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Table of contents

Executive summary **11**

Key policy insights **17**

Output growth has peaked, but is projected to continue at a moderate pace 22
Fiscal policy: short-term challenges and threats to long-run fiscal sustainability 26
The new fiscal targets and preparing for the 2019 tax hike 27
Ensuring long-run fiscal sustainability 29
Monetary policy and the financial sector 32
Recent developments in monetary policy 34
The financial sector: strong at present but emerging concerns 37
Sustaining labour inputs in the face of population ageing 39
Narrowing the productivity gap with leading OECD countries 44
Improving corporate governance in Japan 45
Improving the performance of SMEs 50
Green growth policies to improve well-being and promote sustainable growth 55
More ambitious climate policy would have many benefits 55
Japan needs to reform energy markets further to make the most of renewables 59
The scope for increasing carbon taxation is large 59
Bibliography 62
Annex 1.A. Osaka: meeting the challenges of sustaining growth and providing social services in the face of population ageing 66
Annex 1.B. Progress in structural reform 69

Chapter 1. Labour market reform to cope with a shrinking and ageing population **71**

Extending working lives 73
A reversal of falling employment rates for older persons since 2000 73
Japan's traditional labour market practices 75
Policies that have helped to lengthen working lives 78
The skills of older workers 81
Reforms to extend the careers of older persons 83
Reducing obstacles to the employment of women 91
Improving work-life balance 93
Providing high-quality, affordable childcare 96
Ensuring that women do not have to leave their jobs to care for elderly relatives 99
Reforming the tax system to remove disincentives to work for second earners 99
Enhancing women's role by reducing discrimination 101
Making greater use of foreign workers 107
Promoting inclusive growth by breaking down labour market dualism 110
Bibliography 115

Chapter 2. Meeting fiscal challenges in a rapidly ageing society **121**

Ensuring fiscal sustainability in Japan requires significant fiscal consolidation 125
Japan's new fiscal consolidation plan 126

A path to fiscal sustainability ... 127
Policies to control social spending while providing quality health and long-term care ... 130
Factors driving health and long-term care spending ... 130
More efficient use of healthcare resources ... 133
Ensuring adequate income for the elderly ... 140
Pension reform ... 140
Minimum income security in the rapidly ageing society ... 142
Policies to ensure sustainability of local government services ... 143
Improving the efficiency of local government administration ... 143
Ensuring sustainability of infrastructure investment and maintenance ... 146
Promoting compact cities to achieve economic, environmental and social benefits ... 148
Reinforcing the institutional framework for local land-use ... 148
Raising revenue and removing disincentives to employment ... 151
Further hikes in the consumption tax are needed ... 152
Broadening the personal income tax base and reducing labour supply distortions ... 154
Corporate income and capital taxation to promote inclusive growth ... 156
Increasing the use of environmental taxation ... 156
Bibliography ... 159
Annex 2.1. Long-term debt sustainability analysis ... 161

