) fiscal package in 2013,

Figure 15. **The gap between government expenditure and revenue remains huge**

Central government general account as per cent of GDP[1]



1. The final outcome for FY 1975-2012, the revised budget for FY 2013, and the initial FY 2014 and FY 2015 budgets. Reconstruction spending and bond issuance to finance it are excluded for FY 2011-15.

Source: Ministry of Finance; OECD calculations.

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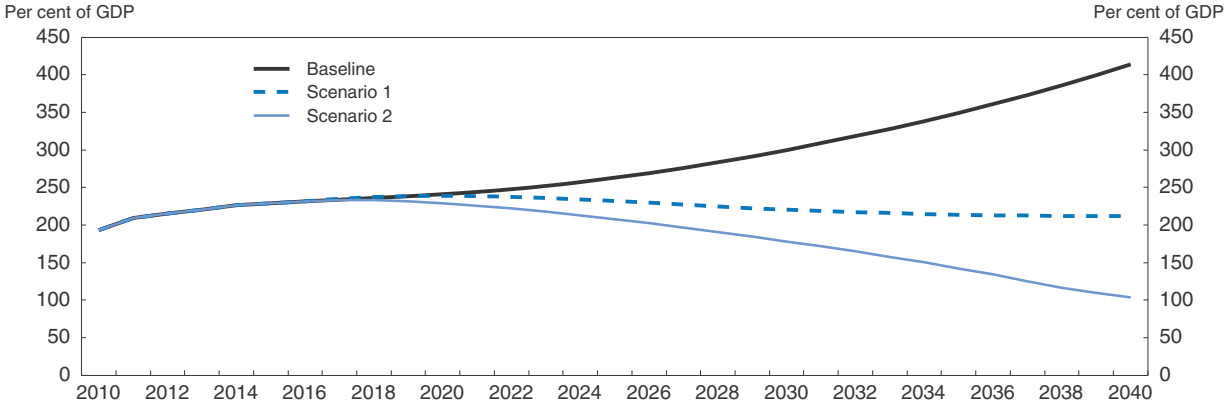
followed by a 5.5 trillion yen package in early 2014, reflecting the "flexible" approach in the second arrow.

Fiscal consolidation advanced with the April 2014 consumption tax hike and the plan for a second increase to 10% in 2015. The doubling of the tax rate would have generated 14 trillion yen (2.7% of GDP) of revenue, of which about one-fifth was to be spent to improve childcare, pensions and healthcare. The remainder was to finance existing social insurance outlays, thereby cutting the deficit. However, with the delay in the second consumption tax hike, planned improvements in pensions and long-term care were postponed. According to the initial budget for FY 2015, which assumes a 9% rise in tax revenue and a 7% increase in non-tax revenue, the FY 2015 primary deficit target can be achieved.

However, Japan remains far from its target of a primary surplus by FY 2020 for central and local governments, according to the February 2015 government projection. It shows a primary deficit of nearly 2% of GDP in FY 2020 (central and local government basis), even assuming the second tax hike in 2017 and nominal GDP growth at an annual average of 3.1% between FY 2013 and FY 2022. The OECD projects a primary deficit of around 5% of GDP in 2016 on a general government basis, which is an important measure as it determines the evolution of public debt. This implies that fiscal consolidation of 1% a year over FY 2016-20 would be necessary to achieve a primary surplus.

In the absence of further measures to reduce the deficit, the government debt ratio would rise steadily to more than 400% of GDP by 2040, according to an OECD simulation (Figure 16), even assuming 2¾ per cent nominal GDP growth. The model is used to simulate

Figure 16. **Simulations of gross government debt as a share of GDP**



Note: In the baseline, there is no fiscal consolidation and nominal growth is around 2¾ per cent (1% real growth, 1¾ per cent inflation). The model shows a rise in long-term interest rates from around 0.25% at present to 7% by 2040. Fiscal consolidation of 7% of GDP over the decade 2017-26 is assumed in the two scenarios, which have different average output growth rates over 2015-40, resulting in varying levels of interest rates:

- Scenario 1: Nominal growth of 1½ per cent (1% real growth, ½ per cent inflation).
- Scenario 2: Nominal growth of 4% (2% real growth and 2% inflation).

Source: *OECD Economic Outlook* Database; OECD calculations.

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the impact of fiscal consolidation of 7% of GDP (equivalent to raising the consumption tax rate from 8% to 22%, the average in the euro area) under different scenarios for real output growth and inflation:

- If real growth were around 1% and inflation were around ½ per cent per year (Scenario 1 in Figure 16), the government debt ratio in 2040 would remain above 200% of GDP.
- If the third arrow boosted real growth to 2%, while inflation reached the 2% target, the debt ratio would decline to nearly 100% by 2040 (Scenario 2). With fiscal consolidation, the rise in interest rates is lower than in the baseline, contributing to the lower debt trajectory.

In sum, achieving faster nominal growth through higher real growth and higher inflation is essential to reduce government debt.

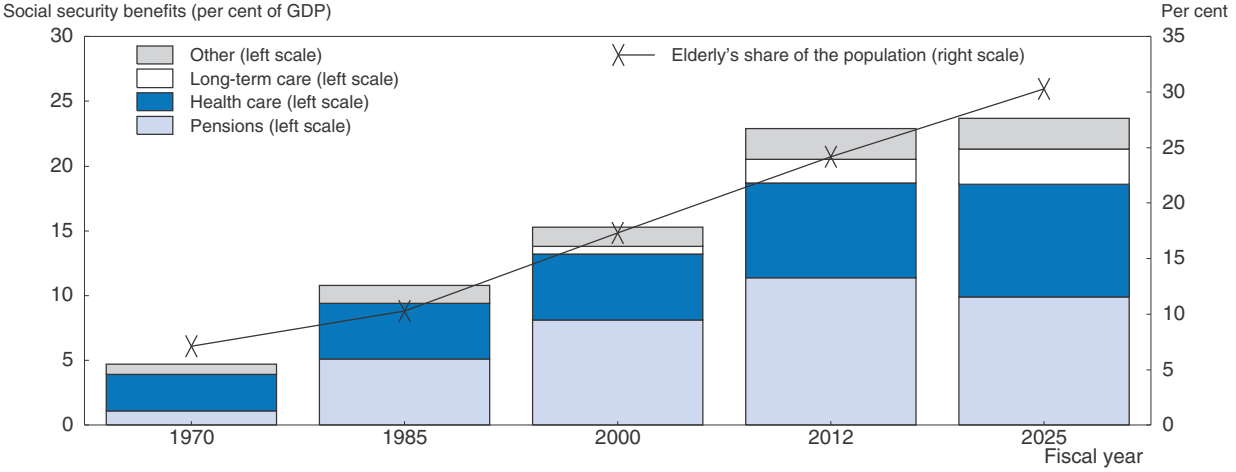
The need for a detailed and credible medium-term fiscal strategy

A fiscal plan should be based on an appropriate target. A primary budget that is close to balance is unlikely to stabilise the debt ratio, let alone put it on a downward trend. Instead, this may require a primary surplus of around 3% of GDP (general government basis), based on the government's projection that the nominal interest rate will be 1.3 percentage points above the nominal growth rate in FY 2023. This is close to the average gap of 1½ percentage points since 1980 (2013 *OECD Economic Survey of Japan*). Given the projected primary deficit of close to 7% of GDP in 2014, this implies that fiscal consolidation of around 10% of GDP is needed to stabilise the debt ratio. A strong institutional framework would help maintain confidence in Japan's fiscal sustainability during such a long period of consolidation. The establishment of such independent fiscal councils in many OECD countries has helped to improve fiscal policymaking, making clear the urgency of the problem and helping build a public consensus for fiscal consolidation (OECD, 2012). In this regard, the role of the Council on Economic and Fiscal Policy, which is headed by the Prime Minister and includes five ministers, the governor of the Bank of Japan, two academic experts and two business leaders, can be expected to increase.

The immediate challenge is to launch a detailed and credible fiscal strategy to forestall, or at least limit, any rise in the long-term interest rate. Such a strategy should take into account that:

- Government revenue in Japan is the sixth lowest in the OECD and well below the average of 43% of GDP, indicating space for higher revenue.
- Government spending in Japan, excluding social security outlays, is the ninth lowest in the OECD, suggesting limited scope for major spending cuts beyond the expected fall in public investment.
- Continued population ageing will put further upward pressure on public social spending (Figure 17).

Figure 17. **Public social spending has been rising sharply in line with population ageing**



Source: National Institute of Population and Social Security Research (2014); Ministry of Health, Labour and Welfare (2012a).

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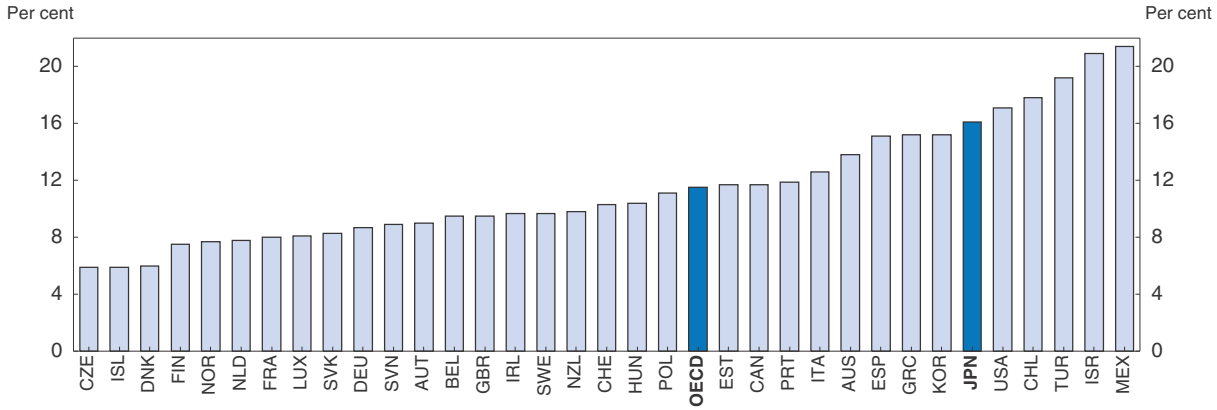
Fiscal consolidation and regulatory reform need to take into account their impact on income inequality and relative poverty, which was the sixth highest in the OECD area in 2012 (Figure 18). The redistributive impact of the tax and benefit systems for the working-age population is weaker than the OECD average (Figure 19), reflecting two factors: i) while total public social spending in 2011 was 23% of GDP, surpassing the OECD average of 21%, spending on the working-age population was only 3% of GDP, compared with the OECD average of 6%; and ii) the tax wedge is high for low-income families with children and relatively flat across the income distribution. Japan is the only OECD country where the lowest income decile has suffered an absolute decline in their real income since the mid-1980s (OECD, 2011a). Moreover, Japan is the only OECD country where the poverty rate for all working households and all households with children is higher after taking account of taxes and benefits (2013 *OECD Economic Survey of Japan*).

Raising more revenue

Raising sufficient revenue will likely require measures to increase receipts from a number of different taxes. Moreover, a steady rise so as to avoid a large increase in any given year would be preferable so as to mitigate the impact on the real economy.

Figure 18. **Japan faces a problem of high poverty**[1]

Relative poverty rate in 2012 or latest year available[2]



1. The relative poverty rate is the share of the population with an income below half the "median equivalent disposable income", which equals household disposable income divided by the square root of the number of household members.
2. Japanese data are based on the Comprehensive Survey of Living Conditions, which is submitted to the OECD by Japan. Another survey, the National Survey of Family Income and Expenditure, shows a much lower relative poverty rate of 10.1%.

Source: OECD Income Distribution and Poverty Database; Ministry of Health, Labour and Welfare, *Comprehensive Survey of Living Conditions*.

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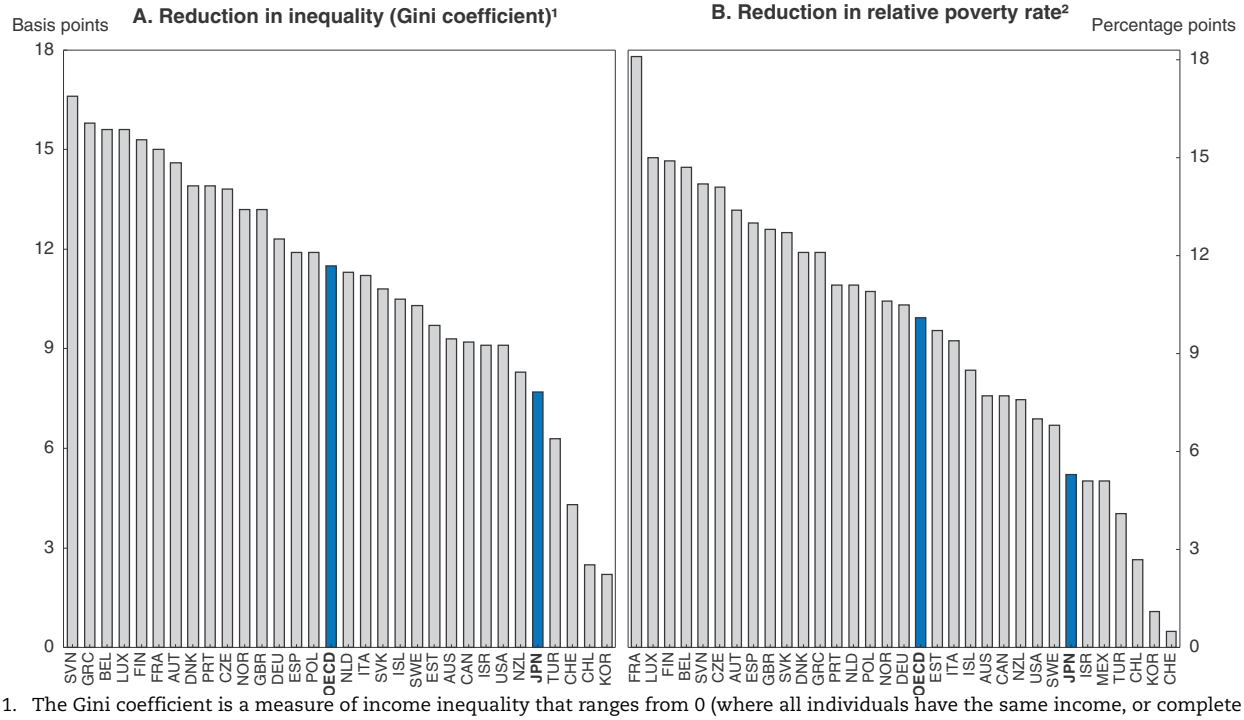
Using the consumption tax, which is a value-added tax (VAT), for additional revenue has many advantages. A VAT is less harmful for economic growth than taxes on labour and capital, as it imposes fewer distortions on employment and investment, and it is a

Figure 19. **The impact of taxes and transfers on income inequality and poverty is weak in Japan**

Working-age population in 2012 or latest year



1. The Gini coefficient is a measure of income inequality that ranges from 0 (where all individuals have the same income, or complete equality) to 1 (where one individual has all the income).
2. The relative poverty rate is the percentage of the population whose income is less than half median income.

Source: OECD Income Distribution and Poverty Database.

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relatively stable revenue source (Arnold et al., 2011). Moreover, it spreads the burden across the population, including the elderly, who receive large net transfers from younger generations. Even with the planned hike to 10% in 2017, Japan's VAT rate would still be the third lowest in the OECD and only about half of the 19% average. It is important to maintain a single rate, relying on more effective policies to address the equity implications of a higher VAT rate. Indeed, reduced VAT rates on items such as food and energy products are a poor tool for targeting support to low-income households, as high-income households benefit most (OECD, 2014g). Countries with multiple rates have relatively low VAT revenue, compared with that implied by their standard rate, thus requiring an even higher standard rate. In addition, multiple rates imply higher administrative and compliance costs, opportunities for fraud, and distortions in consumption decisions.

There is also scope to broaden the personal income tax base, which is relatively narrow. Indeed, less than half of personal income is taxable, reflecting income deductions, such as the personal exemption. In addition, there is a large deduction for salaries, which helps ensure more equitable treatment of employees and the self-employed. Better coverage of the self-employed is thus necessary for base broadening, but this requires the effective introduction of taxpayer identification numbers, which is planned for 2016. A broader base could boost personal income tax revenue from 5.3% of GDP in 2012 toward the OECD average of 8.6%, while enhancing its impact on income distribution. In addition, environmental taxes, which are relatively low in Japan, would be a good source of revenue, as they would also help address environmental concerns (Figure 6), while promoting green growth.

The combined corporate income tax rate is the second highest in the OECD area even after the reduction to below 35% in 2014. Cutting the corporate tax rate and widening its base could stimulate economic activity without necessarily reducing revenues, while encouraging inflows of FDI. One of the key reforms of the Japan Revitalisation Strategy is to reduce the rate below 30% over the next few years, bringing it closer to the 25% OECD average (Table 3). It is important that the cut be revenue neutral, notably by broadening the tax base. In particular, the percentage of firms that pay corporate income tax should be increased from the 30% in FY 2012.

Controlling the growth of public social spending

Pensions and health and long-term care, which are mainly focused on the elderly, account for more than 80% of public social spending. The 2004 pension reform introduced "macroeconomic indexation", which adjusts pension benefits based on changes in the number of contributors and life expectancy. Consequently, pension spending is projected to fall from 11.4% of GDP in FY 2012 to 9.9% in FY 2025. However, the reform will reduce the pension replacement rate. In the case of slow output growth, it could drop below 50% (which is not allowed by law). Further reform is needed to ensure the sustainability of the pension system. Additional cuts in benefits should be avoided. In addition, a further hike in the contribution rate, which is set to reach 18.3% in FY 2017, would risk weakening work incentives.

The best option for further reform, therefore, would be to increase the pension eligibility age, as it would improve pension financing by raising the labour participation of older people (Sutherland et al., 2012). The pension eligibility age is now 65 for men (63 for women) for the basic pension and 61 for men (60 for women) for the Employees' Pension Insurance. Although the age is to be raised to 65 by 2025 for men and 2030 for women, it

will remain relatively low compared to Japan's life expectancy of 83.4 years. Accelerating the increase in the eligibility age to 65 and raising it further – through a link to longevity – would help ensure the sustainability of the pension system and improve inter-generational equity. Calculations based on government simulations suggest that raising the eligibility age to 70 by 2035 could boost the replacement rate by almost 20 percentage points, creating scope for savings (MHLW, 2014a).

In contrast to pensions, healthcare spending is projected to continue rising as a share of GDP. Over 2000-12, it increased at a 2.2% annual rate. Its share of GDP has risen from 7.6% to 10.3%, surpassing the 9.3% OECD average. The increase is nearly evenly divided between the impact of ageing and rising costs per person. In terms of the type of healthcare, costs are driven by spending on pharmaceuticals and hospital stays. Limiting pharmaceutical outlays requires reducing the number of prescriptions and expanding the use of generic medicine, which lags behind other countries.

A top priority is to reduce the average length of hospital stays, which at 31.2 days, is almost four times the OECD average (Table 5). Long hospital stays are, in turn, linked to long-term care; the average stay for curative care is substantially lower at 17.5 days. Given the higher cost of curative care, reflecting the requirements for medical staff and equipment, shifting those not needing such care to home-based care or specialised institutions would sharply lower costs. Shifting beds to long-term care facilities, which relative to the elderly population have only half as many beds as the OECD average, would help ensure adequate long-term care. The number of people receiving long-term care increased by 8% per year over 2000-12 and is likely to accelerate further.

Finally, it is also necessary to reduce hospital stays for curative care, which are again the longest in the OECD (Table 5), by shifting away from a fee-for-service system in favour of a diagnosis-related group approach and raising the low co-payment rate for the elderly (2013 *OECD Economic Survey of Japan*). This would also help reduce the number of doctor visits, which is double the OECD average.

Well-targeted social spending is essential to promote inclusive growth. The main priority is to introduce an earned income tax credit (EITC), which is effective in promoting work and assisting those on low income, especially in countries like Japan with a relatively wide earnings distribution, low taxes on labour and low benefits for the non-employed (2013 *OECD Economic Survey of Japan*). In particular, an EITC would mitigate the regressive impact of consumption tax hikes. An EITC should be accompanied by effective labour market

Table 5. **International comparison of healthcare shows room for cost savings in Japan**

In 2012 or latest year available

	Average total hospital stay[1]	Average hospital stay for curative care[1]	Total number of hospital beds[2]	Number of acute-care beds[2, 3]	Number of long-term care beds[2, 3, 4]	Number of beds in long-term care facilities[2, 4]	Number of doctor consultations per capita per year
Japan	**31.2**	**17.5**	**13.4**	**7.9**	**2.7 (11.1)**	**6.0 (25.0)**	**13.0**
OECD average	8.4	7.4	4.8	3.3	0.6 (3.8)	7.7 (48.5)	6.7
Highest country	31.2	17.5	13.4	7.9	3.2 (27.4)	13.5 (72.2)	14.3
Lowest country	3.9	3.9	1.6	1.5	0.0 (0.0)	2.4 (17.7)	2.7

1. In days.
2. Per 1 000 population.
3. In hospitals.
4. The numbers in parentheses show the number of beds per 1 000 population aged 65 and over.

Source: OECD Health Database.

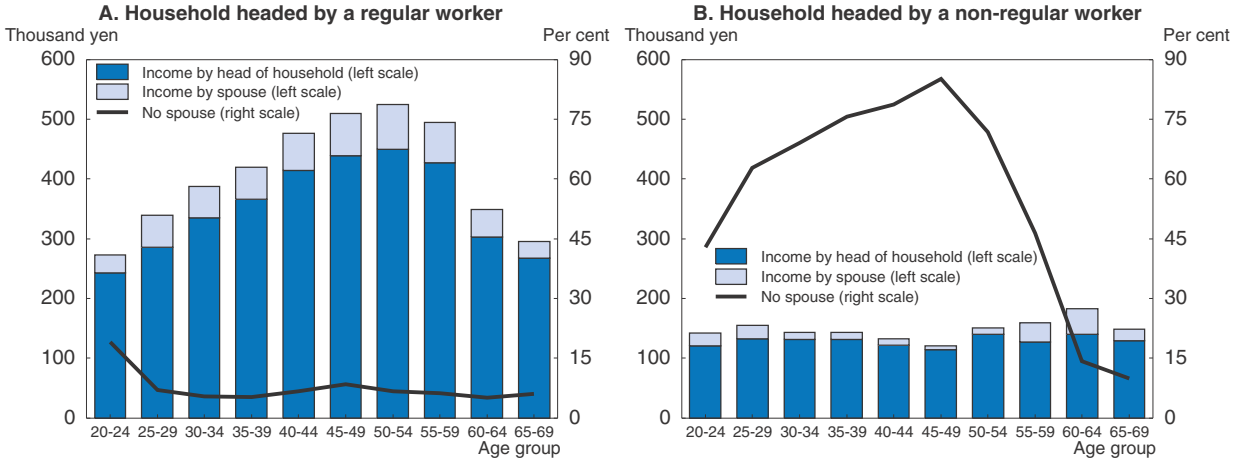
activation policies to help the unemployed find jobs that would allow them to receive the EITC and by steps to enhance transparency about income, particularly of the self-employed.

It is important to break down labour market dualism, which is the major cause of increasing income inequality in Japan, according to the government (Ministry of Health, Labour and Welfare, 2012b). After adjusting for type of job and educational attainment, the wage gap between full and part-time workers is 45% for men and 31% for women. The income of a household headed by a regular worker in the 45-49 age group was more than four times that of a household headed by a non-regular worker (Figure 20). The lower income of non-regular workers also discourages marriage and hence reduces the fertility rate. Dualism has a number of other negative effects (2013 *OECD Economic Survey of Japan*):

- *Less firm-based training:* Only about a quarter of firms provide systematic on-the-job training to non-regular workers, less than half the share for regular workers.
- *Less coverage by the social safety net:* Around one-third of non-regular workers are not covered by employment insurance, even though they have precarious jobs (Ministry of Health, Labour and Welfare, 2011).
- *Limited mobility between regular and non-regular employment:* Non-regular employment is not a stepping-stone to regular employment. Studies show that those who begin their careers as non-regular workers have less success later in life in terms of career stability, incomes and marriage.
- *Reduces well-being:* A 2012 government survey found that the happiness level reported by non-regular workers is below that of regular workers and the self-employed.

Breaking down dualism requires a comprehensive strategy aimed at reducing the factors that encourage firms to hire non-regular workers, including increasing social insurance coverage and upgrading training programmes for non-regular workers and reducing effective protection for regular workers, in particular by increasing transparency. This should include setting clear rules for the dismissal of workers (OECD, 2015).

Figure 20. **There are large income gaps between regular and non-regular workers**



Source: Ministry of Health, Labour and Welfare (2014b).

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Key recommendations to reduce government debt while promoting social cohesion

- Set out a detailed and credible plan to constrain government spending and raise revenues so as to achieve the target of a primary surplus by FY 2020.
- Rely primarily on the consumption tax with a single rate and a broadening of the personal and corporate income tax base to boost government revenue, while raising environmental taxes.
- Reform pensions and health and long-term care to limit spending growth in the face of population ageing.
- Improve the targeting of public social spending and introduce an earned income tax credit for low-income workers.
- Break down labour market dualism by increasing the coverage of social insurance and upgrading training programmes for non-regular workers, and reducing effective employment protection for regular workers, in particular by increasing transparency.

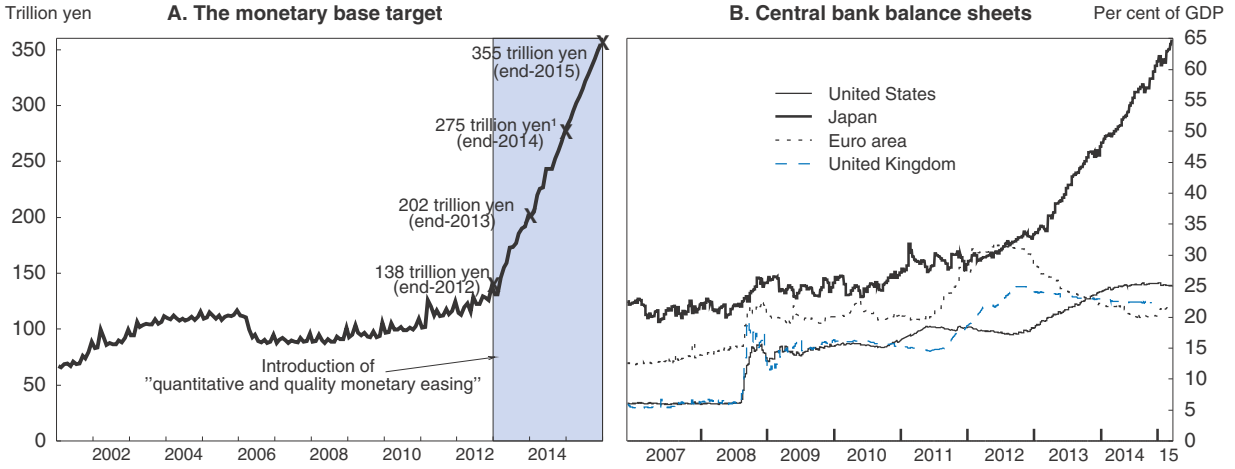
Ending deflation: Bold monetary policy (the first arrow)

Deflation lowers nominal GDP, thereby boosting the government debt ratio and threatening fiscal sustainability. The GDP deflator fell by more than 17% between 1997 and 2013, helping to drive down nominal GDP by 8%. If annual inflation had instead been 1% over that period, the debt ratio would have been only 155% of GDP in 2013 rather than 220%, based on a simple mechanical calculation. It is clear that reducing the debt ratio in a deflationary context is very difficult. Deflation also has a negative impact on growth, partly because it keeps the real interest rate positive at times when ample slack would call for negative real rates. Indeed, a Taylor rule calculation by the OECD for 2014 suggests that a negative policy interest rate was still appropriate in Japan. Given the deleterious effects of deflation, achieving the 2% inflation target should remain a top priority.

In January 2013, the Bank of Japan (BoJ) set a 2% inflation target for the consumer price index and, in April 2013, stated that it would achieve the 2% target as soon as possible, with a time horizon of about two years. To this end, the BoJ launched "quantitative and qualitative monetary easing" (QQE) and pledged to continue until the inflation rate is sustainably at the target level. Such an open-ended commitment by the BoJ should help avoid premature monetary tightening, as in 2006 when the BoJ ended quantitative easing while inflation was around zero, leaving Japan vulnerable to renewed deflation in the wake of the 2008 global financial crisis (2013 *OECD Economic Survey of Japan*).

QQE represents a clear break from past BoJ quantitative easing in terms of its scale, decisiveness and ambition. Previously, the BoJ had declined to set a target, arguing that population ageing made it impossible for monetary policy alone to end persistent deflation. With purchases of 50 trillion yen of government bonds per year, the monetary base was to double from 138 trillion yen (28% of GDP) at end-2012 to 270 trillion yen at end-2014 (Figure 21). The scale of QQE is large compared to quantitative measures adopted elsewhere (Panel B). Indeed, the BoJ's balance sheet reached 65% of GDP in February 2015.

Figure 21. **The monetary base is rising rapidly under quantitative and qualitative easing**



1. The target increased from 270 trillion yen to 275 trillion yen with the increase in QQE in October 2014.
Source: Bank of Japan; Thomson Financial.

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As part of the qualitative aspect of QQE, the composition of asset purchases was changed:

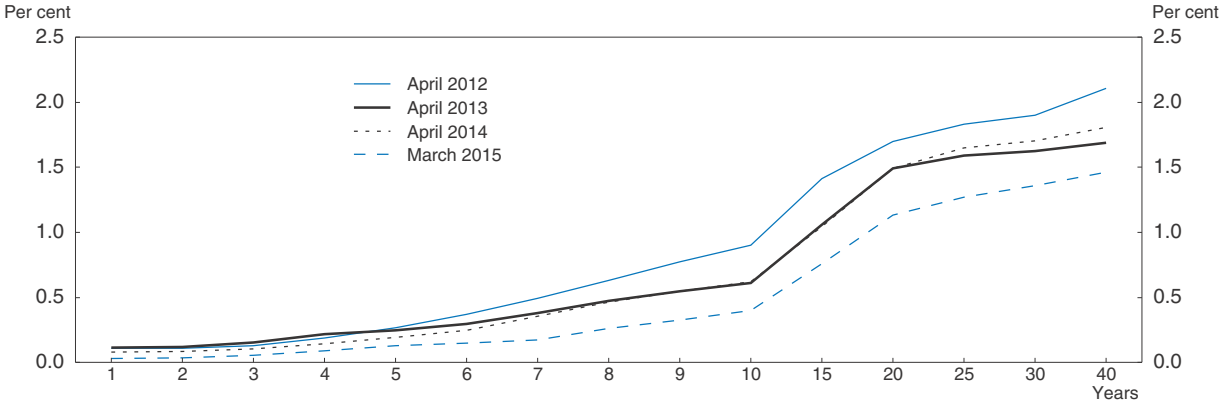
- The BoJ began to purchase government bonds of all maturities, so as to increase the average remaining maturity of its holdings from slightly less than three years to about seven, matching the average maturity of the total stock of outstanding government bonds.
- The BoJ increased its purchases of private assets in order to reduce risk premia.

QQE is aimed at achieving the 2% inflation target by reducing long-term interest rates, strengthening the "portfolio rebalancing effect", and raising inflation expectations. All three transmission channels have been effective:

- Interest rates have fallen across the yield curve, with declines of at least 50 basis points for maturities of ten years or more since 2012 (Figure 22).
- The portfolio rebalancing effect is working, as reflected in the increase in bank lending and the rise in equity prices to 15-year highs (Figure 23).
- The BoJ's new approach had an immediate impact on inflation expectations: according to the break-even inflation rate calculated by comparing yields on fixed-rate and inflation-index bonds. Inflation expectations rose from 0.7% prior to the introduction of QQE in 2013 to 2.7% in early 2014, before falling back to around 2% (Figure 24). Survey-based measures show a more modest rise in inflation expectations over two to ten years ahead from 1% to 1.4%. Given the 50 basis-point drop in long-term interest rates, real interest rates have thus fallen by between 1 and 2 percentage points. The increase in inflation expectations, along with high corporate profits (Figure 2, Panel C), is essential for achieving faster wage growth (Figure 2, Panel B), which helps to sustain growth and achieve the inflation target.

However, inflation fell in the second half of 2014. Facing a drop in oil prices, the BoJ announced in October 2014 a pre-emptive recalibration of QQE to maintain the improved inflation expectations. Its purchases of government bonds increased from the initial 50 trillion yen annual pace set in 2013 to 80 trillion yen and purchases of exchange-traded

Figure 22. **Quantitative and qualitative easing has reduced interest rates across the yield curve**[1]



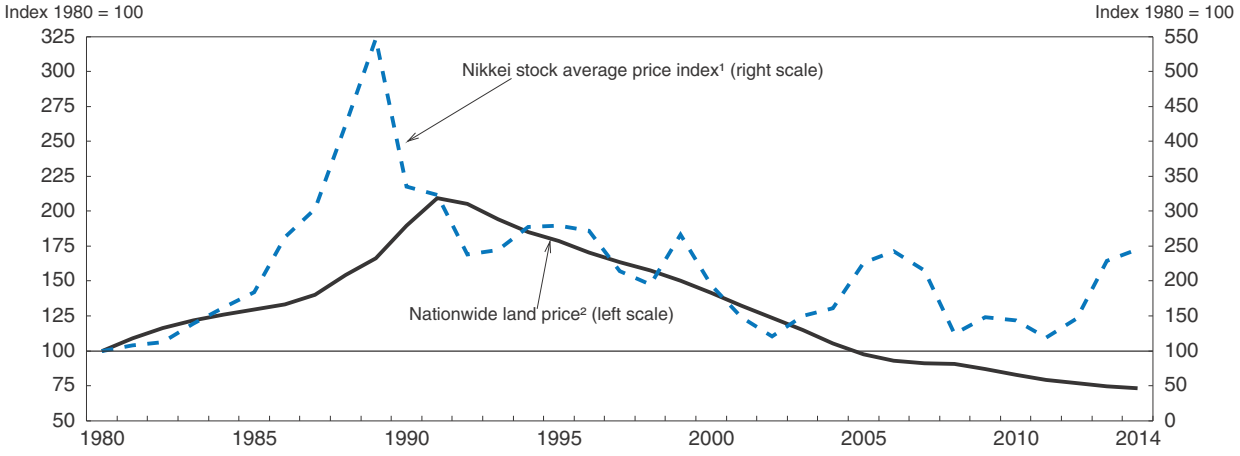
1. Market base rate using compounded growth rate. The data refer to the rate at the end of the month.
Source: Ministry of Finance.

StatLink http://dx.doi.org/10.1787/888933201939

funds (ETFs) and real estate investment funds (J-REITs) tripled. In addition, the BoJ decided to further lengthen the average remaining maturity of its government bond holdings towards ten years. The BoJ recently stressed its readiness to further expand QQE if necessary to achieve its target of 2%. The ramped-up quantitative easing, combined with the delay in the tax hike, should sustain inflation expectations and facilitate a definitive exit from deflation.

Nevertheless, QQE carries a number of risks, in part as its sheer size could disrupt the bond market and fuel asset price bubbles. However, nationwide land prices have fallen for 23 consecutive years (Figure 23), with drops in both commercial and residential land, even though Japan has had a virtually zero policy rate since 1999 (with the exceptions of 2000-01 and 2006-08). However, the pace of decline did slow from 4.7% in 2010 to 1.5% in 2014, as

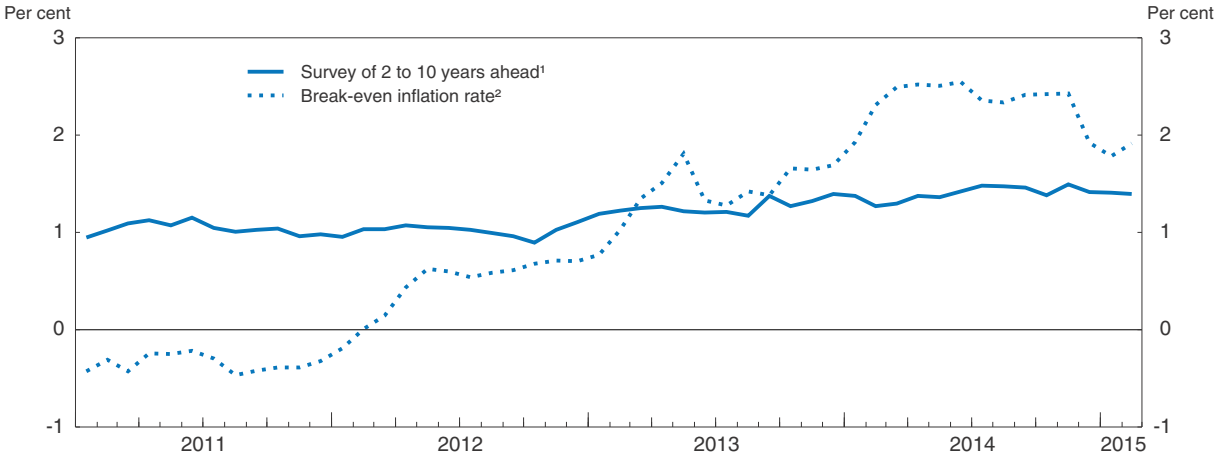
Figure 23. **While stock prices have risen to their levels in the 1990s, land prices have continued to decline**



1. The annual Nikkei stock price index, which averages the price of 225 individual stocks listed on the Tokyo Stock Exchange.
2. Nationwide urban land prices at end-March of each year for all uses (residential, commercial and industrial).
Source: Ministry of Land, Infrastructure, Transport and Tourism; Nikkei Indexes.

StatLink http://dx.doi.org/10.1787/888933201943

Figure 24. **Inflation expectations have increased**



1. The QUICK Monthly Market Survey
2. Yield spreads between fixed-rate coupon-bearing JGBs and inflation-indexed JGBs.

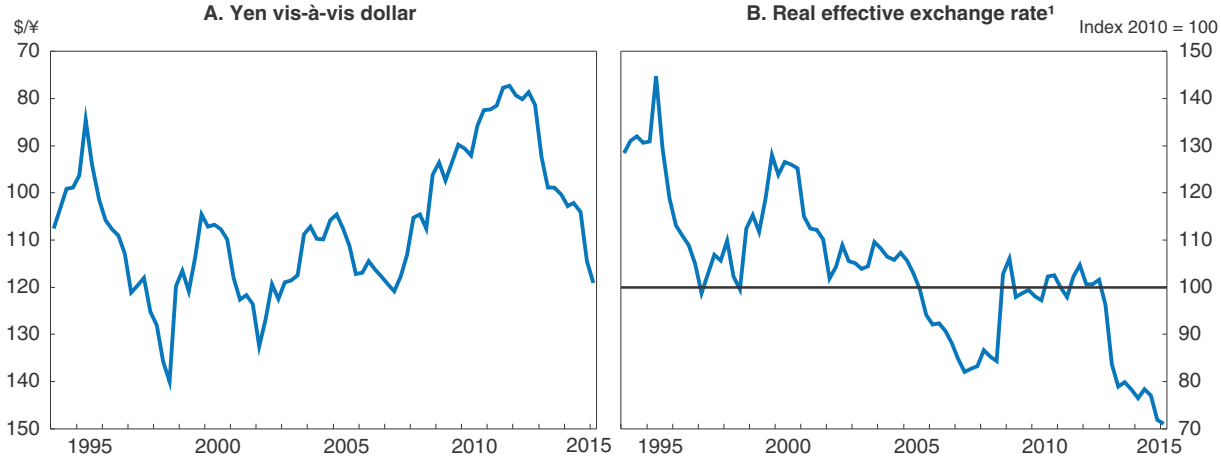
Source: Bank of Japan.

StatLink http://dx.doi.org/10.1787/888933201956

land prices in metropolitan areas rose for the first time since 2008. As for equities, the Nikkei stock price index has doubled since 2011, but remains below its peaks in the 1990s.

Quantitative easing has been accompanied by yen depreciation. Japan joined other G7 countries in 2013 in pledging that it would base its economic policies on domestic objectives using domestic instruments, and would not target exchange rates. The authorities have not intervened in foreign exchange markets since November 2011. Nevertheless, the yen depreciated by 22% against the dollar and in nominal trade-weighted terms between the third quarter of 2012 and July 2014 (Figure 25). The IMF stated in July 2014 that "Japan's external position is … broadly in balance" (IMF, 2014). The government estimates that a 10% depreciation of the currency only raises inflation by about 0.2 percentage points over two years, reflecting imports' relatively small share of

Figure 25. **The yen has depreciated considerably since 2012**



1. Trade-weighted, vis-à-vis 49 trading partners and deflated based on consumer price indices.

Source: *OECD Economic Outlook Database*; Bank of Japan.

StatLink http://dx.doi.org/10.1787/888933201961

GDP at 14%. Since July 2014, the yen has lost another 16% relative to the dollar, with most of the decline coming after the expansion of quantitative easing in October. The yen has also fallen sharply in real effective terms, boosting Japan's cost advantage for exporting companies (Panel B).

The recent expansion of QQE prompted concerns that the BoJ is being forced to monetise government debt, raising the risk of sustained yen depreciation and a run-up in interest rates that could undermine the financing of government deficits. This concern was reflected in the recent decision by Moody's to downgrade Japan's sovereign credit rating to a level below China and Korea. Such risks increase the importance of a detailed and credible fiscal consolidation programme for a primary surplus.

Key recommendation to end deflation

- Continue monetary expansion to durably raise inflation to the 2% target, while monitoring risks.

Bibliography

Andrews, D. and C. Criscuolo (2013), "Knowledge-based Capital, Innovation and Resource Allocation", *OECD Economics Department Working Papers*, No. 1046, OECD Publishing, Paris.

Aoyagi, C. and G. Ganelli (2014), "Unstash the Cash! Corporate Governance Reform in Japan", *IMF Working Papers*, No. 14/138, Washington, DC.

Arnold, J., B. Brys, C. Heady, A. Johansson, C. Schwellnus and L. Vartia (2011), "Tax Policy for Economic Recovery and Growth", *Economic Journal*, Vol. 121.

Bank of Japan (2014), *Outlook for Economic Activity and Prices,* October, Tokyo.

Bouis, R., R. Duval and F. Murtin (2011), "The Policy and Institutional Drivers of Economic Growth Across OECD and Non-OECD Economies: New Evidence from Growth Regressions", *OECD Economics Department Working Papers*, No. 843, OECD Publishing, Paris.

Cabinet Office (2014), "The Impact of the Consumption Tax Hike on Consumer Prices in the Tokyo Area", *Trends in this Week's Indicators*, No. 1097, Government of Japan (in Japanese).

Caballero, R., T. Hoshi and A. Kashyap (2008), "Zombie Lending and Depressed Restructuring in Japan", *American Economic Review*, Vol. 98, No. 5.

Criscuolo, C., P. Gal and C. Menon (2014), "The Dynamics of Employment Growth: New Evidence from 18 Countries", *OECD Science, Technology and Industry Policy Papers*, No. 14, OECD Publishing, Paris.

D'Addio, F. and M. Mira d'Ercole (2005), "Trends and Determinants of Fertility Rates in OECD Countries: The Role of Policies", *OECD Social, Employment and Migration Working Papers*, No. 6, OECD Publishing, Paris.

European Business Council in Japan (EBC) (2014), "The Japanese Market: Why Is It Difficult? What Suppresses FDI?", Tokyo.

Expert Group of the Cabinet Office (2014), *Report of the Expert Group Meeting on Foreign Direct Investment in Japan*, Government of Japan.

Franzoni, C., G. Scellato and P. Stephan (2012), "Foreign Born Scientists: Mobility Patterns for Sixteen Countries", *NBER Working Papers,* No. 18067.

International Energy Agency (2014), "Indicators for CO_2 Emissions", *IEA CO_2 Emissions from Fuel Combustion Statistics* (database), International Energy Agency.

International Monetary Fund (2014), *Japan: 2014 Article IV Consultation*, August, Washington, DC.

Jaumotte, F. and N. Pain (2005), "From Ideas to Development: The Determinants of R&D and Patenting", *OECD Economics Department Working Papers,* No. 457, OECD Publishing, Paris.

Jones, R. (2011), "Education Reform in Japan", *OECD Economics Department Working Papers*, No. 888, OECD Publishing, Paris.

Jones, R. and S. Kim (2013), "Restructuring the Electricity Sector and Promoting Green Growth in Japan", *OECD Economics Department Working Papers*, No. 1069, OECD Publishing, Paris.

Jones, R. and S. Kimura (2013), "Reforming Agriculture and Promoting Japan's Integration in the World Economy", *OECD Economics Department Working Papers*, No. 1053, OECD Publishing, Paris.

Jones, R. and S. Urasawa (2013), "Restoring Japan's Fiscal Sustainability", *OECD Economics Department Working Papers*, No. 1050, OECD Publishing, Paris.

Kinoshita, N. (2013), "Legal Background to the Low Profitability of Japanese Enterprises", *Center on Japanese Economy and Business Working Paper Series*, No. 316, Columbia University.

Koske, I., I. Wanner, R. Bitetti and O. Barbiero (2015), "The 2013 Update of the OECD Product Market Regulation Indicators: Policy Insights for OECD and Non-OECD Countries", *OECD Economics Department Working Papers* (forthcoming).

Lam, W. and J. Shin (2012), "What Role Can Financial Policies Play in Revitalizing SMEs in Japan?", *IMF Working Papers,* WP/12/291, Washington, DC.

Martin, J. and S. Scarpetta (2012), "Employment Protection, Labour Reallocation and Productivity", *De Economist*.

Matsuura, T., H. Sato and R. Wakasugi (2011), "Temporary Workers, Permanent Workers, and International Trade: Evidence from Japanese Firm-Level Data", *RIETI Discussion Paper Series*, No. 11-E-030, Tokyo.

Ministry of Health, Labour and Welfare (2011), *Comprehensive Research on Diverse Employment Formats 2010*, Tokyo (in Japanese).

Ministry of Health, Labour and Welfare (2012a), *Projection for Social Security Costs*, Tokyo (in Japanese).

Ministry of Health, Labour and Welfare (2012b), *White Paper on the Labour Economy*, Tokyo (in Japanese).

Ministry of Health, Labour and Welfare (2014a), *Provisional Calculations on the Current Situation and Projection on the Fiscal Balance of National Pension Schemes: Provisional Results,* Tokyo (in Japanese).