Tables

Table 1. Key reforms introduced since the launch of Abenomics ... 18
Table 2. Macroeconomic indicators and projections ... 24
Table 3. Possible shocks to the Japanese economy ... 26
Table 4. Illustrative annual fiscal impact of proposed reforms ... 28
Table 5. Implementation of OECD recommendations to achieve fiscal sustainability ... 32
Table 6. Chronology of major monetary policy measures and announcements since 2013 ... 33
Table 7. Implementation of OECD recommendations for monetary policy ... 37
Table 8. Basic Policy on Economic and Fiscal Management and Reform 2018 ... 41
Table 9. Employment rates by age and gender ... 43
Table 10. Implementation of OECD recommendations to support employment ... 44
Table 11. The impact of policies to boost employment on per capita GDP ... 45
Table 12. Implementation of OECD recommendations on corporate governance ... 49
Table 13. Implementation of OECD recommendations on SME policies ... 54
Table 1.1. Japan's lifetime employment system ... 77
Table 1.2. Lifetime employment was less prevalent in 2016 than in 2006 ... 78
Table 1.3. Measures affecting the employment of older persons ... 79
Table 1.4. Raising the pensionable age leads to a large increase in the replacement rate ... 85
Table 1.5. Targets set in the 2015 Fourth Basic Plan for Gender Equality ... 102
Table 2.1. Expenditure and revenue measures proposed by government to mitigate the impact of the 2019 consumption tax hike ... 127
Table 2.2. International comparisons show room for healthcare cost savings in Japan ... 133
Table 2.3. Hospital beds are in excess and there are significant mismatches in their functions ... 134
Table 2.4. Long-term care eligibility rate for persons aged 65 and older ... 139
Table 2.5. Elderly BLPP recipients face difficulty in becoming self-sufficient ... 143
Table 2.6. Larger cities achieved lower administrative costs through administrative reform ... 145
Table 2.7. Public infrastructure has an optimal scale of operation ... 148
Table 2.8. Japan's personal income tax deductions are more generous than in other countries ... 154

Table 2.1.1. Assumptions underlying the long-term debt simulations 162

Figures

Figure 1. Abenomics has contributed to faster output growth and higher inflation 17
Figure 2. Population ageing arrived early in Japan and continues at a rapid pace 19
Figure 3. Japan's labour force faces a significant decline 20
Figure 4. Japan's fiscal situation has deteriorated considerably since the early 1990s[1] 21
Figure 5. Well-being indicators for Japan give a mixed picture 21
Figure 6. Composition of Japan's exports by destination and product category in 2017 22
Figure 7. Key macroeconomic indicators 23
Figure 8. Underlying consumer price inflation has been trending up but remains below the 2% target[1] 26
Figure 9. A primary deficit is projected to continue through FY 2025 under current policies 27
Figure 10. Elderly-related social spending is projected to rise further 29
Figure 11. Japan's consumption tax rate is relatively low 30
Figure 12. Long-run simulation of Japan's fiscal balance and government debt 31
Figure 13. The run-up in central bank assets has been the largest in Japan 33
Figure 14. Reasons why firms do not pass on cost increases to sales prices 34
Figure 15. The yield curve has become flatter[1] 35
Figure 16. The Bank of Japan's net government bond purchases have slowed 35
Figure 17. Asset price trends in Japan have improved 36
Figure 18. The financial sector is contributing to the economic expansion 38
Figure 19. Net income is high, although net interest income is falling 39
Figure 20. Increased risk-taking by financial institutions is creating some concerns 40
Figure 21. Most firms have kept their mandatory retirement age at 60 42
Figure 22. Japanese women are under-represented in leadership positions 43
Figure 23. Labour productivity in Japan is more than a quarter below the top half of OECD countries 46
Figure 24. Share of firms with two or more independent directors 47
Figure 25. Divergent views of investors and companies 48
Figure 26. Perceived corruption in Japan was near the OECD average in 2017 49
Figure 27. The productivity gap between large firms and SMEs is wide in Japan 51
Figure 28. The productivity gap between SMEs and large firms is relatively wide in Japan 51
Figure 29. The firm entry rate in Japan is rising, but remains below other major economies 52
Figure 30. The amount of guaranteed loans has fallen along with the share guaranteed 53
Figure 31. Government credit guarantees for SMEs in Japan are exceptionally high 54
Figure 32. Green growth indicators 56
Figure 33. The carbon pricing gap in Japan is relatively large 60
Figure 34. Energy taxes are particularly low on coal 61
Figure 35. Prices for electricity in the industrial sector are high in Japan 61
Figure 1.1. Japan's labour force faces a significant decline 72
Figure 1.2. The employment rate of older persons in Japan has been trending up 74
Figure 1.3. Older Japanese have relatively high employment rates 75
Figure 1.4. The seniority-based wage system in Japan remains strong 76
Figure 1.5. The link between tenure and wages in Japan is one of the strongest in the OECD 76
Figure 1.6. The rise in the employment rate is linked to hikes in the pension eligibility age 78
Figure 1.7. Most firms have kept their mandatory retirement age at 60 80
Figure 1.8. Many workers become non-regular employees after reaching the age of 60 81

Figure 1.9. Older workers' use of skills at work in Japan is relatively low 82
Figure 1.10. Skills of older workers in Japan are well below those of younger workers 83
Figure 1.11. The projected replacement rate of Japan's public pension system is low 85
Figure 1.12. Participation in job-related training is low for older Japanese 88
Figure 1.13. Share of workers who find education and training useful for their job is low in Japan 89
Figure 1.14. Reasons why some inactive persons who wish to work do not search for jobs 90
Figure 1.15. Dual-income households now account for two-thirds of all households 91
Figure 1.16. Female employment has increased, but gender inequality remains high 92
Figure 1.17. Working hours in Japan have changed little during the past 30 years 93
Figure 1.18. Long working hours in Japan have negative consequences 94
Figure 1.19. The share of women remaining in the labour force after having children 96
Figure 1.20. Waiting lists remain long despite rising childcare capacity 97
Figure 1.21. Childcare capacity is limited in major urban areas 98
Figure 1.22. The number of workers leaving jobs in Japan to provide long-term care is rising 99
Figure 1.23. The spouse deduction negatively affects female labour participation and equality 100
Figure 1.24. Average tax rates tend to be higher on second earners than on individuals 101
Figure 1.25. Japanese women are under-represented in leadership positions 103
Figure 1.26. Japanese women are under-represented in certain areas of study and professions 104
Figure 1.27. The impact of education and tenure on the share of women in management 105
Figure 1.28. The share of the foreign-born population in Japan is one of the lowest in the OECD.... 107
Figure 1.29. Non-regular employment is concentrated among women 110
Figure 1.30. The wage gap between regular and non-regular workers is large 111
Figure 1.31. Japan has relatively strong employment protection for regular workers 113
Figure 2.1. Japan's government debt ratio is high, but interest payments are low 122
Figure 2.2. The run-up in central bank assets has been the largest in Japan 123
Figure 2.3. Population ageing has driven the rise in government spending 124
Figure 2.4. Variations across prefectures in the pace of ageing and fiscal capacity are large 124
Figure 2.5. Local governments and social security account for most of government spending 125
Figure 2.6. A primary deficit is projected to continue through FY 2025 under current polices 127
Figure 2.7. Long-run simulation of Japan's fiscal balance and government debt 128
Figure 2.8. Elderly-related social spending is projected to rise further 130
Figure 2.9. Health spending has increased due to ageing and more intensive care 131
Figure 2.10. Longer healthy life spans curb health costs and increase elderly employment 132
Figure 2.11. Excess beds tend to lead to greater hospitalisation costs 135
Figure 2.12. The use of generic drugs is low in Japan 136
Figure 2.13. More clinic doctors is associated with more intensive outpatient care 137
Figure 2.14. Long-term care premiums significantly vary across municipalities 140
Figure 2.15. A rising share of social assistance recipients are elderly 142
Figure 2.16. Cooperation within a prefecture improves the efficiency of municipal tax collection ... 144
Figure 2.17. Public capital stock is unevenly distributed by region and is rapidly ageing 146
Figure 2.18. Infrastructure maintenance costs per capita are higher in less populated prefectures..... 147
Figure 2.19. Compact cities can build exercise into daily life 149
Figure 2.20. Landowners are more difficult to locate in more aged regions 150
Figure 2.21. Japan's tax and social security burden is relatively low 152
Figure 2.22. Japan's consumption tax rate is relatively low 153
Figure 2.23. Japan's tax wedge is high for low-income households 155
Figure 2.24. Environmentally-related taxes are low in Japan 157