Ministry of Health, Labour and Welfare (2014b), *White Paper on the Labour Economy*, Tokyo (in Japanese).

National Institute of Population and Social Security Research (2013), *Statistics on Social Security Costs*, Tokyo.

Ono, A. and L. Uesugi (2014), "SME Financing in Japan during the Global Financial Crisis: Evidence from Firm Surveys", Institute of Economic Research, Hitotsubashi University, Tokyo.

OECD (2009), *OECD Economic Survey of Japan*, OECD Publishing, Paris.

OECD (2010), *Innovation to Strengthen Growth and Address Global and Social Challenges*, OECD Publishing, Paris.

OECD (2011a), *Divided We Stand*, OECD Publishing, Paris.

OECD (2011b), *OECD Economic Survey of Japan*, OECD Publishing, Paris.

OECD (2012), *Draft Principles for Independent Fiscal Institutions*, Working Party of Senior Budget Officials, OECD Publishing, Paris.

OECD (2013a), *OECD Economic Survey of Japan*, OECD Publishing, Paris.

OECD (2013b), *OECD Science, Technology and Industry Scoreboard 2013*, OECD Publishing, Paris.

OECD (2014a), *Agricultural Policy Monitoring and Evaluation 2014*, OECD Publishing, Paris.

OECD (2014b), *Entrepreneurship at a Glance 2014*, OECD Publishing, Paris.

OECD (2014c), *How's Life in Japan? 2014*, *www.oecd.org/statistics/BLI%202014%20Japan%20country%20report.pdf*.

OECD (2014d), "Japan – Advancing the Third Arrow for a Resilient Economy and Inclusive Growth", *Better Policies Series*, OECD Publishing, Paris, *www.oecd.org/japan/2014.04_JAPAN_EN.pdf*.

OECD (2014e), *OECD Science, Technology and Industry Outlook 2014*, OECD Publishing, Paris.

OECD (2014f), *OECD Services Trade Restrictiveness Index (STRI): Japan*, *www.oecd.org/tad/services-trade/STRI_JPN.pdf*.

OECD (2014g), "The Distributional Effects of Consumption Taxes in OECD Countries", *OECD Tax Policy Studies*, No. 22, OECD Publishing, Paris.

OECD (2015), *Back to Work Japan*, OECD Publishing, Paris.

Shinada, N. (2012), "Firms' Cash Holdings and Performance: Evidence from Japanese Corporate Finance", *RIETI Discussion Paper Series*, 12-E-031, Tokyo.

Shirakawa, M. (2013), "Toward Strengthening the Competitiveness and Growth Potential of Japan's Economy", *www.bis.org/review/r130315a.pdf*.

Small and Medium Enterprise Agency (2014), *Japan's Policies for Small and Medium Enterprises*, Tokyo.

Sutherland, D., P. Hoeller and R. Merola (2012), "Fiscal Consolidation: Part 1. How Much is Needed and How to Reduce Debt to a Prudent Level?", *OECD Economics Department Working Papers*, No. 932, OECD Publishing, Paris.

Thangavelu, S. and C. Findlay (2011), "The Impact of Free Trade Agreements on Foreign Direct Investment in the Asia-Pacific Region", *ASEAN+1 FTAs and Global Value Chains in East Asia*, Economic Research Institute for ASEAN and East Asia Research, *Project Report* 2010-29, edited by C. Findlay, Jakarta.

Uesugi, I. (2010), *The Impact of International Financial Crises on SMEs: The Case of Japan*, Hitotusbashi University, May.

Westmore, B. (2013), "R&D, Patenting and Growth: The Role of Public Policy", *OECD Economics Department Working Papers*, No. 1047, OECD Publishing. Paris.

ANNEX

Progress in structural reforms

A. Taking stock of structural reforms: Reforming agriculture and promoting Japan's integration in the world economy

Recommendations in the 2013 OECD Survey of Japan	Actions taken or proposed by the authorities
Phase out the production adjustment programmes	
End the production adjustment programmes over a fixed and relatively short time period to allow farmers to decide how much and where to produce, thus allowing efficient farmers to increase production, while reducing production costs.	The production quota for table rice will be phased out by FY 2018 and the Direct Payment for Rice will be abolished in 2018. Subsidies for manufacturing and feed rice will continue, along with those for other crops, such as wheat and barley.
Provide temporary support payments to large farmers to compensate for the fall in food prices resulting from the phasing out of the production adjustment programmes.	As a safety net to compensate a certain amount of income loss to business farmers, the government budgeted 74.9 billion yen for the income-based payment under the Act on Farm Income Stabilisation in FY 2014, subject to the appropriate contribution by those business farmers.
Introduce decoupled payments targeted to explicit objectives	
Shift from market price supports to decoupled payments targeted to key policy objectives, thereby reducing the total cost of agricultural policies and shifting the burden from consumers to taxpayers.	In FY 2014, the government introduced a new decoupled payment, totalling 79.3 billion yen ($67 million), for farmers involved in environment-friendly farming as part of an effort to promote the multi-functionality of agriculture.
Integrate existing support for the production of specific commodities into the transitory income support for large farmers.	The government abolished the price-contingent payment for rice in the 2014 crop year and the Direct Payment for Rice will be abolished in 2018. However, subsidies will continue for other crops such as wheat and soybeans.
Introduce new decoupled payments targeted to specific beneficiaries and outcomes, such as environmental services for water buffering in areas not suitable for large farms.	In FY 2014, the government introduced a new decoupled payment to promote the multi-functionality of agriculture.
Promote the consolidation of farmland to lower production costs	
Promote the consolidation of farmland so as to cut production costs by lifting obstacles to land transactions.	In 2014, the government established "regional government-supported institutions" in each prefecture, which rent land and lease it to business farmers.
Ensure the transparency of land-use regulation and provide a more predictable framework for the conversion of farmland to other uses.	No action taken.
Develop an efficient farmland market to remove obstacles to needed structural adjustment, in part by allowing non-farm corporations to own farmland.	The government will promote the leasing of land to non-farm corporations through the "regional government-supported institutions" established in 2014.
Reform the tax system to discourage the holding of idle farmland near urban areas.	No action taken.
Make the "farmland use facilitation groups" in each municipality an effective force promoting farm consolidation.	The "regional government-supported institutions" created in each prefecture in November 2014 leased around 500 hectares (0.01% of Japan's farmland) to business farmers in the six months following their establishment.
Increase Japan's integration in the world economy	
Remove border measures on agricultural products as reforms advance, thus reducing prices and costs for consumers and accelerating Japan's participation in comprehensive multilateral, regional and bilateral trade agreements.	The Japan-Australia EPA entered into force and the Japan--Mongolia EPA was signed in 2015. Japan continues to participate in trade negotiations for eight EPAs/FTAs including the Trans-Pacific Partnership (TPP), Japan-EU EPA, the Regional Comprehensive Economic Partnership (RCEP) and the Japan-China-Korea FTA.

Ensure food security	
Ensure adequate food supply through a more competitive agricultural sector, access to stable supplies of imports and emergency reserves.	The June 2014 Japan Revitalisation Strategy is launching an "aggressive agricultural policy" to enhance the competitiveness of the agricultural sector. The government is also taking measures to diversify trade partners and increase stockpiles.
Use a decoupled payment for environmental services to preserve paddy land to cope with any future risks to food security.	In FY 2014, the government introduced a new decoupled payment to promote the multi-functionality of agriculture.
Focus on food security based on a dynamic agricultural sector, a diversification of trade partners, reserves and the preservation of the agricultural resource base.	The decoupled payment introduced in FY 2014 to promote the multi-functionality of agriculture will help preserve the agricultural resource base. The Japan-Australia EPA entered into force and the Japan--Mongolia EPA was signed in 2015. Japan continues to participate in negotiations for eight EPAs/FTAs,

B. Taking stock of structural reforms: Promoting green growth and restructuring the electricity sector

Recommendations in the 2013 OECD Survey of Japan	Actions taken or proposed by the authorities
Upgrade supervision of the nuclear industry and electricity sector	
Ensure that the newly-created Nuclear Regulatory Agency (NRA) is independent from line ministries responsible for energy issues.	The careful and deliberate consideration of nuclear plants' compliance with new safety regulations by the NRA, which is legally independent, provides evidence that it is independent in practice.
Require nuclear plants to meet the criteria to be established by the NRA before being allowed to reopen.	The NRA is carefully reviewing the applications of 21 nuclear power plants to ensure that they meet the new regulatory requirements. As of end-January 2015, only two had received partial approval to meet the new regulatory requirements, which is a prerequisite for re-starting.
Create an independent regulator for the electricity sector that is at arms' length from line ministries.	The current regulator is to be transformed into a new regulatory authority with independence and high-level expertise in 2015.
Improve and expand market mechanisms in the energy sector	
Introduce ownership unbundling to create a level playing field between regional monopolies and new entrants.	The government plans to implement legal unbundling, along with a code of conduct, around FY 2018-2020. If this proves insufficient, the Advisory Committee for Natural Resources and Energy suggests that ownership unbundling will be considered.
Expand interconnection capacity, including frequency converters, and introduce real-time pricing to break down regional monopolies and create a competitive, nationwide electricity market.	Expansion of the capacity of the frequency converters is planned for 2019-21. The Organisation for Cross-regional Co-ordination of Transmission Operators was established in 2015 to promote open access to the transmission system.
Shift to definite-quantity contracts and real-time pricing to promote a competitive, nationwide market.	No action taken.
Promote the role of renewable energy to accelerate green growth	
Ensure that the feed-in-tariff (FIT) system established in 2012 provides appropriate incentives, including for R&D.	The FIT resulted in a 70% expansion of renewable energy capacity by end-October 2014. The government manages the FIT with the dual objectives of facilitating the maximum use of renewables and reducing the cost burden.
Expand interconnections and use of smart grids to effectively manage electricity produced from renewable sources.	METI has decided to introduce a new output control system for photovoltaics and wind by 2021 in order to expand grid capacity.
Introduce carbon pricing through an emissions trading system in combination with a carbon tax to promote investment in green technologies, including renewables.	The second stage of the "Tax for Climate Change Mitigation", a tax on fossil fuels, was implemented in 2014, with the third stage set for 2016. It will generate about 260 billion yen, which will be used to support renewable energy and energy conservation.

C. Taking stock of structural reforms: Boosting labour participation and improving the education system

Recommendations in the 2013 OECD Survey of Japan	Actions taken or proposed by the authorities
Encourage labour market participation of women, the elderly and youth	
Reform aspects of the tax and social security system that reduce work incentives for secondary earners.	In 2014, childcare leave benefits were increased from 50% to 67% of wages (prior to the leave) for the first six months.
Increase the availability of affordable, high-quality childcare and encourage better work-life balance, in part by reducing working hours and enforcing the Childcare and Family Care Leave Law.	The number of childcare places is being increased by about 0.4 million by March 2018. After-school childcare centres will provide care for 0.3 million children by March 2020. The government established a new certification system for employers that creates an employment environment favourable to raising children.
Reduce labour market dualism, which makes employment less attractive, particularly to women and youth, through a comprehensive strategy that includes upgrading training programmes, increasing the social insurance coverage of non-regular workers and reducing effective employment protection for regular workers.	The law was revised in 2013 to ban unreasonable working conditions for fixed-term workers. The government expanded subsidies in 2014 to support the shift of non-regular workers to regular status. Employment Insurance is providing training support for young non-regular workers. An expansion of Employees' Pension Insurance and health insurance will extend coverage to 250 thousand non-regular workers in 2016.
Encourage greater use of flexible employment and wage systems to improve working conditions for older workers, in part by abolishing the right of firms to set mandatory retirement at age 60.	The continued employment system, which allows all employees who wish to, to work to age 65, was made universal in 2013 by abolishing the scheme that had allowed firms to exclude some employees from the system.
Emphasise practical training, combining on-the-job and classroom learning, in part through expanding the Job Card system, to equip youth with skills needed in the labour market.	The Job Card system provided employment training programmes, combining classroom learning and practical training, for 40 000 people in FY 2013.
Improve vocational education, in part by creating a standard qualifications system that is recognised by firms.	Vocational qualifications were expanded nationwide in FY 2013 in new growth areas, such as nursing care, energy and farming.
Improve educational outcomes	
Invest more in early childhood education and care to expand quality and integrate childcare and kindergarten.	A total of 0.5 trillion yen from the 2014 consumption tax hike will be used to increase the capacity and quality of childcare.
Expand the autonomy of primary and secondary schools and increase school choice to encourage schools to excel.	No action taken.
Improve the quality of the tertiary sector by increasing transparency about performance to strengthen competition.	A new system for providing information on colleges and universities will be launched by 2015 March.
Promote the internationalisation of the tertiary sector by increasing the number of foreign students and encouraging the establishment of more foreign tertiary institutions in Japan.	The government is shifting its budget to the "Top Global University Project (2014)" to enhance the international competitiveness of Japanese universities.
Enhance the role of the tertiary sector in innovation, in part through greater co-operation between universities and the business sector, including enhanced labour mobility of researchers.	In 2013, the government implemented programmes to promote the commercialisation of academic research and enhance the labour mobility of researchers. Cross-appointments of researchers in universities, government labs and firms will be promoted.

D. Taking stock of structural reforms: Restoring fiscal sustainability

Recommendations in the 2013 OECD Survey of Japan	Actions taken or proposed by the authorities
Develop a new fiscal consolidation plan	
Develop a more detailed and credible fiscal consolidation plan, including spending targets by category and a timetable for tax hikes, to maintain confidence in the fiscal situation and prevent a run-up in interest rates.	A concrete fiscal consolidation plan to achieve the target of a primary surplus by FY 2020 will be prepared by the summer of 2015.
Aim for a sufficiently large primary budget surplus – around 4% of GDP – to stabilise the debt ratio by 2020.	No action taken.
Limit government spending	
Achieve spending cuts in such areas as public investment and the government wage bill to offset rising social security outlays.	Primary spending, excluding social security expenditure, fell by 1.7% in nominal terms in the FY 2015 budget.
Implement approved reconstruction spending before creating new budget plans.	The government is making efforts to smoothly implement the reconstruction budget in affected areas.
Continue the screening process to find ways to reduce low-priority and ineffective spending programmes.	Audits, budget execution surveys, policy evaluations, and administrative project reviews are being used to improve budget efficiency and effectiveness.
Reform social security to limit spending increases, particularly in the areas of health and long-term care.	The fees for long-term care suppliers were cut by 2.27% in the FY 2015 budget. The out-of-pocket share for patients aged 70-74 will be increased from 10% to 20% for people who reach the age of 70 after April 2015. As for long-term care insurance, the out-of-pocket share will be increased from 10% to 20% in August 2015 for patients aged 65 and above, whose income is above a designated level.
Ensure the sustainability of the public pension programme by accelerating the hike in the retirement age and then linking it to longevity.	The continued employment system, which allows all employees who wish to, to work to age 65, was made universal in 2013 by abolishing the scheme that had allowed firms to exclude some employees from the system.
Increase government revenue	
Implement the planned doubling of the consumption tax rate in two stages to 10% by 2015.	The government increased the consumption tax from 5% to 8% in April 2014, but postponed the planned hike to 10% from October 2015 to April 2017.
Maintain a single rate for the consumption tax to avoid the distortions associated with multiple rates, while introducing measures, notably an earned income tax credit, to address the regressive nature of the tax.	The coalition parties agreed at the end of 2014 to introduce a reduced tax rate scheme when the consumption tax rate is 10%.
Rely primarily on the consumption tax and other indirect taxes, such as environment-related levies, as well as the broadening of income tax bases, to boost government revenue.	The consumption tax rate is to be increased to 10% by 2017 and the government is implementing the "Tax for Climate Change Mitigation". It also broadened the personal income tax base for high salary earners in 2014.
Improve the fiscal policy framework	
Ensure that the Council on Economic and Fiscal Policy (CEFP) functions as an effective impartial body to monitor and evaluate progress in fiscal consolidation.	The functioning of the CEFP was improved in 2014. The CEFP has had many discussions on the progress of fiscal consolidation, including concerning bi-annual economic and fiscal projections for medium to long-term analysis The CEFP is now working to prepare the new medium-term strategy to achieve a primary surplus by FY 2020.
Reform the fiscal policy framework through a multi-year budgeting plan and a stronger legal basis for fiscal targets.	The 2013 Medium-term Fiscal Plan set an improving path for the primary balance in the central government general account for FY 2014-15. The government is formulating a concrete plan to be adopted by the summer of 2015 to achieve a primary surplus for central and local governments by FY 2020.

E. Taking stock of structural reforms: Reducing income inequality and poverty

Recommendations in the 2013 OECD Survey of Japan	Actions taken or proposed by the authorities
Enhance the redistributive power of the tax and benefit systems by increasing the share of net benefits received by low-income households.	A new policy to support low-income pensioners is scheduled to be implemented in 2017. With the consumption tax hike in 2014, temporary benefits for low-income people have been provided.
Introduce an earned income tax credit, initially for wage earners, while expanding it to the self-employed as transparency about their income is enhanced.	No action taken.
Upgrade public assistance by ensuring that those capable of working are enrolled in training, while promoting incentives to leave assistance and coordinating such programs with the existing safety net.	An in-work benefit – a lump-sum benefit to people leaving the Basic Livelihood Protection Programme – was launched in 2014. The working-income deduction for BLPP recipients was made more generous in August 2013 to encourage work.
Address the underlying causes of inequality through reforms in the education system and the labour market.	Employment Insurance is providing training for young non-regular workers. The Employees' Pension Insurance and health insurance will be expanded to provide coverage to 250 thousand non-regular workers (1.3% of the total) in 2016.
Ensure adequate coverage of public assistance and co-ordinate the Basic Livelihood Protection Programme (BLPP) and the "second safety net".	In order to promote self-reliance of persons in poverty, the government will provide them with consultation services, benefits for securing housing and other services from April 2015.
Provide training programmes for recipients of public assistance who are capable of working, while ensuring that there are incentives to leave assistance.	An in-work benefit – a lump-sum benefit to people leaving the Basic Livelihood Protection Programme – was launched in 2014. The working-income deduction for BLPP recipients was made more generous in August 2013 to encourage work. The government has expanded efforts to help benefit recipients who can work to find jobs.
Implement a comprehensive strategy to break down labour dualism, including increasing the social insurance coverage of non-regular workers and reducing employment protection for regular workers, while upgrading training programmes.	Employment Insurance is providing training for young non-regular workers. An expansion of Employees' Pension Insurance and health insurance will extend coverage to 250 thousand non-regular workers in 2016.
Ensure access to high-quality early childhood education and care for children from low-income families.	The central government will expand financial support in the FY 2015 budget for municipal governments that provide subsidies to children from low-income households who enter kindergarten.
Reduce reliance on private, after-school lessons, particularly in juku, in part by increasing school quality, and increase the accessibility of students from low-income families to after-school lessons.	No action taken.
Expand public loans for tertiary education to encourage students from low-income households to invest in higher education.	Public loans under the interest-free scholarship loan programme increased from 277 billion yen in FY 2012 to 307 billion yen in FY 2014, covering almost all students who qualify.
Build on the national surveys of well-being to identify the priorities and policies to improve well-being.	Experimental surveys of well-being were conducted in 2013 and 2014.

Thematic chapters

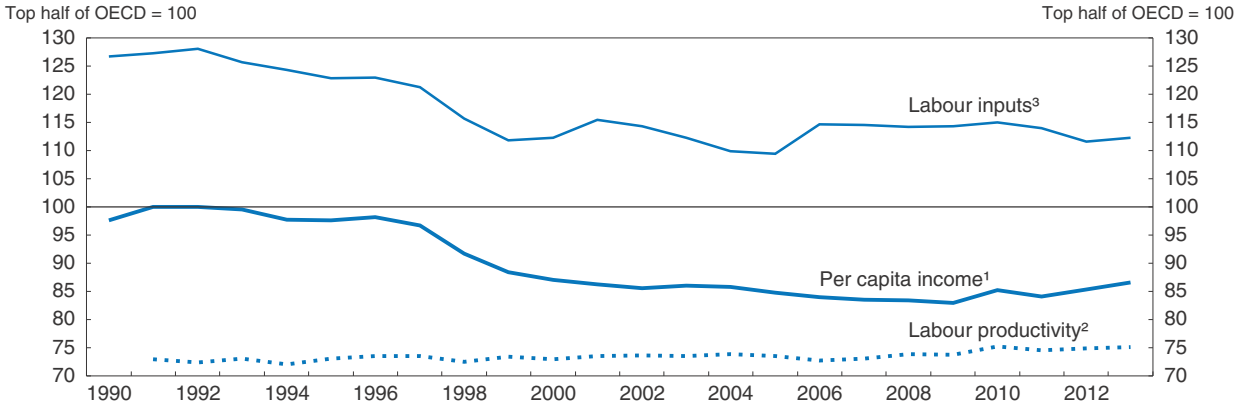
Chapter 1

Enhancing dynamism and innovation in Japan's business sector

Innovation is key to boosting economic growth in the face of a rapidly ageing population. While Japan spends heavily on education and R&D, appropriate framework conditions are essential to increase the return on such investments by strengthening competition, both domestic and international, and improving resource allocation. Upgrading corporate governance would encourage firms to maximise profits and invest their large cash reserves. To promote open innovation in a global framework, it is necessary to improve universities and expand their role in business R&D, while increasing international collaboration in R&D from its current low level. Venture capital-backed firms and start-ups should play a key role in commercialising innovation. To make venture investment a growth driver, it is important to expand the role of business angels and foster entrepreneurship. SMEs, which account for 70% of employment, should contribute more to innovation.

Japan's income per capita, which matched the top half of the OECD countries in the early 1990s, fell to 83% in 2009, before rebounding slightly (Figure 1.1). Japan's relative decline is linked to weaknesses in the business sector, reflected in Japan's falling share of world trade, declining terms of trade, low rates of return on capital and falling inflows of foreign direct investment. The government aims to double Japan's economic growth rate, which has averaged less than 1% per year since 1990 in real terms, to a 2% average through 2022. Given the shrinking population, this would imply 2.4% growth in per capita terms. Faster growth would boost living standards and help to put the public debt ratio, which has risen to 226% of GDP, on a downward trend (Chapter 2). Slower growth would require deeper spending cuts and higher taxes to achieve the target of a primary surplus in FY 2020, thus increasing headwinds to growth.

Figure 1.1. **Living standards in Japan are well below the top half of the OECD**



1. Per capita GDP using 2005 prices and PPP exchange rates.
2. GDP per hour of labour input.
3. Total number of hours worked per capita.

Source: OECD, *Going for Growth Database*.

StatLink http://dx.doi.org/10.1787/888933201970

Achieving faster growth requires better utilising Japan's large stock of human and physical capital and its advanced technology. This depends, in turn, on reforms in a range of areas, many of which are addressed in the 2013 Industrial Competitiveness Enhancement Act, the legal basis for the Japan Revitalisation Strategy, the third arrow of Abenomics. The three major components of the Act include:

- *Accelerated regulatory reform:* two proposals are "corporate field tests", which allow flexibility in applying regulations to individual enterprises and "removing grey zones" by clarifying whether new products and services comply with existing regulations.
- *The renovation of industries:* i) encouraging investment in venture businesses; ii) promoting business restructuring through preferential tax and financial support for

firms that wish to change their current structure; and iii) promoting investment in cutting-edge facilities using leases.

- *Enhanced support for small and medium-sized enterprises (SMEs) to start and rehabilitate firms.*

These priorities, as well as other policies to boost productivity and growth, are discussed below. After a review of the challenges facing Japan, the following section considers framework conditions, including corporate governance, labour market flexibility and product market regulations. Enhancing international competition is also important in this regard. These play a key role in determining the strength of competition and the flexibility of resource allocation. The fourth section provides an overview of the innovation framework. The following section examines policies to promote start-ups, including venture capital-backed businesses, which play a key role in commercialising new technology. The final section focuses on measures to boost innovation and productivity in SMEs. The agenda is broad and requires bold reforms that go well beyond the measures included in the Japan Revitalisation Strategy. In December 2014, the government stated that "Japan must aim to become the most innovative country in the world by carrying out social and economic structural changes". If the necessary reforms were easy, they would have been accomplished long ago. Policy recommendations are summarised in Box 1.3. The main findings include:

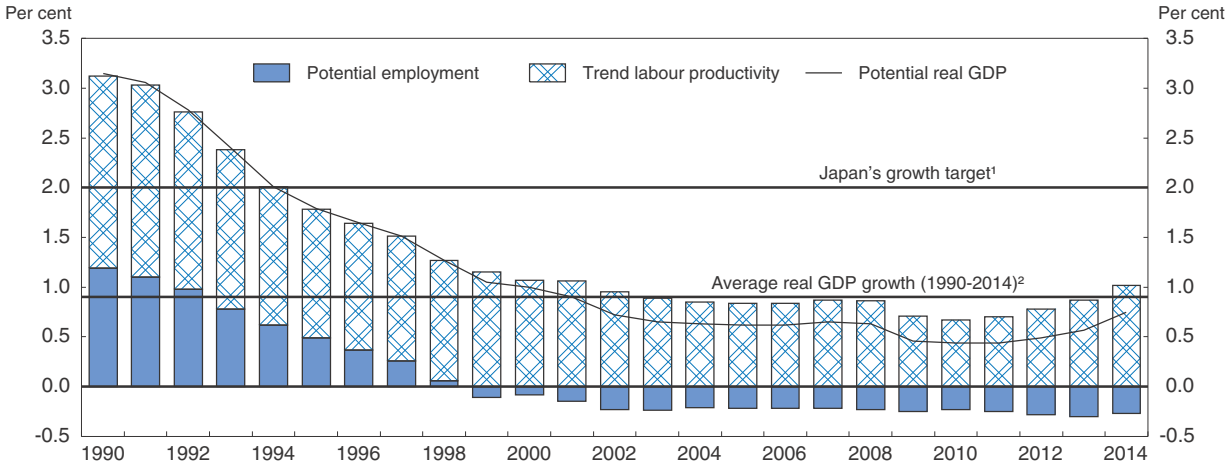
- Japan's competitiveness problems are reflected in its declining share of world trade, declining terms of trade, low rates of return on capital and falling inflows of foreign direct investment.
- Boosting output growth and narrowing the gap in per capita income levels relative to the top half of the OECD requires faster productivity gains, which depend on innovation.
- Increasing the return on Japan's high level of investment in R&D and education requires creating an appropriate framework that strengthens competition and improves resource allocation.
- The innovation system is weakened by a lack of international collaboration and weak links between R&D in the business sector, academia and the government.
- The low rate of firm creation could be boosted by developing entrepreneurship and venture capital.
- The SME sector is lagging and needs to be revitalised so as to play a larger role in innovation.

The challenge of achieving faster growth

Achieving 2% real growth in Japan, where potential growth is currently estimated at around ¾ per cent by the OECD and less than ½ per cent by the Bank of Japan (BoJ), is a daunting challenge. In the BoJ's 2015 public opinion survey, less than 3% of respondents believe that the economy can grow faster than its current rate. Japan's potential growth rate has slowed from over 3% in the early 1990s as a result of two factors: i) the working-age population (15-64) started falling in 1995, flipping the contribution of labour inputs from positive to negative; and ii) trend labour productivity has slowed significantly (Figure 1.2). Indeed, labour productivity per hour of labour input in Japan has remained around a quarter below the top half of OECD countries during the past 25 years (Figure 1.1).

Looking ahead, Japan's growth potential faces downward pressure from population ageing, as the 15-64 age group is declining at a rate of 1.5% per year. Measures to slow the

Figure 1.2. **Japan's potential GDP growth rate has fallen sharply since 1990**



1. The 2% target was set in 2009 and maintained by subsequent governments.
2. Average annual GDP growth in real terms in Japan between 1990 and 2014.

Source: OECD Economic Outlook Database.

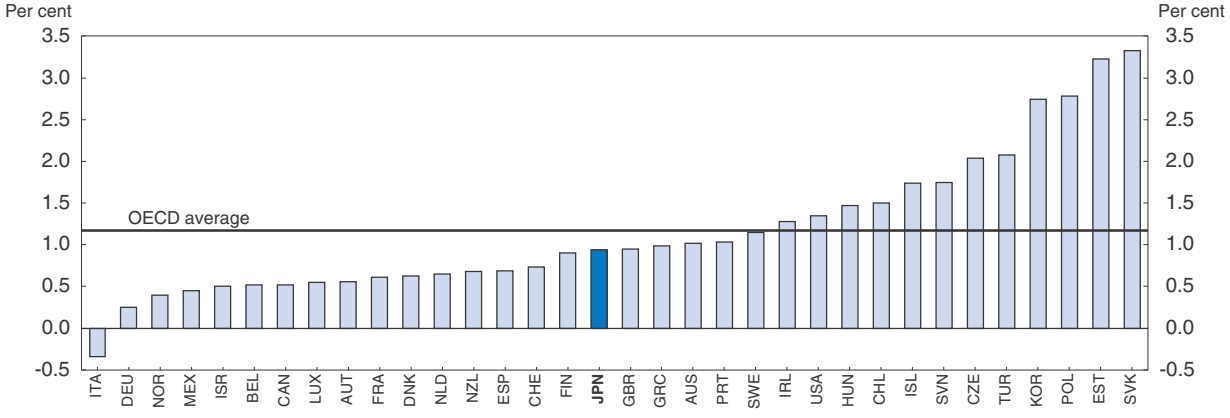
StatLink http://dx.doi.org/10.1787/888933201756

fall in the labour force – or even reverse it – are thus crucial. Such policies should focus on increasing employment of women, older persons and youth, and making greater use of foreign workers. While there is still scope for expanding labour inputs, the employment rate for men is the third highest in the OECD, while that for women is already above the OECD average.

Even if labour inputs were stabilised, achieving the 2% growth target would require boosting labour productivity growth from its average rate of 0.9% since 2000 to 2% (Figure 1.3). Japan's labour productivity growth was below the OECD average of 1.2% over that period. Raising labour productivity growth to 2% is an extremely difficult challenge that is currently met by only a handful of OECD countries, notably emerging economies and central and eastern European countries.

Figure 1.3. **Average labour productivity growth in Japan is below the OECD average**[1]

Average annual growth rate over 2000-13



1. Real GDP divided by total employment (including self-employed).

Source: OECD Economic Outlook Database.

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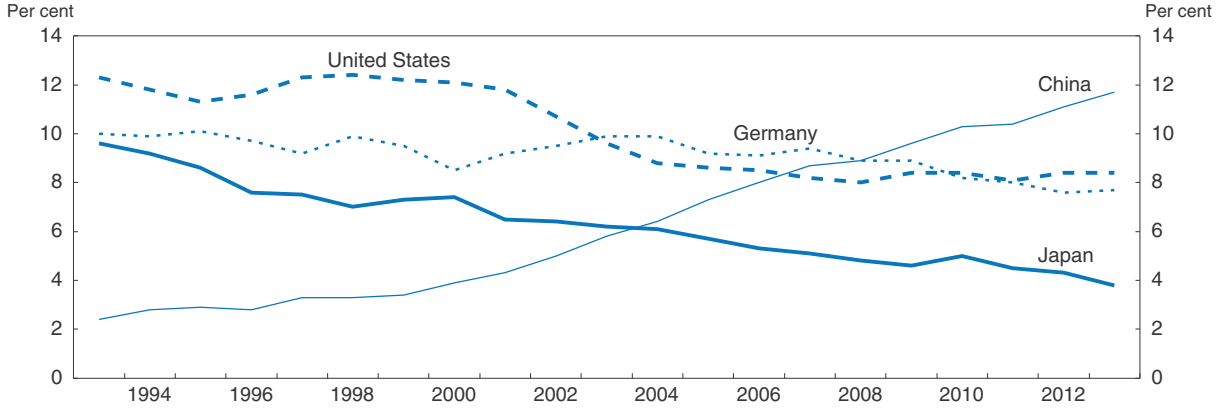
Boosting labour productivity and enhancing Japan's competitiveness

Boosting labour productivity depends, in turn, on total factor productivity (TFP) growth, human capital accumulation and capital deepening. TFP offers the greatest scope for improvement, given that Japan already has a high level of human capital and one of the largest capital-output ratios in the OECD. In contrast, the contribution of TFP to trend labour productivity in Japan is only around 0.2 percentage points, well below the OECD average of 0.7 points. Wide and persistent differences in the level of TFP account for the bulk of the gaps in income per capita across countries (Andrews and Criscuolo, 2013).

Weak productivity growth is reflected in international trade: during the past two decades, Japan's share of world exports fell from nearly 10% to only 4%, while China's rose from 2.4% to nearly 12% (Figure 1.4). Competitiveness concerns have been reinforced by sluggish export growth despite the 30% decline in the real effective exchange rate since the third quarter of 2012. Meanwhile, Japan's share of high-tech exports from OECD countries fell from 22% in 1986 to 11% in 2009, while Korea's rose from less than 4% to 11%. In addition, Japan has suffered persistent terms-of-trade losses in recent years that have reduced national income (Box 1.1). The deterioration in international competitiveness is symbolised by Japan's fall in the rankings of the International Institute for Management Development. After ranking first during the first five years of the survey (1989-93), Japan fell to 27th out of 59 countries in 2012.

Figure 1.4. **Japan's share of world exports has been falling during the past 20 years**



Source: WTO Database.

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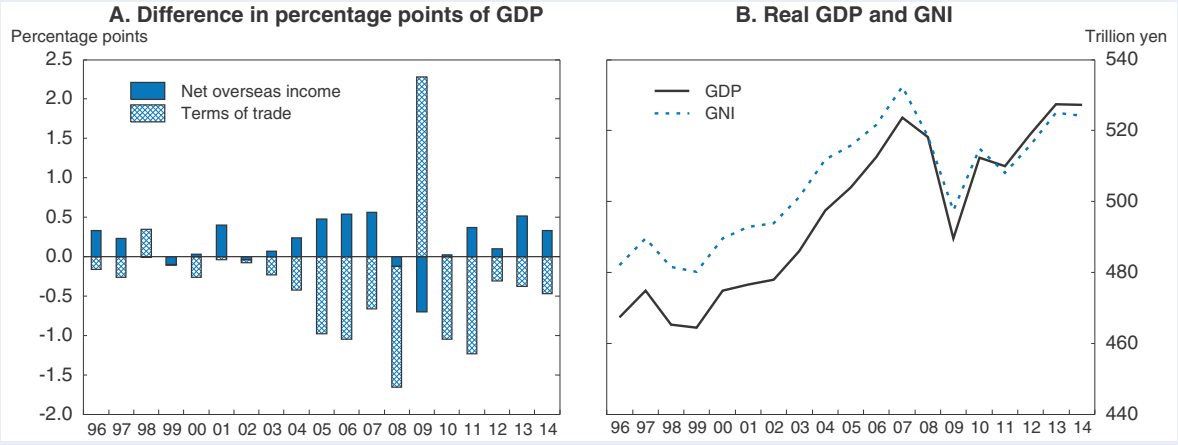
The loss in world export market share has prompted fears of deindustrialisation ("hollowing out"), a recurring theme since the 1980s (Nakamura and Shibuya, 1995). Indeed, the share of the manufacturing sector in nominal GDP has fallen from one-third in 1970 to around one-fifth. As for employment, the number of workers in manufacturing fell by nearly one-third, from 13.9 million to 9.9 million in 2011.

However, the fall of the manufacturing sector in nominal GDP since 1970 masks a marked rise in its share of GDP in real terms (from 17.6% to 23.2%) (Figure 1.7, Panel A, Line A). The large difference between manufacturing's share of GDP in nominal and real terms is explained by rapid productivity gains that have reduced the relative prices of manufactures (Line C). Indeed, TFP in manufacturing has increased 77% relative to the total economy since 1970 (Figure 1.7, Panel B, Line D). With TFP rising so rapidly, the share

Box 1.1. **Reversing the terms-of-trade decline to boost purchasing power in Japan**

Japan has suffered from terms-of-trade losses each year since 2000 (except 2009), more than offsetting net overseas income and pushing gross national income (GNI) below GDP (Figure 1.5). High terms of trade mean that a country can sell its products at a high price and buy cheaply from overseas. Terms-of-trade losses reduce purchasing power, putting downward pressure on wages and profits. Indeed, a government study found that terms-of-trade losses reduce domestic demand with a lag of around two years (Cabinet Office, 2009). International studies also show that the terms of trade have a critical impact on GDP growth (Wong, 2010). If Japan's terms of trade had remained at their 2000 level, per capita GNI in 2014 would have been 6% higher, based on a mechanical calculation.

Figure 1.5. **Terms-of-trade losses are putting downward pressure on gross national income**[1]



1. Real GNI = Real GDP + Net overseas income + terms-of-trade effect. Net overseas income is defined as primary incomes receivable from non-resident units minus primary incomes payable to non-resident units. The terms-of-trade are the ratio of the export and import price deflators.

Source: Cabinet Office.

StatLink http://dx.doi.org/10.1787/888933202008

Japan's terms of trade have fallen by about 40% over the past 20 years, in contrast to the OECD area, where they have been relatively stable (Figure 1.6). Import prices have risen, although less than for the OECD area (Panel B). Import price increases reflect the rising cost of oil and commodities, at least through 2012. The 25% decline in Japan's export prices over 1994-2012, though, is exceptional (Panel C). In contrast, export prices increased by 10% and 28% for Germany and the United States, respectively. In 2014, Japan's terms of trade were by far the lowest among OECD countries (Panel D).

Japan experienced an adverse terms-of-trade shock due to the emergence of low-cost producers of manufactures in Asia (Coleman, 2005). The downward trend in export prices is fundamentally a competitiveness problem; Japanese firms have responded to severe price competition with other Asian producers by reducing export prices in an unsuccessful attempt to maintain market share. Moreover, Japan has concentrated in electronic machinery, a category that has experienced rapid technological change as well as intense competition. In contrast, other countries exporting manufactures, such as Germany, have not experienced significant terms-of-trade losses.

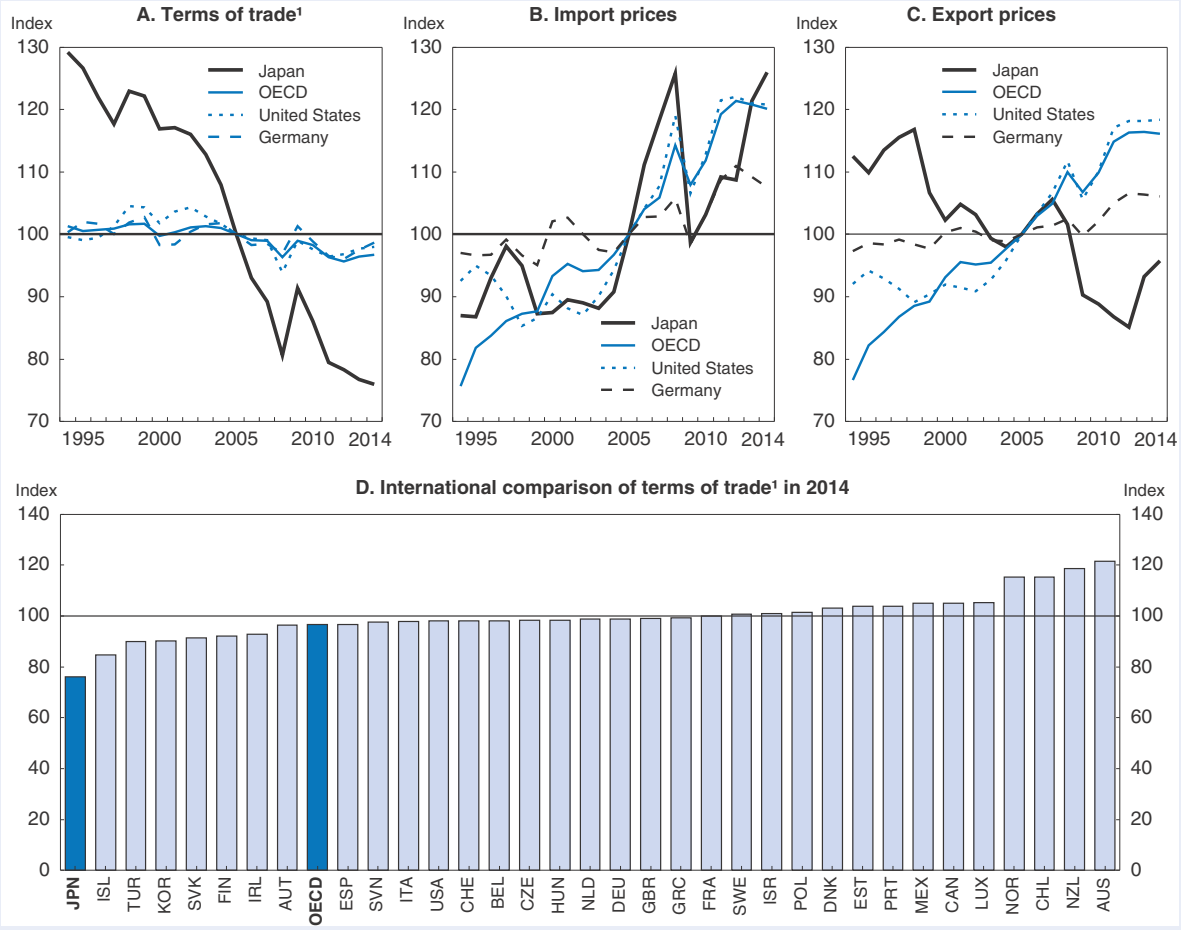
Yen depreciation over 2012-14 (24% relative to the dollar on a calendar year basis) has had an asymmetrical effect on export and import prices in yen terms. While import prices rose by 15%, despite falling world prices for oil and commodities, export prices increased by only 11%, resulting in a further deterioration in the terms of trade. In general, though, exchange rate fluctuations have limited impact on the terms of trade (Nezu, 2011).

In its 2013 Japan Revitalisation Strategy, the government set a target of boosting per capita GNI by more than 1.5 million yen to 5.3 million yen (around $45 000) by 2023. Reversing the decline in the terms of trade would help achieve the target. Enhancing Japan's overall competitiveness would help firms improve non-price competitiveness and avoid the commodification of their products.

Box 1.1. **Reversing the terms-of-trade decline to boost purchasing power in Japan** *(cont.)*

Figure 1.6. **Falling export prices are the key factor for Japan's terms-of-trade losses**

2005 = 100



1. Ratio of export prices to import prices, with 2005 set as the base year.

Source: OECD Economic Outlook Database.

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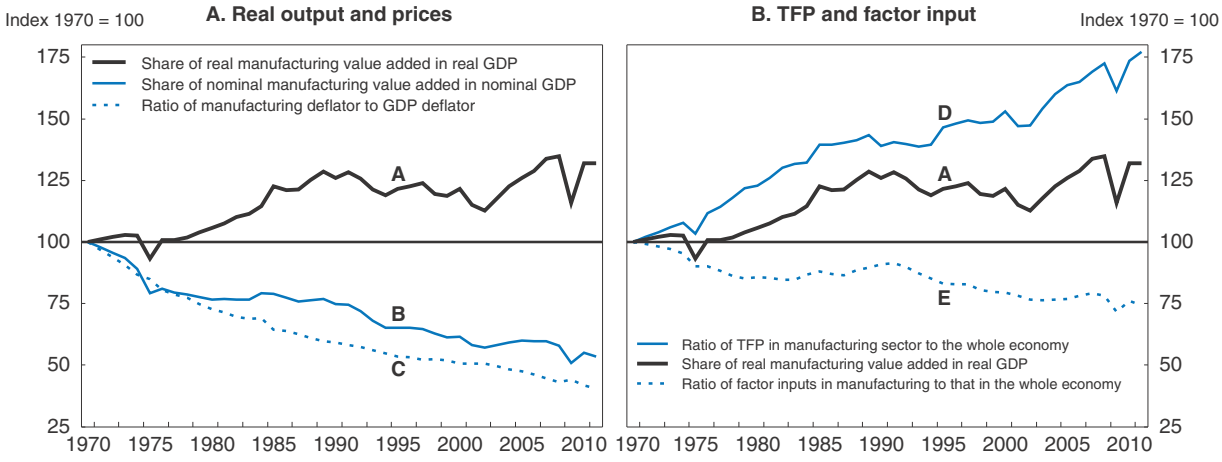
of factor inputs, including labour, allocated to manufacturing has fallen significantly (Line E).

In addition to higher productivity growth, the falling share of manufacturing in nominal GDP and the labour force also reflects factors such as the shift of demand from manufactures to services and offshoring to lower-cost environments. Japan's share of outward FDI matched the OECD average of 23% of GDP in 2013. Deindustrialisation is thus a common trend in advanced economies; for the OECD area, the share of manufacturing (in nominal terms) has fallen by 3.5 percentage points since 1994 to 15.6% (Figure 1.8). The decline in Japan's manufacturing sector – from 22% to 18.5% – is similar and leaves it above the OECD average. In terms of labour inputs, manufacturing's share of total employment fell from 21% in 1994 to 15% in 2013, slightly above the 14% OECD average (Panel B).

Figure 1.7. **Long-term trends in Japan's manufacturing sector**



Source: Japan Industrial Productivity Database 2014.

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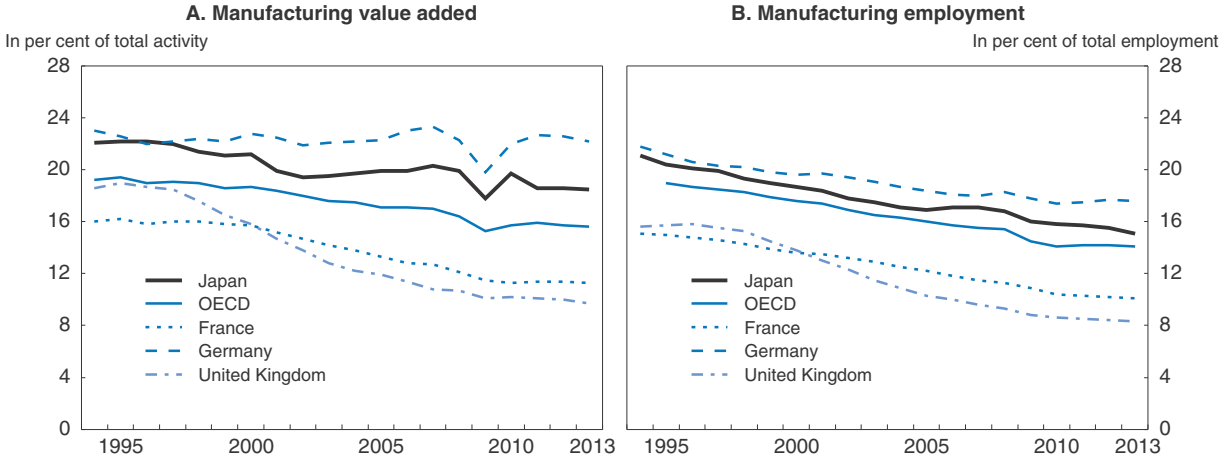
Deindustrialisation is thought to have a number of adverse effects. *First*, to the extent that TFP growth is higher in manufacturing, deindustrialisation may reduce economy-wide TFP growth. However, in Japan, relatively labour-intensive industries with low TFP growth have shrunk, limiting any negative impact. *Second*, given that R&D is concentrated in manufacturing, deindustrialisation may reduce the R&D base. *Third*, the closure of factories reduces technology spillovers from large to small firms (negative "exit" effects) (Fukao, 2012). Nevertheless, policies to stop deindustrialisation, such as trade barriers or restrictions on the globalisation of Japanese firms, would only hurt economic growth. Indeed, outward investment is a way to capture overseas demand, which boosts Japan's national income through interest and dividend payments.