Figure 2.1.1. Long-term gross government debt simulations 162

Boxes

Box 1. Quantification of the impact of structural reforms 45
Box 1.1. The current framework for foreign workers in Japan 108
Box 2.1. The scope of Japan's unidentified landowner problem 151

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

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Basic Statistics of Japan, 2017

(Numbers in parentheses refer to the OECD average)*

LAND, PEOPLE AND ELECTORAL CYCLE					
Population (million)	126.5		Population density per km²	347.8	(35.8)
Under 15 (%)	12.2	(17.9)	Life expectancy (years, 2016)	84.1	(80.6)
Over 65 (%)	28.0	(16.8)	Men	81.0	(77.8)
Foreign (%)	1.6		Women	87.1	(83.2)
Latest 5-year average growth (%)	-0.2	(0.6)	Latest general election	October	2017
ECONOMY					
Gross domestic product (GDP)			Value added shares (%)		
In current prices (billion USD)	4 860		Primary sector	1.2	(2.5)
In current prices (trillion JPY)	545		Industry including construction	31.9	(27.0)
Latest 5-year average real growth (%)	1.2	(2.1)	Services	66.9	(70.5)
Latest 5-year per capita average real growth (%)	1.4	(1.5)			
Per capita (000 USD PPP)	43.3	(43.7)			
GENERAL GOVERNMENT Per cent of GDP					
Expenditure	38.3	(41.0)	Gross financial debt[a]	223.4	(110.1)
Revenue	35.4	(38.8)	Net financial debt[a]	126.9	(71.1)
EXTERNAL ACCOUNTS					
Exchange rate (JPY per USD)	112		Main exports (% of total merchandise exports)		
PPP exchange rate (USA = 1)	102		Machinery and transport equipment	58.8	
In per cent of GDP			Manufactured goods	11.3	
Exports of goods and services	17.8	(27.9)	Chemicals and related products, n.e.s	10.2	
Imports of goods and services	16.8	(27.5)	Main imports (% of total merchandise imports)		
Current account balance	4.0	(0.4)	Machinery and transport equipment	28.8	
Net international investment position	59.9		Mineral fuels, lubricants and related materials	21.1	
			Miscellaneous manufactured articles	13.8	
LABOUR MARKET, SKILLS AND INNOVATION					
Employment rate for 15-64 year-olds (%)	75.3	(67.8)	Unemployment rate, Labour Force Survey (age 15 and over) (%)	2.8	(5.8)
Men	82.9	(75.5)	Youth (age 15-24, %)	4.7	(11.9)
Women	67.4	(60.1)	Long-term unemployed (1 year and over, %)	1.0	(1.7)
Participation rate for 15-64 year-olds (%)	77.5	(72.1)	Tertiary educational attainment 25-64 year-olds (%)	51.4	(36.9)
Average hours worked per year	1 710	(1 744)	Gross domestic expenditure on R&D (% of GDP)	3.2	(2.4)
ENVIRONMENT					
Total primary energy supply per capita (toe)	3.4	(4.1)	CO_2 emissions from fuel combustion per capita (tonnes, 2016)	9.1	(9.1)
Renewables (%)	5.5	(10.2)	Water abstractions per capita (1000 m³, 2014)	0.6	
Exposure to air pollution (more than 10 µg/m³ of PM2.5, % of population, 2015)	98.1	(75.2)	Municipal waste per capita (tonnes, 2016)	0.4	(0.5)
SOCIETY					
Income inequality (Gini coefficient, 2015)	0.339	(0.313)	Education outcomes (PISA score, 2015)		
Relative poverty rate (%, 2015)	15.7	(11.7)	Reading	516	(493)
Median disposable household income (000 USD PPP, 2015)	22.4	(23.1)	Mathematics	532	(490)
Public and private spending (% of GDP)			Science	538	(493)
Health care	10.7	(8.8)	Share of women in parliament (%)	9.3	(28.7)
Pensions (2015)	9.7	(7.3)	Net official development assistance (% of GNI)	0.23	(0.38)
Education (primary, secondary, post sec. non tertiary, 2015)	2.7	(3.5)			

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.

a. 2016 data for Japan.