Figure 1.8. **International comparison of trends in manufacturing**[1]



1. Based on ISIC4 in nominal terms. It is important to note that the fall in the share of manufacturing may be overstated by the outsourcing of service activities that were previously performed in-house.

Source: OECD National Accounts Database.

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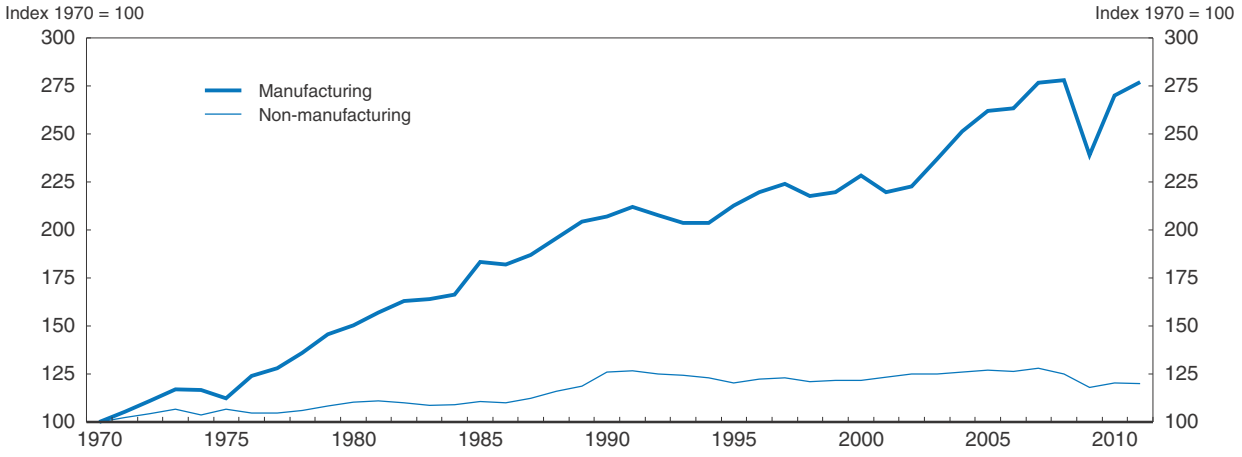
Figure 1.9. **The productivity gap between manufacturing and non-manufacturing has widened sharply**



Source: Japan Industrial Productivity Database 2014.

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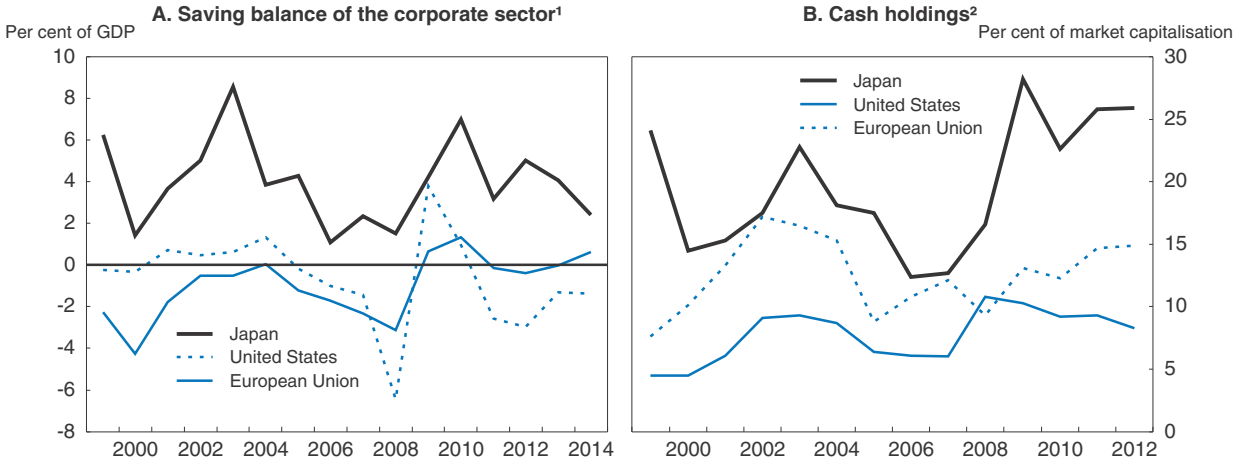
Rather than deindustrialisation, Japan's key problem is the lack of TFP growth in non-manufacturing, which has been declining since its peak in 1991 (Figure 1.9). This reflects the low level of R&D in the service sector, which accounted for only 9% of business R&D in 2011, well below the OECD average of 38%. The challenge is to boost TFP growth, particularly in services, which account for a growing share of output. This requires addressing three key issues: cash hoarding in the corporate sector, ineffective investment in knowledge-based capital (KBC) and low corporate profitability.

Addressing three key issues in the corporate sector

The corporate sector has had a saving surplus since 1998 (Figure 1.10), helping to reduce gross corporate debt from 115% of GDP in 1998 to 76% in 2012 and restore liquidity

Figure 1.10. **Japan's corporate sector has a saving surplus and large cash holdings**



1. For the US and Japan, data are available through 2014:Q3 and for the EU, 2014:Q2.
2. Cash and marketable securities of listed companies as a percentage of market capitalisation in each country or region. For Japan – Topix 500 Index; US – S&P 500, euro area – Bloomberg Europe 500.

Source: Bank of Japan (2014), "Flow of Funds: Comparison of US and Europe"; Bloomberg; OECD calculations.

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buffers. Indeed, cash holdings of listed non-financial firms reached 28.5% of market capitalisation in 2011, compared to only 14% in 2000, and is far above the US and European levels (Panel B). Cash holdings reached 62% of GDP in FY 2012 (Ministry of Finance, 2014). Moreover, Japan's corporate sector's holdings of cash and deposits combined reached 56% of market capitalisation, compared to an average of 25% in other G7 countries. Consequently, the share of listed firms that hold cash and deposits exceeding their interest-bearing debt (i.e., firms without net external borrowings) rose from 24% in 1998 to 43% (Shirakawa, 2013).

High cash holdings in Japan are not driven by specific industries, but are instead broad-based, as the corporate sector seeks a buffer against shocks. Since the bubble collapse in the early 1990s, reducing debt has been a priority for firms. Cash holdings increased sharply during Japan's banking crisis in the early 2000s and in the wake of the 2008 global crisis, as funding conditions became severe and cash flow volatility increased (Shinada, 2012). A number of other factors help explain high cash holdings. *First*, persistent deflation has encouraged firms to hold cash rather than pursue more productive uses of resources (Kuroda, 2013). *Second*, cross-country studies show that good corporate governance tends to reduce cash holdings by addressing the agency problem stemming from the different objectives of management and shareholders, who tend to focus more on short-term profits. A study of 3 400 Japanese firms suggests that improving corporate governance would significantly reduce cash holdings (Aoyagi and Ganelli, 2014). *Third*, regulations that make takeovers rare in Japan reduce the pressure on managers to act in the interest of shareholders by reducing cash holdings (Kinoshita, 2013). *Fourth*, the pressure on managers is further reduced by cross-shareholdings, which focus on mutual benefits rather than maximising profits.

Corporate cash holdings in Japan have risen beyond what a standard model of corporate cash demand would imply as appropriate (Aoyagi and Ganelli, 2014). High cash holdings can prevent firms from maximising their return on assets, thereby holding back aggregate demand and limiting output growth (Shinada, 2012). Indeed, high and rising cash holdings have coincided with a negative contribution of private investment to growth during recent years and falling real wages despite positive labour productivity growth. While holding high levels of cash on their balance sheet may be rational for an individual firm, the end result is a suboptimal equilibrium, a "paradox of thrift", calling for reform (Aoyagi and Ganelli, 2014).

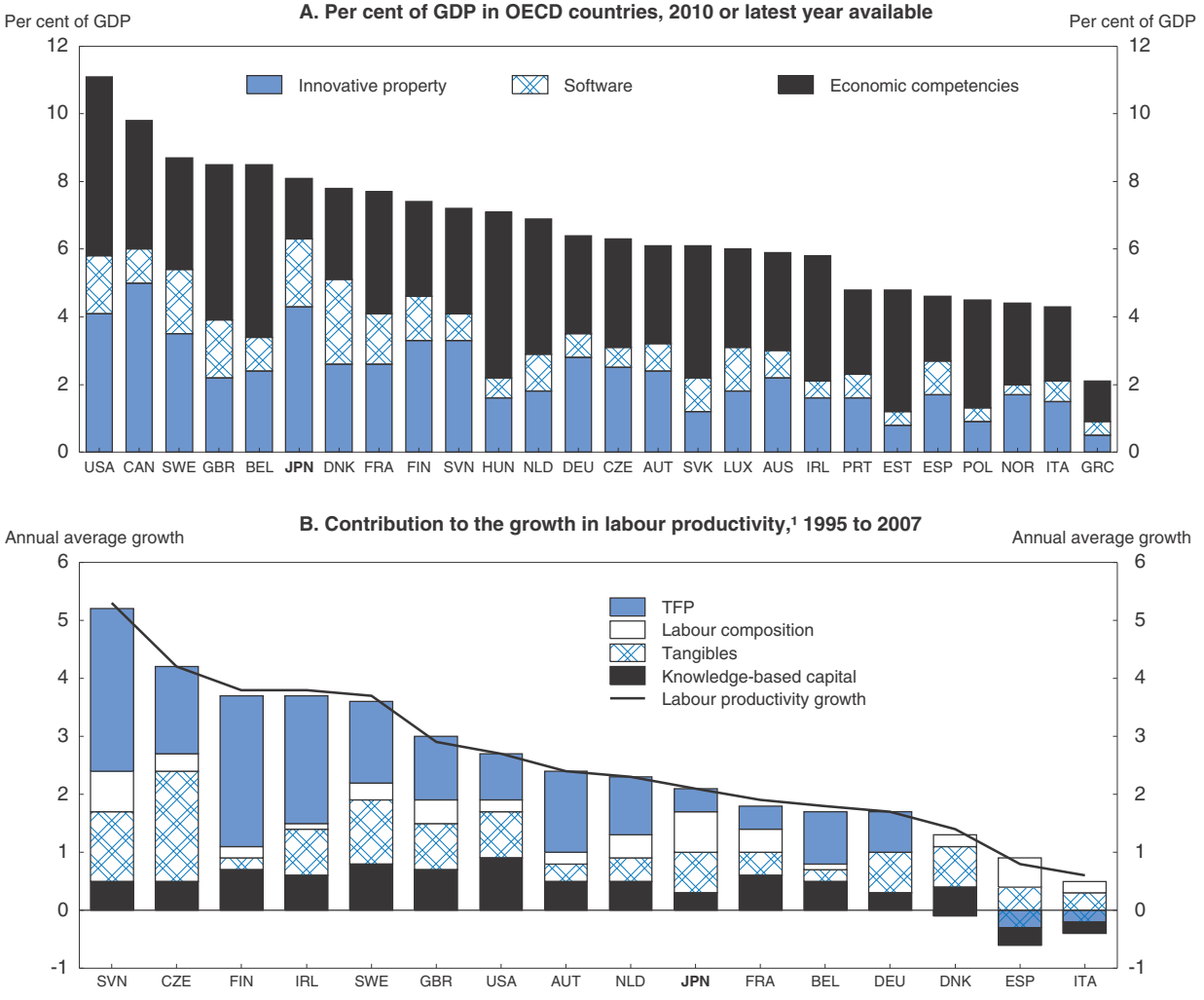
Cash holdings can be reduced in one of three ways: increased dividend payments to stockholders, more investment, and faster wage growth, which the government has strongly encouraged. Reducing cash reserves requires changing the business environment, for example by improving corporate governance (see below) to modify firms' incentives. Investment, in particular, would be boosted by regulatory reforms. Indeed, Abenomics' third arrow is officially "the growth strategy for promoting investment".

Channelling part of the excess liquidity into investment in knowledge-based capital (KBC) would have a particularly positive effect on productivity and growth. Indeed, most of the income gaps between developed economies cannot be explained by the stock of labour and tangible capital, but instead depend on investment in KBC, which includes: i) innovative property (R&D, copyright and license costs); ii) computerised information (software and databases); and iii) economic competencies (firm-specific human capital, organisational structure, brand equity) (OECD, 2013e). Japan's level of investment in KBC is

in the top third of OECD countries for which data are available, at 8% of GDP (Figure 1.11). However, the contribution of KBC to labour productivity growth is one of the lowest among OECD countries (Panel B).

While investment in innovative property in Japan is large, driven by high R&D spending in manufacturing, investment in the other two categories of software and economic competencies is lower. The lack of labour flexibility (see below) limits investment in software, which is profitable to the extent that it is accompanied by organisational changes that allow firms to reduce inputs of unskilled labour (Fukao et al., 2014). Limited labour flexibility has also contributed to the rise in the share of non-regular workers from 20% in 1990 to 37% in 2014, of which about one-third are temporary workers. Labour market dualism also helps explains the fall in investment in economic competencies to 2% of GDP (Figure 1.11), as firms have less incentive to train temporary workers. Indeed, 59% of firms provide on-the-job training to regular workers but only 29% provide it to non-regular

Figure 1.11. **Investment in knowledge-based capital**



1. Annual average growth rate from 1995 to 2007 of output per hour worked.
Source: Corrado et al. (2012).

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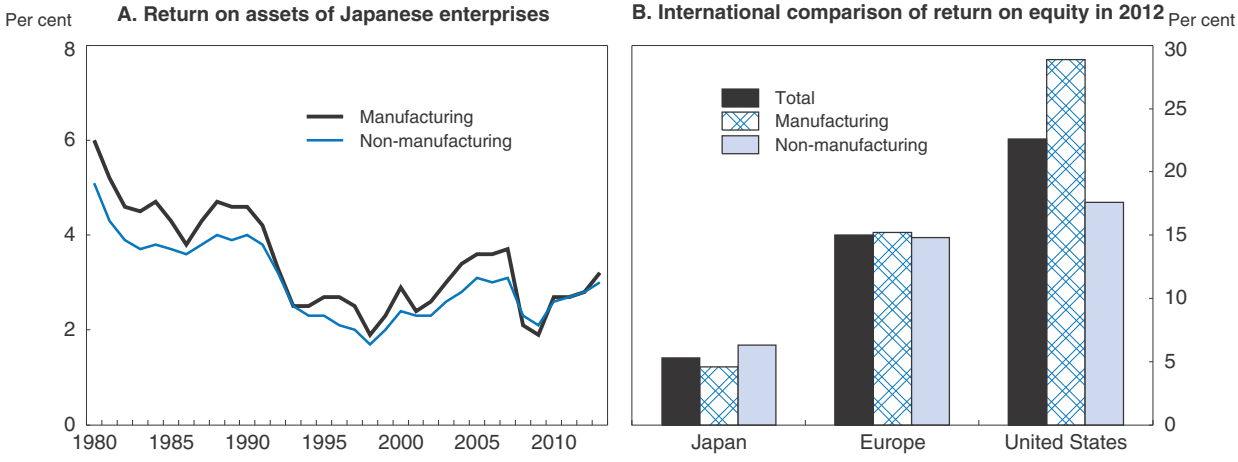
workers (Ministry of Health, Labour and Welfare, 2014). Other factors cited for low investment in intangibles include: i) weak incentives for management to boost efficiency; ii) the smaller share of young firms, which tend to invest more in intangibles; and iii) the prevalence of small shops in the retail sector (Fukao et al., 2014).

Using the high cash holdings to boost investment in intangible assets could also improve profitability. Operating profits in Japan have fluctuated around 6% of sales, about half of the level of the United States and Europe (Kinoshita, 2013). In Japan, the rate of return on assets has been on a long-term downward trend in both manufacturing and non-manufacturing, as the 2002-08 rebound appears to have been only temporary (Figure 1.12). The return on equity is far below that in the United States and Europe in both manufacturing and non-manufacturing (Panel B). Addressing the issues of high cash holdings, ineffective investment in KBC and low corporate profitability requires improving framework conditions to strengthen competition, upgrade the innovation system, promote the creation of start-ups, including venture capital-backed firms, and revitalise the SME sector.

Figure 1.12. **Return on assets have fallen, while return on equity is relatively low**



Source: Ministry of Finance (2014), *Annual Survey of Business Conditions*; Ministry of Economy, *Trade and Industry* (2014).

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Framework conditions to promote innovation and boost productivity

Appropriate framework conditions are needed to encourage firms to participate in innovation and allow its benefits to spread throughout the economy. As noted above, cross-country differences in productivity and growth are largely explained by TFP, which in turn depends on a reallocation of resources in favour of innovative firms. Stronger competitive pressure would push firms to innovate and invest their cash. If the market works, firms that fail to adopt the most productive technologies have to downsize or exit, thereby releasing resources to more efficient firms, maximising productivity and output growth. The ability to rapidly reallocate labour and capital is particularly important in innovative sectors so that firms can capture the value of their ideas before imitation by competitors (Andrews and de Serres, 2012). Such flexibility raises the amount of investment in KBC by increasing its return (Andrews and Criscuolo, 2013). On the other hand, frictions in resource reallocation lower the expected net benefits of innovation.

The speed at which resources are reallocated to innovative firms depends on a number of factors discussed below, as well as competition policy. Enforcement by Japan's Fair Trade Commission has been classified as "very good" by the Global Competition Review (Global Competition Review, 2013). However, there is room to improve competition policy by reducing exemptions to the Anti-Monopoly Act and increasing administrative fines (2008 *OECD Economic Survey of Japan*).

Improving corporate governance

Corporate governance is a key determinant of an economy's competitiveness and growth as it affects access to equity, the allocation of equity and the monitoring of firms' performance (Isaakson and Çelik, 2013). Japan is one of the few advanced countries without a corporate governance code. In 2004, the Tokyo Stock Exchange (TSE) introduced "Principles of Corporate Governance for Listed Companies". However, it did not provide detailed rules for governance, nor was there any obligation to comply. As noted above, weaknesses in corporate governance are linked to a number of problems, including the low rate of return on assets and the large cash holdings of Japanese firms (Aoyagi and Ganelli, 2014). The 2014 "Japan Revival Vision" by the ruling Liberal Democratic Party states that Japan's corporate governance "lags other countries".

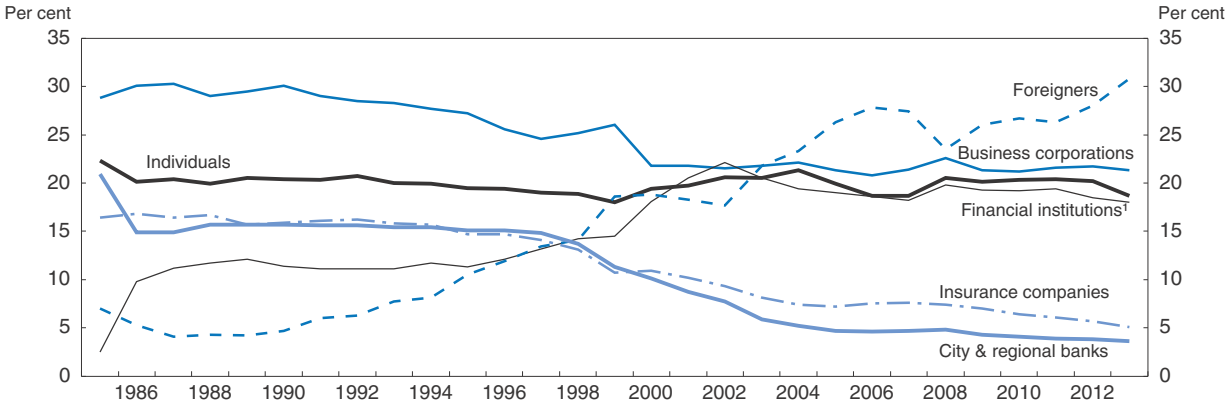
The Vision also calls for lower cross-shareholding, which has "reduced the sense of crisis among management of Japanese companies for many years" and slowed industrial restructuring. While cross-shareholdings between companies with business ties provide mutual benefits and help fight takeover bids, they block the interests of investors seeking financial gains (Ueda, 2014). In 1985, city and regional banks and non-financial firms held half of shares by value (Figure 1.13). While the banks' shareholdings have fallen sharply, non-financial firms account for one-fifth of total shareholdings.

Recent trends in shareholding reveal a number of other changes (Figure 1.13):

- The proportion of shares held by individuals has been stagnant, while insurance companies' shareholdings have fallen.

Figure 1.13. **Shareholder composition of Japanese companies**

Distribution of market value by type of shareholder



1. Excluding insurance companies and city and regional banks.

Source: Tokyo Stock Exchange, 2013 *Share Ownership Survey*.

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- Foreign investors have become a major player in the Japanese stock market, as their shareholdings have risen from 7% of the total in FY 1985 to 31% in FY 2013.
- Despite the falling shareholding by insurance companies, domestic institutional investors are playing an important role, as in other advanced countries.

The expanding role of foreign investors and institutional investors, both domestic and foreign, are helping to strengthen corporate governance. Meanwhile, the shrinking shareholdings of a number of domestic investor categories puts downward pressure on share prices and encourages firms to improve corporate governance to attract investors from other countries. In short, the changing structure of corporate ownership is a catalyst for improving corporate governance.

A number of steps have been taken recently to improve corporate governance. The "JPX-Nikkei Index 400" was launched in January 2014 to "activate the stock market". The index is composed of 400 firms chosen in part on the basis of quantitative criteria, including return on equity (ROE). Indeed, the JPX-Nikkei 400 companies had an average ROE of 11% over FY 2011-13 compared to 4% for companies in the first section of the TSE that were not chosen. In addition, qualitative factors, such as the use of two or more independent, external directors on corporate boards, were used to select the 400 companies. The JPX-Nikkei 400 is thus harnessing market forces to improve corporate governance.

This was followed in February 2014 by the introduction of a "Stewardship Code", which obliges participating institutional investors to fulfil their responsibilities through "constructive dialogue" with the firms in which they invest. The Code is based on a "comply or explain" approach. Institutional investors that adopt the Code are expected to appropriately monitor their investee companies and report periodically on how they fulfil their stewardship responsibilities, including voting. In addition to boosting the return to their clients, institutional investors that fulfil these functions perform a socially beneficial role by providing new information that will improve resource allocation and the performance of investee firms (Çelik and Isaksson, 2013). By November 2014, 175 companies had adopted the Code (FSA, 2014). The number is likely to increase, as institutional investors who fail to adhere to the Code will lose clients.

However, the ability of investors to be good stewards is limited by Japan's lack of a corporate governance code. The 2014 revision of the Revitalisation Strategy called on the TSE and the Financial Services Agency to prepare such a code based on the OECD's Principles of Corporate Governance. A draft code was submitted for public comment in December 2014 and is to take effect for nearly 3 400 companies in mid-2015. It will apply a "principles-based approach" that is not legally binding but aims to contribute to the "success of companies, investors and the economy". It includes five major principles:

- *Securing the rights and equal treatment of shareholders:* Companies should take appropriate measures to fully secure shareholder rights, giving adequate consideration to minority and foreign shareholders. Companies with cross-shareholdings should explain the rationale for such holdings.
- *Appropriate co-operation with stakeholders other than shareholders:* Companies should recognise that their growth depends on a range of stakeholders, including employees, customers and local communities. They should also promote diversity, including the active participation of women.

- *Ensuring appropriate information disclosure and transparency:* The board of directors should recognise that information is the basis for constructive dialogue with shareholders and therefore ensure that such information, particularly non-financial information, is accurate, clear and useful.
- *Responsibilities of the board:* The board should set the broad direction of corporate strategy, establish an environment where appropriate risk-taking by the senior management is supported and carry out effective oversight from an independent and objective standpoint. Companies should make effective use of outside (referred to as independent) directors. Boards should establish and disclose standards aimed at securing the effective independence of their outside directors.
- *Dialogue with shareholders:* Companies should engage in constructive dialogue with shareholders.

Much of the debate on corporate governance focuses on outside directors, who are expected to be more effective in monitoring management and ensuring that they run the firm for shareholders' benefit. However, boards of directors in Japan are dominated by insiders, notably long-term employees, who play a major role in decision-making, contributing to a lack of transparency in corporate governance (Miyajima, 2013). The revised Companies Act and the TSE require companies to have at least one outside director on a comply or explain basis (Table 1.1). The average number of outside directors in Japan has risen from 0.9 per company in 2008 to 1.3 in 2014 for the nearly 1 800 companies listed on the TSE's first section. However, 39% of these companies did not have any outside directors. In contrast, outside directors are legally mandatory in the United States (a majority of the board) and Korea (at least one quarter). Corporate governance codes require outside directors in the United Kingdom (at least half) and France (half). Indeed, a 2013

Table 1.1. **Rules on outside directors of listed companies**

		Japan	United Kingdom	Germany	France	United States	Korea
Mandatory rule		--	--	--	--	**Majority** of the board (Listing rules)	**Not less than ¼** (Commercial Act)
Comply or explain rule[1]	**Comply rule** on outside directors	**At least one** (amended listing rules)	**At least half** of the board, excluding the chairman	**Adequate number** (Corporate Governance Code)	**Half** of the board (Corporate Governance Code)	--	--
	Legal basis	Amended listing rules	Corporate Governance Code	Corporate Governance Code	Corporate Governance Code		
	Regulatory body	Stock Exchange	Independent Legal Entity	Government commission	Enterprise Association		
	Explain rule	Verbal explanation at the shareholders' meeting	Disclosure	Disclosure	Disclosure		
	Legal basis	Amendment bill of the companies act	Listing rules	Stock corporation act	Commercial code		
(Reference)	Corporate governance code		✓	✓	✓		
	Stewardship code	✓ (Feb. 2014)	✓	--	--	--	--

1. Regulators establish a rule, which companies may either comply with or explain publicly why they do not. The purpose of this approach is to let the shareholders decide whether the companies' decision is appropriate.

Source: OECD (2014c).

survey by Institutional Shareholder Services found that only 0.2% of Japanese listed companies had a majority of outside directors, compared to 50% in the United Kingdom and 90% in the United States.

The low share of outside directors in Japan reflects the reluctance of some managers to introduce a system that inhibits their freedom of action (Saito, 2009). Some argue that firms should be free to choose the optimal composition of their board of directors based on the nature of their business. Moreover, the presence of outside directors has not prevented scandals at some companies. This suggests that management can defeat the purpose of outside directors by appointing ones that are loyal to it.

The draft code would require "multiple" outside directors. The appointment of outside director(s) in Japan has been found to have a significantly positive impact on a company's share price and profit margin (Saito, 2009), and to boost firms' ROE (Investor Impact, 2014). Requiring at least two outside directors would strengthen governance by corporate boards, which have an average of nine members. However, it has been argued that at least three outside directors are necessary to give them a strong voice.

The benefits from appointing outside directors in Japan are largest in business lines where information is easily available to outsiders. However, such firms have the lowest numbers of outside directors (Miyajima, 2012), showing that simply leaving the decision to the market and managers will not improve the situation. The use of outside directors is desirable and should become the norm, while making companies that opt out explain their non-compliance in a way that will "gain full understanding from shareholders" (Council of Experts, 2014). However, there remains a risk that powerful business organisations may prepare a standard explanation form for firms that choose to not appoint outside directors, thereby undermining the effectiveness of the comply or explain approach by protecting them from an adverse response from investors (Fujita, 2013).

The benefits of outside directors depend on the independence of those directors and their expertise. A majority of outside directors in Japan at present are actually ex-employees or partners of the firm and most are appointed for the benefit of the inside directors rather than shareholders (Kinoshita, 2013). A member of the *Council of Experts Concerning the Corporate Governance Code* has expressed concern that the current criteria for independent directors established by securities exchanges are "abstract and they allow considerable room for interpretation" (Council of Experts, 2014). Moreover, the compensation of outside directors should be more strongly linked to shareholders' dividends. Finally, directors should receive training from independent sources on their fiduciary responsibilities and should not have to rely exclusively on information provided to them by management. Unlike some jurisdictions, Japan has no rules requiring director training or disclosure thereof (OECD, 2014b). In the draft code, companies are responsible for providing training to their directors.

Labour market flexibility: relaxing employment protection

Innovation requires continuous reallocation of labour and other resources within and across firms and sectors. There is considerable evidence that employment protection has a major impact on labour flows (Martin and Scarpetta, 2012). Low levels of protection allow resources to flow to their most productive uses, benefiting innovative firms that require

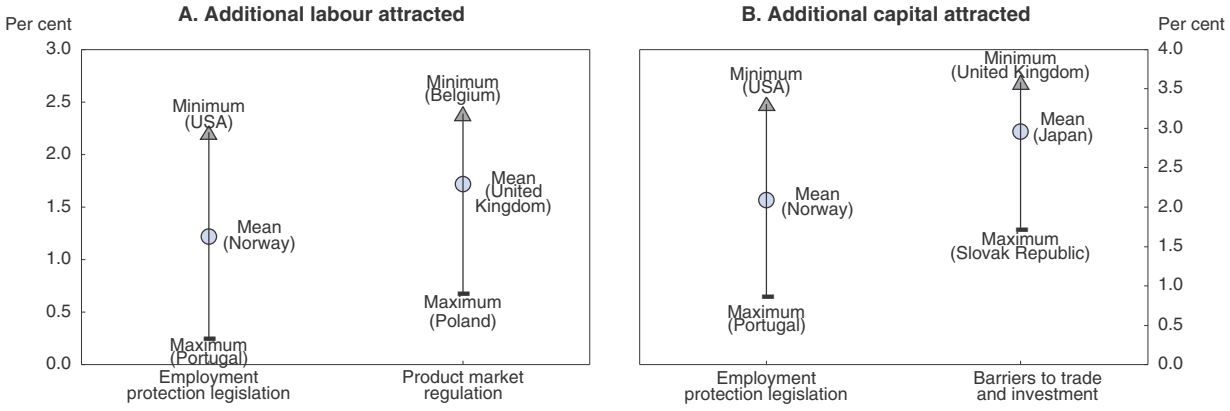
large employment adjustments. But high employment protection hinders resource reallocation, weakening productivity growth and innovation:

- It reduces R&D expenditure, particularly in innovative sectors (Andrews and Criscuolo, 2013). Firms in industries characterised by rapid technological change place a high value on flexibility. By raising exit costs, stringent employment protection makes experimentation less attractive.
- It reduces the ability of innovative firms to attract the resources needed to implement and commercialise new ideas. The increase in the work force in a firm that experienced a 10% rise in patents ranged from 0.3% and 2.2% depending on the strictness of employment protection, while the increase in capital ranged from 0.9% to 3.3% (Figure 1.14).
- Employment protection impedes venture capital financing in innovative sectors, which rely on rapid resource reallocation across the investment portfolio from failing to successful ventures.
- Multinational enterprises tend to concentrate more technologically-advanced innovation in countries with low employment protection, thus making resource shifts easier.

In Japan, employment protection has contributed to the rise in the share of non-regular workers (such as fixed-term, dispatched and part-time workers) from 16% of employees in 1985 to 37% in 2014. Firms hire non-regular workers in part to enhance employment flexibility and avoid the cost of laying off regular workers, who receive high employment protection (2013 *OECD Economic Survey of Japan*). Indeed, firms that face greater uncertainty in their sales have a higher share of non-regular workers (Matsuura et al., 2011). The government recognised the importance of labour mobility in the Revitalisation Strategy, which calls for a shift "from an excessive employment stability policy to a policy of supporting labour movement to enable individuals to smoothly change jobs, fulfill their potential and play active roles for economic growth". To accomplish this goal, the government should reduce effective employment protection for regular workers, in particular by increasing transparency, accompanied by expanded training opportunities. This would increase investment in R&D in innovative sectors and enable innovative firms to attract resources. In addition, breaking down labour market dualism would reduce income inequality (Chapter 2).

Figure 1.14. **Impact of the stringency of regulation on resource allocation**

For a firm with a 10% increase in its patent stock over 2002-10



Source: Andrews et al. (2014).

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Product market regulation

Competition encourages firms to innovate and develop new markets to stay ahead of competitors. Studies show a significant inverse relationship between product market regulation (PMR) and productivity at the aggregate level (Bouis et al., 2011). Less restrictive PMRs promote: i) entry by new firms; ii) the effective diffusion of knowledge from both domestic and overseas sources; iii) improved managerial performance; and iv) private investment in innovation. OECD research shows that a modest cut in the PMR in the energy, transport and communications sectors – corresponding to the difference in regulation between Australia and Austria in 2008 – could boost the level of business R&D by 5% (Westmore, 2013).

Less restrictive regulations also enable firms to attract the complementary resources that are needed to implement and commercialise new ideas. For a firm that experienced a 10% increase in patents over 2002-10, it is estimated that its work force increased by 2.4% in the country with the least stringent PMR but by only 0.7% in the country where it is most stringent (Figure 1.14). In turn, greater allocative efficiency results in faster productivity and output gains. Moreover, a decrease in PMR is found to have a positive impact on patenting activity. A hypothetical reduction in regulation in Finland in 2008 equivalent to the PMR indicator falling to the sample average in that year (a decline of 0.35) is estimated to result in a 3% rise in patents per capita. In contrast, higher PMR stifles innovation and growth; convergence to the technological frontier will be slower for countries with higher PMR (Westmore, 2013).

Japan's overall PMR indicator was 1.4 in both 2008 and 2013, slightly below the OECD average, but well above the leading OECD economies (Figure 1.15). The Industrial Competitiveness Enhancement Act cited "over-regulation" as a major distortion limiting Japan's competitiveness. To overcome such obstacles, the government recently re-activated two advisory bodies, which had been dormant between 2009 and 2012, to the Prime Minister:

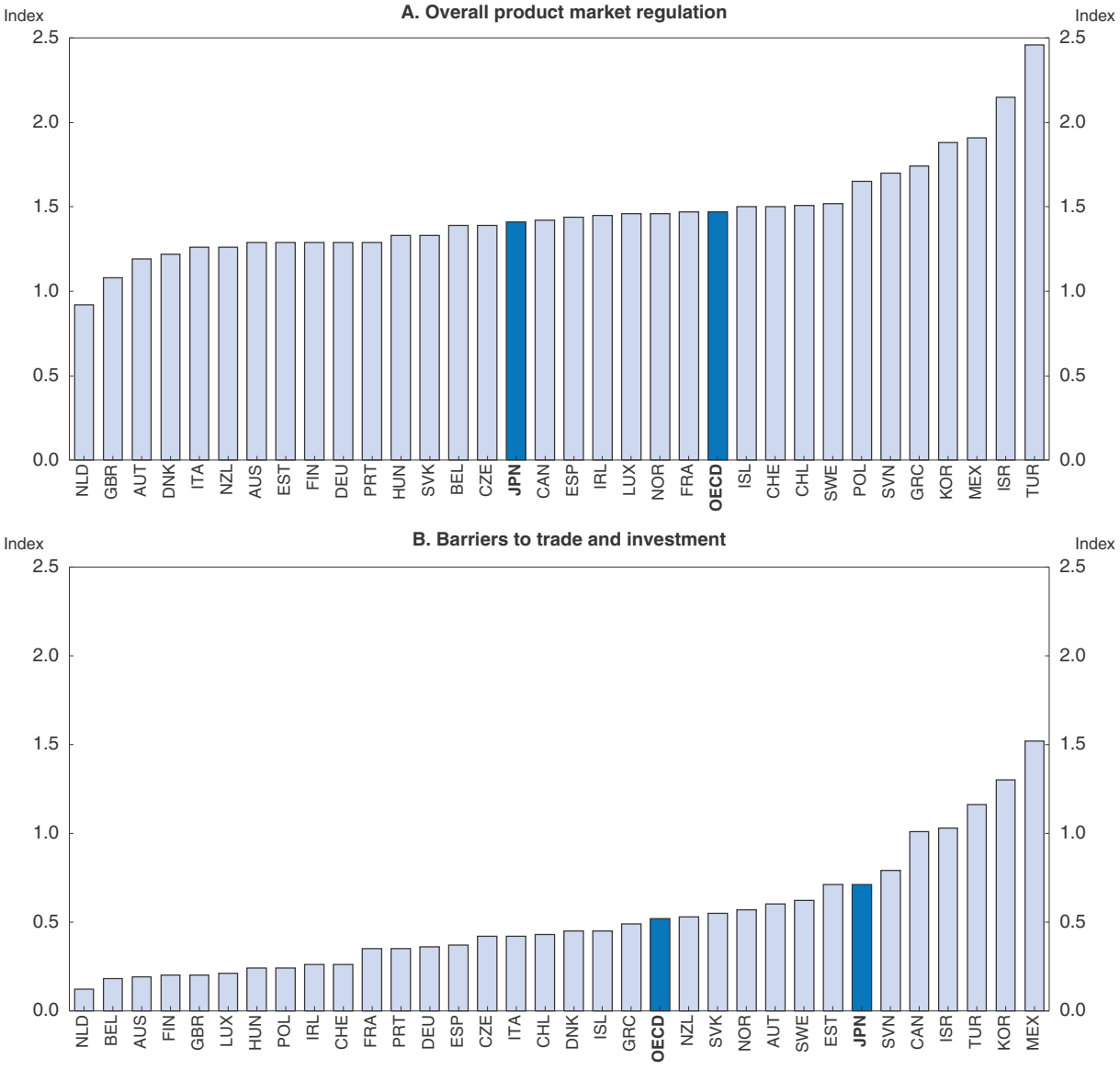
- The Regulatory Reform Committee (RRC), which consists of 15 members from the business sector, academia and research institutes, presents annual reports on regulatory reform.
- The Council on Economic and Fiscal Policy (CEFP), established within the Cabinet Office in 2001, advises the Prime Minister on economic and fiscal policy, including regulatory reform. It consists of four private-sector experts, five ministers and the Bank of Japan governor.

Regulatory reforms require the full consent of the relevant ministries, which in some cases may use their independence to protect the interests of their clients, making reform a difficult and time-consuming process. Moreover, ministries protecting the interest of producers have been more powerful than those promoting consumers' interests and market competition (Yashiro, 2014).

The government also launched two new initiatives in 2013: the National Strategic Special Zones (Box 1.2) and the Industrial Competitiveness Council (ICC), which consists of business leaders and ministers and is headed by the Prime Minister. The Council reviews economic and industrial policies, including regulatory reform, and the Revitalisation Strategy. The Council, which aims to make Japan's business environment "the best in the world", could play the role of a productivity commission.

Regulatory reform in Japan was originally focused on lowering business costs by removing obsolete regulations on business activities, such as electricity, trucking and telecommunications, and has led to large benefits (Prime Minister's Office, 2007). Priorities

Figure 1.15. **International comparison of product market regulation in 2013**[1]



1. The OECD Indicators of Product Market Regulation are a comprehensive and internationally-comparable set of indicators that measure the degree to which policies promote or inhibit competition. Research shows that the indicators have a robust link to performance. The indicator, based on more than 700 questions, ranges from zero (most relaxed) to six (most stringent).

Source: OECD Product Market Regulation Database; Koske et al. (2015).

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for further reform are retail, energy, transport, business services and public services, such as health and education (2008 *OECD Economic Survey of Japan*). Reform of public services requires reducing "social regulations", which impose high costs (Yashiro, 2014). For example, firms are not allowed to manage hospitals or clinics, thus protecting small "non-profit organisations" and preventing scale economies and the widening of consumer choice. In addition, the prices of health and long-term care services are fixed, preventing hospitals and long-term care clinics from providing higher quality and more expensive services that some consumers would prefer. The emphasis on egalitarianism prevents competition that would lead to the provision of higher quality services.

Box 1.2. **National Strategic Special Zones**

A major feature of Japanese regulatory reform is its use of special zones. The most prominent example is the Special Zones for Structural Reform (SZSR) launched in 2002, which depend on the initiative of local governments. Of the more than 5 725 reform proposals made by local governments, 1 235 zones have been created, and 544 reforms in the zones were extended nationwide. The fact that only a fifth of the initial proposals were accepted indicates that opposition to reform, even in limited geographical areas, remains significant, although some proposals were not implemented as they were already allowed by law. The special zones are estimated to have increased private investment by 0.6 trillion yen (0.1% of 2013 GDP) and employment by 18 000 (0.03%) (Yashiro, 2014). However, interest in the SZSR has waned in recent years.

Nevertheless, the 2013 Japan Revitalisation Strategy includes a new scheme, National Strategic Special Zones. The continued reliance on the special zone approach reflects the importance of social consensus rather than top-down decision making. Given the strong resistance to reforms by powerful ministries and interest groups, social experiments in limited geographical areas are thought to be the only way to achieve significant reforms.

In contrast to the SZSR, the new initiative is driven by the central government. The Council on National Strategic Special Zones is chaired by the Prime Minister and includes the Minister of State for the National Strategic Special Zones, other relevant ministers and private-sector experts. Each of the six new Special Zones has a headquarters, bringing together the Minister of State for the National Strategic Special Zones, the mayor and local business leaders. The headquarters collects regulatory reform ideas from the private sector, which are then examined by the central government's Council. The reforms can be extended nationwide. Once the reforms are agreed, the local headquarters is responsible for implementation. The six zones designated in March 2014 include major urban areas:

- Tokyo area: Centre for international business and innovation
- Kansai area (Osaka, Kyoto and Hyogo prefectures): Hub for medical innovation and human resources
- Okinawa prefecture: International tourism centre
- Fukuoka City: Promotion of start-up businesses through employment reforms
- Yabu City, Hyogo Prefecture: Reform centre for agriculture in mountainous regions
- Niigata City: Reform centre for large-scale agriculture

The National Strategic Special Zones' main objectives are: i) formation of international centres with the "best environment in the world"; ii) creation of international innovation in health care; and iii) the formation of action centres for agriculture. These objectives are to be achieved through regulatory reforms in urban development, education, employment, medical care and agriculture. The zones are intended to spark private-sector investment. Prime Minister Abe said that they "will strengthen corporate competitiveness, attract investment from abroad and expand employment… The National Strategic Special Zones will be a breakthrough for reform".

The National Strategic Special Zones differ from the SZSR in a number of ways. Most importantly, they are a national project in collaboration with city mayors rather than initiated by local authorities. In addition, they include tax breaks and interest subsidies (Yashiro, 2013). However, the new Special Zones will need more ambitious reforms to make them more successful than previous efforts. For example, the Special Zone for Asian Headquarters was launched in 2011 with an aim of making Japan a centre for international

Box 1.2. **National Strategic Special Zones** *(cont.)*

business, by attracting more than 50 corporate headquarters for Asia before 2016. It is thus similar to the new Tokyo Special Zone for Structural Reform. Thus far, though, the 2011 special initiative has attracted only two headquarters (Okubo, 2014).

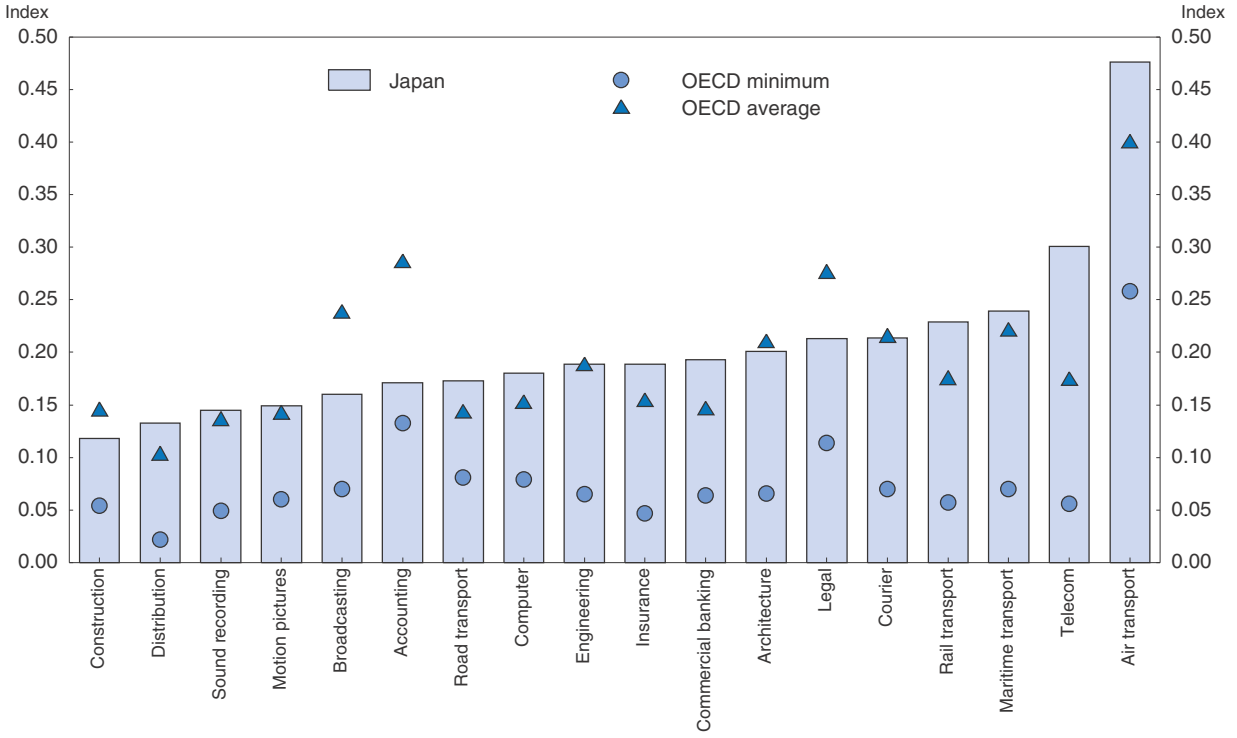
Moreover, the experience of the Fukuoka special zone shows the challenge of implementing reforms. The mayor of Fukuoka had proposed that employment protection be relaxed in the zone for regular workers in venture businesses less than five years old to promote the growth of new firms. In the end, Employment Consultation Centres providing advice on "Employment Guidelines" were established in three of the zones (Matuso and Yamazaki, 2014).

Note: Other examples include the 2011 "Comprehensive Global Strategic Special Zones" to create internationally-competitive business environments and "Comprehensive Special Local Revitalisation Zones" for agriculture, tourism and culture.

Finally, promoting competition in services requires ensuring a level playing field by phasing out the Anti-Monopoly Act's special treatment of SMEs, which play a major role in services. In addition, restrictions on service trade should be liberalised (Figure 1.16). Of 18 service sectors, Japan's restrictions match or exceed the OECD average in 13 areas

Figure 1.16. **Japan's services trade restrictiveness index by sector**

The indices take values between zero and one (the most restrictive)[1]



1. The index includes regulatory transparency, barriers to competition, other discriminatory measures, restrictions on movement of people and restrictions on foreign entry. The STRI methodology takes into account different market and trade cost structures across sectors to ensure that they reflect the relative restrictiveness of each sector. Nevertheless, the indices may not be perfectly comparable across sectors. The indicators are for 2013 or the most recent year available.

Source: OECD (2014g).

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including computers, telecommunications, distribution, commercial banking, insurance and air, road, maritime and rail transport.

Promoting international competition

The liberalisation of barriers to international trade and investment spurs innovation by broadening the scope for knowledge diffusion and technological transfer across borders, either embodied in goods and services or through investment that transmits ideas (Jaumotte and Pain, 2005). The increase in the capital stock in a firm that experienced a 10% rise in patents ranged from 1.7% to 3.6% depending on the level of trade and investment barriers (Figure 1.14). A number of studies show that foreign firms operating in Japan have higher management efficiency and productivity than their Japanese counterparts (Urata, 2005). International openness thus promotes competition and more efficient resource allocation; firms that cannot compete in the global market downsize, while those that can, expand production. The benefits of international openness are maximised by pro-competition domestic product market regulations.

Investment in Japan offers a number of advantages, including a large domestic market, a skilled work force, its location as a gateway to Asia, low-cost capital, and the opportunity to work with high-tech partners and tap Japanese R&D (EBC, 2014). These factors explain why Japan ranked tenth in the world in 2011 in UNCTAD's "Inward FDI Potential Index". Nevertheless, the stock of inward FDI in Japan has stayed below 4% of GDP since 2008, the lowest in the OECD. Moreover, it is only 15% of Japan's stock of outward FDI, compared to ratios between 60% and 90% for other G7 countries, reflecting in part Japan's high barriers to trade and investment (Figure 1.15, Panel B). In addition, public opinion is less favourable to FDI inflows, which is sometimes viewed as a threat (Urata, 2005).

Policies to promote inflows of foreign direct investment

The Japan Revitalisation Strategy set a target of doubling the stock of inward FDI from 18 trillion yen in 2012 to 35 trillion yen in 2020, echoing the 2003 plan to double FDI over five years. The government's Expert Group on FDI in Japan held meetings in early 2014 with foreign firms to identify the factors that limit FDI inflows to Japan (Expert Group of the Cabinet Office, 2014 and EBC, 2014). The overriding concern is the need for harmonisation with global systems to address the problem of low profitability and high costs in Japan and to improve living conditions for expatriates. A number of specific issues were cited:

- *Corporate mergers and acquisitions (M&As):* M&As, a key channel for FDI, are low in Japan. A 2007 law aimed to facilitate "triangular mergers", in which a foreign firm can acquire a Japanese company through a merger of its Japanese subsidiary and the Japanese target company. The Japanese subsidiary is allowed to use shares issued by its foreign parent to purchase the shares of the Japanese target company, which disappears. However, a "business continuation" criterion is applied, which effectively means that only companies that already have operations in Japan can use this approach. Consequently, triangular mergers have remained virtually unused (EBC, 2014).
- *The tax system:* A high corporate income tax rate discourages FDI inflows (Arnold et al., 2011). Even with the planned reduction to 31.3% in FY 2016 (see Chapter 2), Japan's rate will remain much higher than in other Asian economies, such as Hong Kong, China (16%), Singapore and Taipei, China (17%), Korea (24%) and China (25%).

- *Corporate governance:* Japan's corporate governance framework lags behind global standards (see above). The lack of clarity and accountability discourages potential investors (EBC, 2014).
- *The regulatory environment:* Unclear administrative practices and unique and rigid standards for certifying consumer goods in Japan are a deterrent to FDI inflows (EBC, 2014). Procedures for starting a business are long and complicated.
- *Employment:* Japan needs to enhance the flexibility of employment and termination rules (see below) to attract FDI. The lack of mid-career mobility makes it difficult for foreign firms in Japan to secure experienced workers. In addition, there is a shortage of English-language skills.
- *Entry of foreign workers:* Given that FDI is also facilitated by the movement of people, rules that restrict the entry of workers can discourage foreign investors. For example, a worker in a field that is different from his or her educational background must prove they have ten years of experience in the industry to obtain a visa.

Foreign companies also cite the importance of free trade agreements, as liberalising trade promotes FDI as well (Thangavelu and Findlay, 2011). While Japanese tariffs are low, the key obstacles are non-tariff barriers, including the regulatory environment. According to the European Business Council in Japan, unique product specifications and certification processes raise costs, requiring some EU companies to run Japan-only production lines (EBC, 2014). Japan has signed 15 Economic Partnership Agreements (EPAs) since 2002, primarily with ASEAN countries (Table 1.2). Together, they cover less than a quarter of Japan's trade. The Japan Revitalisation Strategy seeks to raise the share of Japan's trade with countries with which it has an EPA or FTA from 19% in 2012 to 70% by 2018. This requires agreements with larger trading partners, such as the United States, China and the EU, which is to be completed in 2015. Japan decided in 2013 to join the Trans-Pacific

Table 1.2. **Japan's Economic Partnership Agreements**

	Took effect in	Share of exports in 2014 in per cent		Share of imports in 2014 in per cent	
		Total	Agriculture	Total	Agriculture
Singapore	2002	3.1	1.3	1.0	0.9
Mexico	2005	1.6	0.2	0.5	1.3
Malaysia	2006	2.0	1.7	3.6	0.9
Chile	2007	0.2	0.0	1.0	6.6
Thailand	2007	4.5	4.7	2.7	4.3
Indonesia	2008	2.1	2.5	3.1	3.9
Brunei	2008	0.0	0.0	0.5	0.0
Philippines	2008	1.4	0.8	1.2	2.3
ASEAN[1]	2008	15.2	15.9	14.2	14.2
Switzerland	2009	0.4	0.1	0.9	0.6
Vietnam	2009	1.7	4.5	1.9	1.7
India	2011	1.2	1.0	0.9	1.0
Peru	2012	0.1	0.0	0.2	1.1
Australia	2014	2.1	0.7	5.9	13.4
Mongolia[2]		0.0	0.1	0.0	0.0
Total		**20.4**	**17.7**	**23.4**	**38.0**

1. Includes Cambodia, Laos and Myanmar, in addition to the other ASEAN countries shown individually.
2. Signed in February 2015.

Source: OECD International Merchandise Trade Statistics Database.

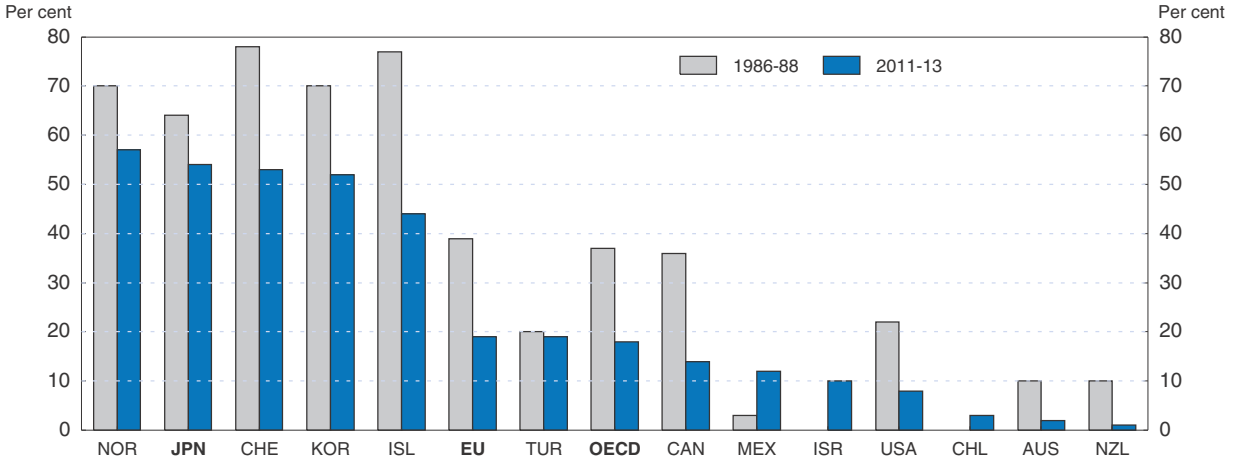
Partnership (TPP) negotiations to create a 12-nation free trade agreement including North America, Australia, New Zealand and Chile. The countries agreed, in principle, to eliminate all tariffs. The TPP is a key priority as it has the potential to bring important, long-lasting benefits to Japan.

The importance of agricultural reform in Japan

The benefits from EPAs depend on the extent to which Japan opens its agricultural sector during the negotiations, thereby enabling Japan to obtain concessions on its manufactured exports (2013 *OECD Economic Survey of Japan*). The *Plan for Creating Dynamism Through Agriculture, Forestry and Fisheries and Local Communities* aims at enhancing the competitiveness of farmers, enabling the agricultural sector to become competitive, and as a result, able to cope with high-level EPAs. Such agreements require cutting border measures, which isolate farmers from international competition. Border measures, including the tariff on rice, contribute to the high level of assistance: the Producer Support Estimate was 54% in Japan in 2011-13, three times the OECD average (Figure 1.17). Prices received by farmers are double world market prices. Such assistance imposes heavy burdens on taxpayers and consumers. Indeed, consumption spending on agricultural commodities was 1.8 times their value at border prices over 2011-13 (OECD, 2014a). In other words, higher prices boosted consumer spending on agricultural products 1.8 times.

Productivity in land-intensive agriculture is low, reflecting the small average farm size of only 2 hectares, compared to the European Union (14 hectares) and the United States (170 hectares) (MAFF, 2012). The government estimates that land productivity on rice farms of 10 to 15 hectares is double that on farms of 1 to 2 hectares, the current norm. The prevalence of small farms reflects the production quota system, subsidies that make small-scale farming profitable and the complex web of laws governing land ownership, transfer and taxation (Jones and Kimura, 2013).

Figure 1.17. **The Producer Support Estimate[1] for Japan is the second highest in the OECD**



1. Producer support is the annual monetary value of gross transfers from consumers and taxpayers arising from policies that support agriculture, regardless of their nature, as a per cent of the value of gross farm receipts. Countries are ranked according to their 2011-13 levels. Chile, Israel and Slovenia excluded from the OECD total in 1986-88. The EU figure is the EU12 for 1986-88 and the EU27 for 201-13.

Source: OECD PSE/CSE Database 2014.

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The Revitalisation Strategy set an ambitious target of doubling the income of farmers and farming communities within ten years, in part by doubling exports to 1 trillion yen by 2020. A similar 2007 initiative failed to raise exports, reflecting in part the 2008 global financial crisis and the 2011 Great East Japan Earthquake. In 2014, agriculture, forestry and fishery exports increased by 11.1% in value terms to a record high 612 billion yen. Several reforms have been announced to help achieve the Strategy's goal. *First*, regional government-supported institutions were established in 2014 to promote farm consolidation by leasing land from farmers and renting it to business farmers and new entrants. Farm consolidation is essential to achieve the government's goal of reducing the cost of rice production by business farmers by 40%. However, the impact of the new policies will be limited by existing policies, such as price support, which discourage farm exit. Farmers hang onto their land as they can still make a profit, given high rice prices, and many hope to make a profit by selling their land for residential or other uses. Consequently, a previous farmland consolidation organisation operating in all prefectures has only leased around 32 000 hectares in 2011 (0.6% of Japan's total farmland).

Second, the rice production adjustment programme introduced by the government in 1970 will be phased out by FY 2018. Direct payments for rice will be abolished in 2018. However, subsidies for manufacturing and feed rice, and other crops, such as barley and wheat, were increased with an aim to fully utilise paddy land and raise food self-sufficiency. Such an approach will keep the rice price high by limiting its supply. Commodity-specific support accounts for around 90% of producer support in Japan, compared to 32% in the European Union (OECD, 2014a). Support to farmers should be decoupled from the production of specific commodities and, over time, phased out. As for border measures, the government is participating in TPP negotiations, taking into account the April 2013 Diet resolution, which called on the government to give top priority to protecting the categories of rice, wheat and barley, beef and pork, dairy products and sugar and starch crops.

The reforms underway, however, fall far short of what is needed to achieve the government's goals and create an open competitive environment for farmers. The thriving specialist livestock and horticulture industries demonstrate that many Japanese farmers have the potential to be internationally competitive and respond to market opportunities (Jones and Kimura, 2013). Indeed, vegetables, a labour-intensive sector that receives little public support and is not necessarily large-scale, increased its share of agricultural output from 9% in 1960 to 27% in 2013. To create a competitive agricultural sector, more ambitious reforms are required:

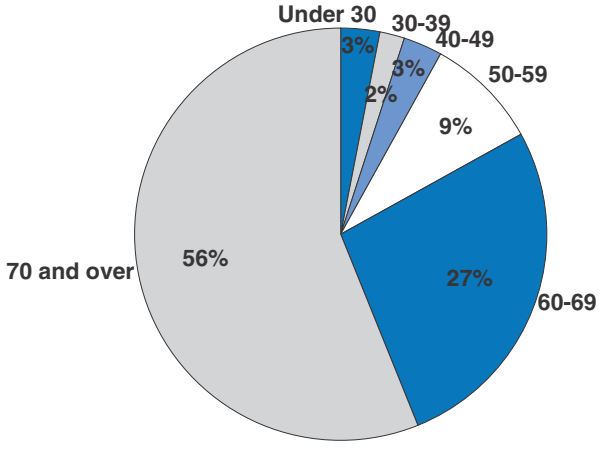
- Shift away from commodity-specific payments, which push farmers into activities where they are not competitive. Instead, farmers should have the freedom to make their own production decisions in response to market demands. Reducing the subsidies for the diversion crops would lower the price of rice toward the world price.
- Phase out subsidies based on the cost of production, as they perpetuate inefficient production and hinder farm consolidation, in favour of payments decoupled from production. Decoupled payments, such as those based on environmental services, are more efficient in raising farm income, in addition to being more transparent. Shifting from supporting farm income through subsidies and import barriers to a system of direct income support for farmers would lower the overall cost of agricultural support in Japan, according to an OECD study (OECD, 2009).

- Unravel the policy settings that impede farm consolidation to move toward the goal of increasing the ratio of farmland used by business farmers to 80% by 2023. Land markets should become more dynamic, notably by lifting obstacles to transactions. The prohibition on non-agricultural corporations owning farmland should be abolished to leave open all options for attracting labour, capital and technology to agriculture. This may help reduce the large amount of idle farmland, despite other obstacles.
- Reform the role of the Central Union of Agricultural Co-operatives (JA Zenchu) to strengthen market forces in agriculture. The Regulatory Reform Committee has proposed reforms reducing the JA Zenchu's administrative role, at the same time securing the independence and revitalisation of local agricultural co-operatives.

Bold reforms to revitalise the agriculture sector should begin promptly, given the urgent need to boost Japan's growth potential and the advancing age of farmers. Indeed, in 2010, the average age of rice farmers was 68.5 and 56% were over 70, while another 36% were between 50 and 70 (Figure 1.18). Only 8% were under age 50. In addition, the high level of farm household income, which exceeds that of non-farm households, means that farmers have the resilience and capacity to cope with reform.

Reform also requires addressing the issue of food security, which is often confused with food self-sufficiency, making agricultural reform very difficult politically. Despite the high level of support, agricultural output is falling and food self-sufficiency declined from 79% in 1960 to 39% in 2013 in calorie terms. The government aims to raise it to 50% by 2020. Further opening the agricultural sector, though, would lower food self-sufficiency, at least in the short run. It is essential to adopt a multi-faceted approach to food security that includes: i) a more competitive domestic agricultural sector; ii) diversified sources of imports; iii) sufficient emergency food reserves; and iv) the conservation of an adequate agricultural resource base (2013 *OECD Economic Survey of Japan*). Introducing provisions in EPAs with food exporters to ensure food supply is one way to establish long-term supply relationships and enhance food security.

Figure 1.18. **Japan's farm workforce is elderly: the age distribution of rice farmers in 2010**



Source: Ministry of Agriculture, Forestry and Fisheries (2010).

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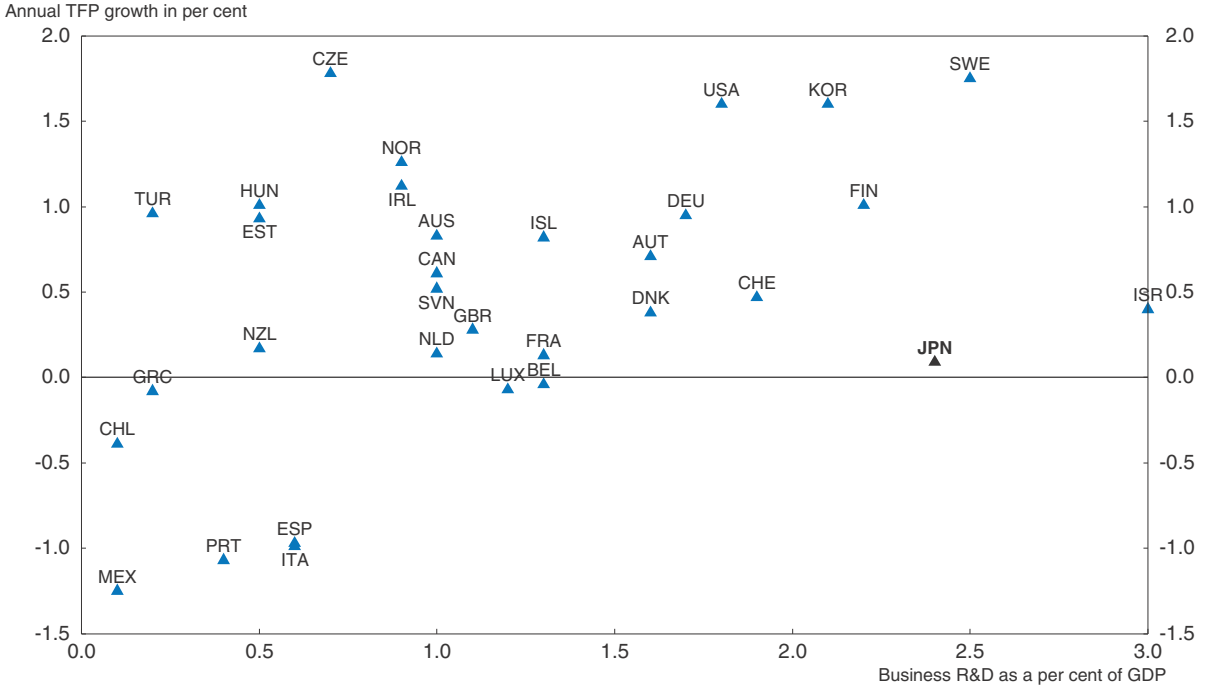
Measures to improve Japan's innovation system

Japan's gross domestic expenditure on R&D, which has remained around 3½ per cent of GDP since 2005, was the fifth highest in the OECD in 2012. Moreover, the business sector accounts for three-quarters of the outlays, one of the highest shares in the OECD area. Business R&D is particularly important as it has the greatest impact on TFP growth (Westmore, 2013). Despite the high business R&D intensity, TFP growth in Japan has been well below the OECD average in recent years (Figure 1.19), as noted above. One reason may be that only 30% of Japanese patents have been exploited internally and less than 10% were licensed to others (OECD, 2008). In addition to framework conditions, increasing the return on R&D requires better bridging to innovation by ensuring adequate human capital in science and engineering, upgrading the quality of universities and strengthening their links with firms, expanding international collaboration in innovation, and improving the framework for public support for R&D.

Figure 1.19. **Total factor productivity growth and business R&D intensity**

1995-2013



Source: OECD Economic Outlook No. 96; *Long-term Scenario Database*; *OECD Main Science and Technology Indicators*.

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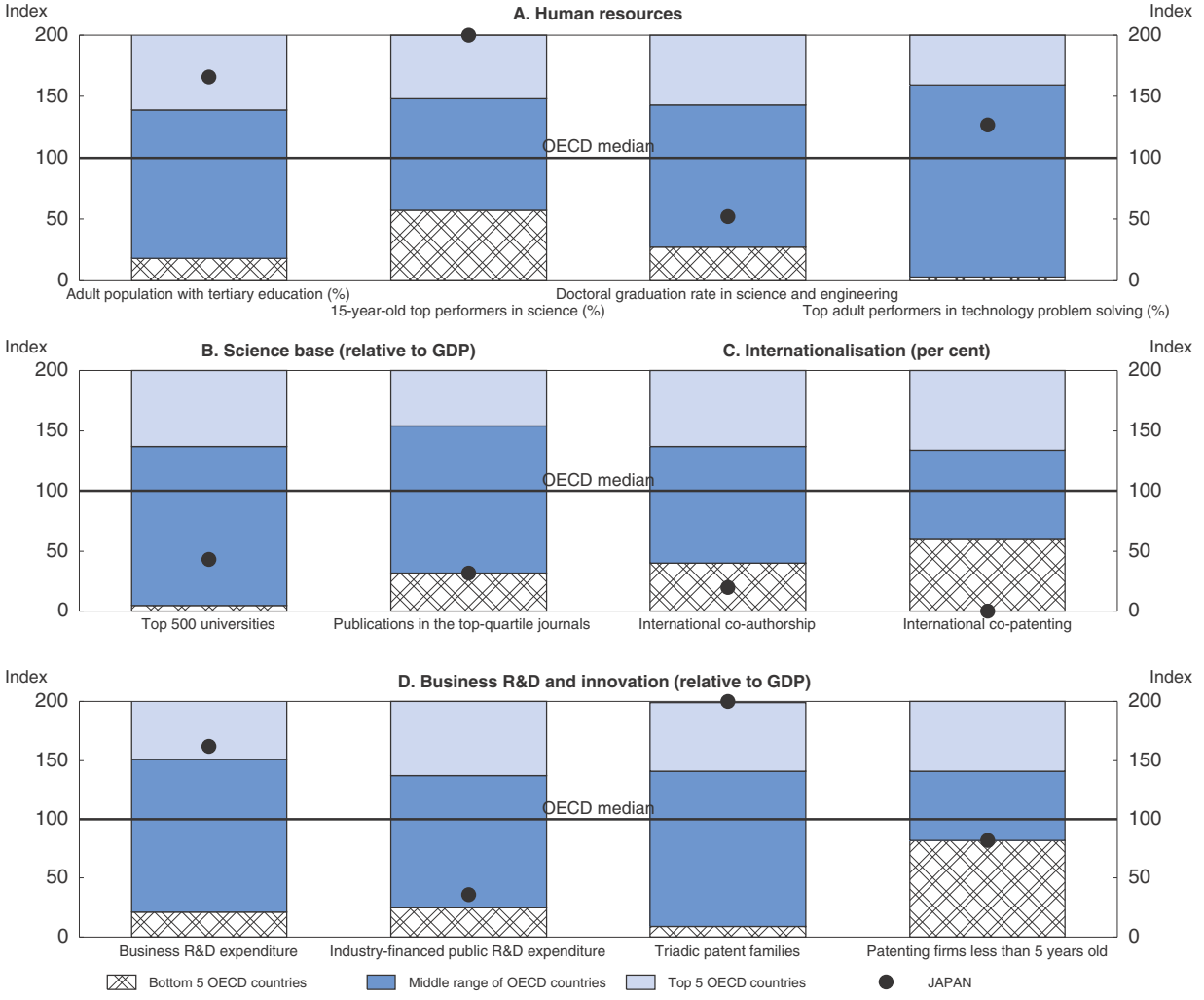
Ensuring adequate human capital in science and engineering

Japan is well known for its educational achievements. The share of the adult population with a tertiary education is the third highest in the OECD area (Figure 1.20). Among 15-year-olds, Japan had the third-highest score in science in the 2012 PISA tests (OECD, 2013d) and the proportion of its top performers is the highest in the OECD. However, like some other OECD countries, Japan faces labour shortages in some key sectors due to a decline in the number of science and engineering majors in universities during the past 25 years. By 2007, there were 4.5 job offers for each graduate in fields like electronic

Figure 1.20. **Comparative performance of national science and innovation systems in 2014**



Note: Normalised index of performance relative to the median values in the OECD, which are set at 100. The top performer is set at 200 and the lowest at zero. The fifth-highest performer in the case of the "Top 500 universities" had a score of 137 relative to the OECD median, while the fifth lowest had a score of 5. Japan, with a score of 43, was in the middle range.
Source: OECD (2014f).

StatLink http://dx.doi.org/10.1787/888933202149

machinery, well above the 1.5 nationwide average. The doctoral graduation rate in science and engineering is well below the OECD median at 22% of all doctorates.

Upgrading the quality of universities and strengthening their links with firms in R&D

Although total spending at the tertiary level in Japan is close to the OECD average, the number of Japanese universities ranked in the top 500 in the world (relative to GDP) was well below the OECD median in 2014 (Figure 1.20, Panel B), suggesting scope to improve quality. Japan's 2014 reform plan is dividing universities into three categories. The 22 universities chosen for the top category are expected to compete with the top institutions of higher learning in the world. In addition to this reform, promoting internationalisation and competition between institutions may help to improve quality.

Internationalising the university sector by increasing the share of foreign students and attracting leading foreign tertiary institutions to Japan would improve its performance (2011 *OECD Economic Survey of Japan*). In 2008, when the share of foreign students in Japanese tertiary institutions was 3.2%, the government launched the Global 30 project with 13 universities with an aim of increasing the number of foreign students to 300 000 (about 10% of total tertiary enrolment) by 2020. Nevertheless, the share was only 4%, in 2012, half of the OECD average of 8%. Attracting accredited foreign providers to the tertiary sector would also help stimulate competition and raise 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 five at present. Meanwhile, young Japanese are becoming increasingly inward-looking (Expert Group of the Cabinet Office, 2014). For example, the number of Japanese students studying at top universities overseas is lower than that of their Chinese and Korean counterparts.

Strengthening competition depends in part on increasing transparency about the quality of tertiary institutions and their results by providing detailed information, including on the labour market outcomes of their graduates. In addition, the government could strengthen competition by raising the share of funding that is linked to a university's performance, which is currently only around one-fifth. As the expanding supply of tertiary education and the falling number of high school graduates have converged, demographic trends provide an opportunity to enhance competition and raise quality. The number of 18-year-olds, which peaked at 2.05 million in 1992, dwindled to about 1.2 million by 2012. During that time, the number of four-year universities rose from 523 to 783, of which about 90% are private. Consequently, nearly half of private universities have excess capacity and around 40% are operating in the red. As the number of high school graduates continues to fall, tertiary institutions will face rising pressure to maintain enrolments. Ensuring adequate information through an accreditation and quality assurance system is essential to ensure that downsizing results in the restructuring, merger and closure of the weakest institutions (Jones, 2011).

Relaxing regulations on tuition, enrolment caps and the requirement that the government approve programme changes would also promote competition. The government sets a standard tuition level for national universities, but allows them to charge up to 20% more. However, almost all universities charge the standard amount, reflecting concern that higher tuition would be offset by a cut in government grants. As a result, tuition fees are largely unrelated to the quality of education, its cost or the labour outcomes of its graduates. The undifferentiated level of tuition fails to encourage the most efficient use of resources. Universities should be allowed to set tuition fees, with any changes not offset by government grants, while at the same time expanding student loan programmes to ensure access for all qualified students.

Higher-quality universities could make a larger contribution to innovation. Of business-financed R&D spending, only 0.5% in 2013 was carried out at universities, indicating weak linkages between academia and the business sector (Table 1.3). Similarly, only 2.6% of research performed at universities was funded by firms. Moreover, spending on R&D performed in universities increased by only 12% (adjusted for inflation) in Japan between 2000 and 2012, compared to 50% in Germany and 59% in the United States. While universities employ a majority of Japan's PhDs in natural sciences, they financed only 5.9% of R&D in 2013. The role of universities could be strengthened by raising the share of government R&D funding that is competitively financed. An increased university role in

Table 1.3. **Flows of R&D funds in 2013**

A. R&D funding

Source of funding	Allocation of R&D spending by sector performing it				
	Share of total R&D spending	Government	Universities	Business enterprises	Total
Government[1]	18.1	54.4	40.2	5.4	100.0
Universities	5.9	0.6	99.3	0.1	100.0
Business enterprises	75.5	0.6	0.5	98.9	100.0
Foreign sources	0.5	9.6	1.6	88.8	100.0

B. Sector performing R&D

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]	10.4	94.5	0.3	4.7	0.5	100.0
Universities	13.5	54.1	43.2	2.6	0.1	100.0
Business enterprises	76.1	1.3	0.0	98.1	0.6	100.0

1. Includes private non-profit institutes.
Source: OECD, *R&D Statistics Database*.

R&D should be accompanied by greater university-business co-operation in a range of areas, including curriculum (Jones, 2011). A larger university role in R&D may also boost the share of basic research in total R&D, which is the third lowest in the OECD, even though Japan is at the technology frontier in many fields.

The government has launched technology licensing organisations (TLOs), which are corporations that obtain patents for university research results and license the technology to private firms, thereby promoting academia-industry co-operation. The new businesses created by technology licensing return part of the profit to the universities, thus funding further research. The government assists TLOs through subsidies and by waiving patent fees. While Japan has 38 TLOs approved by the government, their role is relatively small, as only $24 million in royalty income was generated in 2010, about 1% of the $2.4 billion in the United States (Table 1.4). The number of patents held by universities has not increased since 2010.

In addition, the number of collaborative research projects between universities and firms has stagnated in recent years. While the number is significant at 21 600 in 2010, many are small-scale projects. Consequently, the total spent on collaborative projects was $469 million (Table 1.4), only about one-tenth the amount in the United States and one-third that in the United Kingdom. The government hopes to expand large-scale

Table 1.4. **University-industry collaboration in selected countries in 2010**

	Number of patents	Number of technology transfers	Royalty income[1]	Number of sponsored/ collaborative research projects	Amount of sponsored/ collaborative research projects[1]	Number of start-ups
Japan	8 675	4 968	24	21 600	469	47
United States	13 397	4 284	2 400	-	4 300	651
United Kingdom	2 258	5 082	45	28 576	1 245	268

1. In million US dollars.
Source: Nishimura (2013).

collaborative projects to promote the commercialisation of such projects. Indeed, after reaching 252 in 2005, the number of start-ups from university-business collaboration fell to 47 in 2010. The government is also trying to enhance the role of government research institutes (GRIs). Under the new Innovation National System (the Amari Plan), they are to play a bridging role to promote exchanges between business, academia and the government.

Promoting open innovation in global networks and international collaboration

In recent years, there has been a trend toward "open innovation in global networks", in which firms increasingly collaborate with external partners, such as suppliers, customers and other companies, both at home and abroad (OECD, 2008). Open innovation thus provides a much broader base of ideas and technologies. However, Japanese firms have not embraced open innovation to the same extent as their foreign peers, reflecting concerns about losing technology to competitors (Motohashi, 2013). Japan ranked 16th out of 24 OECD countries in an OECD study on the share of external knowledge sources for innovation over 2008-10 (OECD, 2013c). Only 0.5% of the R&D carried out in Japan in 2013 was financed from abroad (Table 1.3), one of the lowest shares in the OECD, indicating that linkages with foreign firms and institutions are relatively weak, and few foreign researchers come to Japan. According to a study of 16 countries, the share of immigrant scientists in Japan is among the lowest (Franzoni et al., 2012). Consequently, the level of international co-authorship of academic papers is also among the lowest in the OECD area (Figure 1.20, Panel C). As noted above, increasing openness to trade and investment and promoting the internationalisation of universities would enhance Japan's participation in world R&D networks. The government has shown limited commitment to the globalisation of R&D (Motohashi, 2013).

The number of Japanese applications for triadic patent families (per GDP) during 2009-11 was the highest in the OECD area (Figure 1.20, Panel D). Despite the numerical success, an OECD study ranked the quality of Japanese patents at 17th of 21 member countries, based on 12 indicators (Squicciarini et al., 2013). Greater international collaboration could help improve their quality, as the level of international co-patenting in Japan was the lowest in the OECD (Figure 1.20, Panel C).

Improving the framework for public support for R&D

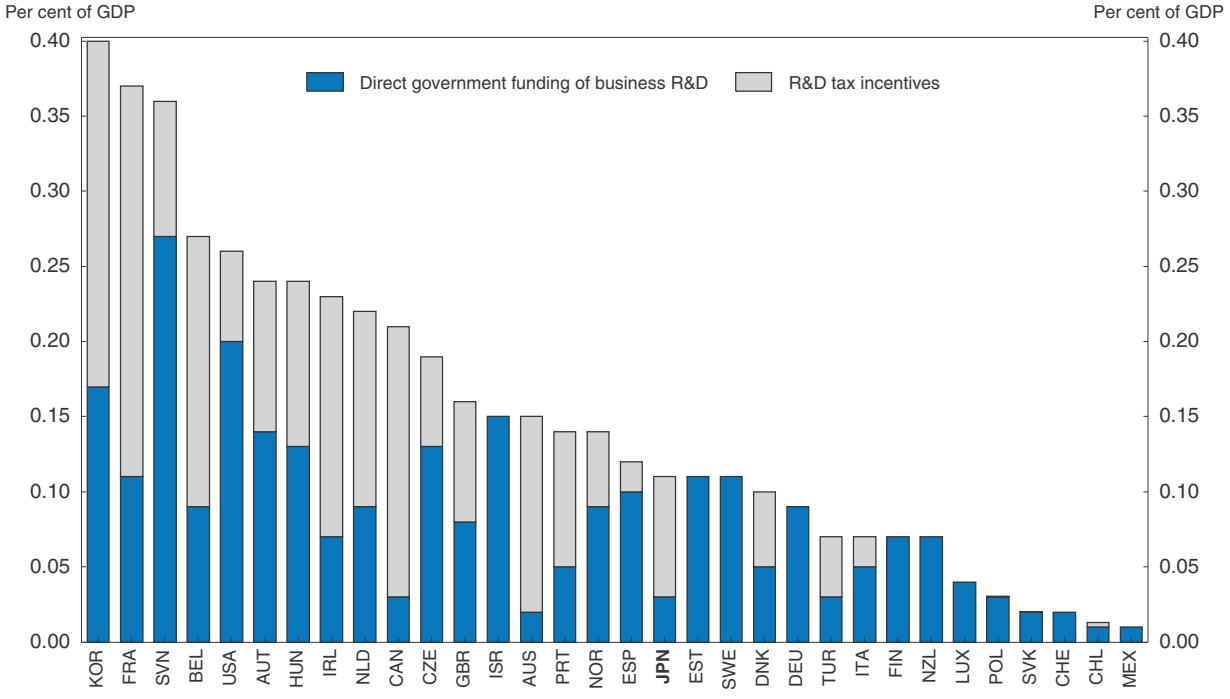
Government science and technology spending declined in FY 2013 for the first time in a decade, making it difficult to boost government R&D spending to 1% of GDP, an objective in the 4th Science and Technology Basic Plan (FY 2011-15). The current plan aims to shift from a technology-driven approach to an issue-driven approach, focusing on: i) reconstruction from the Great East Japan Earthquake; ii) green innovation; and iii) "life innovation" to improve health and nursing care. The government also wants to promote greater interaction between R&D activities in universities, government and the business sector, in part by enhancing the labour mobility of researchers between sectors. The third Science and Technology Basic Plan for FY 2006-10 proposed enhancing such mobility by expanding the use of fixed-term contracts and performance evaluation at universities and by requiring researchers to change their organisational affiliation at least once after graduation before obtaining a permanent position. However, labour mobility remains low, reflecting the reliance on long-term, open-ended contracts. The government is planning to promote labour mobility by allowing researchers to have cross-appointments in universities, GRIs and firms.

To improve co-ordination and eliminate the "silos" between ministries and sectors, the Council on Science and Technology Policy was reorganised in May 2014 as the Council on Science, Technology and Innovation (CSTI). It will collaborate with other councils, including the Industrial Competitiveness Council, which plays a key role in the Revitalisation Strategy. CSTI decisions will also be endorsed by the Cabinet, making them binding on all ministries. A budgeting committee, including officials from relevant ministries, was established under the CSTI. In addition, a new programme, Impulsing PAradigm Change through Disruptive Technologies (ImPACT), was created to promote high-risk and high-impact R&D.

Public support for business-sector R&D is justified by market failures that keep R&D spending below the socially-optimal level. Business R&D in Japan fell 12% in inflation-adjusted terms in 2009 and remained 6% below its pre-crisis level in 2011 (OECD, 2013c). Public support can be classified as tax incentives, a non-discriminatory tool that reduces the marginal cost of R&D for firms, and direct support (Figure 1.21). Tax incentives have been found to be effective: according to an OECD study, a 6% increase in the generosity of R&D tax incentives boosts the level of R&D by about 6% in the long run. However, the impact is less if R&D tax policy changes frequently, indicating the importance of a predictable policy framework (Westmore, 2013). Direct public support for business R&D, which creates risks associated with "picking winners", has fallen in recent decades. However, direct support can also lead to positive outcomes, provided it is well designed and based on a competitive selection process.

Figure 1.21. **Government support for business-sector R&D is low in Japan**

Budgetary impact as a percentage of GDP in 2012 or latest year available



Source: OECD R&D Tax Incentive Indicators; OECD National Accounts; OECD Main Science and Technology Indicators.

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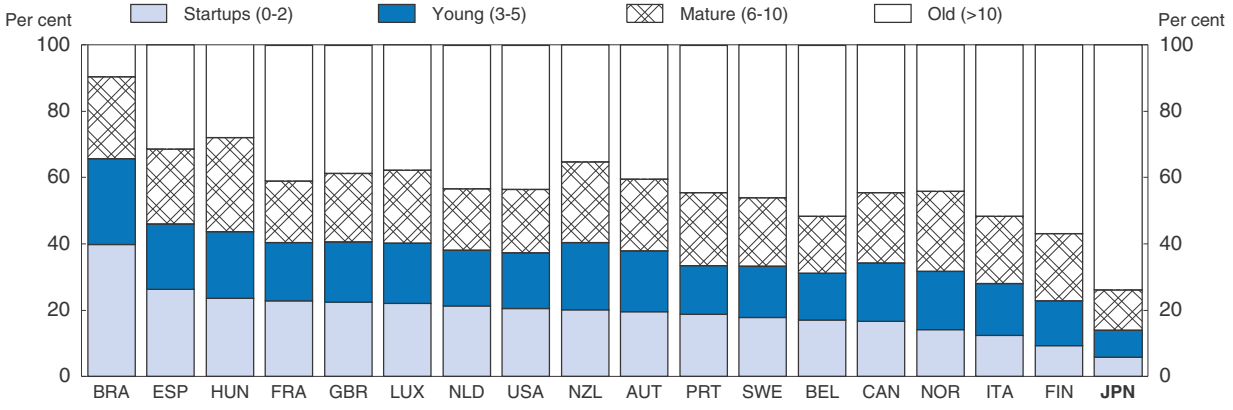
Public R&D support in Japan was relatively low at 0.1% of GDP in 2012 and is focused on tax incentives, which take the form of tax credits that allow firms to reduce their national corporate tax liability by up to 30%. However, this approach favours large companies because they pay a higher corporate tax rate (34.6%) than SMEs (23%), which includes new start-ups that often do not have any profits. The R&D support for large companies thus disadvantages new, more productive firms (Bravo-Biosca et al., 2012). Consequently, more generous R&D tax credits are associated with a higher share of stagnant firms and a lower share of growing firms (Andrews and Criscuolo, 2013). Policies should aim at encouraging R&D by smaller firms; enterprises with less than 250 workers accounted for only 4% of total business R&D, compared to the OECD average of 33% in 2011 (OECD, 2013c). To allow SMEs to benefit from the R&D incentive, the tax credit could be made refundable (i.e. not limited by the firms' tax liability). In addition, increasing SMEs' interaction with government research institutes (GRI) would help in this regard: only 1% of SMEs collaborated with GRIs over 2002-04, compared to 9% of large firms (OECD, 2008).

Promoting start-ups and venture-capital backed firms

SME start-ups, including venture businesses, play a major role in economic growth and innovation. Firms less than five years old, regardless of size, accounted for less than a fifth of total non-financial business employment but generated half of all new jobs over 2001-11 in the OECD area (OECD, 2013c). In Japan as well, firms aged less than five years old created around 2 million jobs between 2001 and 2006, in contrast to firms older than ten years, which reduced employment (Fukao and Kwon, 2011). The business start-up and closure rates in Japan averaged only 4.5% over 2004-09, compared to 10% in the United States and the United Kingdom (Cabinet Secretariat, 2013). As a result, Japan's SME sector is dominated by old firms; three-quarters are more than ten years old compared to a share of less than half in most OECD countries (Figure 1.22). The Revitalisation Strategy set a target to raise the start-up and closure rates to 10%.

Figure 1.22. **Small firms in Japan are relatively old**

Share of small firms (less than 50 employees) by age (in years) over 2001-11



Source: Criscuolo et al. (2014).

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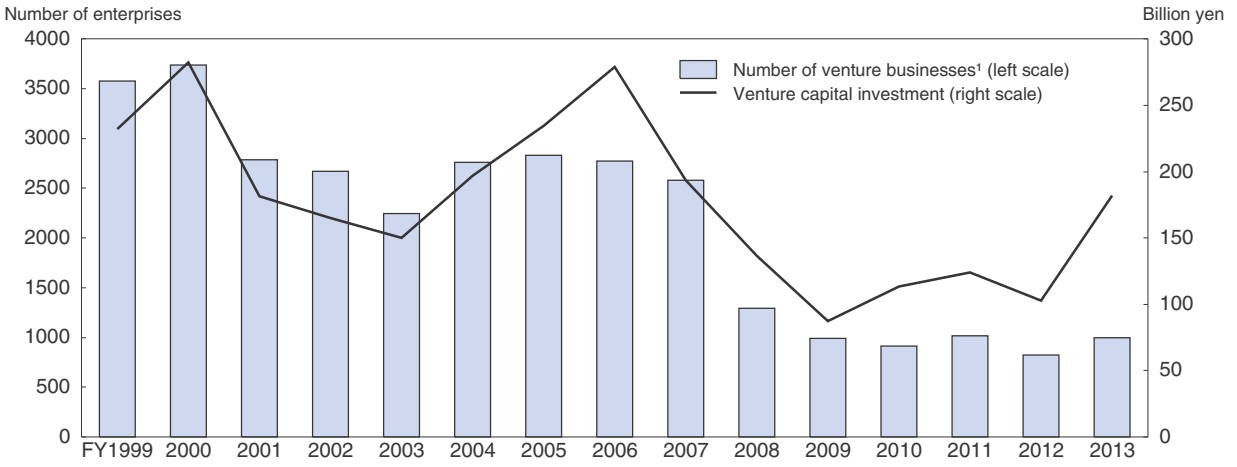
Figure 1.23. **Trend of venture capital investment in Japan**



1. Number of firms receiving venture capital investment.
Source: Venture Enterprise Centre (2014).

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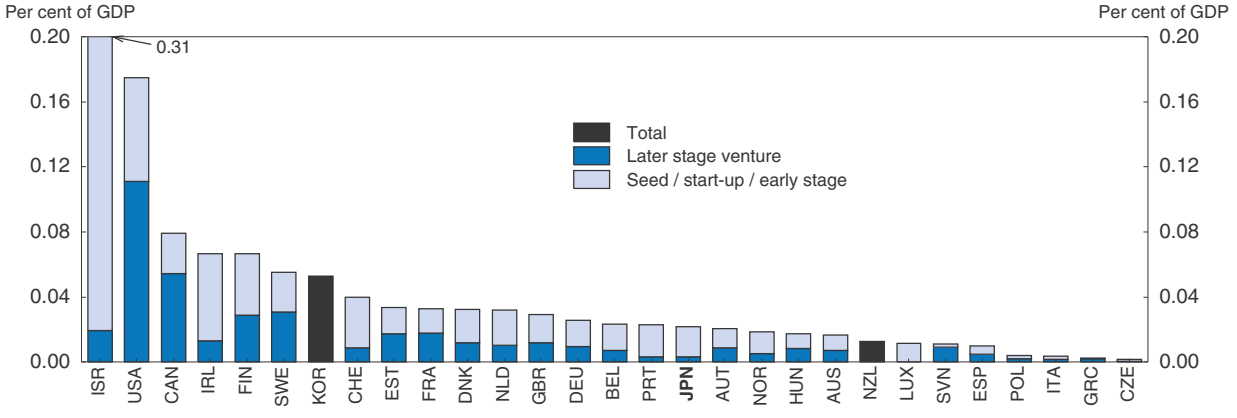
Venture capital investment is weak

Venture capital investment in Japan is weak, reflecting the legacy of the corporate sector's reliance on debt rather equity finance. According to a government survey, entrepreneurs and their family and friends are the main sources of start-up financing. In addition, 25% of start-ups receive bank lending and 17% receive government loans and subsidies, but only 2% receive venture capital investment.

Venture capital investment declined markedly sharply over 2006-09 (Figure 1.23). Although it rebounded in 2013, it remains well below its earlier peaks. Moreover, 60% is invested in overseas companies. In addition, the number of firms receiving venture capital has fallen sharply from nearly 4 000 in FY 2000 to 1 000 in FY 2013. The level of venture capital investment in Japan is slightly below the OECD median and far behind such countries as Israel and the United States (Figure 1.24).

Figure 1.24. **Venture capital investment as a share of GDP is relatively low in Japan**
2013 or latest year available



Source: OECD (2014f).