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

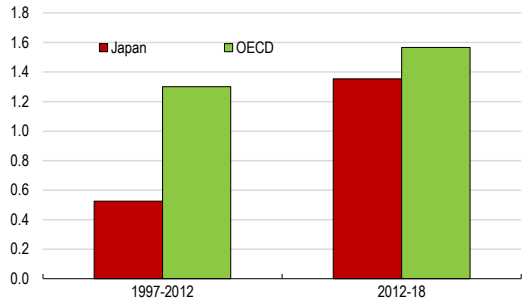
- *Growth has strengthened but Japan faces long-term challenges*
- *Output growth is projected to continue at a moderate pace*
- *Japan needs a detailed and concrete plan to ensure fiscal sustainability*
- *Reducing obstacles to employment*
- *Raising productivity is important to offset the impact of falling labour inputs*
- *Boosting well-being by improving the environment and slowing climate change*

Growth has strengthened but Japan faces long-term challenges

Japan's current economic expansion is its longest of the post-war era. The growth of output per capita has accelerated since 2012 to a rate close to the OECD area (Figure A), supported by the three arrows of Abenomics — a bold monetary policy, flexible fiscal policy and structural reforms. Persistent deflation has ended and the government budget deficit has fallen from 8.3% of GDP in 2012 to 2.4%.

Figure A. Japan's per capita output growth has accelerated

Annual average percentage change



Source: OECD Economic Outlook database.

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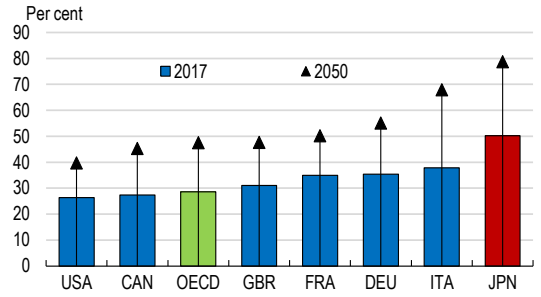
Japan faces the intertwined challenges of rapid population ageing and high government debt. Ageing is partly driven by long life expectancy. Half of the children born in Japan in 2007 are expected to live to the age of 107, which has major implications for the labour market. The number of elderly is projected to rise from 50% of the working-age population in 2015 to 79% by 2050, remaining the highest in the OECD (Figure B).

The increasing elderly population has driven a sharp rise in social spending since 1992. Twenty-seven consecutive years of budget deficits have driven gross government debt to 226% of GDP in 2018, the highest ever recorded in the OECD area. The government projects that population ageing will boost spending on health and long-term care by 4.7% of GDP by 2060. Measures to ensure the sustainability of Japan's social insurance programmes, as spending rises and the number of working-age persons falls from 2.0 per elderly to 1.3 by 2050, is a priority.

Figure B. Japan's population is projected to remain the oldest in the OECD in 2050



Note: Population aged 65 and older as a share of the population aged 20 to 64.
Source: OECD Demography and Population database.

StatLink http://dx.doi.org/10.1787/888933953088

Output growth is projected to continue at a moderate pace

Output growth has slowed since 2017, reflecting weaker exports as world trade decelerated (Figure C). Still, output growth is expected to remain close to ¾ per cent through 2020, as shortages of labour and capacity, combined with record-high profits, continue to support business investment and wages. The temporary effect of the planned hike in the consumption tax rate from 8% to 10% in October 2019 will be less than after the 2014 tax hike thanks to offsetting fiscal measures.

Figure C. The economy is projected to grow around ¾ per cent a year in 2019 and 2020

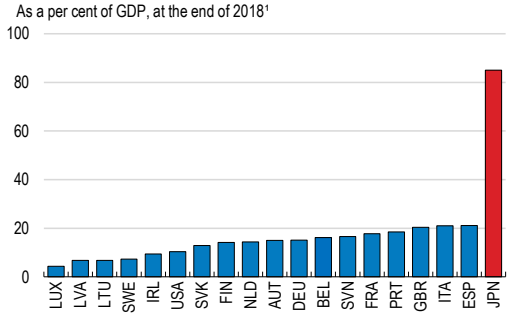
	2018	2019	2020
Gross domestic product	0.8	0.8	0.7
Private consumption	0.4	0.6	-0.1
Gross fixed capital formation	1.1	1.9	0.6
Exports	3.1	1.6	3.8
Imports	3.3	3.5	2.0
Unemployment rate	2.4	2.4	2.4
Consumer price index[1]	1.0	0.7	1.3
General government fiscal balance (% of GDP)	-2.4	-2.4	-1.9

1. Excluding the impact of the 2019 tax hike.
Source: OECD Economic Outlook database.

Global uncertainties weigh on the outlook. Trade tensions have clouded the outlook for businesses and risk disrupting investment and global value chains. Japan is also vulnerable to a slowdown in China's domestic demand. On the domestic side, wage growth is a major uncertainty. Larger increases in basic wages are important to sustain private consumption.

The Bank of Japan should maintain monetary easing until achieving its inflation target while taking account of risks and problems. Headline consumer price inflation has edged up from negative territory in 2016, but remains well below the 2% target. Under qualitative and quantitative easing, the central bank's holdings of government bonds have reached 85% of GDP (Figure D).

Figure D. Bank of Japan's holdings of government bonds have increased sharply



1. March 2019 for Japan, January for the United States and November 2018 for Sweden.
Source: OECD Economic Outlook database.

StatLink http://dx.doi.org/10.1787/888933953107

Japan needs a detailed and concrete plan to ensure fiscal sustainability

The government now aims to achieve a primary surplus by FY 2025. Due to lower-than-expected growth, repeated supplementary budgets and delays in raising the consumption tax from 8% to 10%, the FY 2018 benchmark for the primary defict was missed. Moreover, it was decided to use some of the additional revenue from the 2019 tax hike for new social spending. In this context, the FY 2020 target, set in 2010, is no longer realistic. Japan needs a comprehensive fiscal consolidation plan including specific spending cuts and tax increases, as well as an improved fiscal framework to ensure implementation of the plan. To reduce the government debt ratio to 150% of GDP by 2060, OECD estimates suggest a sustained primary surplus of 5% to 8% of GDP would be required.

Containing spending growth requires focusing on health and long-term care by making more efficient use of healthcare resources while providing high-quality care. Priorities for reform include taking long-term care out of hospitals and shifting its focus to home-based care, promoting greater use of generic drugs and improving preventive care. With Japan's population projected to fall by one-fifth to around 100 million by 2050, many parts of the country are facing depopulation. Efficiency would be increased by expanding the joint provision of local public services, including health and long-term care and infrastructure, across jurisdictions and developing compact cities.

Japan should rely primarily on the consumption tax to boost revenue as it is a relatively stable revenue source, is less harmful for growth and improves intergenerational equity. The current 8% rate is one of the lowest in the OECD. Achieving a sufficient primary surplus through the consumption tax alone would require raising the rate to between 20% and 26%, above the 19% OECD average. A hike in environmentally-related taxes from their relatively low level would also be beneficial. In addition, broadening the personal income tax base would raise revenue while reducing inequality and disincentives to work. Policies that encourage employment and output growth are crucial for fiscal sustainability.