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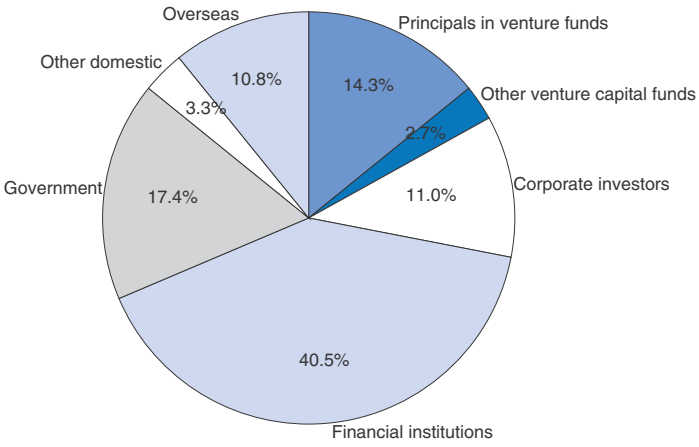
Figure 1.25. **Breakdown of investors in newly-established venture capital funds in Japan**



1. Over the period FY 2010-12.
Sources: Venture Enterprise Centre (2013).

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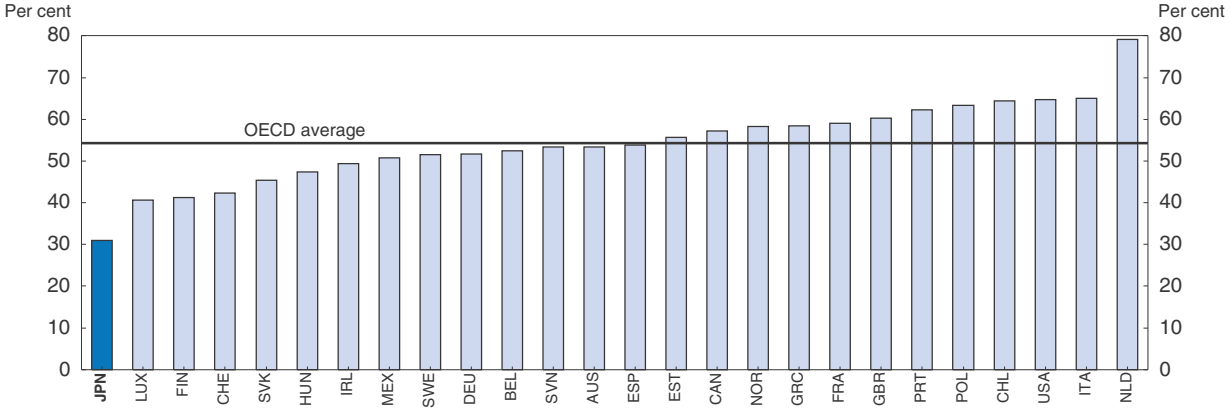
Among venture capital-backed firms at an early stage of development, financing is provided by private companies (30%), public institutions (18%), venture capital funds (18%), banks (17%) and business angels (16%). The government believes that business angels should play a more prominent role in Japan as they do in many countries. In addition to supplying financing, they also provide mentoring and networks. This is particularly important in Japan, as less than the 12% of the Japanese believe that they have the skills needed to start a new business, the lowest among OECD countries (Global Entrepreneurship Monitor, 2015).

The largest investors in new venture capital funds are financial institutions (40.5%) and the public sector (17.4%) (Figure 1.25). In contrast to the large government role, pension funds and academic institutions have not entered this market. In addition to the restraints on funding, the venture capital sector is also constrained by limited demands for funds. Japan has relatively few entrepreneurs, as less than a third of the working-age population views entrepreneurship as a good career choice, the lowest among OECD countries (Figure 1.26),

Figure 1.26. **Share of the population that views entrepreneurship as a good career choice is low in Japan**

Per cent of the population aged 18 to 64 in 2014



Source: Global Entrepreneurship Monitor (2015).

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reflecting in part a fear of failure. Employees with attractive business ideas and technologies tend to remain in large enterprises. Consequently, only 2.5% of the working-age population intends to start a business within three years, the lowest share in the OECD (Global Entrepreneurship Monitor, 2015).

New government measures to promote venture capital

The Revitalisation Strategy includes measures to promote start-ups and venture businesses. To enhance financing of ventures, a number of reforms have been introduced:

- The tax system for business angels is being made more user-friendly by streamlining application procedures. Angel investors receive an income tax deduction and losses from selling equities can be carried forward three years.
- Measures to promote crowd-funding were promulgated in May 2014, including a relaxation of entry requirements for operators of such platforms, although they must conduct checks on start-ups and provide information.
- Firms that invest in venture capital funds and which manage or provide technical support to venture capital-backed businesses will be designated as "Specified Investment Businesses", making them eligible for financial support from public financial institutions.
- Up to 80% of investment by firms in venture capital funds can be counted as loss reserves and deductible expenses.

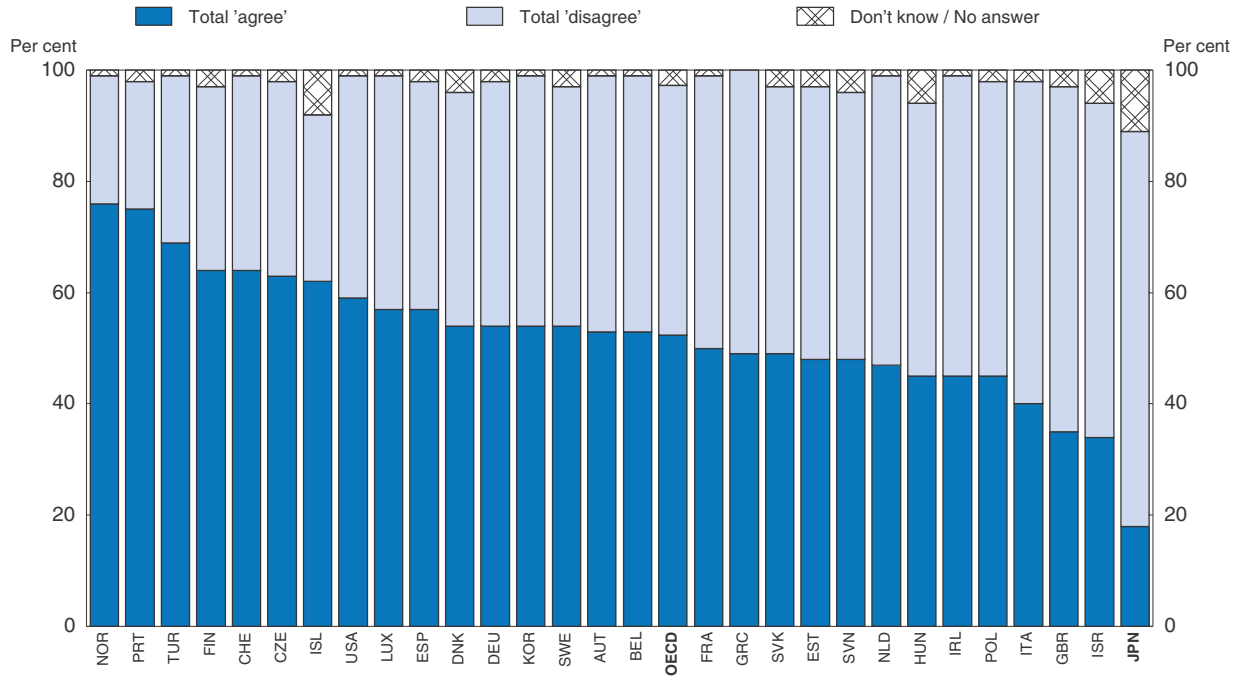
The government is also taking steps to improve the environment for venture capital-backed firms. *First*, it will nurture human resources for venture business by developing entrepreneurial education. *Second*, the personal guarantee system, which requires entrepreneurs to put their personal assets at risk in the case of failure, was revised. In some cases, personal guarantees will not be required, for instance if the business and personal assets of the business owner are clearly separated. *Third*, the government will promote investment by existing firms in venture business by supporting spin-offs and carve-outs. Finally, the 2014 version of the Revitalisation Strategy contains several steps to promote venture capital investment: i) the Venture Business Creation Council will be launched to promote connections between start-ups and larger firms; ii) government procurement from start-ups will be expanded; and iii) unemployment insurance will be provided to entrepreneurs who are not currently employed.

Policy directions to promote the venture business sector and start-ups

Promoting start-ups, including venture-backed business, is a priority in light of their significant contribution to economic growth. The first priority is to address framework conditions by removing regulatory barriers, particularly in promising areas such as health and energy, and relaxing employment protection, as noted above. In addition, the government needs to encourage entrepreneurship, in part through education, to raise the firm creation rate. Indeed, the development of the venture capital industry cannot proceed more rapidly than the creation of attractive projects. Only 18% of the Japanese, the lowest in the OECD, agree that "school had helped to develop a sense of initiative and a sort of entrepreneurial attitude", compared to an OECD average of 52% (OECD, 2013a). Moreover, education leaves students less prepared to become entrepreneurs. Less than 20% of Japanese think that their school education provided them the skills and know-how to run a business (Figure 1.27).

Figure 1.27. **School education does not provide the skills for entrepreneurship in Japan**

Per cent that agree that school education provided enabling skills and know-how to run a business (2012)



Source: OECD (2013a).

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Recognising that entrepreneurship is a crucial skill for the 21st century, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) has launched programmes such as "Promotion of Global Entrepreneurs". However, these programmes are aimed at university and graduate students. Country experiences in this area suggest the following priorities. *First*, entrepreneurial skills need to be fostered in primary and secondary schools. Ireland, for example, has programmes for children from age ten. *Second*, entrepreneurship education should be broad in nature and go beyond career education. A recent EU study on entrepreneurship education focuses on creativity, entrepreneurial know-how, responsibility, risk-taking, problem solving, and team-working (European Commission, 2013). *Third*, entrepreneurial education requires inter-ministerial co-operation, as well as the support of public institutions and the private sector. For Japan, the OECD Tohoku School project, which focuses on helping students learn through practical hands-on experience, provides a good basis for developing entrepreneurial education.

Entrepreneurship would also be fostered by improving the environment for angel investors and large firms that finance and nurture start-ups. In addition, the stigma attached to failure should be reduced so that potential entrepreneurs are not dissuaded from launching start-ups by the lack of second chances. Indeed, the share of Japanese who agree that entrepreneurs who fail should have a second chance was the second lowest in the OECD in 2012 (OECD, 2013a). The government should promote an environment that allows entrepreneurs who fail to have additional opportunities to create ventures. In this regard, reducing the role of personal guarantees is welcome. Moreover, there should be channels through which the experience and knowledge of failed entrepreneurs can be used to benefit others.

The sources of funding for venture businesses should be diversified. In addition to a greater role for business angels, venture capital funds should be expanded to attract new investors. One important potential source is pension funds, which do not currently invest in venture capital. The Government Pension Investment Fund has decided to increase the proportion of equities in its portfolio from 25% to 50%, equally split between domestic and foreign shares. While pension funds have to be cautious in investing in risky assets, some investment in venture capital "fund of funds" would help boost their returns. Greater links with academia could also encourage funding from universities as well. Another approach is to promote more venture capital investment from overseas. While around 10% of investment in newly established venture capital funds is from abroad, a more open environment for FDI (see above), could attract more foreign investment, given Japan's technological advantages in many areas.

The government plans to promote equity crowd-funding to raise money through relatively small donations from a large number of people, helping novice entrepreneurs obtain financing without red tape, thereby enabling them to save time and money. It thus creates a new channel for ordinary citizens to fund companies in exchange for shares in the business. By 2011, $1.5 billion globally is estimated to have been raised, even though the legal and institutional framework is still in its initial stages (Jones and Kim, 2013). There are an estimated 700 platforms focusing on specific areas, primarily at an early stage of financing. However, crowd-funding's role as a source of start-up financing remains relatively small.

Japan should proceed carefully with its plan to make crowd-funding a complementary source of funding for entrepreneurs, as there is little analysis thus far of this new area of financial development. Most business angels spend considerable time and money on due diligence before investing, in contrast to equity crowd-funding, in which most investors are members of the general public. The lack of due diligence may increase the risk of fraud. In addition, entrepreneurs with poor proposals who are rejected by experienced investors after detailed due diligence might turn to equity crowd-funding, resulting in needless losses (Isenberg, 2012). From a company perspective, relying on equity crowd-funding would mean losing the guidance and networks provided by seasoned angel investors. In addition, an idea launched via the Internet is easily copied. For such reasons, equity-based crowd-funding is not currently allowed in most OECD countries. In the United States, businesses are allowed to sell up to $2 million of unregistered securities through crowd-funding. In addition, individual investment is restricted to $10 000 or 10% of the investor's annual income – whichever is less. The need for investor protection depends on the amount of money raised. Crowd-funding that consists primarily of small amounts, thereby distributing risks widely, requires less regulation to protect investors, and offers a potentially important funding source for start-ups.

Making the SME sector more dynamic

SMEs accounted for 99.7% of registered firms, 70% of employment and more than 50% of value added in 2012 (SMEA, 2014a). The definition of SMEs varies by sector; in manufacturing, it includes firms with capital of 300 million yen or less or with fewer than 300 employees. Japan has a large number of SMEs per capita compared to other major economies (Shimizu, 2013). They form the backbone of the service sector and are a crucial part of the manufacturing and export supply chain. However, SMEs have long suffered from low productivity, weak profitability and high leverage (IMF, 2012a). The BoJ's diffusion index

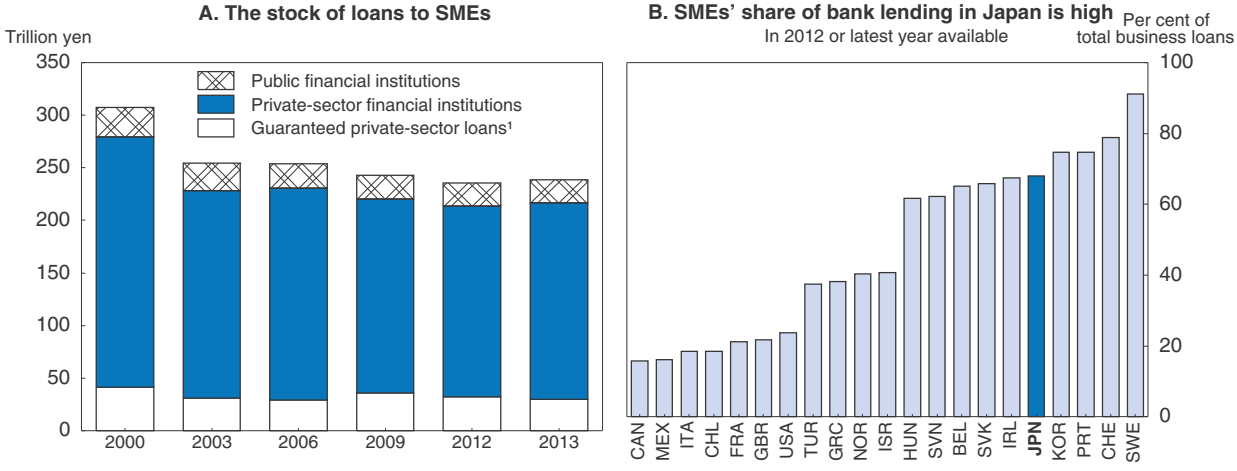
on business conditions for small firms has been in negative territory during most of the past two decades, running 20 to 30 points lower than for large firms. SMEs' debt-to-equity ratio has averaged more than 300% over 2000-10, compared to 168% for large companies, making SMEs more vulnerable to shocks. Meanwhile, the net profit margin (adjusted by the capital ratio) is only 1.5% for SMEs, compared to 6.2% for large firms (Lam and Shin, 2012). Less than a third of firms with capital of less than 100 million yen ($851 000) reported a profit in FY 2012. The number of SMEs has fallen from 4.8 million in 1999 to 3.8 million in 2012, reflecting in part the difficulty that ageing owners face in finding successors.

As SMEs rely heavily on domestic demand, they are especially vulnerable to economic and social changes (SMEA, 2014b). Indeed, only around 6 000 SMEs (0.2% of the total) are exporters and exports account for only 7% of sales in manufacturing SMEs compared to 28% in larger firms (EIU, 2010). The problems in the SME sector are linked to the weakness of services (Figure 1.9), given that more than three-quarters of SMEs are in that sector. The 1963 Small and Medium Enterprise Basic Law, which had classified SMEs as a disadvantaged group, was revised in 1999 to define SMEs as a source of growth. Policies now have a dual focus: i) revitalisation of regional areas by maintaining employment and starting new businesses; and ii) realising Japan's growth potential by promoting new businesses and overseas business expansion (SMEA, 2014a). However, longstanding policies to prop up non-viable SMEs appear to have reached their limit. Accelerating the revitalisation of the SME sector is an objective of the Revitalisation Strategy.

Financing SMEs

SMEs' access to credit is constrained by their lack of collateral, short credit history and limited expertise in producing financial statements. Lending to SMEs is relatively risky, as information about small firms is costly to obtain and less reliable than for large companies and SMEs have a relatively high failure rate. These factors hinder lending to small firms. The longer a SMEs' history, the lower its borrowing cost (Uesugi, 2006). In Japan, lending to SMEs fell by 27% between 1997 and 2013 (Figure 1.28), reducing its share from 63% of GDP to 50%, in the context of generally sluggish output growth and deflation. Reduced lending

Figure 1.28. **Loans to small and medium-sized enterprises**



1. Guaranteed by the 52 credit guarantee corporations associated with local governments.
Source: Small and Medium Enterprise Association; OECD (2014e).

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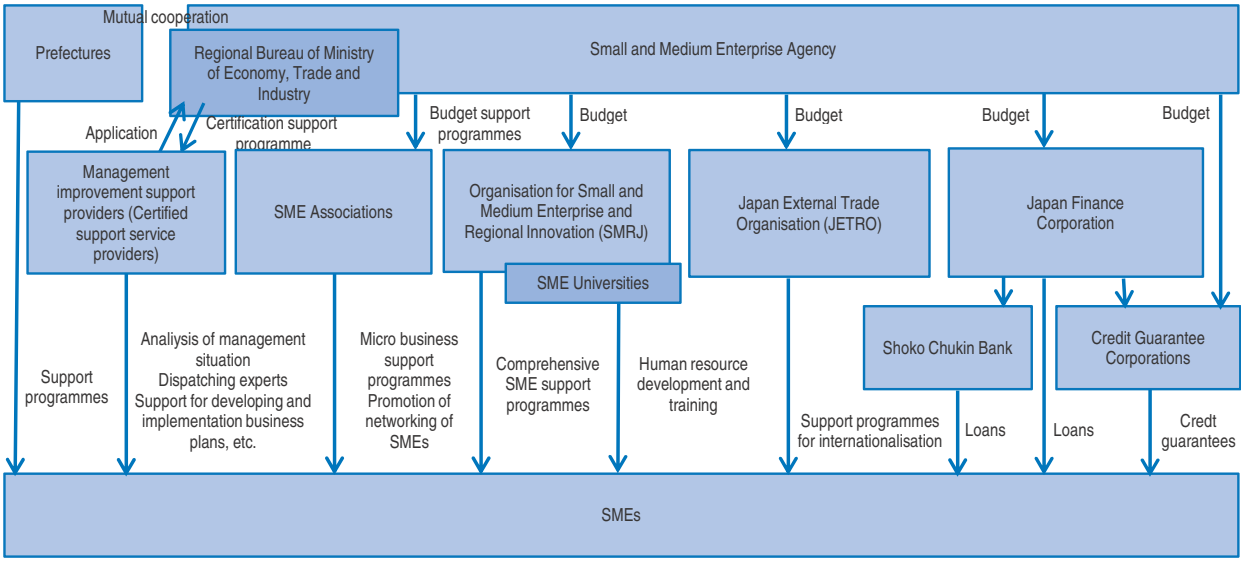
lowered the debt-to-equity ratio of small firms with capital of between 10 and 100 million yen from 5.9 in 1997 to 2.2 in 2013. Nevertheless, the share of SMEs in commercial bank loans to firms was the fifth highest in the OECD at 68% in 2012 (Panel B). The role of direct financing for small firms (with capital between 10 and 100 million yen) through issuing bonds and equities is negligible: they accounted for 2.5% and 0.3%, respectively, of loans to SMEs.

The government provides about 10% of financing for SMEs, and its share rises to 20% once guarantees are included. Public support is delivered through a number of channels (Figure 1.29):

- The government provides loans at low interest rates directly through a public financial institution, the Japan Finance Corporation (JFC), which ensures safety net financing and supports business start-ups and overseas expansion (JFC, 2014). The JFC provides low, fixed-interest and long-term loans (half are for more than five years). JFC lending peaked at 12.0 trillion yen (2.4% of GDP) in FY 2010 following the crisis, but fell to 6.5 trillion yen in FY 2013, according to the JFC's annual report.
- The JFC also provides indirect financing through another public institution, the Shoko Chukin Bank (SCB), which accounts for 3.7% of lending to SMEs on top of 5.1% by the JFC. The remaining 91% is divided between city banks (31.0%), regional banks (40.5%), Shinkin banks (16.0%) and credit unions (3.7%).
- Another important channel for SME support is public credit guarantees of private-sector loans to SMEs. Japan has 51 credit guarantee corporations (CGCs) that operate with the assistance of local governments. The CGCs, in turn, are insured by the JFC, which reimburses the CGCs in the case of default. In 2013, the default rate was 2.2% on guarantees. Credit guarantees have fallen since the 2008 global crisis but in FY 2013 the number (3.1 million) and amount (30 trillion yen, 12.5% of SME lending) remained high (Credit Guarantee Corporation, 2014). In 2013, 37.9% of SMEs used public credit guarantees. SMEs pay credit guarantee fees, ranging from 0.39% to 2.2% depending on

Figure 1.29. **The framework of support for small and medium-sized enterprises**



Source: Small and Medium Enterprise Agency (2014a).

their creditworthiness, as evaluated by the Credit Risk Database (CRD). However, the guarantee fees received by the CGCs in FY 2011 were only about one-fifth of the insurance reimbursements from the JFC, which thus depends on subsidies from the central government (Yamori, 2014).

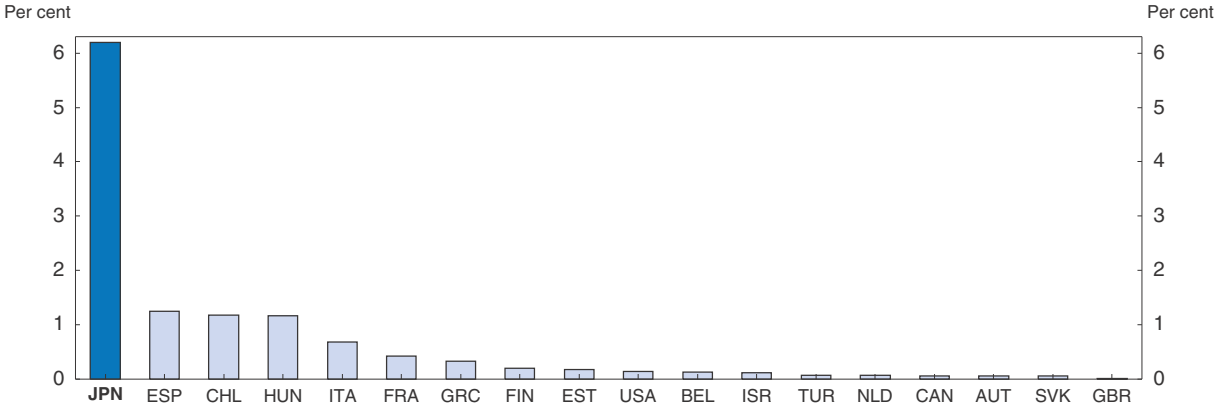
- The CRD also collects and shares SME business data, including financial, non-financial, and default information, which facilitates private lending. As of May 2014, 179 financial institutions belonged to the CRD (Credit Guarantee Corporation, 2014).
- The government also uses regulatory measures to support SME financing. For example, a 2008 law required financial institutions to review the terms of their loans to SMEs in response to requests by the borrowers, in particular by granting grace periods for payments of interest and principal (Yamori, 2014). The amended loans were not classified as nonperforming as long as the SMEs make credible restructuring plans (Endo, 2013 and Ono and Uesugi, 2014). While there was no legal penalty on banks that do not respond to SMEs' requests, banks must report their response to the authorities and publicly disclose it (Yamori et al., 2013). Of the more than 4.3 million loans for which SMEs requested modification, 97% of them were approved by banks. The cumulative amount of modified loans reached 120 trillion yen (Ono and Uesugi, 2014). Although the law ended in April 2013, the Financial Services Agency continued to encourage financial institutions, through its inspections and supervisory processes, to modify the terms of their loans to SMEs (Endo, 2013). Capital adequacy regulations also have been modified since the 2008 crisis (Yamori et al., 2013). For example, the government does not require financial institutions that do not have overseas branches to include unrealised profits and losses for "other available-for-sale securities" in capital. This is to mitigate the adverse effect on SME funding caused by large fluctuations in unrealised profits and losses.
- The BoJ also supports SME financing. The "Measures to Support Strengthening the Foundations for Economic Growth" provides long-term funds at a low interest rate to private financial institutions for lending to SMEs with between 1 million and 10 million yen of capital.

Problems associated with government intervention in SME financing

High public support for SMEs has negative side effects. *First*, it hinders the development of market-based financing. SMEs prefer government loans, as they carry low interest rates, while government credit guarantees reduce the burden of collateral and personal guarantees. Financial institutions are content to enjoy stable profits at low risk thanks to credit guarantees, thus reducing incentives to develop credit evaluation and risk management skills for SME lending and to closely monitor borrowers. The amount of guarantees in Japan is the highest in the OECD at 6.2% of GDP in 2013 (Figure 1.30). In 2007, the government limited credit guarantees to 80% of the loan under the "responsibility-sharing system", making financial institutions liable for 20%. However, following the 2008 crisis, the government launched an emergency scheme with 100% guarantees. Such guarantees apply to SMEs: i) less than five years old; ii) in structurally-depressed industries; and iii) located in areas affected by the 2011 earthquake. The guarantee coverage ratio should be reduced to about 60% – in line with international averages (IMF, 2012a).

Figure 1.30. **Credit guarantees for SMEs in Japan are exceptionally high**

Per cent of stock of guarantees in GDP in 2013



Source: OECD (2015).

StatLink http://dx.doi.org/10.1787/888933202217

The underdevelopment of market-based SME financing is reflected in the small share of "pure credit" loans, i.e. loans that do not depend on collateral and personal or public credit guarantees. In 2008, only 11.5% of SMEs had received "pure credit" loans, although this is more than in 2005 (Table 1.5).

Second, generous government support delays restructuring by keeping non-viable enterprises (so-called "zombie" firms) afloat (Caballero et al., 2008 and Kwon et al., 2009). Such support distorts resource allocation and limits access to finance by viable companies, thereby reducing Japan's potential growth. Indeed, firm exit and entry rates in Japan are only about one-third of those in other advanced countries (Lam and Shin, 2012). Japan introduced a Civil Rehabilitation Act in 2000 to promote restructuring, but by 2010, only 7 700 SMEs (0.2% of all SMEs) had applied for it. The survival of non-viable firms also reflects support from financial institutions that wish to avoid recognising losses, as it would reduce profits and capital. Such an approach is facilitated by forbearance by financial supervisors in enforcing prudential regulations. Following the 2008 crisis, as noted above, the government did not require financial institutions to classify modified loans as non-performing, as long as the SME had a plan to normalise its situation in five to ten years, a relatively easy criterion to meet. In addition to reducing pressure on firms and lenders to restructure, such policies weaken the credibility of financial statements and the soundness of financial institutions. The Bank of Japan estimates that the change reduced the ratio of non-performing loans to total loans by 0.6 percentage points for large banks

Table 1.5. **The share of SMEs relying on collateral and guarantees to receive loans**

In per cent

	2005	2006	2007	2008
Collateral	51.5	49.7	44.3	40.3
Personal guarantee by firms' representative	50.6	52.0	63.5	59.4
Personal guarantee by someone outside of firm	18.1	17.5	12.1	10.5
Public credit guarantees	37.4	38.7	41.5	40.1
None of the above (pure credit loans)	5.2	4.3	7.8	11.5

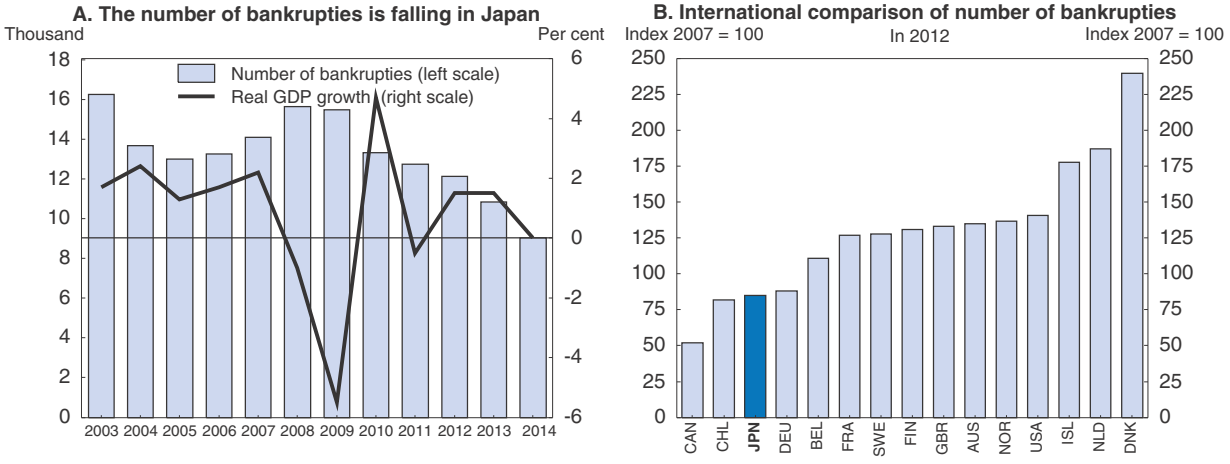
Source: Uesugi (2010).

and 1.6 points for regional banks (Ono and Uesugi, 2014). In September 2014, the non-performing loan ratio was 1.1% for major banks and 2.6% for regional banks.

Banks' preference to avoid recognising losses and the practice of regulatory forbearance encourage the "evergreening" of non-viable firms, resulting in a vicious cycle: the lack of restructuring by firms prevents efficient resource allocation, which in turn increases the risk of bad loans. One sign of evergreening is that the interest rate charged on loans to SMEs in Japan with low creditworthiness has been below the breakeven point of banks and above the rate for strong SMEs (Lam and Shin, 2012). In other words, the higher credit risk of weak SMEs is not reflected in interest rates due to government intervention. Another problem is the long duration of credit guarantees. In a survey of Aichi prefecture, two-thirds of firms had received guarantees for more than ten years (Yamori, 2014). In sum, government policies hinder restructuring. Even though the Japanese economy contracted sharply in 2008-09 and 2011, the number of bankruptcies has fallen since the crisis and by 2014 was a quarter below its 2007 level (Figure 1.31). In contrast, bankruptcies increased by an average of 66% in the OECD countries over 2007-12, with only four countries reporting declines (Panel B).

Third, there is little evidence that government financial support improves SME performance. A 2007-12 study found that public support increased loan availability for SMEs but did not result in any significant increase in profitability compared to firms that did not receive benefits (Ono and Uesugi, 2014). Moreover, firms receiving public support recorded larger declines in employment. Another study showed that firms with public credit guarantees were more likely to be in deficit and took longer to repay loans than SMEs without such guarantees (Lam and Shin, 2012). Similar results have been found in other countries (Jones and Kim, 2014). Finally, high public support discourages small firms from growing and losing the benefits associated with SME status. The so-called "Peter Pan syndrome" is reflected in the fact that only 29% of Japan's largest 300 companies (by market capitalisation) have been created since the 1960s, compared to 79% in the United States (Figure 1.32).

Figure 1.31. **The number of bankruptcies in Japan has fallen since 2008 despite two crises**



Source: OECD (2014f); *OECD Economic Outlook Database*.

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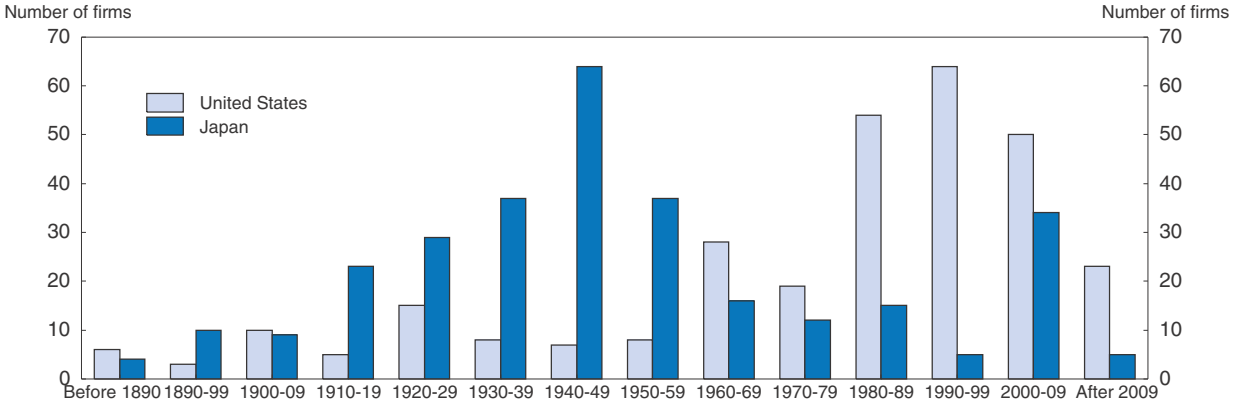
Figure 1.32. **Large firms in Japan are relatively old**

Year of establishment of the 300 largest firms by market capitalisation[1]



1. The increase in the number of Japanese firms established between 2000 and 2009 reflects the creation of a large number of holding companies during that decade.

Source: Thompson Reuters; OECD calculations.

StatLink http://dx.doi.org/10.1787/888933202223

Directions for reform to improve government programmes for SMEs

Arguably, government intervention should be limited to covering the SME financing gap – the difference between the amount of SME financing that would occur in the absence of market failures and the actual amount of financing – although this is difficult to estimate in practice. In Japan, however, the role of SME policies has expanded to promoting social cohesion and overcoming economic crises. Given its broad focus, SME support in Japan is generous compared with other OECD economies. Reducing it would help Japan address its fiscal problem while promoting restructuring.

Achieving the Revitalisation Strategy's goal of raising the business start-up and exit rates to 10% requires scaling back SME support and making it more market-friendly. In particular, the number of SME loans that are guaranteed should be reduced gradually and the coverage of credit guarantees should be set at 80% or less to force banks to actively monitor credit risks. Moreover, the cost of credit guarantees should be high enough to encourage strong SMEs to seek loans from private institutions rather than relying on public support. Even SMEs with high creditworthiness make large use of public financial institutions and credit guarantees (Minoya, 2012). When existing credit guarantees reach the end of their contract (usually seven years), they should not be renewed. This would allow greater focus on young SMEs, which face the most difficulty in obtaining loans.

Supervisors should not pressure financial institutions to modify loan contracts in response to requests from SMEs. Instead, the policy focus should shift from providing a safety net to cope with recent crises to promoting the restructuring of non-viable firms through efficient markets. To encourage such restructuring, financial institutions should be required to conduct regular credit reviews of SMEs, publicly announce the results, and prepare restructuring plans for non-viable firms, an approach adopted in Korea.

It is also essential to develop appropriate infrastructure for market-based SME financing in order to limit the negative effects of government intervention. Given that the cost of collecting and analysing information about SMEs exceeds the benefits for an individual financial institution, information should be collected and shared among institutions. While the CRD was intended to play such a role, timely credit information is

still not available due to the reluctance of financial institutions to share information through credit registries. This reflects legal constraints and the lack of an identification system (IMF, 2012b). The government needs to reduce such obstacles to promote data sharing through the CRD.

In addition to information sharing, the government is encouraging direct relations between SMEs and financial institutions, so-called "relationship banking", to reduce the information asymmetry. In Japan, such relationships are already well developed: the average length of a SME's transactions with a bank is 32 years, compared to 22 in Germany, 16 in Italy, 14 in France and 11 in the United States (Uesugi, 2010). Long-term relationships in Japan partly reflect the age structure of firms (Figure 1.22). Such relationships, along with increased public support, helped to alleviate financing difficulties in the wake of the 2008 crisis. Indeed, only 461 firms (13%) out of 3 555 surveyed responded that financial institution(s) suddenly changed its (their) lending attitude. Of those firms, 43% reported that it was a large bank that changed their lending attitude, while only 9% cited Shinkin banks, major credit suppliers to SMEs (Uesugi, 2010). Nevertheless, relationship banking should be improved to ensure that it can endure without the high levels of government support in Japan. It is essential to promote the financial health of the financial institutions that play a major role in SME financing, notably regional and Shinkin banks, which are financially weaker than the large city banks and have higher levels of non-performing loans.

Market-based financing for SMEs should be based on diverse methods. At present, loans backed by collateral, typically fixed assets, are widely used in Japan, although this is problematic as SMEs in general do not have sufficient fixed assets (IMF, 2012b). Moreover, company failure in the case of loans backed by personal guarantees creates a negative stigma that discourages entrepreneurship. The authorities have encouraged asset-based financing based on inventory and current assets since the mid-2000s, but the use of such methods remains negligible. According to financial institutions and SMEs, the difficulty in assessing fair value has limited the use of these methods, especially in smaller financial institutions, such as regional banks and Shinkin Banks (IMF, 2012b). Therefore, it is necessary to train experts who can assess the value of non-fixed assets precisely and manage asset-based financing in both financial institutions and SMEs, while ensuring clear operating procedures to reduce regulatory risk.

Box 1.3. **Main policy recommendations to enhance dynamism and innovation in Japan's business sector**

Strengthen competition and improve the allocation of resources

- Upgrade corporate governance to increase pressure on management to act in shareholders' interests.
- Reduce product market regulation and promote labour market flexibility and mobility to promote the reallocation of resources in favour of innovative firms.
- Increase Japan's integration in the world economy by removing obstacles to inflows of foreign direct investment.
- Participate in high-level trade agreements, notably the Trans-Pacific Partnership and the Japan-EU Economic Partnership Agreement.

Box 1.3. **Main policy recommendations to enhance dynamism and innovation in Japan's business sector** *(cont.)*

- Move to a more market-based agricultural system by measures such as reducing commodity-specific payments to farmers, accelerating the consolidation of farmland and reforming the role of agriculture co-operatives.

Upgrade the innovation system

- Strengthen the linkages between academia, the business sector and government research institutes.
- Integrate Japan in global R&D networks and expand international collaboration in patenting.

Promote start-ups and venture capital-backed enterprises

- Improve the entrepreneurial climate by ensuring second chances and develop entrepreneurial education.
- Revitalise venture capital investment to promote firm creation and innovation.

Make the small and medium-sized enterprise sector more dynamic

- Reduce government support for SMEs to promote the restructuring of viable firms and the exit of non-viable ones.
- Develop market-based financing of SMEs.

Bibliography

Andrews, D. and A. de Serres (2012), "Intangible Assets, Resource Allocation and Growth: A Framework for Analysis", *OECD Economics Department Working Papers*, No. 989, OECD Publishing, Paris.

Andrews, D. and C. Criscuolo (2013), "Knowledge-based Capital, Innovation and Resource Allocation", *OECD Economics Department Working Papers*, No. 1046, OECD Publishing, Paris.

Andrews, D., C. Criscuolo and C. Menon (2014), "Do Resources Flow to Innovative Firms? Cross-country Evidence from Firm-level Data", *OECD Economics Department Working Papers,* No. 1127, OECD Publishing, Paris.

Aoyagi, C. and G. Ganelli (2014), "Unstash the Cash! Corporate Governance Reform in Japan", *IMF Working Papers*, No. 14/138, Washington, DC.

Arnold, J., B. Brys, C. Heady, A. Johansson, C. Schwellnus and L. Vartia (2011), "Tax Policy for Economic Recovery and Growth", *Economic Journal*, Vol. 121.

Bravo-Biosca, A., C. Criscuolo and C. Menon (2012), "What Drives the Dynamics of Business Growth?", *OECD Science, Technology and Industrial Policy Papers*, No. 1, OECD Publishing, Paris.

Bouis, R., R. Duval and F. Murtin (2011), "The Policy and Institutional Drivers of Economic Growth Across OECD and Non-OECD Economies: New Evidence from Growth Regressions", *OECD Economics Department Working Papers*, No. 843, OECD Publishing, Paris.

Caballero, R., T. Hoshi and A. Kashyap (2008), "Zombie Lending and Depressed Restructuring in Japan", *American Economic Review*, Vol. 98, No. 5.

Cabinet Office (2009), *Annual Report on the Japanese Economy and Public Finances, 2009*, Government of Japan, Tokyo.

Çelik, S. and M. Isaksson (2013), "Institutional Investors and Ownership Engagement", *OECD Journal: Financial Market Trends,* Volume 2013/2.

Coleman, W. (2005), "Terms-of-Trade, Structural Transformation and Japan's Growth Slowdown", *https://faculty.fuqua.duke.edu/~coleman/web/ColemanJapan.pdf*.

Corrado, C., J. Haskel, C. Jona-Lasinio, and M. Iommi (2012), "Intangible Capital and Growth in Advanced Economies: Measurement Methods and Comparative Results", *www.intan-invest.net*.

Council of Experts Concerning the Corporate Governance Code (2014), *Japan's Corporate Governance Code*, *www.fsa.go.jp/en/refer/councils/corporategovernance/20141226-1/01.pdf*.

Credit Guarantee Corporation (2014), *Credit Guarantee System in Japan*.

Criscuolo, C., P. Gal and C. Menon (2014), "The Dynamics of Employment Growth: New Evidence from 18 Countries", *OECD Science, Technology and Industry Policy Papers*, No. 14, OECD Publishing, Paris.

Economist Intelligence Unit (EIU) (2010), "SMEs in Japan: A New Growth Driver?", *The Economist*.

Endo, T. (2013), "Post-crisis Regulation of Financial Institutions in Japan", ADBI-JFSA Joint Conference, Tokyo.

European Business Council in Japan (EBC) (2014), "The Japanese Market: Why Is It Difficult? What Suppresses FDI?", Tokyo.

European Commission (2013), "Entrepreneurship in the EU and Beyond", *Flash Eurobarometer,* Report 354*, http://ec.europa.eu/ public_opinion/flash/fl_354_en.pdf*.

Expert Group of the Cabinet Office (2014), *Report of the Expert Group Meeting on Foreign Direct Investment in Japan*, Government of Japan.

Financial Services Agency (2014), *Principles for Responsible Institutional Investors: "Japan's Stewardship Code"*, *www.fsa.go.jp/en/refer/councils/stewardship/20140407.html*.

Franzoni, C., G. Scellato, and P. Stephan (2012), "Foreign Born Scientists: Mobility Patterns for Sixteen Countries", *NBER Working Papers,* No. 18067.

Fujita, T. (2013), "Corporate Governance and the Rule of Soft Law", *www.gcoe.j.u-tokyo.ac.jp/pdf/ GCOESOFTLAW-2012-3.pdf*.

Fukao, K. and H. Kwon (2011), "The Key Drivers of Future Growth in Japan", *www.accj.or.jp/en/news-a-media/press-releases/doc_view/86-the-key-drivers-of-future-growth-in-japan*.

Fukao, K. (2012), "Deindustrialisation in Japan and its Impact on Growth", Presentation for the Workshop "Is Deindustrialisation Inevitable? The Future of Manufacturing in Japan, Korea, Germany and France", Organised by the Fondation France-Japon de l'EHESS, Paris, 20-21 March.

Fukao, K., K. Ikeuchi, Y. Kim, H. Kwon, T. Makino and M. Takizawa (2014), "The Structural Causes of Japan's Lost Decades", *www.worldklems.net/conferences/worldklems2014/worldklems2014_Fukao.pdf*.

Global Competition Review (2013), *Rating Enforcement Review*, London.

Global Entrepreneurship Monitor (2015), *Global Entrepreneurship Monitor 2014 Global Report*.

IMF (2012a), *Japan: Financial Sector Assessment Program – Technical Note on Credit Intermediation*, *IMF Country Report* No. 12/262, September, Washington, DC.

IMF (2012b), *Japan: Selected Issues*, *IMF Country Report* No. 12/209, August, Washington, DC.

Investor Impact (2014), "Japan's Stewardship Code: Implications for Investor Relations", *http:// investorimpact.com/wp/wp-content/uploads/2014/07/IR-Insight-July_E.pdf*.

Isaksson, M. and S. Çelik (2013), "Who Cares? Corporate Governance in Today's Equity Markets", *OECD Corporate Governance Working Papers*, No. 8, OECD Publishing, Paris.

Isenberg, D. (2012), "The Road to Crowdfunding Hell", *Harvard Business Review*, April.

Japanese Finance Corporation (2014), *Annual Report*, Tokyo (in Japanese).

Jaumotte, F. and N. Pain (2005), "From Ideas to Development: The Determinants of R&D and Patenting", *OECD Economics Department Working Papers,* No. 457, OECD Publishing, Paris.

Jones, R. (2011), "Education Reform in Japan", *OECD Economics Department Working Papers*, No. 888, OECD Publishing, Paris.

Jones, R. and M. Kim (2014), "Promoting the Financing of SMEs and Start-ups in Korea", *OECD Economic Department Working Papers*, No. 1162, OECD Publishing, Paris.

Jones, R. and S. Kimura (2013), "Reforming Agriculture and Promoting Japan's Integration in the World Economy", *OECD Economics Department Working Papers*, No. 1053, OECD Publishing, Paris.

Kang, J. (2014), "Balance Sheet Repair and Corporate Investment in Japan", *IMF Working Papers*, No. 14/141, Washington, DC.

Kinoshita, N. (2013), "Legal Background to the Low Profitability of Japanese Enterprises", *Center on Japanese Economy and Business Working Paper Series*, No. 316, Columbia University.

Koske, I., I. Wanner, R. Bitetti and O. Barbiero (2015), "The 2013 Update of the OECD Product Market Regulation Indicators: Policy Insights for OECD and non-OECD Countries", *OECD Economics Department Working Papers* (forthcoming).

Kuroda, H. (2013), "Overcoming Deflation: The Bank of Japan's Challenge", *www.boj.or.jp/en/announcements/press/koen_2013/ko131010a.htm/*.

Kwon, H., F. Narita and M. Narita (2009), "Resource Reallocation and Zombie Lending in Japan in the '90s", *RIETI Discussion Paper Series*, No. 09052, Tokyo.