Reducing obstacles to employment

The labour force will decline by one-fourth by 2050, assuming constant labour force entry and exit rates. Japan's traditional labour model – lifetime employment, a seniority-based wage system and mandatory retirement – is poorly suited to the era of 100-year lives, as it

discourages the employment of older persons and women, and labour mobility. Abolishing the right of firms to set mandatory retirement at 60 would increase employment and productivity as workers who are re-hired at age 60 are usually shifted to non-regular jobs with lower responsibilities and pay. It would also weaken the role of seniority in setting wages, which would benefit women in particular.

Women face obstacles to employment and are under-represented in leadership roles. For example, they account for only 10% of the members of the lower house of the Diet. Removing barriers to women requires policies to: *i)* improve work-life balance by strictly enforcing the new 360-hour annual limit on overtime; *ii)* further reduce waiting lists for childcare; and *iii)* attack discrimination, which tends to exclude women from fast-track career paths. Breaking down labour market dualism is also essential, as women account for two-thirds of non-regular workers, who are paid substantially less. This would also eliminate a key source of income inequality and poverty.

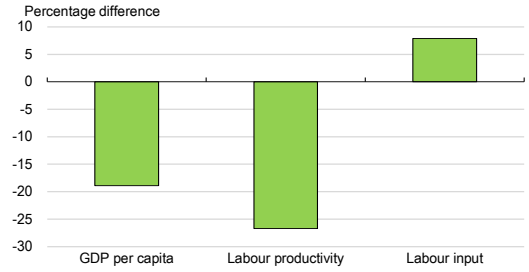
It is essential to increase the role of foreign workers. The new residency status that allows lower-skilled foreigners to work in sectors facing labour shortages is a major step in this direction.

Raising productivity is important to offset the impact of falling labour inputs

Output per hour worked in Japan is more than a quarter below the top half of OECD countries (Figure E)**.** The government set a goal to double productivity growth to 2% by 2020. One key area for reform is corporate governance, which has the potential to encourage firms to use their large cash holdings for fixed investment and wages. In 2015, Japan introduced a Corporate Governance Code, but the changes thus far have been primarily form rather than substance. The government should closely monitor and promote the Code's implementation, notably the measures to reduce cross-shareholding and increase diversity on corporate boards.

Figure E. Labour productivity is low in Japan and labour inputs are high

Japan relative to the top half of OECD countries in 2017



Source: OECD Economic Outlook database.

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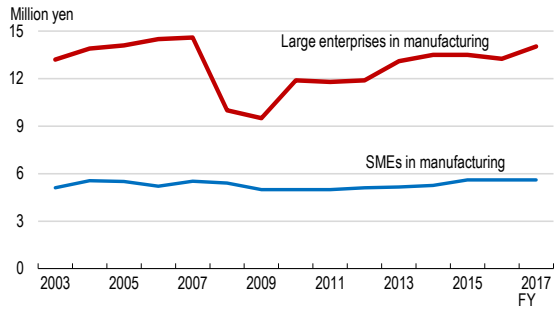
Another priority for reform relates to small and medium-sized enterprises (SMEs). Despite a high level of public support for SMEs, productivity in large firms was 2.5 times higher than in SMEs in FY 2017 in manufacturing, a large gap by international standards (Figure F). Narrowing the gap is essential to achieve inclusive growth. The government has scaled back credit guarantees to SMEs and the proportion of loans that is guaranteed. Further reducing support would strengthen incentives for banks to provide appropriate monitoring and for SMEs to increase productivity. Successfully implementing programmes to promote entrepreneurship and reduce the use of personal guarantees would boost the creation of innovative firms. The large share of older SME owners creates succession issues but also opportunities to achieve economies of scale.

Figure F. The productivity gap between large firms and SMEs is wide in Japan

Output per worker in manufacturing



Source: Ministry of Finance.