Lam, W. and J. Shin (2012), "What Role Can Financial Policies Play in Revitalizing SMEs in Japan?", *IMF Working Papers,* WP/12/291, Washington, DC.

Liberal Democratic Party of Japan (2014), "Japan Revival Vision", Japan Economic Revival Headquarters.

Martin, J. and S. Scarpetta (2012), "Employment Protection, Labour Reallocation and Productivity", *De Economist*.

Matsuo, Y. and J. Yamazaki (2014), "Japan's Special Zone Scheme: Third Time Lucky?", *Nikkei Asian Review*, 20 May, *http://asia.nikkei.com/print/article/31596*.

Matsuura, T., H. Sato and R. Wakasugi (2011) "Temporary Workers, Permanent Workers, and International Trade: Evidence from Japanese Firm-Level Data", *RIETI Discussion Paper Series*, No. 11-E-030, Tokyo.

Ministry of Agriculture, Forestry and Fisheries (MAFF) (2010), *2010 Census of Agriculture and Forestry*, Tokyo.

Ministry of Agriculture, Forestry and Fisheries (MAFF) (2012), *Annual Report on Food, Agriculture and Rural Areas in FY 2011*, Tokyo.

Ministry of Economy, Trade and Industry (2014), *Ito Review of Competitiveness and Incentives for Sustainable Growth – Building Favorable Relationships between Companies and Investors*; *www.meti.go.jp/english/press/2014/pdf/0806_04b.pdf*.

Ministry of Finance (2014), *Annual Survey of Business Corporations*, Tokyo (in Japanese).

Ministry of Health, Labour and Welfare (2014), *Basic Survey on Skill Development 2013*, Tokyo (in Japanese).

Minoya, A. (2012), "SME Finance in Japan: Experiences and Challenges", presentation, Bank of Japan.

Miyajima, H. (2012), "The Pros and Cons of Mandating the Appointment of Outside Directors: Based on New Empirical Testing", Research Institute of Economy, Trade and Industry, Tokyo.

Miyajima, H. (2013), "Reforming Japanese Corporate Management: Independent Audit Committees Should be Established", Research Institute of Economy, Trade and Industry, Tokyo.

Motohashi, K. (2013), "Innovation Policy Challenges for Japan: An Open and Global Strategy", *Asie Visions* 45, IFRI Center for Asian Studies, Paris.

Nakamura, Y. and M. Shibuya (1995), *The Hollowing Out Phenomenon in the Japanese Industry*, Research Institute of International Trade and Industry, *Tokyo.*

Nezu, R. (2011), "Disturbing Deterioration in Terms of Trade in Asia", Institute for International Studies and Training, Tokyo, *www.iist.or.jp/en-m/2011/0198-0806/*.

Nishimura, Y. (2013), *Current Situation of University-Industry Collaboration and Technology Transfer in Japan: The Role of Intermediaries*, *www.eu-japan.eu/sites/eu-japan.eu/files/20130919-Session2-1-Nishimura.pdf*.

Ono, A. and I. Uesugi (2014), "SME Financing in Japan during the Global Financial Crisis: Evidence from Firm Surveys", Institute of Economic Research, Hitotsubashi University, Tokyo.

OECD (2008), *Open Innovation in Global Networks*, OECD Publishing, Paris.

OECD (2009), *Evaluation of Agricultural Policy Reforms in Japan*, OECD Publishing, Paris.

OECD (2011a), *Board Practices: Incentives and Governing Risks*, OECD Publishing, Paris.

OECD (2011b), *OECD Economic Survey of Japan*, OECD Publishing, Paris.

OECD (2013a), *Entrepreneurship at a Glance,* OECD Publishing, Paris.

OECD (2013b), *OECD Economic Survey of Japan*, OECD Publishing, Paris.

OECD (2013c), *OECD Science, Technology and Industry Scoreboard 2013*, OECD Publishing, Paris.

OECD (2013d), *PISA 2012 Results: What Students Know and Can Do (Volume I),* OECD Publishing, Paris.

OECD (2013e), *Supporting Investment in Knowledge Capital, Growth and Innovation*, OECD Publishing, Paris.

OECD (2014a), *Agricultural Policy Monitoring and Evaluation 2014*, OECD Publishing, Paris.

OECD (2014b), *Corporate Governance in Asia: Asian Roundtable on Corporate Governance*, OECD Publishing, Paris.

OECD (2014c), *Corporate Governance Yearbook,* OECD Publishing, Paris.

OECD (2014d), *Entrepreneurship at a Glance 2014*, OECD Publishing, Paris.

OECD (2014e), *Financing SMEs and Entrepreneurs 2014: An OECD Scoreboard*, OECD Publishing, Paris.

OECD (2014f), *OECD Science, Technology and Industry Outlook 2014*, OECD Publishing, Paris.

OECD (2014g), *OECD Services Trade Restrictiveness Index (STRI): Japan*, *www.oecd.org/tad/services-trade/STRI_JPN.pdf*.

OECD (2015), *Financing SMEs and Entrepreneurs 2015: An OECD Scoreboard* (forthcoming).

Okubo, T. (2014), "The Truth about Japan's Tokku Special Zones", *JBpress*, 2 July, *http://jbpress.ismedia.jp/articles/-/41109*.

Prime Minister's Office (2007), *Economic Effects of Regulatory Reform*, Tokyo (in Japanese).

Saito, T. (2009), "Why Outside Directors in Japan are Not Prevalent?", *RIETI Report,* No. 110, Tokyo.

Shimizu, K. (2013), "The Survival of Regional Banks and Small and Medium Enterprises", in *Syncretism: The Politics of Economic Restructuring and System Reform in Japan*, edited by K. Kushida, K. Shimizu and J. Oi, Walter H. Shorenstein Asia-Pacific Research Center, Stanford University.

Shinada, N. (2012), "Firms' Cash Holdings and Performance: Evidence from Japanese Corporate Finance", *RIETI Discussion Paper Series*, 12-E-031, Tokyo.

Shirakawa, M. (2013), "Toward Strengthening the Competitiveness and Growth Potential of Japan's Economy", *www.bis.org/review/r130315a.pdf*.

Small and Medium Enterprise Agency (2014a), *Japan's Policies for Small and Medium Enterprises*, Tokyo.

Small and Medium Enterprise Agency (2014b), *2014 White Paper on Small and Medium Enterprises in Japan*, Tokyo.

Squicciarini, M., H. Dernis and C. Criscuolo (2013), *Measuring Patent Quality: Indicators of Technological and Economic Value*, OECD Publishing, Paris.

Thangavelu, S. and C. Findlay (2011), "The Impact of Free Trade Agreements on Foreign Direct Investment in the Asia-Pacific Region", *in ASEAN+1 FTAs and Global Value Chains in East Asia*, *Economic Research Institute for ASEAN and East Asia* Research, *Project Report* 2010-29, edited by C. Findlay, Jakarta.

Ueda, R. (2014), "Corporate Governance in Japan: Developments in Listed Companies and Roles of Institutional Investors", Financial Research Center – Financial Services Agency.

Uesugi, I. (2006), *SME Financing in Japan: What We Have Found*, *Research & Review*, 2006/01, Research Institute of Economy, Trade and Industry, Tokyo.

Uesugi, I. (2010), *The Impact of International Financial Crises on SMEs: The Case of Japan*, Hitotusbashi University, May.

Urata, S. (2005), "Japan Needs to Boost its Inward Foreign Direct Investment", Research Institute of Economy, Trade and Industry, Column 0132, July.

Venture Enterprise Centre (2013), *Survey on Trends in Venture Capital Investment FY 2012*, Tokyo.

Venture Enterprise Centre (2014), "The Result of Survey on Venture Capital Investment Trends in 2014 (Preliminary Report)", *VEC Venture News* No. 4.

Westmore, B. (2013), "R&D, Patenting and Growth: The Role of Public Policy", *OECD Economics Department Working Papers*, No. 1047, OECD Publishing, Paris.

Wong, H. (2010), "Terms of Trade and Economic Growth in Japan and Korea: An Empirical Analysis", *Empirical Economics*, Vol. 38.

Yamori, N., K. Kondo, K. Tomimura, Y. Shindo and K. Takaku (2013), "Japanese Banking Regulations and SME Finance under the Global Financial Crisis", *Japanese Journal of Monetary and Financial Economics*, Vol. 1.

Yamori, N. (2014), "Japanese SMEs and the Credit Guarantee System after the Global Financial Crisis", *Research Institute for Economics and Business Administration Discussion Paper Series,* DP2014-26, Kobe.

Yashiro, N. (2013), "Strategic Zones to Revitalise the Japanese Economy?", *East Asia Forum*, 8 September, *www.eastasiaforum.org/2013/09/08/strategic-zones-to-revitalise-the-japanese-economy/*.

Yashiro, N. (2014), "Towards Responsive Regulations and Regulatory Coherence in ASEAN and East Asia: Deconstructing Effective and Efficient Regulatory Management Systems - Case for Japan", Economic Research Institute for ASEAN and East Asia, Jakarta.

Chapter 2

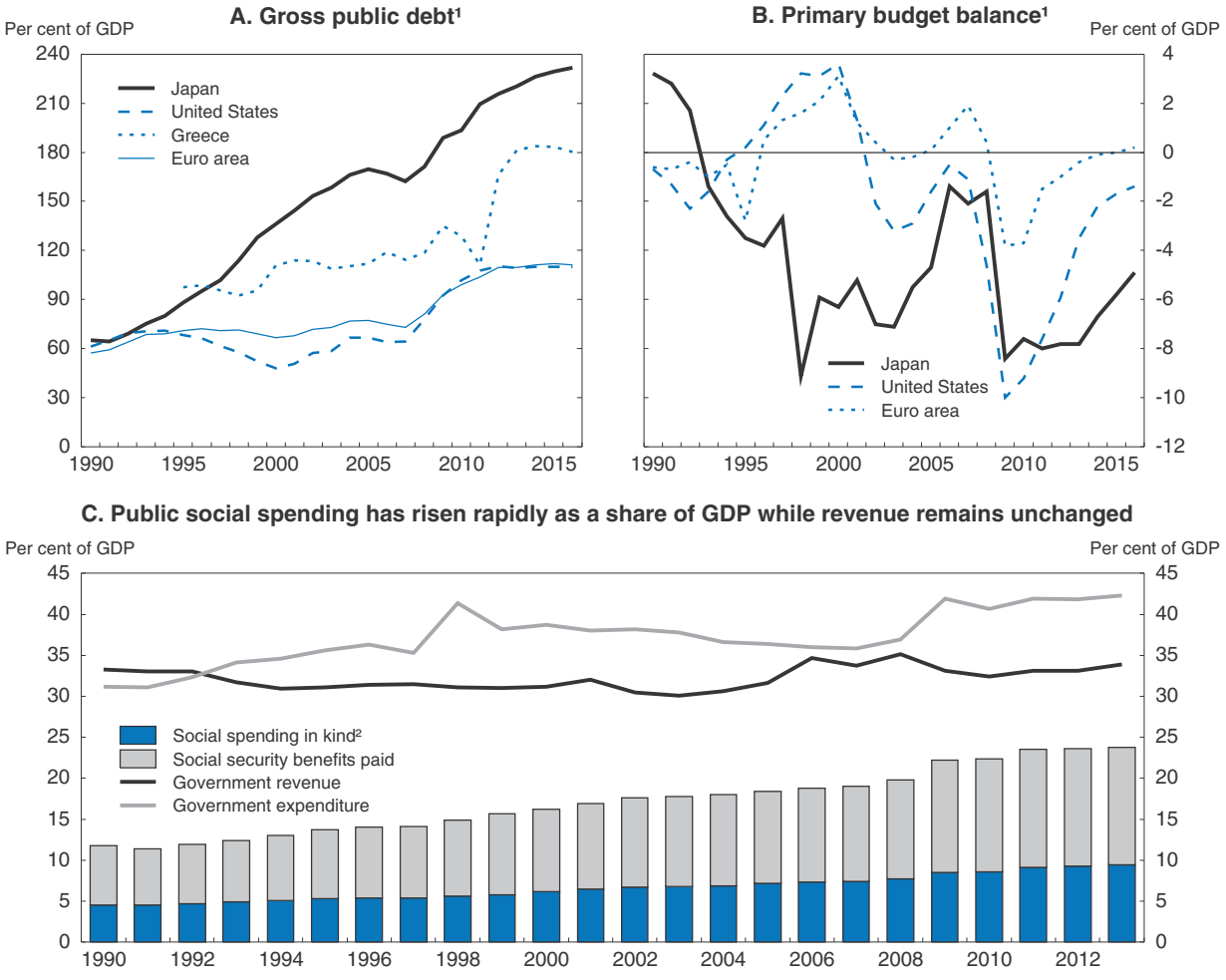
Achieving fiscal consolidation while promoting social cohesion

With gross government debt of 226% of GDP, Japan's fiscal situation is in uncharted territory and puts the economy at risk. Japan needs a detailed and credible fiscal consolidation plan, including specific revenue increases and measures to control spending to restore its fiscal sustainability. The major concern on the spending side are social spending pressures in the context of rapid population ageing, making reforms to contain such spending a priority. Much of the consolidation, though, will have to be on the revenue side, primarily through hikes in the consumption tax rate beyond the 10% now planned for 2017. Fiscal consolidation should be accompanied by measures to promote social cohesion through the tax and benefit system and by breaking down labour market dualism. In particular, an earned income tax credit is a priority to assist the working poor.

Twenty-two years of budget deficits have driven up gross public debt from 70% of GDP in 1992 to around 226% in 2014, the highest ever recorded in the OECD area (Figure 2.1). In net terms, the debt ratio is 129% of GDP, again the highest in the OECD. The primary deficit is projected to remain high at around 5% of GDP in 2016 (Panel B), further pushing up debt. Japan's fiscal problem reflects the doubling of public social spending, from 12% of GDP in 1990 to 24% in 2013, while revenues were unchanged at one-third of GDP (Panel C). By FY 2013, social spending accounted for more than half of general government spending.

Figure 2.1. **Japan's fiscal situation has deteriorated over the past 20 years with the increase of social spending**

In per cent of GDP



1. OECD estimates for 2014 and projections for 2015-16.
2. "Social spending in kind" is calculated from fiscal year data.

Source: OECD Economic Outlook Database.

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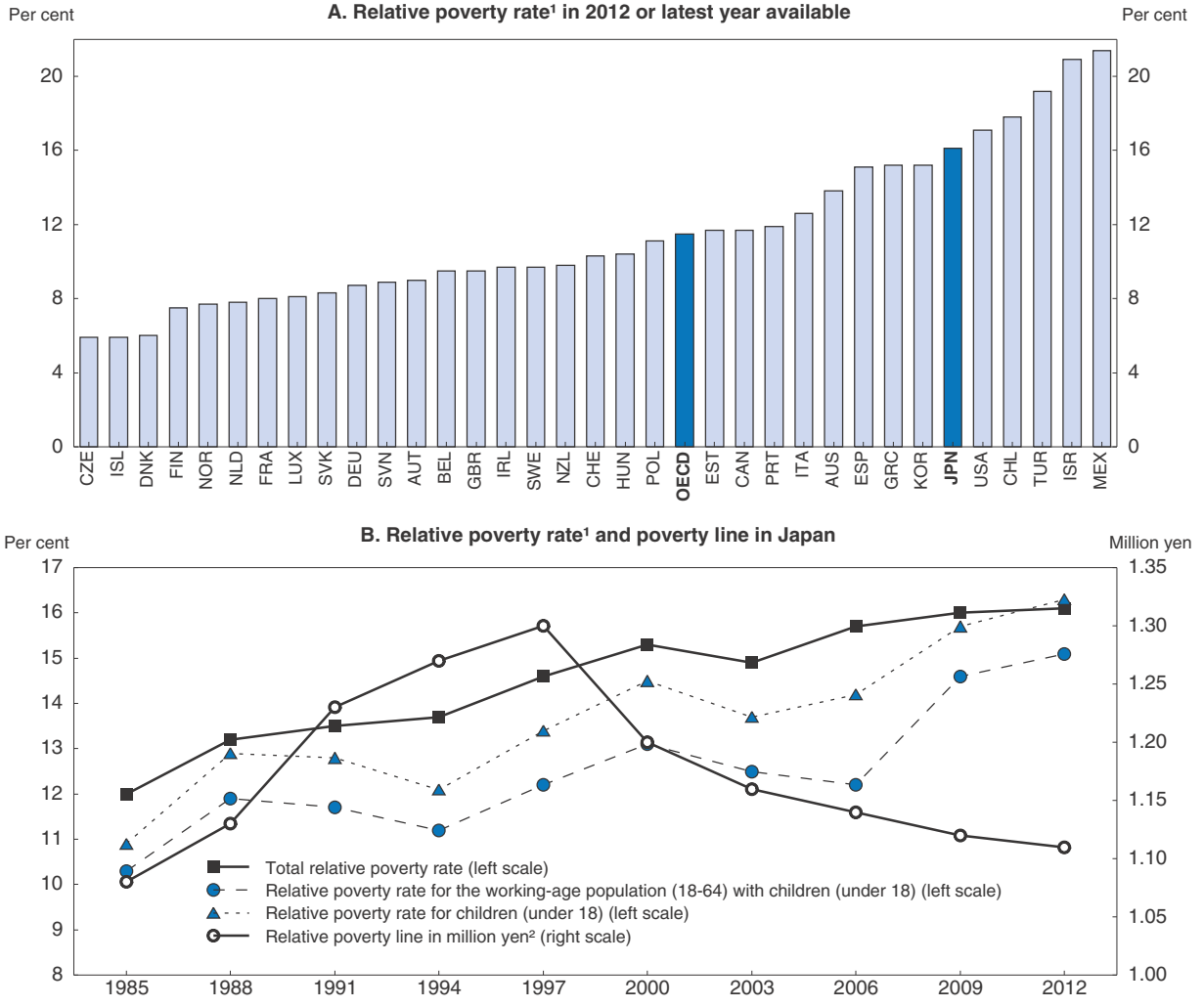
The impact of high debt is mitigated at present by low interest rates, reflecting persistent deflation and the risk aversion and "home bias" of investors, as well as large-scale purchases by the Bank of Japan (BoJ) under its "Quantitative and Qualitative Easing" (QQE) policy. Around 90% of government debt is domestically held and the government's external debt (including the BoJ) was less than $1 trillion in mid-2014 (around a quarter of GDP). However, the outlook for the government bond market will be more uncertain once the BoJ achieves its inflation target and phases out QQE.

At the same time, Japan faces high poverty and income inequality. The relative poverty rate, defined as the share of the national population with an income below half of the national median, was the sixth highest in the OECD area (Figure 2.2). It increased from 12.0% in 1985 to 16.1% in 2012, driven by a rise among the working-age population (Panel B).

Figure 2.2. **Japan faces a problem of high poverty and social cohesion**



1. The relative poverty rate is the share of the population with an income after taxes and transfers below half the "median equivalent disposable income", which equals household disposable income divided by the square root of the number of household members. Japanese data are based on the Comprehensive Survey of Living Conditions, which is submitted to the OECD by Japan. Another survey, the National Survey of Family Income and Expenditure, shows a much lower relative poverty rate of 10.1%.
2. Defined as half the median disposable income nationwide. It is in real terms.

Source: OECD Income Distribution and Poverty Database; Ministry of Health, Labour and Welfare, *Comprehensive Survey of Living Conditions*.

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The relative poverty rate of children in Japan was the ninth highest in the OECD at 16.3% in 2012. Moreover, the "relative poverty line" – 50% of the national median income – has fallen by 15% in real terms since 1997, indicating that conditions have deteriorated in absolute terms for those in relative poverty (Oshio, 2013). Income inequality has also increased, driven by a rise in inequality for the working-age population.

The poverty issue among the working-age population and children reflects two factors. *First*, public social spending transfers income from those under age 65 to the elderly. Indeed, 80% of social security benefits go to the 40% of households with a person aged 65 or older. Those households hold nearly half of total household financial assets but only 14% of debt (Tanaka, 2010). *Second*, labour market dualism creates high wage inequality. The rising share of non-regular workers has been identified as the major cause of inequality (Ministry of Health, Labour and Welfare, 2014a), despite a small increase in the earnings of non-regular workers from 62.3% of regular workers in FY 2012 to 63.4% in FY 2014.

After an overview of Japan's fiscal predicament, this chapter reviews policy options to achieve fiscal sustainability, beginning with the revenue side. The third section analyses measures to control spending, primarily by limiting the growth of public social expenditures. Policy recommendations are summarised in Box 2.3. The main findings include:

- The very high level of government debt leaves Japan vulnerable to a loss of confidence and a run-up in interest rates, which would have destabilising effects on public finances, the financial sector and the real economy. A detailed and credible plan to maintain confidence is thus crucial.
- With government revenue low compared to other OECD countries, there is scope for revenue increases, focusing on taxes that are less harmful for growth, such as the consumption tax.
- Given that rising government spending is driven by social expenditures related to population ageing, reform of pension and health and long-term care is crucial to contain spending growth.
- The issues of high relative poverty should be addressed by improving social welfare programmes and by attacking the underlying causes of inequality, notably labour market dualism.

Japan's fiscal situation is not sustainable

Japan's fiscal management policy

In 2013, the government adopted fiscal targets that are broadly in line with the fiscal strategy laid out in 2010:

- Halving the primary deficit of central and local governments from 6.6% of GDP in FY 2010 to 3.3% by FY 2015.
- Achieving a primary surplus by FY 2020.
- Steadily reducing the public debt to GDP ratio thereafter.

The targets were established by "The Basic Policies for Economic and Fiscal Management and Reform" and were spelled out in more detail in the "Medium-term Fiscal Plan", which were adopted in 2013. Fiscal policy targets gross, rather than net, debt (Box 2.1).

Table 2.1. **Initial FY 2015 budget**

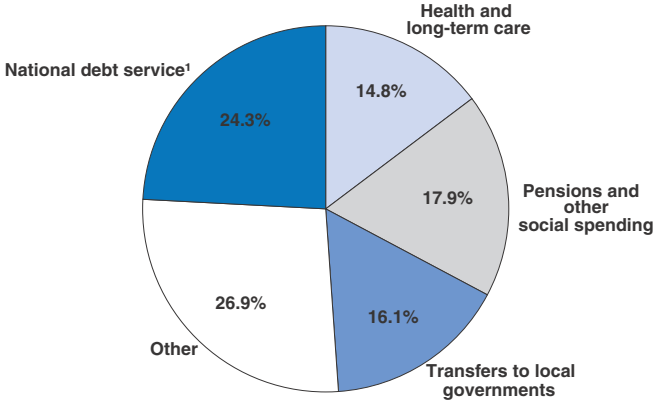
General account in trillion yen in nominal terms

Expenditure category	FY 2014 budget (initial)	FY 2015 budget (initial)	Change in trillion yen	Percentage change
A. Primary spending	**72.6**	**72.9**	**0.3**	**0.4**
Social security	30.5	31.5	1.0	3.3
Pensions	10.9	11.2	0.3	3.1
Health and long-term care	13.9	14.2	0.4	2.6
Social assistance and other	5.7	6.0	0.3	5.3
Education	4.1	4.1	-0.0	-0.5
Science	1.3	1.3	-0.1	-3.9
Local allocation tax grants, etc.	16.1	15.5	-0.6	-3.8
National defence	4.9	5.0	0.1	2.0
Public works	6.0	6.0	0.0	0.0
Economic assistance	0.5	0.5	0.0	-0.7
Measures for SMEs	0.2	0.2	0.0	0.2
Energy	1.0	0.9	-0.1	-6.8
Food supply	1.1	1.0	0.0	-0.9
Other	6.9	6.9	-0.1	-1.0
B. National debt service	**23.3**	**23.5**	**0.2**	**0.8**
Interest payments	10.1	10.1	0.0	0.0
Debt redemption[1]	13.1	13.3	0.2	1.3
Total	**95.9**	**96.3**	**0.5**	**0.5**

1. These outlays are not included in government spending on a general government basis.
Source: Ministry of Finance.

The FY 2015 general account budget reflects the challenge of achieving the FY 2020 primary surplus target. To limit the rise in nominal spending, the budget cuts outlays on energy (6.8%), science (3.9%) and education (0.5%), while keeping public works unchanged (Table 2.1). Consequently, primary spending, excluding social security outlays, falls by 1.7%. However, significant increases in social security (3.3%) and debt service (0.8%) will boost total spending by 0.5% to a record high 96.3 trillion yen. Indeed, social security outlays and debt service account for over half of total general account outlays (Figure 2.3).

Figure 2.3. **Debt service and social security accounts for more than half of the FY 2015 budget**



1. National debt service includes 13.3 trillion yen of debt redemption, which is not included in general government spending, and 10.1 trillion yen of interest payments. By law, about 1.6% of existing debt has to be redeemed each year.
Source: Ministry of Finance.

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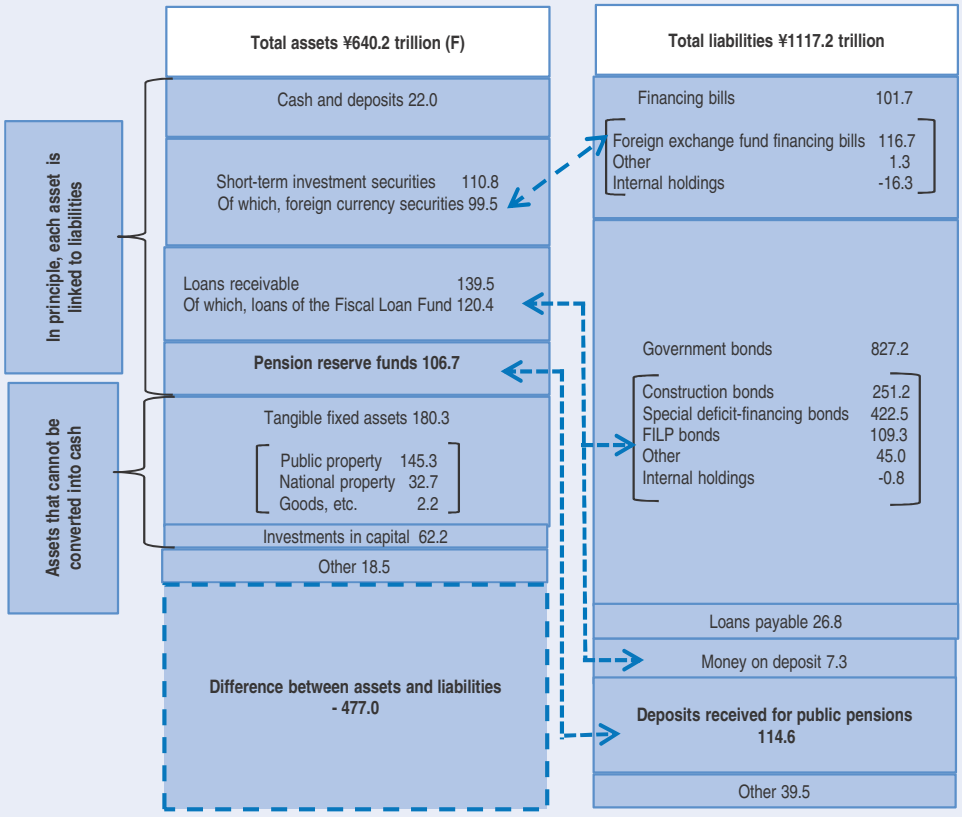
Box 2.1. **Gross versus net government debt**

As noted above, Japan's government debt, on both a gross and net basis, is the highest among OECD countries. Moreover, government assets – the difference between gross debt and net debt – are also large at nearly 100% of GDP. Some of these assets also generate income. In 2013, about two-thirds of the interest payments on liabilities were offset by government interest receipts, helping to limit net government interest payments to 0.7% of GDP. It is sometimes argued that net debt is the most appropriate measure of government debt as it excludes intra-governmental debt, which has no direct, immediate impact on the economy (CBO, 2009). In addition, the large stock of assets may provide Japan a cushion that could help protect it against a sovereign debt crisis.

The usefulness of government assets as a cushion, however, is limited by several factors. *First*, only about a third of government assets are in the form of liquid instruments, such as cash and bonds. For example, tangible fixed assets, such as roads and public buildings, account for more than a quarter of central government assets (Figure 2.4), and these cannot be easily turned into cash in case of emergency. *Second,* assets are linked to corresponding liabilities. For example, loans made by the Fiscal Loan Fund, which amounted to some 120.4 trillion yen (25% of GDP) in FY 2012 were financed by Fiscal Investment Loan Programme bonds of a similar amount. Similarly, pension reserve funds (106.7 trillion yen) are backed by deposits received for public pensions (114.6 trillion yen), while foreign exchange reserves, which are nearly 100 trillion yen, are financed by 116.7 trillion yen of foreign exchange fund financing bills. If these large assets were used for other purposes during a contingency, the matching liabilities would have to be met through higher government revenue. *Third*, the quality of some government assets, such as loans made by the Fiscal Loan Fund, is doubtful (2005 *OECD Economic Survey of Japan*).

Figure 2.4. **Central government assets and liabilities in FY 2012**



Source: Ministry of Finance.

Box 2.1. **Gross versus net government debt** *(cont.)*

In sum, while the large stock of government assets needs to be borne in mind, gross government debt appears to be the best summary measure of the public-sector position. In fact, even gross debt may understate the government's eventual obligations, as it does not include unfunded future liabilities, notably for public pensions, which are estimated at 450 trillion yen (92% of 2014 GDP) (Ministry of Health, Labour and Welfare, 2010). In addition, it excludes contingent liabilities, such as government loan guarantees for quasi-government institutions.

In addition to the record amount of spending in the FY 2015 budget, spending will be increased by another 3.1 trillion yen (0.6% of GDP) by the FY 2014 supplementary budget approved by the Diet in February 2015. The package is intended to promote growth, after two quarters of output decline, by supporting households and small firms and improving disaster preparedness (Table 2.2). Another focus is regional revitalisation and additional transfers to local governments, on top of the FY 2015 budget and the fiscal plan of local governments. The supplementary budget will be financed by 2 trillion yen from remaining funds from the settlement of accounts for the FY 2013 budget[1] and higher-than-expected tax receipts of 1.7 trillion yen. More than four-fifths of the 3.7 trillion yen in untapped resources is thus being used to increase spending rather than to cut government borrowing. Meanwhile, local governments plan to increase their spending by 2.3% from 83.4 trillion yen in FY 2014 to 85.3 trillion yen in FY 2015.

Table 2.2. **FY 2014 supplementary budget**

General account in trillion yen

Expenditure category	Expenditure
A. Supporting households and small businesses	1.2
Support for households and small businesses	0.6
Measures to reduce energy costs	0.4
Measures to revitalise housing markets	0.2
B. Regional revitalisation	0.6
Fostering human resources and job creation	0.2
Economic revitalisation through industrial development in regional areas	0.4
C. Disaster preparedness	0.8
D. Local Allocation Tax grants (for local governments)	1.0
E. Other	0.4
F. Reduction in fixed expenses (including national debt service)	-1.8
G. Provision for Special Account for Reconstruction	1.0
Total	**3.1**

Source: Ministry of Finance.

The government expects to achieve the primary deficit target of 3.3% of GDP for central and local governments in FY 2015, even including the FY 2014 supplementary budget.[2] In February 2015, the government projected that the deficit would fall from 5.7% of GDP in FY 2013 to 5.2% in FY 2014. Consequently, meeting the 3.3% target implies reducing the primary deficit by around 2 percentage points of GDP in FY 2015. Such a large reduction requires limiting other components of spending, namely special accounts and local government spending, which nearly matches primary spending by the central government.

Reducing the primary deficit by 2 percentage points of GDP in FY 2015 also hinges on achieving the projected 9% increase in tax revenue, while nominal GDP is forecast to rise by 2.7%, according to the government. The increase in tax receipts is to be led by an 11.6% gain in consumption tax revenues, reflecting the lagged effect of the April 2014 tax hike, even though the government projects that private consumption will rise by 2.8% in nominal terms in FY 2015. Corporate income tax receipts are expected to rise by 4.5% in FY 2015 despite a cut in the tax rate from 34.6% in FY 2014 to 32.1% in FY 2015. However, measures to broaden the tax base are likely to limit the impact of the tax cut on revenues.[3] In addition, non-tax revenue is forecast to rise by 7%, thanks in part to one-off measures, such as the sale of government equity holdings and the use of reserves in state funds. If the large revenue increase fails to materialise, meeting the FY 2015 target would require scaling back planned spending. In any case, the target provides discipline in limiting government spending, even if the FY 2015 primary deficit outcome will not be known until 2017.

Looking ahead to FY 2020, the Cabinet Office projected in February 2015 that the primary deficit of central and local governments would be 1.6% of GDP in FY 2020 even under the following favourable assumptions: i) the second consumption tax hike to 10% is implemented in 2017; ii) nominal GDP grows by 3.1% a year on average for FY 2013-22 (the "economic revitalisation case"); and iii) primary spending, excluding social security, is constant in real terms after FY 2016 (Cabinet Office, 2015). Under the baseline case, with annual nominal GDP growth of 1.4%, the government projects that the primary deficit would be 3.0% of GDP in FY 2020. The decision in late 2014 to delay the second consumption tax hike to 10% planned for October 2015 until April 2017 may make it even more difficult to achieve the planned fiscal consolidation path.

Key elements needed in a new medium-term strategy

The government is preparing a new medium-term strategy, to be announced by the summer of 2015, which aims to achieve a primary surplus by FY 2020, while promoting economic revitalisation. It should target a primary surplus large enough to achieve the third goal of putting the government debt ratio on a downward trend. The current Strategy covers only central and local governments, even though the evolution of public debt depends on the general government balance, which includes the social security balance. The social security fund has been in the red every year since FY 2007, with a deficit averaging 0.8% of GDP. It is expected to remain in deficit according to the government's projections through FY 2023. Focusing on the general government balance, which includes the social security system, increases the amount of fiscal consolidation required to stabilise the public debt ratio.

The size of the primary surplus necessary to stabilise the government debt ratio gap equals the gap between the nominal interest rate and nominal growth rate multiplied by the level of debt. If the gap were to match its 1½ percentage point average since 1980, Japan would need a primary surplus of around 3½ per cent of GDP. In the government's medium to long-term projections, the gap is assumed to be 1.3 points in FY 2023, which would imply that a primary surplus of 3% of GDP would be necessary to stabilise the debt ratio.[4]

The large-scale fiscal consolidation – from a general government primary deficit of around 7% of GDP in 2014 to a surplus of around 3% – requires decisive political will and commitment, backed by public support. It is crucial to maintain confidence in Japan's fiscal sustainability, despite its high level of debt, during the extended period of consolidation ahead, which may take more than a decade. To sustain such confidence, it is crucial to draw up and commit to a detailed and credible medium-term plan that contains specific

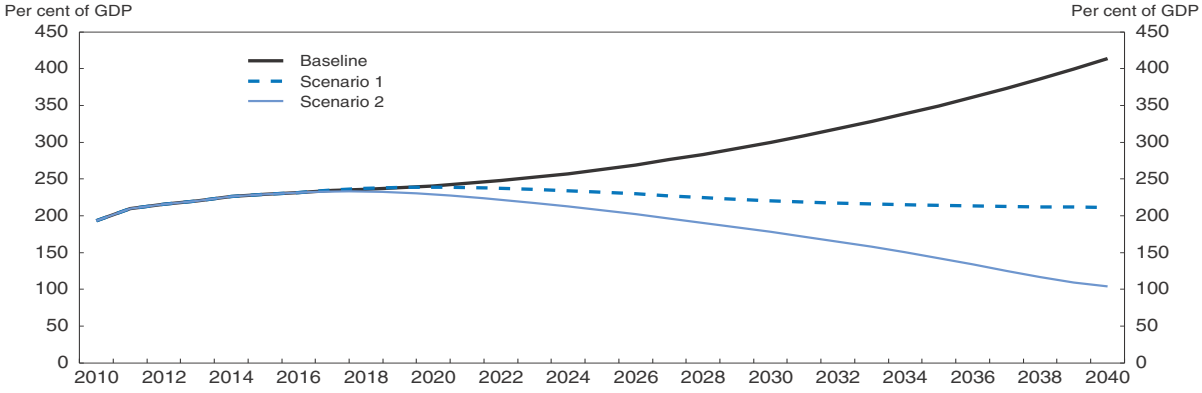
spending cuts and tax increases necessary to achieve the required primary surplus. Such a commitment would be strengthened by improving the fiscal policy framework through a stronger legal basis for fiscal targets. Past country experience with large fiscal consolidations suggests that it is helpful to have an expenditure rule in addition to a budget balance rule (IMF, 2009).

In addition, good fiscal institutions are a necessary condition for fiscal discipline and to help sustain political commitment to medium-term goals (Hagemann, 2010). Fiscal policy can benefit from having an impartial body provide: i) costing of various government initiatives; ii) ex ante evaluation of whether fiscal policy is likely to meet its mid-term target; iii) ex post evaluation of whether fiscal policy has met its targets; and iv) an analysis of the long-run sustainability of fiscal policy (Calmfors, 2011). In Japan, the Council on Economic and Fiscal Policy, which includes the Prime Minister, five ministers, the governor of the Bank of Japan, two academic experts and two business leaders plays some of these roles.

Achieving fiscal sustainability requires all three arrows of Abenomics

Without further consolidation measures, Japan's debt-to-GDP ratio would rise inexorably, according to the OECD's model of Japan's debt dynamics. The baseline, which assumes no fiscal consolidation after 2016, shows a gross debt ratio of more than 400% by 2040 (Figure 2.5).

Figure 2.5. **Simulations of gross government debt as a share of GDP**[1]



1. In the baseline, there is no fiscal consolidation, while consolidation of 7% of GDP over the decade 2017-26 is assumed in the two scenarios, which are based on different growth rate assumptions (see Box 2.2).

Source: OECD Economic Outlook Database; OECD calculations.

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The model is used to simulate the impact of a 7 percentage-point of GDP consolidation over the decade 2017-26 (Box 2.2). However, in the first scenario, with annual nominal output growth of 1½ per cent between 2014 and 2040, the debt ratio remains alarmingly high at above 200% of GDP through 2040 despite the fiscal consolidation measures. In contrast, fiscal consolidation, combined with effective implementation of the first and third arrows, would put the debt ratio on a downward trend, falling to nearly 100% of GDP by 2040 in Scenario 2. Nominal output growth is 4% thanks to the success of quantitative and qualitative monetary easing in achieving the 2% target and of the Japan Revitalisation Strategy in boosting real output growth to 2%. In sum, fiscal measures are not enough to

Box 2.2. **Long-term debt simulations**

The OECD has developed a model of Japan's debt dynamics (Guillemette and Strasky, 2014). The evolution of gross debt as a share of GDP (d) depends on the primary balance as a share of GDP (pb), on the difference between the real interest rate (r) and the growth rate of real GDP (g), and approximately follows:

$\Delta d_t = -pb_t + (r_t - g_t)d_{t-1}$

The model illustrates the importance of nominal GDP growth in reducing debt. Even with fiscal consolidation of 7% of GDP, the debt ratio remains fairly constant if nominal GDP growth averages 1½ per cent (Scenario 1). However, if nominal growth were to reach 4%, the same amount of fiscal consolidation would put the debt ratio on a steady downward trend. The main features of the model are:

- Real growth depends on potential growth, the output gap and the fiscal impulse. The model assumes a fiscal multiplier of 0.5, which is in line with the government's macroeconomic model developed by the Economic and Social Research Institute in the Cabinet Office, which estimates a multiplier of 0.3 to 0.6 for tax hikes, and close to a recent estimate of around 0.6 (Baum et al., 2012). The fiscal multiplier may turn out to be higher than 0.5, particularly of consolidation includes spending reductions (Guillemette and Strasky, 2014). With a higher fiscal multiplier, the negative effects of fiscal consolidation on economic activity in the scenarios presented above become more significant. In scenario 1, for example, assuming a fiscal multiplier of 1.0 would result in a government debt ratio of 236% of GDP in 2040, 25 basis points higher than with a multiplier of 0.5.
- Fiscal policy is implemented through assumptions on the path of the structural primary balance. In the baseline, with no fiscal consolidation after 2016, the primary balance stays around its level of more than 5% of GDP through 2040 (Table 2.3). In the two scenarios, the 7% of GDP in fiscal consolidation results in primary surpluses of 1.7% and 4% of GDP in 2026, respectively, reflecting different output growth rates in the two scenarios.
- Inflation, defined in terms of the GDP deflator, is modelled using an expectations-augmented Phillips curve.
- The monetary policy stance is driven by interest-rate smoothing toward a standard Taylor rate but cannot fall below an assumed bound of 0.1%.
- The long-term (10-year) interest rate is modelled as a 10-year average of future short-term policy rates (under perfect foresight), a term premium (fixed at 0.7%) and a fiscal-risk premium which depends on the gross debt ratio. Consequently, the interest rate varies between the two scenarios and the baseline, where the rising debt raises the interest rate, further boosting the debt ratio in a vicious circle.
- The cost of debt servicing depends on the maturity structure of debt, as well as on past and projected interest rates.

reduce government debt but need to be accompanied by faster growth. In turn, lower debt would be positive for growth. It has been estimated that gross debt between 50% and 80% of GDP is growth maximising (Checherita-Westphal et al., 2011).

Box 2.2. **Long-term debt simulations** *(cont.)*

Table 2.3. **Long-term debt simulation results**

Annual averages as a percentage of GDP

Baseline: Nominal growth averages 2¾ per cent (real growth = 1%, inflation = 1¾ per cent)

	2014-26	2026-40	2014-40	2040
Long term interest rate	3.1	6.0	4.7	6.9
Government balance	-7.4	-16.5	-12.4	-23.0
Government primary balance	-5.3	-5.0	-5.1	-5.0
Gross debt	243.8	333.1	292.5	413.8

Scenario 1: Nominal growth averages 1½ per cent (real growth = 1%, inflation = ½ per cent)

	2014-26	2026-40	2014-40	2040
Long term interest rate	1.4	3.8	2.7	4.2
Government balance	-2.1	-0.7	-1.4	-1.9
Government primary balance	-2.1	1.9	0.0	2.0
Gross debt	234.5	217.8	225.2	211.5

Scenario 2: Nominal growth averages 4 per cent (real growth = 2%, inflation = 2%)

	2014-26	2026-40	2014-40	2040
Long term interest rate	3.1	6.4	4.8	6.4
Government balance	-2.5	4.5	1.3	9.8
Government primary balance	-1.3	6.8	3.0	9.3
Gross debt	223.2	155.1	186.1	103.7

Source: OECD Economic Outlook Database; OECD calculations.

Fiscal policy should also promote social sustainability

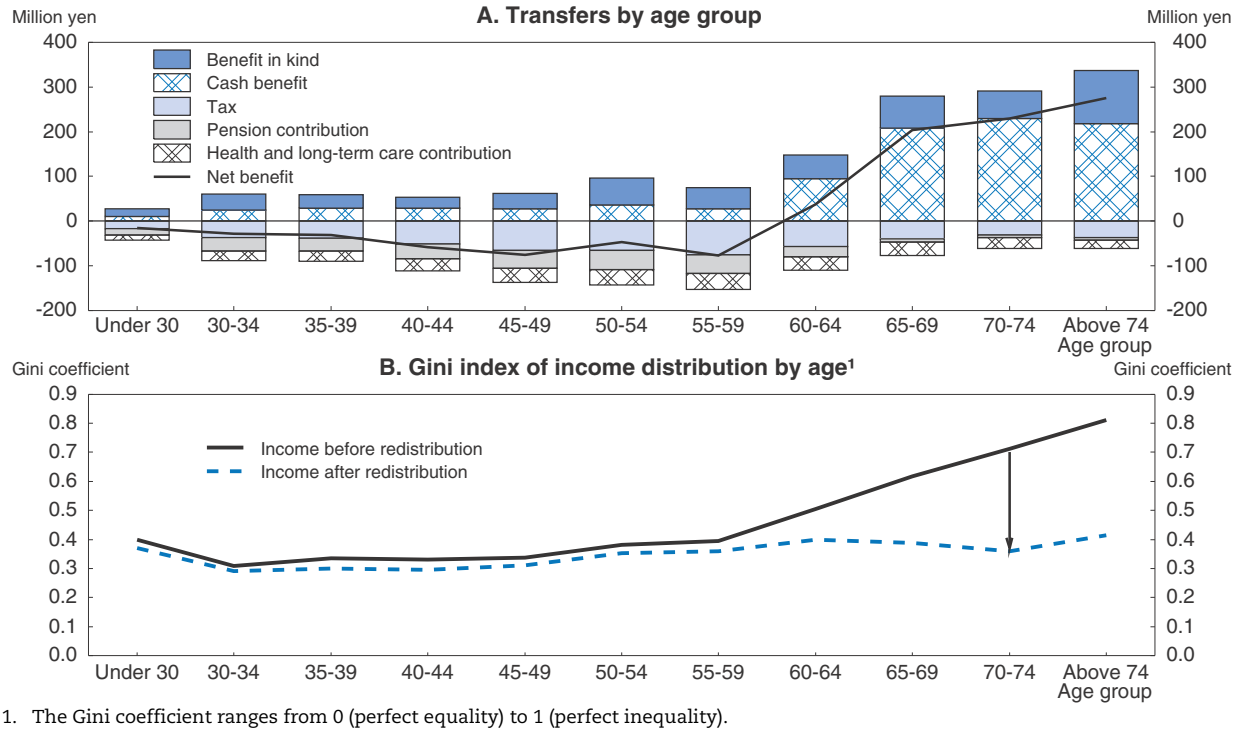
Given its high public debt and rising ageing-related expenditure, Japan's tax burden needs to be increased while reducing expenditure. At the same time, it is important that fiscal consolidation aim to promote social cohesion, which has weakened in the face of rising poverty and income inequality.[5] However, the impact of Japan's tax and benefit system on income inequality and relative poverty is weaker than the OECD average, reflecting the fact that it primarily redistributes income over life-cycles rather than across individuals (OECD, 2013). Indeed, it results in substantial income transfers from the young to the elderly through the pension, health and long-term care insurance systems (Figure 2.6). Consequently, social spending only has a significant impact on the Gini coefficient among the elderly (Panel B).

Increasing government revenue while promoting social cohesion

Ensuring fiscal sustainability will require measures to boost revenues from their relatively low levels while constraining the growth of spending, particularly that related to population ageing. Taxes and social insurance contributions amounted to only 29% of GDP in 2012, the eighth-lowest share in the OECD (Figure 2.7). Japan's tax system stands out in several regards. *First*, the consumption tax rate in Japan is low. Even after the planned hike to 10% in 2017, it will remain the third lowest value-added tax rate in the OECD. *Second*, personal income tax revenue, at 5.5% of GDP, is well below the OECD average of 8.6%. *Third*,

Figure 2.6. **Japan's tax and benefit system transfers income from young to old**

In 2011



1. The Gini coefficient ranges from 0 (perfect equality) to 1 (perfect inequality).

Source: Ministry of Health, Labour and Welfare, *Survey on Income Redistribution in 2011*.

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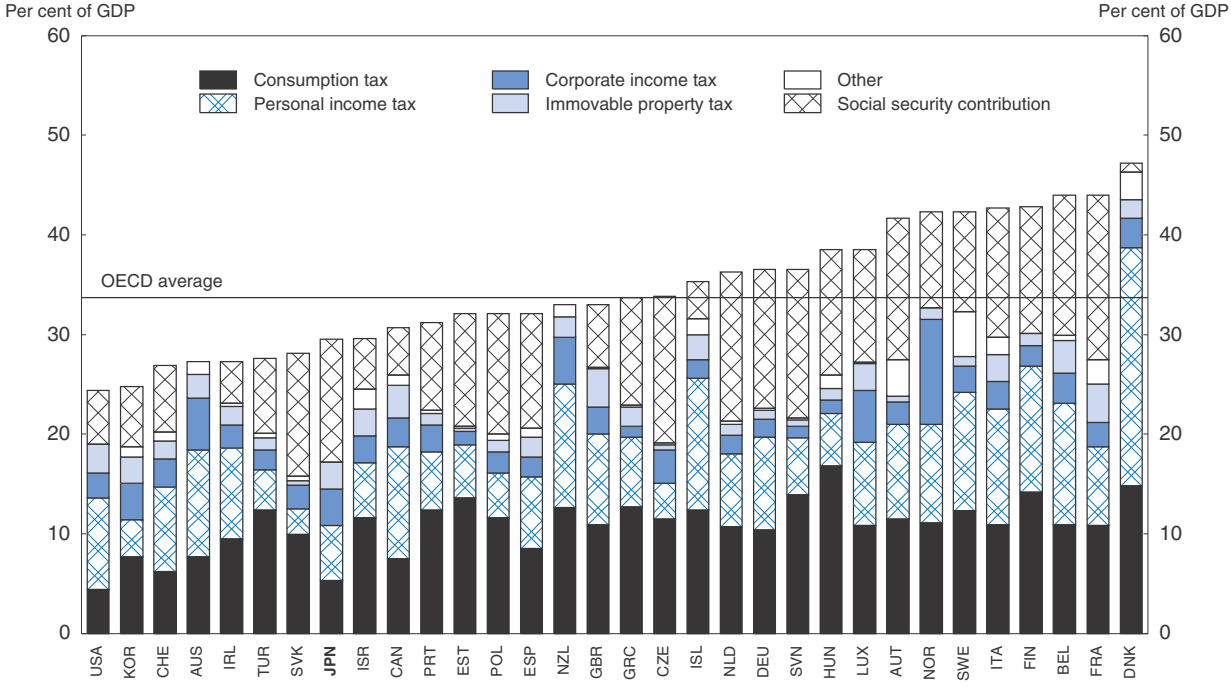
Figure 2.7. **Japan's tax and social security burden is relatively low**

In 2012



Source: OECD, *Revenue Statistics Database*.

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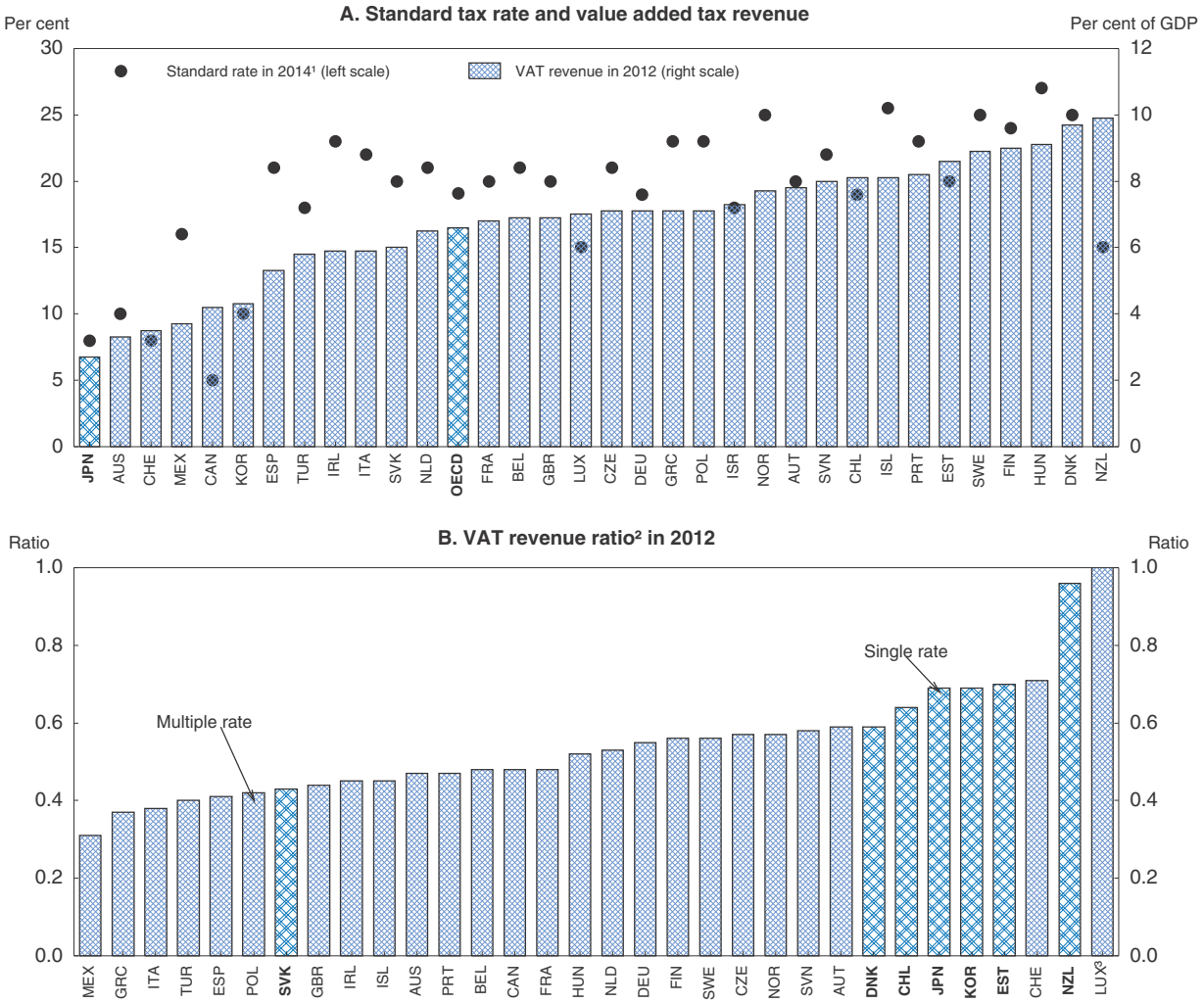
the corporate income tax rate is still among the highest in the OECD. *Fourth*, environmental tax revenue as a share of GDP is well below the OECD average.

Japan needs to further raise the consumption tax, while keeping a single rate

The small share of revenue from indirect taxes in Japan reflects the low consumption tax rate (Figure 2.8). A VAT, such as Japan's consumption tax, is acknowledged to be a relatively stable revenue source and is less harmful for economic growth, as it imposes fewer distortions on employment and investment (Arnold et al., 2011). A greater role for the VAT would also improve intergenerational equity, as the elderly would bear more of the tax burden. In short, a VAT is the most appropriate tax for raising revenue in Japan.

Figure 2.8. **Japan's consumption tax should be raised further while keeping a single rate**



1. The standard rate in January 2014, except for Japan, which reflects the consumption tax hike to 8% in April 2014.
2. VAT revenue ratio = actual VAT revenue/((Final consumption expenditure – actual VAT revenues) × standard rate). A ratio close to one indicates that the VAT is effective in raising revenue.
3. VAT revenue ratio for Luxembourg in 2012 was 1.13. The exceptionally high VAT revenue ratio reflects Luxembourg's position as a financial centre and as a hub for European e-commerce.

Source: OECD, *Consumption Tax Trends 2014*.

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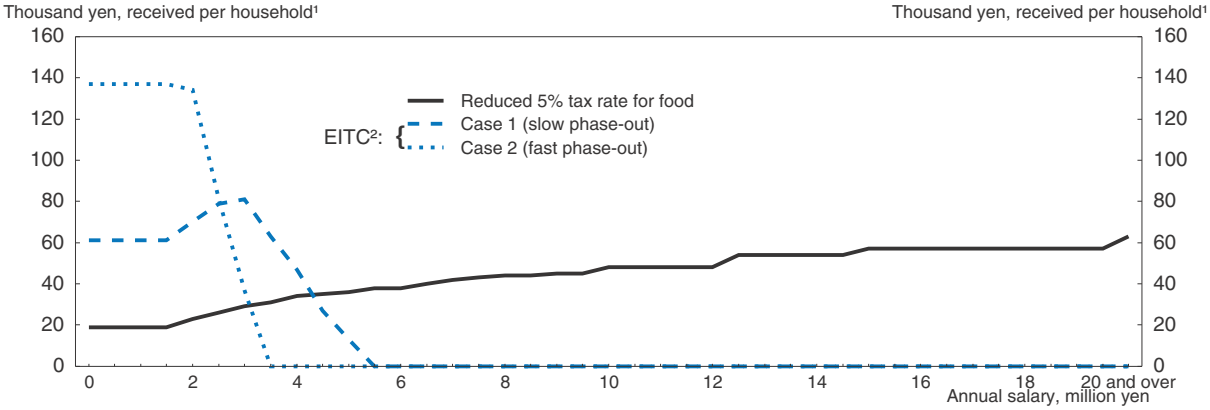
As noted above, the government's projection shows a primary deficit of 1.6% of GDP in FY 2020, even with a hike in the consumption tax rate to 10% in 2017. If the primary deficit were to be balanced through the consumption tax alone, the rate would need to rise by slightly more than 3 percentage points, given that a one-point hike in the consumption tax rate generates revenue equivalent to ½ per cent of GDP. Achieving a primary surplus of around 3% to stabilise the debt ratio would require another 6 percentage-point hike in the tax rate. Consequently, if Japan were to achieve its fiscal targets by relying solely on the consumption tax, the rate would have to converge toward the 22% average in Europe. Moreover, reducing the debt ratio from 2021 would require an even larger tax hike.

Given that Japan has a single consumption tax rate, the tax is effective in raising revenues, as shown by its high "VAT revenue ratio" (Figure 2.8, Panel B). However, the ruling coalition parties have agreed to introduce multiple rates when the tax rate is 10% in order to soften the redistributive impact. A multiple-rate VAT would limit the revenue increase, requiring an even higher standard rate. For example, a 5% rate for food (including beverages and eating out) would reduce tax revenue by 3.3 trillion yen (0.7% of GDP) (Ruling Parties' Council on the Tax System, 2014), requiring a standard rate of 11.4% to offset it. Introducing multiple VAT rates has additional drawbacks (2013 *OECD Economic Survey of Japan*). *First*, it would entail higher administrative and compliance costs, especially for SMEs. *Second*, it would provide opportunities for fraud through the misclassification of items. *Third*, it would reduce the neutrality of the VAT, thus distorting consumption decisions and decreasing welfare.

Moreover, multiple tax rates are not effective in mitigating the regressive impact of raising the consumption tax rate, as most of the benefits go to high-income households (OECD, 2014c). A 5% rate for food would reduce the consumption tax payments of households with an annual income of 15 million yen by an average of 55 000 yen per year (Figure 2.9). In contrast, households with an income of 3 million yen would only benefit half as much.

Figure 2.9. **An earned income tax credit can offset the regressive impact of raising the consumption tax rate**

The gains to households by income level from a multi-rate consumption tax versus an earned income tax credit



1. The gain is due either to the reduced rate of 5% on food, including beverages and eating out (the solid line), or an EITC benefit (cases 1 and 2), with a single 10% tax rate.
2. Assumes a single 10% consumption tax rate. The total amount paid as EITC benefits in both cases 1 and 2 equals the amount of foregone revenue that would have resulted from introducing a 5% rate.

Source: Ministry of Internal Affairs and Communications, *National Survey of Family Income and Expenditure in 2009*; OECD calculations.

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If the revenue foregone by introducing a lower VAT rate for food were instead used to finance an earned income tax credit (EITC), an in-work benefit for low-income earners, the gains would be better-targeted on low-income earners. For example, if the EITC were gradually phased out by an income of 6 million yen, it would provide an annual benefit of 60 000 yen to households with income below 2 million yen (case 1 in Figure 2.9). Alternatively, if the EITC were more concentrated among low-income households by phasing it out by 4 million yen, it would provide an annual benefit of 134 000 for households below 2 million yen (case 2). In both cases, the spending for an EITC would match the amount of revenue that would have been lost by introducing a 5% consumption tax rate for food. Although Japan has been considering the introduction of an EITC, there is concern about the lack of transparency about income, particularly among the self-employed. Under the 2012 reform of social security and taxes, identification numbers for taxpayers and those contributing to social security were to be introduced in mid-2014 and put into use in 2015. However, the introduction was delayed until 2016. The numbers will be important to enhance transparency about income and facilitate the introduction of an EITC, as well as a reduction in the wage income deduction in the personal income tax (see below).

Broaden the tax base for personal income tax, which would have positive effects on social cohesion

Personal income tax revenue in Japan is low because of a narrow base. Indeed, less than half of the estimated 260 trillion yen in personal income in FY 2014 is taxable (Table 2.4). *First*, deductions for wage income and public pension benefits reduce taxable

Table 2.4. **Japan's personal income tax base is narrowed by a range of deductions**

Trillion yen based on the FY 2014 budget

Personal income = 260 trillion yen (of which, wages – 210 trillion yen; pension benefits – 30 trillion yen; income from business/real estate – 20 trillion yen)

Deductions = around 140 trillion yen

Deductions for expenses (about 80 trillion yen)		Income deduction (60 trillion yen)		
		Personal exemptions (30 trillion yen)	Other (about 30 trillion yen)	
Wage income deduction (62 trillion yen)	Public pension deduction, etc. (14 trillion yen)	Basic deduction (18 trillion yen) Spouse deduction (5 trillion yen) General allowance for dependents (2 trillion yen) Special allowance for dependents (19-22) (1 trillion yen) Allowance for elderly dependents (1 trillion yen) Other (3 trillion yen)	Exemption for social insurance premiums (26 trillion yen) Exemption for life insurance premiums (2 trillion yen) Other (2 trillion yen)	Personal income tax base (110 trillion yen) Personal income tax (11.7 trillion yen)[1]

1. Tax payments are further reduced by a tax deduction of 0.7 trillion yen for home mortgage payments and dividends.

Source: Ministry of Finance.

income by around 80 trillion yen, nearly a third of personal income. *Second*, a number of income deductions further lower taxable income by around 60 trillion yen.

For a four-person household with a single worker earning the average wage, Japan's personal income tax base is narrowed by deductions amounting to 60.5%, the fourth highest in the OECD (Table 2.5). The largest deduction is for wage income, set at 31% of personal income regardless of household type. This deduction, which was introduced in 1913, has been steadily expanded, partly to equalise the tax burden with the self-employed, who appear to avoid a significant portion of their tax liability compared to wage earners (Government Tax Committee, 2010). This underlines the need for greater transparency about the income of the self-employed, in part through the effective use of taxpayer identification numbers once they are introduced in 2016. The income exemption, which is at least 650 000 yen ($5 530) is thought to be larger than employment expenses (such as newspapers, books and clothing), which have been estimated at 360 000 yen on average (Government Tax Committee, 2010).

Table 2.5. **Japan's personal income tax deductions are more generous than in other countries**

A. Married household with two children with one worker earning the average wage (per cent of income)

	Basic deduction	Spouse deduction	Child-rearing deduction	Deduction for social insurance premium	Wage income exemption	Others	Total deduction
Japan	**7.8**	**7.8**		**13.9**	**31.0**		**60.5**
United States	41.3		16.1				57.4
Germany	36.0			13.8	2.2	0.2	52.2
United Kingdom	26.6						26.6
Netherlands							0.0
Sweden	3.3						3.3

B. Single household earning the average wage (per cent of income)

	Basic deduction	Spouse deduction	Child-rearing deduction	Deduction for social insurance premium	Wage income exemption	Others	Total deduction
Japan	**7.8**			**13.9**	**31.0**		**52.7**
United States	20.6						20.6
Germany	18.0			14.1	2.2	0.1	34.4
United Kingdom	26.6						26.6
Netherlands							0.0
Sweden	3.3						3.3

Source: OECD (2014b).

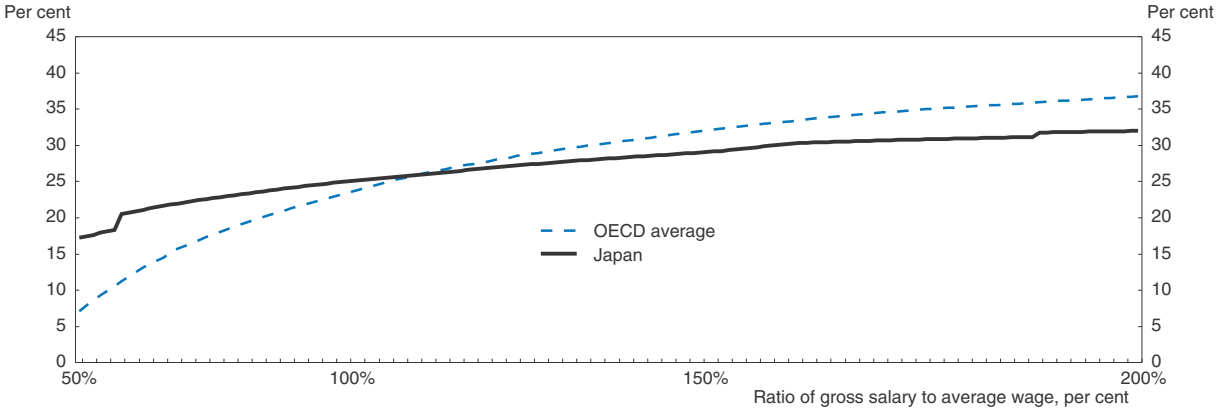
Making the tax system more progressive by reducing the burden on low-income households

Broadening the base of the personal income tax would make Japan's progressive tax rates more effective in reducing inequality. Under the current tax system, the tax wedge is significantly higher than the OECD average for low-income families with children (Figure 2.10). Moreover, it is relatively flat across the income distribution.

One of the largest deductions is for spouses, which exempts second earners' income up to 1.03 million yen and allows them to be claimed as a dependent by the main earner.

Figure 2.10. **Japan's tax wedge is high for low-income households**

Tax wedge[1] as a per cent of total earnings for a married couple with two children in 2013



1. Includes the income taxes and social security contributions paid by workers and their employers and the family benefits that workers receive in the form of cash transfers as a share of total earnings.

Source: OECD (2014b).

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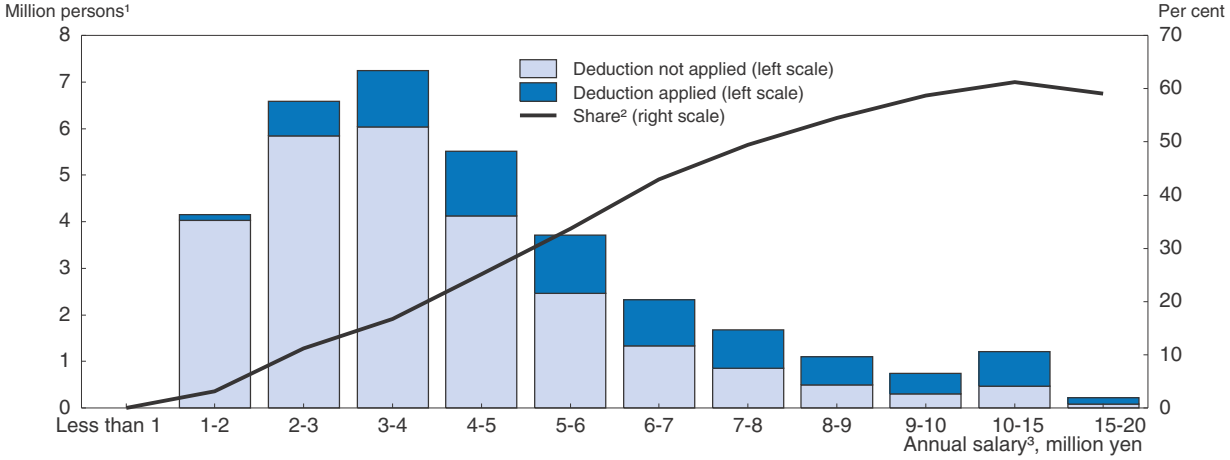
This deduction, which amounts to around 5 trillion yen (1% of GDP), reduces female labour supply by encouraging women to work part-time. Moreover, the spouse deduction benefits higher-income households; the share using the deduction rises to more than half at annual incomes above 8 million yen, compared to only 10% for incomes below 3 million yen (Figure 2.11). One reason may be that spouses in low-income households work full-time as they need the income. Deductions focused on high-income households reduce the redistributive power of the personal income tax system. While the Japan Revitalisation Strategy states that the spouse deduction will be discussed, it does not commit to any reform. Finally, personal income tax receipts are reduced by almost 0.7 trillion yen (6% of

Figure 2.11. **The spouse income deduction mainly benefits higher-income individuals**



1. The graph excludes those who do not pay personal income tax.
2. Individuals claiming the spouse deduction as a percentage of the total number of individuals, including those who are not eligible for the spouse deduction, such as those who are not married.
3. Annual salary of individuals.

Source: Government Tax Committee (2014).

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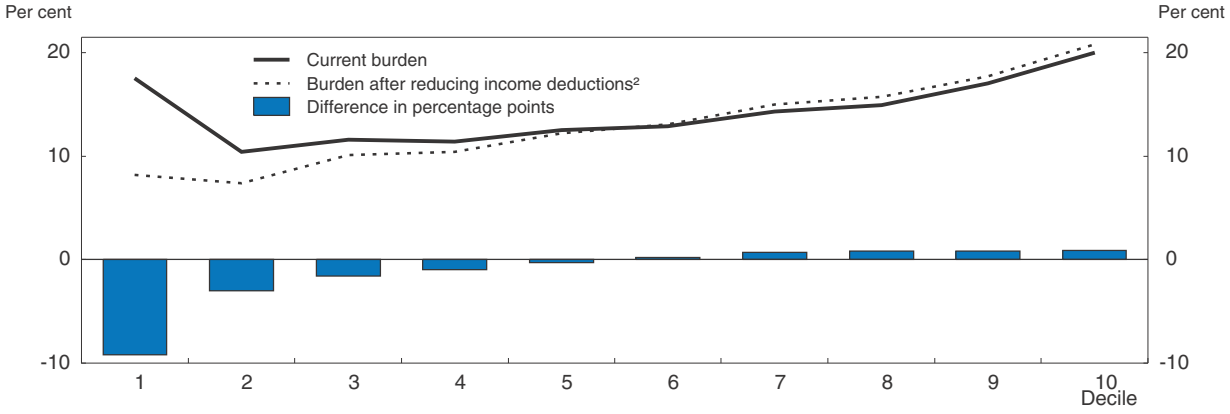
the total) by tax deductions for housing loans and dividends, which again primarily benefit higher-income households.

Reducing deductions could significantly alleviate the tax burden for low-income households. For example, if the spouse deduction, along with the basic deduction and allowances for dependents for personal income and local inhabitant tax were abolished, and replaced by a tax credit distributed evenly across the distribution to offset tax and social security contributions, the tax and social security burden of the lowest income decile would be reduced by nearly 10 percentage points (Figure 2.12). Decreases in the tax burden in the lower half of the income distribution would be offset by slightly higher burdens for the upper half. Targeting the tax credit at lower-income households would have an even larger impact on income distribution. In addition, reducing tax deductions for housing loans and dividends would broaden the tax base, while enhancing the redistributive impact of personal income taxes. It is also important to implement more fundamental reform, such as reducing the deduction for wage income. As for the EITC, this requires enhancing transparency about the income of the self-employed.

Figure 2.12. **Reducing income deductions would lower the tax burden on low-income households**

Tax and social security payments as a percentage of household income[1]



1. Tax and social security payments (personal income and local inhabitant tax and contributions to health, long-term care, pension, and employment insurance) in 2009 are divided by household income, which includes salary and business income as well as income from rent, interest, dividends, public and person pension benefits, livelihood subsidies and childcare allowances. This is based on a household panel survey from 2009.
2. The basic allowance, spouse deduction and all allowances for dependants in the personal income and local inhabitant tax are abolished. The resulting income tax revenue is evenly divided among households as a tax credit (186 000 yen), which is assumed to be used to reduce their social security burden.

Source: Doi and Park (2011); OECD calculations.

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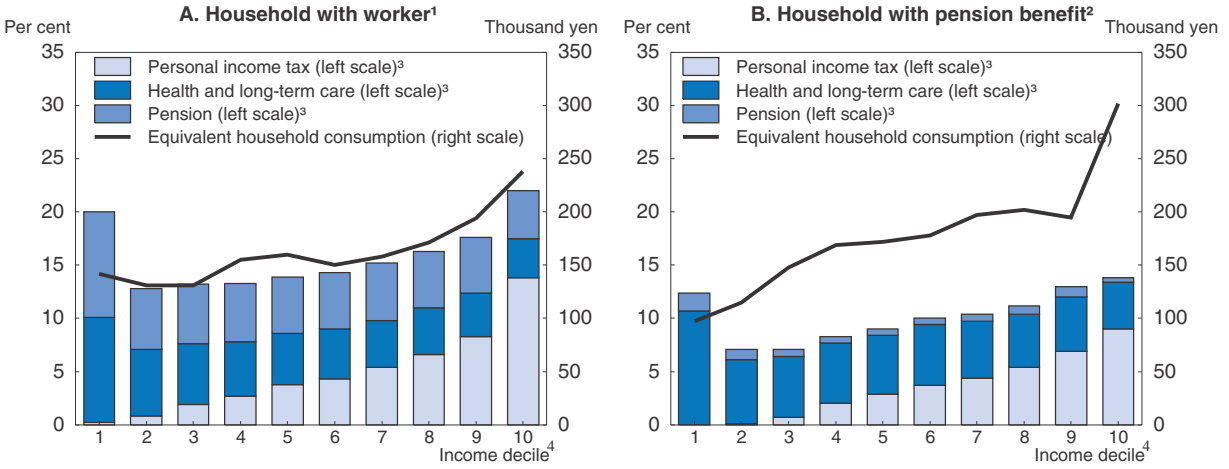
Reducing transfers from young to old

As noted above, the tax and benefit system transfers income from the working-age population to the elderly. One reason is that the deduction for pension income – which amounts to nearly half of pension benefits – is even more generous than that for wage income (Table 2.4).[6] In addition, pension contributions are deducted from the personal income tax base. Comparing consumption levels in "pension households" (more than half of income from pensions) to that in "worker households" (more than half of income from wages or business income) reveals a lack of fairness between generations (Figure 2.13). The consumption of pension households exceeds that of worker households beginning in the

Figure 2.13. **Consumption is higher in households receiving pension income**



1. "Household with worker" refers to households in which more than half of its income comes from salary or business income.
2. "Household with pension benefit" refers to households in which more than half of its income comes from pension benefits.
3. As a per cent of household income.
4. Based on equivalised household income for the entire sample. The sample includes around 20 000 households.

Source: Tajika and Yashio (2008).

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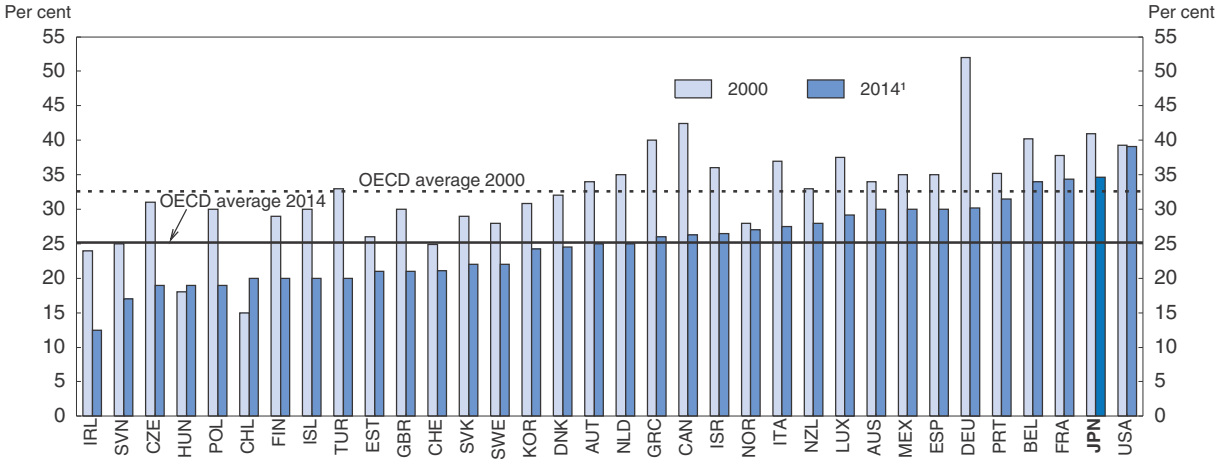
third decile, reflecting the fact that the tax and social security burdens of worker households are double those of pension households. Increasing the taxation of pension benefits would contribute to generational fairness (Ihori, 2010). It would also promote efficiency by reducing the tax burden on the working-age population, thereby encouraging them to work and save.

Cutting corporate income taxes

In 2014, Japan reduced its combined (national and local governments) corporate income tax rate from 37%, the second highest in the OECD, to 34.6%. Moreover, it plans to cut the rate further to 32.1% in FY 2015 and 31.3% in FY 2016 to promote growth while broadening the base. This initiative is intended to "raise companies' profitability by spreading the tax burden more widely and reducing the burden on companies with profit-earning power" (Ministry of Finance, 2015). The economic benefits of the tax cuts have been questioned as business investment has remained sluggish despite record profit levels and already high levels of cash holdings (Chapter 1). Nevertheless, each point of reduction in the combined corporate tax rate could boost investment by 0.4%, although the impact will be reduced by base broadening (De Mooij and Saito, 2014). It could thus help unlock the large cash reserves of Japanese firms (Chapter 1). Moreover, a number of studies have found that lower corporate tax rates increase inflows of foreign direct investment and total factor productivity growth (OECD 2007, Schwellnus and Arnold, 2008 and Arnold et al., 2011). Even after the cut to 31.3% in FY 2016, the combined corporate tax rate will remain above the OECD average of 25% (Figure 2.14). Given the fiscal situation, it is essential that the rate cuts be revenue neutral by broadening the tax base. The priorities in this regard are to abolish the lower tax rate for SMEs and reduce the generosity of the tax depreciation allowance, which exceeds economic depreciation (OECD, 2010).

Figure 2.14. **Japan's corporate income tax rate is still among the highest in the OECD**



1. Japan 2014 data are from Japan's Ministry of Finance and this rate is applied from October of 2014. The rate is to be cut further to 32.1% in FY 2015 and 31.3% in FY 2016.

Source: OECD, *Tax Database;* MOF, *International Comparison of Combined CIT Rate*.

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Environment-related taxes

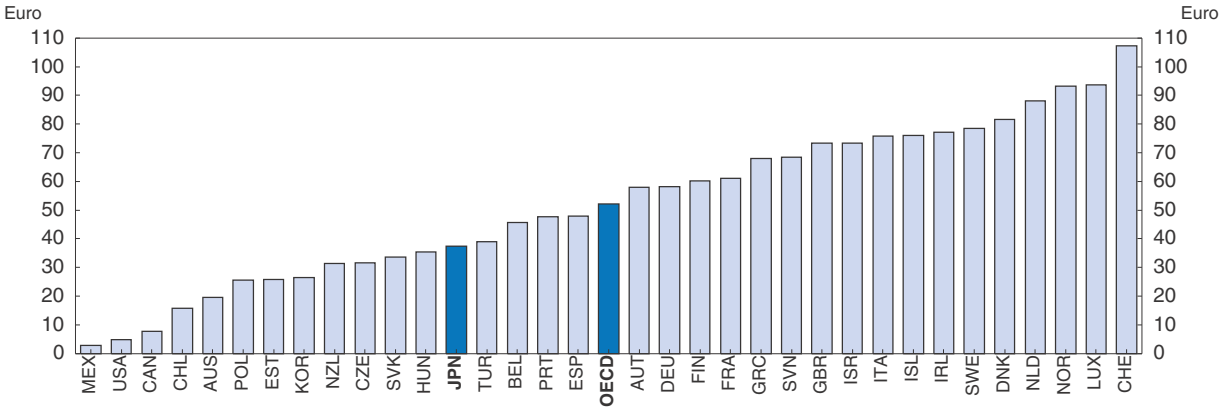
Japan's economy has long been characterised by relatively high energy efficiency and low greenhouse gas (GHG) emissions. Indeed, emissions were below the OECD average from 1990 to 2010 on both on a per capita basis and relative to GDP. However, the closure of Japan's nuclear power plants resulted in a sharp spike in the carbon intensity of Japan's energy mix since 2011. The 2009 objective of reducing GHG emissions by 25% from their 1990 level was revised in 2013. The new target calls for cutting emissions by 3.8% from their 2005 level, implying a 3% rise from the 1990 level. Raising environmental taxes would boost revenue while helping to reduce GHG emissions and achieve other environmental objectives, such as reducing pollution (2013 *OECD Economic Survey of Japan*). Japan has taken steps in this regard, notably by introducing the Tax for Climate Change Mitigation, which is increasing the existing tax on petroleum and coal in three steps in 2012, 2014 and 2016, with the revenues earmarked for renewable energy and energy conservation. However, there is room for further increases as taxes on energy use are still below the OECD average (Figure 2.15).

Controlling spending while fostering socially-inclusive growth

General government spending, excluding interest payments and social security outlays, in Japan, was the ninth lowest in the OECD in 2013, suggesting limited scope for spending cuts other than in social security. One possibility, though, is public investment, which fell from more than 7% of GDP in the 1980s to 3.9% by 2011. Following the Great East Japan Earthquake in 2011, reconstruction spending boosted public investment to an estimated 4.3% of GDP in 2014. With 23 trillion yen (4.7% of GDP) already spent on reconstruction, the downward trend in public investment could resume. At the same time, it is important to sustain Japan's growth potential through productive public investment, which requires closing unnecessary infrastructure to reduce maintenance costs. According to the government, maintenance costs, which accounted for around half of total investment in FY 2010, will exceed the current level of all public investment by FY 2037, thus crowding out new investment projects (Ministry of Land, Infrastructure and Transport, 2010). Public investment should concentrate on projects with the highest

Figure 2.15. **The average effective tax rate on energy use in Japan is still low compared to Europe**

EUR per tonne of carbon dioxide (CO2) on 1 April 2012[1]



1. July 2012 for Australia.

Source: OECD (2013c).

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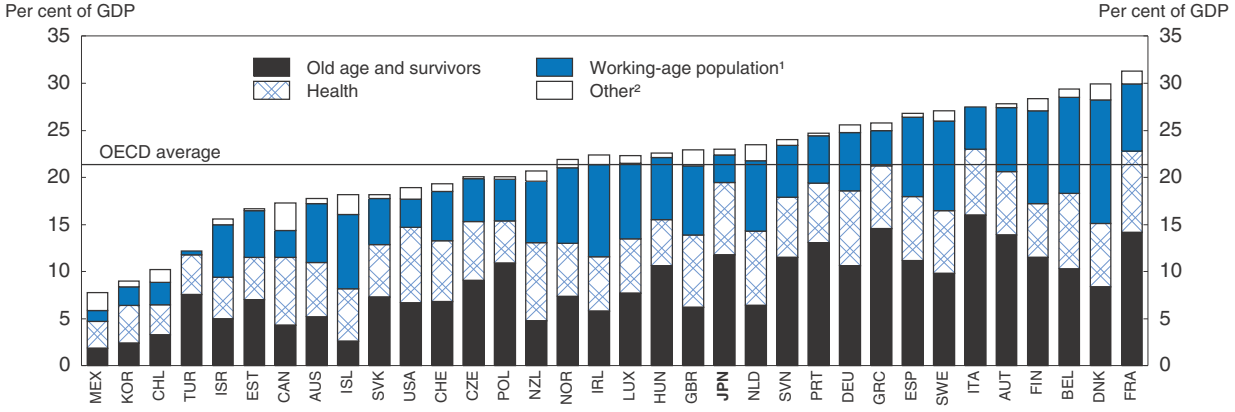
returns, which are usually found in urban areas. The allocation should thus be shifted away from its focus on promoting regional development by investing in poorer rural areas.

Local government is another source of potential savings. The central government should contain local spending, given that half of local government deficits are funded by the central government's general account. In addition, the supplementary tax transfers to local governments that were launched in FY 2009, around 1.1 trillion yen on average, should be phased out.

Given that the increase in government expenditures is driven by the rise in social security spending from 12% of GDP in 1990 to 24% in 2013 (Figure 2.1), social security reform is the priority. The share of social spending allocated to programmes focused on the elderly – pensions, long-term care and health, which rises sharply with age – is more than four-fifths, the second highest in the OECD (Figure 2.16). The upward pressure on spending

Figure 2.16. **Public social spending in Japan is concentrated in health and elderly-related outlays**

In 2011



1. The OECD categorises social expenditure into nine categories. Social expenditure for the working-age population includes family benefits, active labour market programmes, unemployment benefits and incapacity benefits.
2. The "Other" category includes housing and other social areas.

Source: *OECD Social Expenditure Database.*

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is likely to continue as the proportion of the population over age 65 is projected to increase from 24% in 2012 to 30% in 2025, keeping it the highest in the OECD. Consequently, the ratio of working-age persons to elderly will fall further from 2.4 to 1.8. Based on planned reforms, public social spending is projected to rise from 22.8% of GDP in FY 2012 to 24.4% in FY 2025, with the cost borne by the central and local governments (Table 2.6).

Table 2.6. **Social security spending projections**

	FY 2012		FY 2020[2]				FY 2025[2]			
			Without reform		With reform[1]		Without reform		With reform[1]	
	Trillion yen	Per cent of GDP	Trillion yen	Per cent of GDP	Trillion yen	Per cent of GDP	Trillion yen	Per cent of GDP	Trillion yen	Per cent of GDP
Total benefits	**108.6**	**22.8**	**131.8**	**23.6**	**134.4**	**24.1**	**144.8**	**23.7**	**148.9**	**24.4**
Pension	54.0	11.4	58.5	10.5	-	-	60.4	9.9	-	-
Healthcare	34.6	7.3	46.1	8.3	46.9	8.4	53.3	8.7	54.0	8.9
Long-term care	8.4	1.8	13.1	2.3	14.9	2.7	16.4	2.7	19.8	3.2
Childcare	4.9	1.0	5.8	1.0	-	-	5.6	0.9	-	-
Others	6.6	1.4	8.4	1.5	-	-	9.0	1.5	-	-
Total contributions	**103.9**	**21.1**	**126.8**	**22.7**	**129.5**	**23.2**	**142.1**	**23.3**	**146.2**	**23.9**
Premium payments	61.4	12.9	75.3	13.5	76.5	13.7	83.9	13.7	85.7	14.0
Government	42.5	9.0	51.6	9.2	52.9	9.5	58.3	9.5	60.5	9.9
Of which:										
Pension[3]	13.0	2.6	13.2	2.4	-	-	13.7	2.2	-	-
Healthcare[3]	15.7	3.0	21.1	3.8	21.4	3.8	25.2	4.1	25.5	4.2
Long-term care	4.5	1.0	7.3	1.3	8.4	1.5	9.2	1.5	11.1	1.8

1. Includes the new spending measures planned in the comprehensive social security reform, such as the provision of high-level hospital and in-home care and the reduction of payments for health insurance premiums.
2. The GDP growth rate is based on the Cabinet Office's "prudent scenario" announced in January 2012. The Ministry of Health, Labour and Welfare assumes an annual nominal growth rate of 1.7% after FY 2023.
3. The figures for FY 2012 are calculated by using the ratio of each to government outlays reported in Ministry of Health, Labour and Welfare (2012).

Source: National Institute of Population and Social Security Research (2014); Ministry of Health, Labour and Welfare (2012).

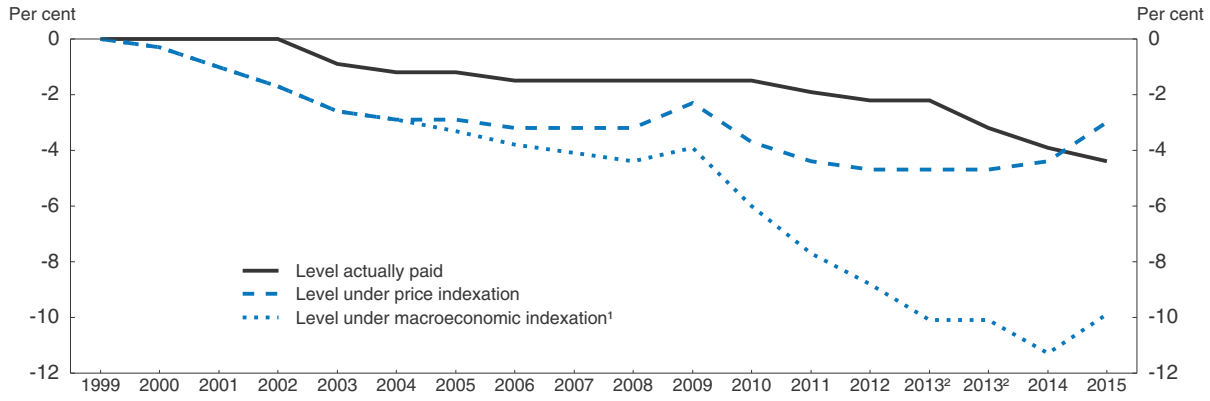
Pension reform

Pension spending is projected to fall from 11.4% of GDP in FY 2012 to 9.9% in FY 2025, despite population ageing, thanks to the 2004 pension reform (Table 2.6). The reform introduced "macroeconomic indexation", which adjusts pension benefits based on changes in the number of contributors and life expectancy, and hikes the contribution rate from 13.6% in FY 2004 to 18.3% by FY 2017. In other words, the benefit level is to adjust to the contribution schedule so as to achieve financial balance. Macroeconomic indexation, which would reduce benefits by 0.9% on average each year through FY 2025, is in addition to price indexation, which adjusts pension benefit levels based on the consumer price index. Macroeconomic indexation should be allowed to operate fully, even with deflation, to limit the government's future pension sustainability.

However, actual pension benefits are substantially higher than implied by the two indexation methods. *First*, the price indexation of benefits was suspended in the early 2000s in the context of deflation. Consequently, pension benefits fell only 2% between FY 1999 and FY 2012, rather than the 5% implied by price indexation (Figure 2.17). In 2012, the government decided to eliminate the overpayment of pension benefits in three steps by FY 2015. Nevertheless, excess pension payments were a cumulative 9 trillion yen (1.8% of

Figure 2.17. **Trends in pension benefit levels**

Percentage change relative to 1999



1. Macroeconomic indexation implies that price indexation is fully implemented.
2. There were two revisions in 2013 (April and October).

Source: Nakazawa et al. (2014).

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2014 GDP) over FY 2000-14. *Second*, with pension benefits above the level implied by price indexation, macroeconomic indexation was not implemented, resulting in an additional 12 trillion yen of pension overpayments over FY 2000-14. In sum, total excess pension payments amounted to 21 trillion yen (4.3% of GDP) (Nakazawa et al., 2014).

The share of the population contributing to the mandatory basic pension has fallen from 85% in FY 1990 to 61% in FY 2013, far below the 80% necessary to maintain the current system. The decline suggests a loss of confidence in the future of the public pension system, which has seen its reserve fund decline faster than projected. There are three levers to ensure the sustainability of the pension system: raising the pension eligibility age, increasing contributions and reducing pension benefits. However, benefits are already low despite the overpayment discussed above. Indeed, the average gross replacement rate (as a share of average lifetime earnings) of Japan's public pension scheme is 35.6% at the average wage, compared to the OECD average of 40.6%. Moreover, including mandatory private schemes (which Japan does not have), the OECD average rises to 54.0% (OECD, 2013b). In addition, the government's 2014 projections show the replacement rate falling further, from the current average of 62.7% (by the Japanese calculation) to as low as 42% by mid-century in some cases (Table 2.7).[7] As for boosting the contribution rate beyond what is already planned, it could further reduce the number of persons contributing to the pension system, while weakening work incentives by raising the tax burden.

The best option is thus to increase the pension eligibility age, as it would lower spending, raise the labour participation of older persons and reduce intergenerational transfers, which favour current pension recipients (Sutherland et al., 2012). The pension eligibility age is now 65 for men (63 for women) for the basic pension and 61 for men (60 for women) for the Employees' Pension Insurance (EPI). Although the age for the EPI is to be raised to 65 by 2025 for men and 2030 for women, it will remain relatively low compared to Japan's life expectancy, which is now 83.4 years, the world's longest. Accelerating the increase in the eligibility age to 65 and raising it further – through a link to longevity – would help ensure the sustainability of the pension system and improve intergenerational equality and have a positive effect on economic growth (Kashiwase et al., 2012).

Calculations based on government simulations suggest that raising the pension eligibility and retirement ages from 65 to 68 in FY 2033 would have a strong positive impact on pension benefits (Table 2.7). The simulations show the impact of raising the pension eligibility age on the replacement rate, assuming a fixed amount of total pension spending. In cases C and E, the replacement rate would be around 63% (including the impact of macroeconomic indexation) in 2050, matching the current replacement rate. However, the replacement rate would fall to around 50% if the pension eligibility age were to remain at 65. If the eligibility age were increased further to 70 in FY 2035, the replacement rate would rise to around 72%, allowing scope to reduce pension benefits. In the slower growth scenarios (cases G and H), replacement rates are markedly lower, showing the importance of output growth in sustaining the public pension scheme. Finally, the decision to increase the share of the Government Pension Investment Fund held in equities from 25% to 50%, equally split between domestic and foreign shares, while reducing the share of government bonds, should lift the return, thereby helping to improve the sustainability of public pensions.

Table 2.7. **Raising the pensionable age leads to a large increase in the replacement rate**

Per cent

Cases[1]	Real GDP growth rate		Replacement rate[2] (%) in 2050 for pension eligibility age of:		
	FY 2014-23	FY 2024 onward	65 years	68 years	70 years
Case C	1.1	0.9	51.0	63.9	72.5
Case E	1.1	0.4	50.5	63.3	71.8
Case G[3]	0.2	-0.2	42.0	52.8	60.0
Case H[4]	0.2	-0.4	41.9	52.7	59.8

1. The table shows four of the eight simulations done by the Ministry of Health, Labour and Welfare (2014b). Total pension benefit payments are fixed, resulting in variations in the replacement rate.
2. Pension benefit, including the impact of macroeconomic indexation, as a percentage of final earnings. The replacement rate was 62.7% in FY 2014.
3. For the retirement age of 65, the replacement rate is for 2058.
4. For the retirement age of 65, the replacement rate is for 2054.

Source: Ministry of Health, Labour and Welfare (2014b and 2014c); OECD calculations.

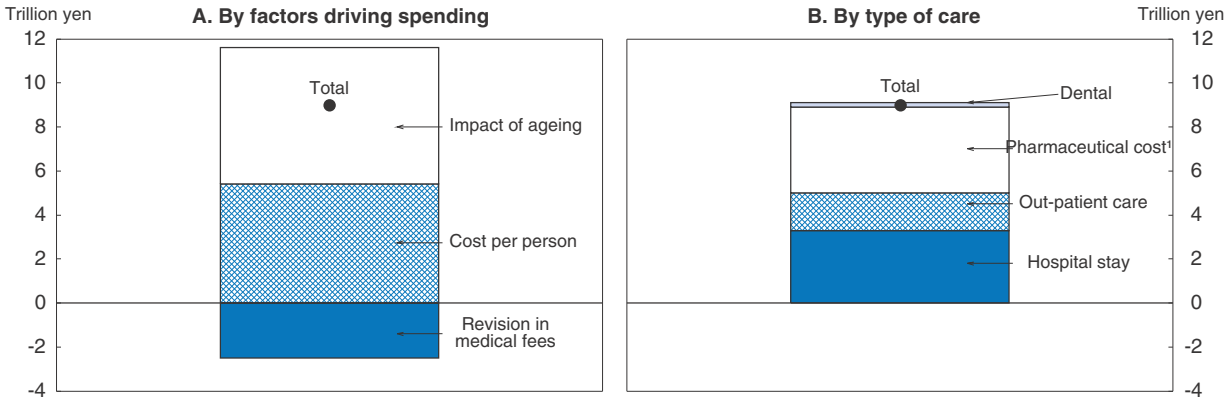
Health and long-term care reform

Health spending has been increasing at a 2.2% annual rate over FY 2000-12, while nominal GDP has been falling at a rate of -0.6%. Consequently, health spending has risen from 7.6% of GDP to 10.3% in 2012, surpassing the OECD average of 9.3%. Increased health spending is driven in almost equal measure by population ageing and increasing costs per person, reflecting more intensive care and the rising cost of drugs and medical devices (Figure 2.18). These two factors have been partially offset by cuts of around 3% in medical fees in 2002 and 2006. Population ageing alone could increase healthcare spending by some 3½ per cent of GDP by 2030 (Nozaki, et al., 2014).

Significant cuts in medical fees in the revisions that take place every two years would run counter to the government's pledge to upgrade the quality of services covered by public health insurance. *First*, the government has speeded up its review of new drugs, narrowing Japan's "drug lag" caused by a slow approval process compared to the United States and Europe (Jones, 2009). The Pharmaceuticals and Medical Devices Agency (PMDA), which is responsible for approving new products, has been greatly expanded. Review times have

Figure 2.18. **Health spending has increased due to ageing and more intensive care**

Increase in trillion yen between FY 2000 and FY 2012



1. Includes only pharmaceuticals sold at pharmacies. Those sold elsewhere are included in the other categories.

Source: Ministry of Health, Labour and Welfare, *National Health Expenditure*; Ministry of Internal Affairs and Communication, *Demographic Statistics*; OECD calculations.

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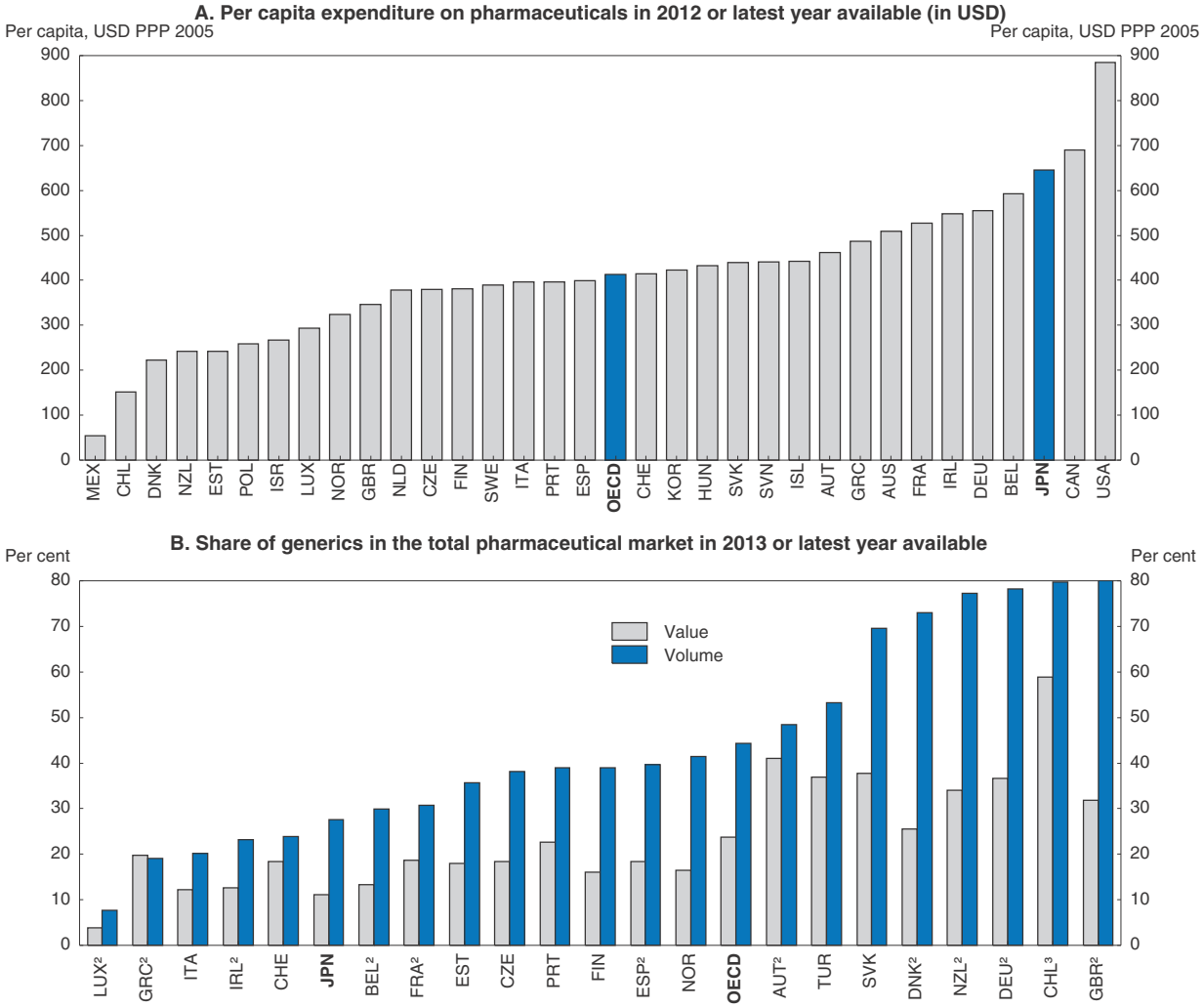
been cut in half and the number of new pharmaceuticals approved increased from 75 in FY 2008 to 138 in FY 2013. *Second*, the traditional practice of lowering the price of pharmaceuticals every two years has been changed, at least for high-tech products. Instead, their price can be maintained throughout the life of the patent.

Such measures are positive for Japanese consumers and promote R&D in health sciences. They are consistent with the Revitalisation Strategy, which calls for reforms "to revitalise the healthcare industry". However, accelerating the introduction of expensive new pharmaceuticals and treatments into public health insurance would boost health spending by the government, which already accounts for 82% of total health spending. On the other hand, leaving new treatments outside of public health insurance limits their availability due to restrictions on "mixed billing": patients who combine new medicines or treatments that are not included in public insurance with services that are included must pay not only the cost of the additional treatments but also the cost of services normally covered by public insurance. The government will introduce an optional insurance scheme to give patients faster access to new treatments not covered by the universal public insurance, thereby promoting the health industry, while avoiding an additional financial burden on public finances.

The goal of revitalising healthcare must be balanced with the need to reduce spending on pharmaceuticals, which accounted for 44% of the rise in health spending over FY 2000-12 (Figure 2.18). At $645 per capita in 2012, Japan's per capita consumption of pharmaceuticals is the third highest in the OECD and 56% above the OECD average (Figure 2.19). The rapid growth in spending on pharmaceuticals is driven by population ageing and the low market penetration of generic drugs. Indeed, generics accounted for only 28% of the pharmaceutical market in 2013 in volume terms, well below the OECD average of 44% (Panel B). The government wants to raise the share to around 34% by FY 2017, which would reduce health spending by 0.4 trillion yen (Ministry of Finance, 2014). If the share of generics in Japan were to reach the US level of 84%, and their price reduced by 10%, pharmaceutical spending could be cut in half (Ikegami, 2014). The sales of generics should be increased by requiring pharmacies to fill prescriptions using generics when they

Figure 2.19. **Pharmaceutical consumption per capita is high in Japan, reflecting less use of generic drugs**[1]



1. Includes medical non-durables.
2. Reimbursed pharmaceutical market.
3. Community pharmacy market.

Source: OECD, *Health Statistics*.

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are available and moving towards making it the standard for reimbursement for every prescription (Jones, 2009).

Limiting the growth of public health spending also requires reducing hospital stays, which accounted for 36% of the rise in total health spending over FY 2000-12 (Figure 2.18). Japan stands out for its exceptionally long hospital stays, which averaged 31.2 days in 2012, almost four times the OECD average (Table 2.8). Long hospital stays reflect the provision of long-term care in hospitals; the average stay for curative care is substantially lower at 17.5 days (although still double the OECD average). Indeed, only about half of hospital patients in acute-care beds receive healthcare, with the remainder just receiving help with daily living at most (Tsutsui et al., 2015). Shifting patients not needing healthcare to home-

Table 2.8. **International comparison of healthcare shows room for cost savings in Japan**

In 2012 or latest year available

	Average total hospital stay[1]	Average hospital stay for curative care[1]	Total number of hospital beds[2]	Number of acute-care beds[2, 3]	Number of long-term care beds[2, 3, 4]	Number of beds in long-term care facilities[2, 4]	Number of doctor consultations per capita per year
Japan	**31.2**	**17.5**	**13.4**	**7.9**	**2.7 (11.1)**	**6.0 (25.0)**	**13.0**
OECD average	8.4	7.4	4.8	3.3	0.6 (3.8)	7.7 (48.5)	6.7
Highest country	31.2	17.5	13.4	7.9	3.2 (27.4)	13.5 (72.2)	14.3
Lowest country	3.9	3.9	1.6	1.5	0.0 (0.0)	2.4 (17.7)	2.7

1. In days.
2. Per 1 000 population.
3. In hospitals.
4. The numbers in parentheses show the number of beds per 1 000 population aged 65 and over.

Source: OECD, *Health Database*.

based care or specialised institutions would sharply lower costs, given the higher cost of hospitals, reflecting the requirements for medical staff and equipment.

The number of hospital beds per capita in Japan is also the highest in the OECD (Table 2.8). In 2014, the government required each prefecture to project the number of hospital beds needed in the future by category and to shift excess beds to other functions. Shifting long-term beds to long-term care facilities would also help ensure adequate long-term care, with the number of elderly receiving long-term care rising by 8% a year. Indeed, long-term care facilities in Japan have only half as many beds, relative to the elderly population, as the OECD average (Table 2.8). The central government should provide sufficient incentives for prefectural governments to meet their target. The length of hospital stays by prefecture is positively correlated with the number of "excess beds", as defined by the difference between the actual number and the benchmark level set by each prefecture, following central government guidelines. The planned transfer of National Health Insurance from municipal to prefectural governments should help in this regard.

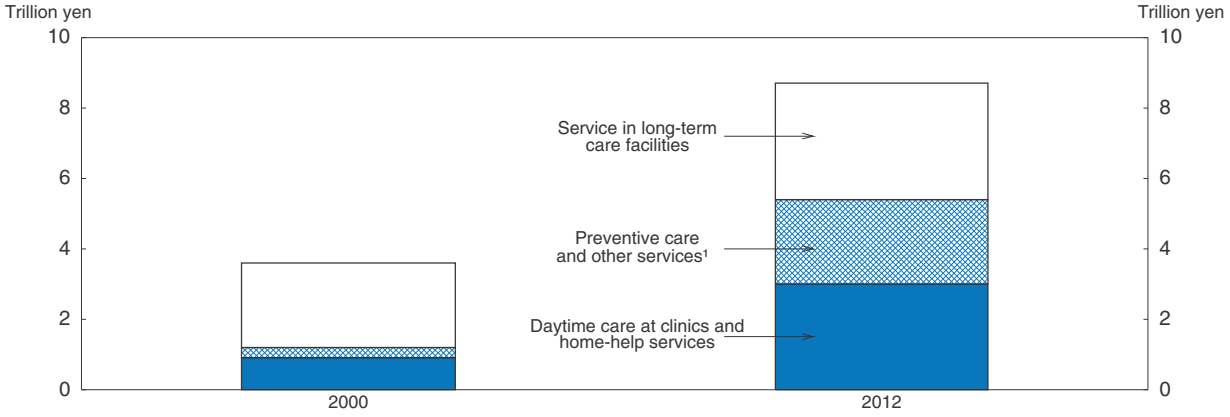
Setting aside the issue of long-term care in hospitals, the length of hospital stays for curative care in Japan is the longest and the number of acute-care hospital beds the highest in the OECD (Table 2.8). This suggests shifting further from a fee-for service system to a diagnosis-related group approach. In 2003, Japan introduced a case-mix based payment, the Diagnosis Procedure Combination (DPC), which sets an overall fee according to the illness, while promoting the standardisation of treatment and length of hospital stay. The DPC needs to be made more effective by increasing the coverage of hospitals and illnesses and basing fees on the most efficient hospitals. Finally, efficiency in the hospital sector would be promoted by abolishing the rule limiting the direction of hospitals and clinics to medical doctors and relaxing restrictions on equity finance.

Shifting away from fee-for-service would also help reduce the number of doctor consultations per person, which is double the OECD average (Table 2.8). In addition, it would be useful to increase co-payments, especially for people aged 70 or more, most of whom now pay only 10% (except those who earn as much as the working-age population and thus pay the standard 30% co-payment rate). Indeed, a government survey found that only half of the population age 75 and over found the co-payment to be burdensome. While the low co-payment increases the quantity of out-patient care, it has little positive effect on patients. One study compared the behaviour of 69-year-olds, who normally pay a 30% co-payment, with 70-year-olds, who pay only 10%. It found increased outpatient and

inpatient care for 70-year-olds, indicating that demand is price sensitive. However, the increased healthcare for the 70-year-olds had little impact on mortality and other health outcomes (Shigeoka, 2014), suggesting a need for higher co-payment rates, while taking account of the implications for equity. Co-payments as a share of health spending in Japan are below the OECD average (Nozaki et al., 2014). The increase in the co-payment rate to 20% for persons aged 70-74 who reached age 70 after April 2014 is a step in the right direction.

Long-term care spending has shown the fastest growth among social programmes, with outlays rising at a 7.6% annual pace since the introduction of long-term care insurance in FY 2000 (Figure 2.20). The number of persons receiving care reached 12.8% of the elderly population in 2011, matching the OECD average. The long-term care premium, which is paid by persons aged 40 and over, has increased sharply. For those over age 65, the average premium has risen by 71% since FY 2000.

Figure 2.20. **Long-term care expenditure has more than doubled in 12 years**



1. Other services include short-stay service, rental of welfare equipment and fee for home repair, etc. Preventive care services started in FY 2006.

Source: Ministry of Health, Labour and Welfare, *Survey of Actual Condition of Long-term Care Benefits* in FY 2000 and FY 2012.

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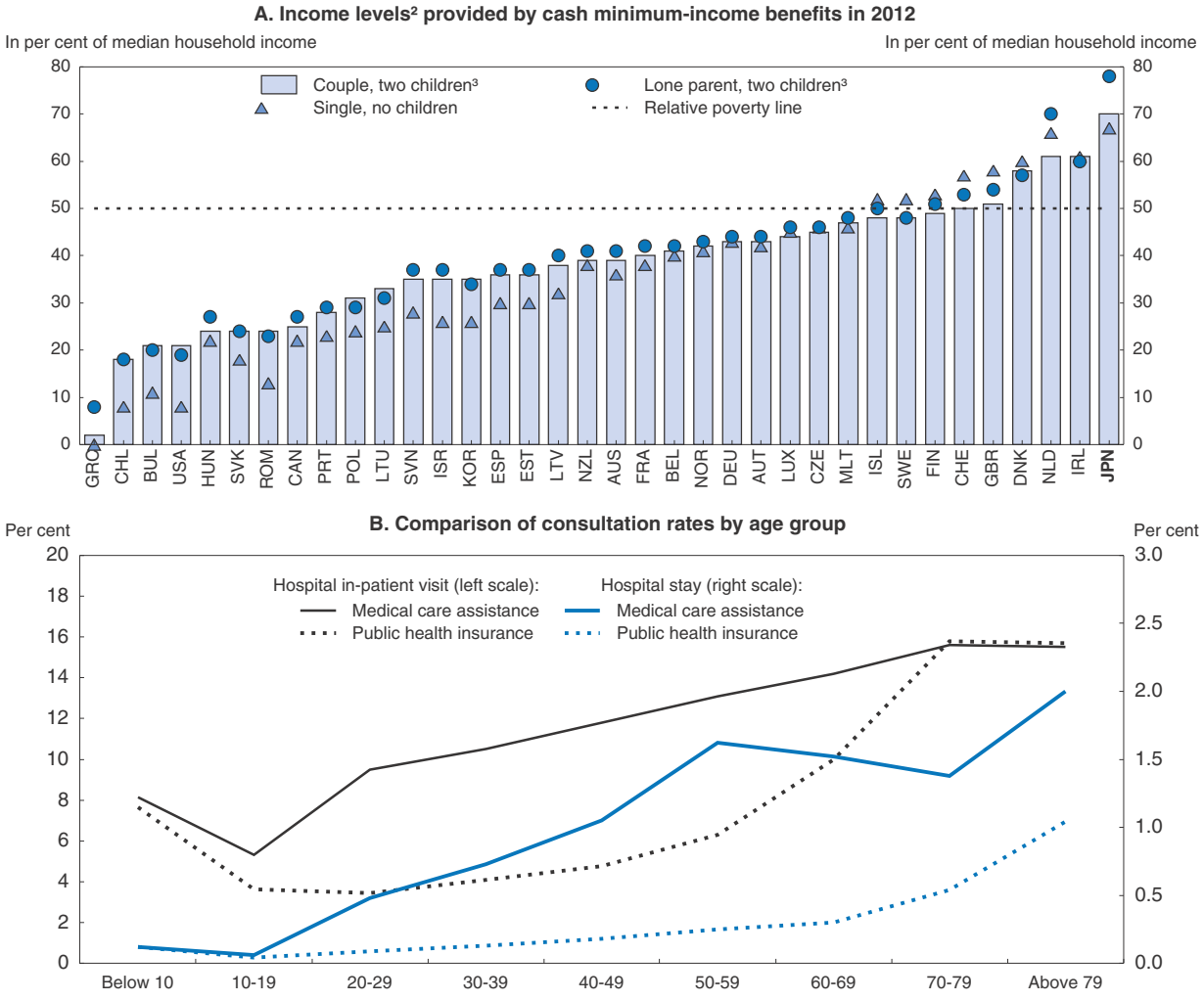
The number of care recipients will rise rapidly as the share of the population over age 75 increases, making it crucial to contain costs. More than 80% of the increased spending comes from the first two categories of "daytime care at clinics and home-help services" and "preventive care and other services", which together rose more than four times over FY 2000-12. To contain spending, the government decided to increase co-payments to 20% and raise the payment ceiling by 19% to 44 000 yen ($375) per household per month from October 2015. However, the reforms are applied only to the elderly who earn as much as the working-age population, who are likely to be relatively few among those receiving long-term care. Further increasing the co-payment is essential given the high price elasticity, especially for less-intensive services. One option would be to follow the example of other countries with long-term care insurance, such as Germany and Korea, which restrict insurance coverage to older persons with more severe needs for care (MOF, 2014).

Minimum-income benefit reform

Japan's tax and social security benefit system mainly redistributes income from the working-age population to the elderly through social insurance systems. Support aimed at the working-age population is only 3% of GDP, well below the OECD average of 6%. The key

social welfare policy is the Basic Livelihood Protection Programme (BLPP), which provides a minimum standard of living to impoverished persons who meet the eligibility criteria, while promoting self-reliance. The BLPP is a last-resort measure that provides cash and a package of in-kind benefits to those living under the absolute poverty line. The number of recipients has risen by 34% since 2008, reaching its highest level since 1951, which may reflect a higher number of non-regular workers and elderly persons receiving the benefit. The level of benefits is very generous at 67% to 78% of the average wage, depending on household type (Figure 2.21). Indeed, the level of benefits is the highest in the OECD and would be even higher if it included all of the in-kind benefits offered to BLPP recipients.

Figure 2.21. **The Basic Livelihood Protection Programme provides generous in-kind and cash benefits**[1]



1. The results from the OECD tax-benefit model are shown on an equivalised basis (square root of household size).
2. Income level includes all relevant cash benefits (social assistance, family benefits, housing-related cash support) for a family with a working-age head, no other income sources and no entitlements to primary benefits such as unemployment insurance. However, it excludes in-kind benefits such as free healthcare, subsidised transport, free school meals and subsidised childcare and water. Benefits are net of any income taxes and social contributions.
3. Calculations for families with children assume two children aged 4 and 6 and do not include childcare benefits and costs.

Source: OECD, *Tax-Benefit Models*; Ministry of Health, Labour and Welfare.

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However, there are a number of problems with the BLPP. *First*, the public assistance rate, at only 1.7% of the population, reflecting strict eligibility conditions, is inadequate given the 16% relative poverty rate. Lower benefits that are spread more widely to poor households, while limiting moral hazard problems, would be more effective in reducing relative poverty. *Second*, the BLPP weakens work incentives due to the high effective tax rates on persons leaving the BLPP to accept full-time employment. For those who can earn the average wage, the rate is around 85%, the highest in the OECD for a single parent (Table 2.9), reflecting the loss of benefits and the impact of taxes and social contributions. Consequently, once people join the programme, they tend to receive benefits for a long time. *Third*, the BLPP's medical assistance, which ensures free provision of healthcare without any co-payment, encourages greater use of health services. Indeed, working-age people with medical assistance are hospitalised five times more than those belonging to the public health insurance, who make co-payments of 30%, although this may also reflect a poorer health status (Figure 2.21, Panel B). Moreover, those with medical assistance receive out-patient care at hospitals more than twice as frequently.

Table 2.9. **The effective tax rate on moving to employment is high in Japan**[1]

Household with two children (aged 4 and 6) in 2012

	Single parent Earnings as a share of average worker[2]			Two parents, one of whom works Earnings as a share of average worker[2]		
	50%	67%	100%	50%	67%	100%
Japan	85.0	87.9	84.3	85.0	87.9	85.4[3]
OECD average	58.2	56.5	54.8	69.5	66.2	59.8
Highest country	98.8	87.9	84.3	113.5	97.7	97.3
Lowest country	-11.7	2.7	20.3	-11.7	2.0	16.1

1. The results are from the OECD tax-benefit model. The effective tax rates measure the extent to which taxes and benefits reduce the financial gain of moving into work. The estimates here are for a person who is not employed, but not entitled to unemployment benefits. They are eligible for social assistance and other means-tested benefits.
2. With a full-time job.
3. Japan is the second highest in the OECD.

Source: OECD, *Tax-Benefit Models*.

Japan should reduce the generous BLPP payments and introduce policies to encourage work and eliminate the poverty trap. In August 2013, some measures were taken to reduce the disincentive for work by BLPP recipients.[8] In addition, an in-work benefit introduced in July 2014 is a step in the right direction. When recipients leave the BLPP, the government provides a lump-sum benefit that is calculated based on the amount they earned while receiving public assistance. For working-age people, it is also important to provide training and job support for those with weak vocational skills. The top priority, though, is the EITC, which would make it advantageous to leave the BLPP for employment. Indeed, some countries have negative effective tax rates on returning to work, thanks to an EITC (Table 2.9). An EITC is also needed to reduce the large number of working poor. Japan's share of households in relative poverty despite having two or more workers is the second highest in the OECD.

The issue of regional inequality

While a few major urban centres are expected to continue gaining population, many regions and cities are likely to experience even faster ageing and population decline than

Japan as a whole. Smaller towns and rural communities face a particularly uncertain future. Given current demographic trends, such strains are unavoidable and will lead to increased economic disparities in Japan, a country that has hitherto had relatively low inter-regional disparities. An increasing concentration of population – and in particular, of working-age population – will complicate the provision of essential public services, which can be costlier and more difficult to sustain in very low-density areas. Japan already has the sixth-largest disparity in access to services in the OECD (OECD, 2014g).

The Japan Revitalisation Strategy emphasises the potential for compact urban development to contribute to the agglomeration of jobs in cities (OECD, 2012b). It also envisages more compact development of small towns and rural settlements, with a view to sustaining some degree of economically viable settlement in depopulating areas by concentrating population around key service centres. This is a long-term undertaking but it already raises difficult questions for the authorities, who have to decide where to replace or upgrade essential infrastructure and where to "downsize" local communities. It also underscores the painful trade-offs that may lie ahead when balancing growth and equity objectives.

Breaking down labour market dualism

In addition to fiscal measures, it is essential to attack the root causes of relative poverty and inequality, notably labour market dualism. To enhance employment flexibility and reduce labour costs, firms increased the number of non-regular workers from 8.8 million (20.2% of total employment) in 1994 to 19.6 million in 2014 (37.4%). Non-regular workers, a category that includes fixed-term, part-time and dispatched workers (i.e. workers sent from private employment agencies), earn relatively little: in 2012, 77% of non-regular workers were paid less than 2 million yen ($17 700) a year, compared to 9.9% of regular workers. According to a 2010 government survey, 49% of non-regular workers are the main earner in their households (Ministry of Health, Labour and Welfare, 2011a). In a household where only the husband works, the relative poverty rate is 5% if he is a regular worker, but 35% if he is non-regular. If the wife is also a non-regular worker, the relative poverty rate stays high at 19% (Table 2.10).

Table 2.10. **Non-regular worker households suffer from a high poverty rate**

Poverty rate by employment status of spouses[1]

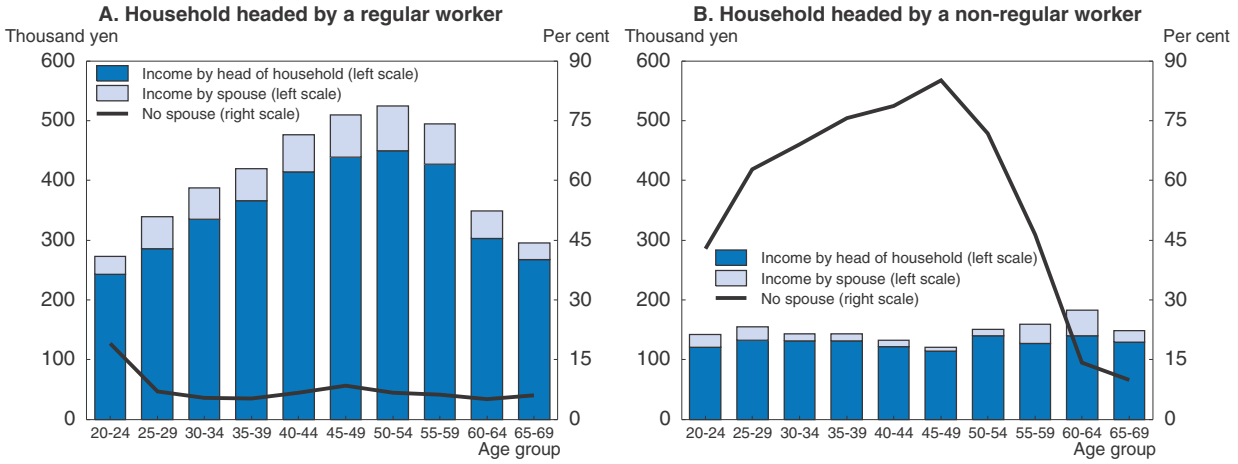
Husband (%)	Wife (%)			
	Regular	Non-regular	Self-employed	Not employed
Regular	1	3	3	5
Non-regular	7	19	16	35
Self-employed	5	16	13	23
Unemployed	8	38	21	47

1. The data are based on a survey of nearly 10 000 people.
Source: Higuchi (2013).

On an hourly basis, earnings of non-regular workers are around 60% of regular workers (excluding bonus payment). Non-regular workers are penalised by their relatively short tenure in firms, given the importance of seniority in setting wages. Consequently, the income gap between households headed by regular workers and those headed by non-regular workers increases over time (Figure 2.22). Indeed, the average income of households headed by regular workers in the 45-49 age group was four times higher than

Figure 2.22. **Significant income gaps between regular and non-regular workers**

Monthly wage income[1]



1. The survey covers households with two or more members.

Source: Ministry of Health, Labour and Welfare (2014a).

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for those headed by a non-regular worker. Furthermore, the lower income of non-regular workers discourages marriage; the share of non-regular workers in the 45-49 age group who are single is ten times higher than the share for regular workers. A government survey found that around a third of young people in their 20s and 30s who want to marry but remain single said they did not marry as they do not have enough money for married life. A similar proportion stated they do not want children because of concern about a lack of income (Cabinet Office, 2013).

Besides lower income and higher relative poverty, non-regular workers receive less coverage by social security. One of the reasons firms hire non-regular workers is to reduce their social security contributions, which amount to 16% of total labour cost. Around one-third of non-regular workers are not covered by employment insurance and about one-half are excluded from Employees' Pension Insurance and firm-based health insurance (Ministry of Health, Labour and Welfare, 2010). By law, employees who work more than 20 hours per week and are employed for more than 31 days must be covered by employment insurance. In addition, more than 20% and 5% of unmarried part-timers have no public pension (basic or employee-based) and health insurance, respectively (Table 2.11). This creates a serious social problem as such persons will receive less family support in their old age, given that they have less chance of marriage. In contrast, 99.5% of regular workers are covered by EPI and employees' health insurance (Ministry of Health, Labour and Welfare, 2011b). Finally, 70% of part-timers do not receive bonus payments and 90% do not receive the lump-sum retirement benefits paid by firms. A 2014 law extended Employees' Pension Insurance and health insurance coverage to another 250 000 part-timers.[9] It will be important to effectively enforce the law and further extend the mandated coverage.

The negative consequences of labour market dualism are aggravated by the limited mobility between regular and non-regular employment, which is not a stepping-stone to regular employment. Studies show that those who begin their careers as non-regular workers have less success later in life in terms of career stability, incomes and marriage (Higuchi and Sakai, 2005). While the government offers subsidies to firms that shift non-

Table 2.11. **Unmarried part-time workers have receive less social security coverage**

Per cent of part-time workers covered by social security in 2011

	Not covered by unemployment benefits	Not covered by health insurance	Not covered by public pension[1]	Covered by employee's health insurance[2]	Covered by employee's pension[2]
Total	**44.1**	**2.2**	**8.7**	**68.2**	**59.7**
Married		0.6	2.6	72.1	69.3
Unmarried		5.4	21.6	60.3	39.4
Male	**54.2**	**4.7**	**15.3**	**49.2**	**32.7**
Married		0.8	1.5	40.9	34.5
Unmarried		9.5	32.3	59.8	30.2
Female	**39.8**	**1.1**	**5.9**	**76.2**	**71.1**
Married		0.6	2.9	82.0	80.3
Unmarried		2.5	14.0	60.7	45.9

1. Not covered by the basic pension, nor the employee pension.
2. Covered either through their own job or that of their spouse.

Source: Ministry of Health, Labour and Welfare (2011), *Comprehensive Actual Condition Survey on Part-timers, 2011*.

regular workers to regular status, progress is slow as firms enjoy the advantages of employment flexibility and lower wages costs stemming from hiring non-regular workers.

It is crucial to address the issue of labour market dualism, which affects a large share of the population and creates inequality and poverty. It also has important implications for government spending as non-regular workers' lack of social insurance coverage is driving up the use of social assistance and the problem will become worse in the future. The government has introduced measures aimed at limiting non-regular employment by restricting the use of dispatched workers and limiting the length of fixed-term contracts. However, experience in some OECD countries shows that simply restricting the use of non-regular workers may not necessarily prompt firms to hire more regular workers (OECD, 2008). Instead, a comprehensive strategy is needed to reduce the factors that encourage firms to hire non-regular workers, and break down labour market dualism by increasing the coverage of social insurance and upgrading training programmes for non-regular workers and reducing effective employment protection for regular workers, in particular by increasing transparency (2013 *OECD Economic Survey of Japan*). The government has made some efforts in this regard by expanding vocational training for workers, including non-regular workers, and is extending the coverage of EPI and health insurance. The government has also introduced a legal ban on discrimination against non-regular workers and is promoting the transition to regular worker status through subsidies to firms.

Ambiguous criteria about the conditions under which workers can be dismissed on economic grounds increases effective employment protection for regular workers (OECD, 2015). The Labour Contract Law states that "a dismissal shall, where it lacks objectively reasonable grounds and is not considered to be appropriate in general societal terms, be regarded as a misuse of the right and therefore be renounced". But the law does not specify the meaning of the word "appropriate", leaving an exact determination in each specific dispute to individual judges. The government has established "Employment Guidelines" that detail judicial decisions regarding dismissal and other labour disputes. These guidelines are disseminated in National Strategic Special Zones to help global companies aiming to start businesses in Japan and new firms. The guidelines are also applicable nationwide. However, the government has no intention to introduce a financial settlement system that enables employers to dismiss workers by just paying money to them.

Box 2.3. **Main policy recommendations to reduce government debt while promoting social cohesion**

Develop a credible fiscal consolidation plan

- Maintain the current medium and long-term fiscal targets.
- Set out a detailed and credible plan to constrain government spending and raise revenues so as to achieve the target of a primary surplus by FY 2020.
- Strengthen the fiscal policy framework to maintain confidence in the fiscal situation and prevent a run-up in interest rates.

Increase government revenue, while promoting social cohesion

- Rely primarily on the consumption tax with a single rate and a broadening of the personal and corporate income tax base to boost government revenue, while raising environmental taxes.
- Improve the targeting of public social spending and introduce an earned income tax credit for low-income workers.

Limit government spending while fostering socially-inclusive growth

- Reform social security to limit spending increases, particularly in health and long-term care, by increasing efficiency and raising co-payments, while taking account of equity implications.
- Ensure the sustainability and intergenerational equity of the public pension scheme, primarily by increasing the pension eligibility age above 65 and fully applying macroeconomic indexation.
- Reform social assistance by reducing benefits and enhancing work incentives while expanding its coverage.
- Break down labour market dualism by increasing the coverage of social insurance and upgrading training programmes for non-regular workers and reducing effective employment protection for regular workers, in particular by increasing transparency.

Notes

1. After the end of each fiscal year at the end of March, each ministry and agency accounts for its actual expenditures and presents a statement of accounts to the Ministry of Finance (MOF) by the end of July. Based on these statements, the MOF aggregates the individual settlement of accounts and comes up with the settlement of total revenues and expenditures.
2. The OECD Secretariat projects budget balances on a general government basis and does not have a separate estimate for central and local governments. In addition, it projects on a calendar year basis, rather than for fiscal years, which begin on 1 April each year.
3. There are four measures in the FY 2015 tax reform: i) tax deduction of losses carried forward is reduced from a maximum of 80% of income to 65%; ii) the exclusion of dividends from gross profit is reduced to the share ownership ratio up to 25%; iii) pro-forma standard taxation for large corporations is increased; and iv) special tax measures, such as R&D incentives, are reduced.
4. Assuming that the debt ratio in remains around its current level of 230% of GDP, the size of the primary surplus necessary to stabilise the debt ratio would be around 3%, i.e. 230% * 1.3.
5. The share of the population that answered that their life is “hard” (“very hard” and “rather hard”) increased from 51% in 2001 to 60% in 2012. The share was 66% of households with children and 54% of elderly households (Ministry of Health, Labour and Welfare, *National Livelihood Survey 2012*).
6. The pension benefit exemption is guaranteed to be at least 0.7 million yen ($5 960) for those under age 65 and 1.2 million yen for those above age 65. The pension income deduction is more generous than salary income at every income bracket.

7. The replacement rate is defined as the monthly old-age pension benefit received at age 65 by a specified couple (the husband was covered by the Employees' Pension Insurance from age 20-59 and his wife is a dependent) divided by the average monthly disposable income (including bonuses) of working-age employees. If the replacement rate drops below 50% in the benchmark case, the law requires that macroeconomic indexation be terminated and pension benefits and contributions revised.
8. The working income deduction was changed: i) the fully deductible limit was raised from 8 000 yen per month to 15 000 yen; and ii) the deduction rate was changed from a range of 0 to 17.2% to a flat rate of 10%.
9. It expanded coverage to part-timers who: i) work more than 20 hours per week; ii) are paid more than 88 000 yen per month (about a third of the average wage); iii) have worked in the same firm for more than a year; iv) work in a company employing more than 500 people; and v) are not students.

Bibliography

Arnold, J., B. Brys, C. Heady, A. Johansson, C. Schwellnus and L. Vartia (2011), "Tax Policy for Economic Recovery and Growth", *Economic Journal*, Vol. 121.

Baum, A., M. Poplawski-Ribeiro and A. Weber (2012), "Fiscal Multipliers and the State of the Economy", *IMF Working Papers*, No. 12/286, Washington, DC.

Cabinet Office (2013), *Report on Research on Marriage and Family Formation*, Government of Japan, Tokyo.

Cabinet Office (2015), *Economic and Fiscal Projections for Medium to Long Term Analysis*, 12 February, Government of Japan, Tokyo (in Japanese).

Calmfors, L., (2011), "The Role of Independent Fiscal Policy Institutions", *Institute for International Economic Studies Seminar Papers*, No. 767, Stockholm University, Stockholm.

Checherita-Westphal, C., A. Hughes-Hallet and P. Rother (2012), "Fiscal Sustainability Using Growth-maximising Debt Targets", *ECB Working Papers*, No. 1472.

Congressional Budget Office (2009), *The Long-Term Budget Outlook*, US Congress, Washington, DC.

De Mooij, R. and I. Saito (2014), "Japan's Corporate Income Tax: Facts, Issues and Reform Options", *IMF Working Papers*, No. 14/138, Washington, DC.

Doi, T. and S. Park (2011), "Micro-simulation on the FY 2011 Package of Tax Revisions", *Keio/Kyoto Global COE Discussion Paper Series*, DP2011-001 (in Japanese).

Government Tax Committee (2010), *Personal Income Tax; Review Perspective*, Document 1, 9 November, Tokyo (in Japanese).

Guillemette, Y. and J. Strasky (2014), "Japan's Challenging Debt Dynamics", *OECD Journal: Economic Studies*, Vol. 2014/1, OECD Publishing, Paris.

Hagemann, R. (2010), "Improving Fiscal Performance Through Fiscal Councils", *OECD Economics Department Working Papers*, No. 829, OECD Publishing, Paris.

Higuchi, Y. (2013), "The Dynamics of Poverty and the Promotion of Transition from Non-Regular to Regular Employment in Japan: Economic Effects of Minimum Wage Revision and Job Training Support", *Japanese Economic Review*, Vol. 64, No. 2.

Higuchi, Y., and T. Sakai (2005), "Afterwards for Freeters: Jobs, Incomes, Marriage, and Childbirth", *Labour Issues*, No. 535 (in Japanese).

Ihori, T. (2010), "Overall Picture of Tax Reforms", in *How the Japanese Tax System Should be Reformed*, edited by T. Doi, Nihon Keizai Shinbunsya (in Japanese).

Ikegami, N. (2014), "Controlling Health Expenditures by Revisions to the Fee Schedule in Japan", in *Universal Health Coverage for Inclusive and Sustainable Development: Lessons from Japan,* edited by N. Ikegami, World Bank, Washington, DC.

International Monetary Fund (2009), *Fiscal rules – Anchoring Expectations for Sustainable Public Finance*, Washington, DC.

Jones, R. (2009), "Health-Care Reform in Japan: Controlling Costs, Improving Quality and Ensuring Equity", *OECD Economics Department Working Papers*, No. 739, OECD Publishing, Paris.

Kashiwase, K., M. Nozaki and K. Tokuoka (2012), "Pension Reforms in Japan", *IMF Working Papers*, No. 12/285, Washington, DC.

Ministry of Finance (2014), *Social Security 1: Overall, Health and Long-term Care and Childcare*, Documents for the Fiscal System Council, 8 December (in Japanese).

Ministry of Finance (2015), *Outline of FY 2015 Tax Reform*, Tokyo.

Ministry of Health, Labour and Welfare (2010), *Verification of Pension Financing in FY 2009*, Tokyo (in Japanese).

Ministry of Health, Labour and Welfare (2011a), *Comprehensive Research on Diverse Employment Formats 2010*, Tokyo (in Japanese).

Ministry of Health, Labour and Welfare (2011b), *Comprehensive Survey of Actual Conditions of Part-timers, 2011*, Tokyo (in Japanese).

Ministry of Health, Labour and Welfare (2012), *Projections on Social Security Benefits and Contributions*, Tokyo.

Ministry of Health, Labour and Welfare (2014a), *Annual Report on the Labour Economy*, Tokyo (in Japanese).

Ministry of Health, Labour and Welfare (2014b), *Provisional Calculations of the Current Situation and Projections of the Fiscal Balance of National Pensions and Welfare Pension Under Various Options*, Tokyo (in Japanese).

Ministry of Health, Labour and Welfare (2014c), *Range of Economic Assumptions for Verification of Pension Financing in FY 2014 (Related Document)*, December 2014, Tokyo (in Japanese).

Ministry of Land, Infrastructure and Transport (2010), *Annual Report on Land, Infrastructure, Transport and Tourism in Japan, 2009*, Tokyo (in Japanese).

Nakazawa, M., N. Kageyama, K. Toba and M. Takamura (2014), "Quantitative Analysis on Pension Financing and the Pensionable Age", *KIER Discussion Paper Series,* No. 1313, Kyoto Institute of Economic Research, Kyoto.

National Institute of Population and Social Security Research (2014), *Financial Statistics of Social Security in Japan 2012*, Tokyo.

Nozaki, M., K. Kashiwase and I. Saito (2014), "Health Spending in Japan: Macro-Fiscal Implications and Reform Options", *IMF Working Papers*, No. 14/142, Washington, DC.

OECD (2007), "Tax Effects on Foreign Direct Investment: Recent Evidence and Policy Analysis", *OECD Tax Policy Studies*, No. 17, OECD Publishing, Paris.

OECD (2008), *OECD Economic Survey of Spain*, OECD Publishing, Paris.

OECD (2009), *OECD Economic Survey of Japan*, OECD Publishing, Paris.

OECD (2010), "Tax Policy Reform and Economic Growth", *OECD Tax Policy Studies*, No. 20, OECD Publishing, Paris.

OECD (2011), *OECD Economic Survey of Japan*, OECD Publishing, Paris.

OECD (2012), *Compact City Policies, A Comparative Assessment*, OECD Publishing, Paris.

OECD (2013a), *OECD Economic Survey of Japan*, OECD Publishing, Paris.

OECD (2013b), *Pensions at a Glance, 2013*, OECD Publishing, Paris.

OECD (2013c), *Taxing Energy Use: A Graphical Analysis,* OECD Publishing, Paris.

OECD (2014a), *How's Your Life in Your Region? Measuring Regional and Local Well-being for Policy Making*, OECD Publishing, Paris.

OECD (2014b), *Taxing Wages 2014*, OECD Publishing, Paris.

OECD (2014c), "The Distributional Effects of Consumption Taxes in OECD Countries", *OECD Tax Policy Studies*, No. 22, OECD Publishing, Paris.

OECD (2015), *Back to Work Japan*, OECD Publishing, Paris.

Oshio, T. (2013), *Economics of Social Security*, Nippon Hyoron Sha, Tokyo (in Japanese).

Ruling Parties' Council on the Tax System (2014), *A Study on the Reduced Rate for the Consumption Tax*, Liberal Democratic Party and Komeito, Tokyo (in Japanese).

Shigeoka, H. (2014), "The Effect of Patient Cost Sharing on Utilization, Health and Risk Protection", *American Economic Review*, Vol. 104, No. 7.

Sutherland, D., P. Hoeller and R. Merola (2012), "Fiscal Consolidation: Part 1. How Much is Needed and How to Reduce Debt to a Prudent Level?", *OECD Economics Department Working Papers*, No. 932, OECD Publishing, Paris.

Schwellnus, C. and J. Arnold (2008), "Do Corporate Taxes Reduce Productivity and Investment at the Firm-level? Cross-country Evidence from the Amadeus Dataset", *OECD Economics Department Working Papers*, No. 641, OECD Publishing, Paris.

Tanaka, H. (2010), "Structure of Tax and Social Security Contributions and Social Security Benefits: for Reform of Tax and Social Security Systems", *Hitotsubashi University Discussion Paper*, No. 481, Tokyo (in Japanese).

Tajika, E. and H. Yashio (2008), "Reform of Personal Income Tax and Overall Reform of Tax and Social Security Contribution Using Tax Deductions", *Kikan Syakaihosyou Kenkyu*, Vol. 44, No. 3, National Institute of Population and Social Security Research, Tokyo (in Japanese).

Tsutsui, T., S. Higashino, M. Nishikawa and M. Otaga (2015), "Medical and Long-term Care Services Provided to Hospitalised Patients in Japan: Data Analysis from a 2012 National Survey". *Review of Administration and Informatics*, Vol.27, No. 2, University of Shizuoka.

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