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Boosting well-being by improving the environment and slowing climate change

Japan faces the challenge of reducing CO_2 emissions and air pollution. Japan plans to build new and more efficeint coal-fired power plants. These nonetheless produce more CO_2 emissions than other types of power plants. Increasing the use of renewables, which are becoming more competitive, could reduce emissions and improve air quality. This requires facilitating their entry in electricity markets. Gradually increasing effective carbon prices, while taking into account the already high price of electricity, as well as the social and economic impacts in Japan, would be an option to achieve emission reductions cost-effectively and further increase Japan's high level of energy efficiency.

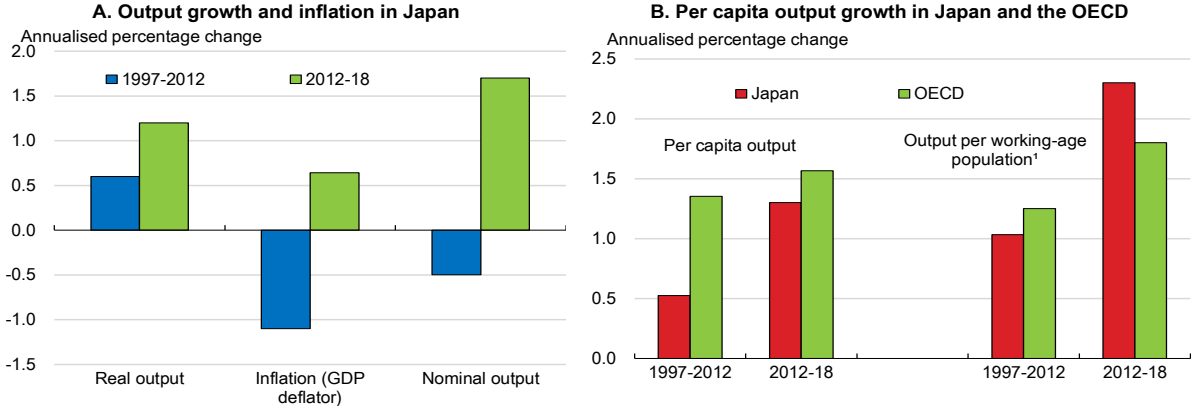
MAIN FINDINGS	KEY RECOMMENDATIONS
Monetary policy and the financial sector	
Consumer price inflation is well below the 2% target.	Monetary easing should be maintained as planned until inflation is durably above the 2% target, while closely monitoring costs and risks.
Financial institutions have been more active in risk-taking, expanding their lending to low-return borrowers, real estate, overseas borrowers and investment trusts.	Financial supervisors should encourage financial institutions to improve their risk management in areas where they have increased their risk-taking.
Mitigating the decline in the labour force	
In 2016, 81% of firms set a mandatory retirement age of 60. Those who are re-hired tend to work in non-regular jobs that pay less and do not fully utilise their skills.	Abolish the right of firms to set a mandatory retirement age and reinforce legislation against age discrimination.
The share of employees working long hours in Japan is high, discouraging employment of second earners in households and older persons.	Strictly enforce the new 360-hour annual limit on overtime hours and raise penalties on firms that exceed it. Introduce a mandatory minimum period of rest between periods of work.
The female employment rate increased from 60.7% in 2012 to 69.6% in 2018, though around half were non-regular workers. The share of management positions in the public and private sectors held by women is among the lowest in the OECD. This contributes to a 25% gender wage gap, the third highest in the OECD.	Focus on reducing the waiting list for childcare so that mothers are not forced to leave the work force and strengthen measures to prevent discrimination against women in education and employment.
Foreign workers account for only 2% of the labour force, the lowest share in the OECD. A recent law created a residency status that allows foreign nationals to work for up to five years in Japan in sectors facing labour shortages.	Provide programmes to help foreign nationals adjust to Japan, including through education, and ensure fair treatment in wages and conditions to attract foreign workers.
Raising productivity	
The 2014 Stewardship Code and 2015 Corporate Governance Code have led to changes, though so far it is more form than substance. Cross-shareholding and cash reserves are high and the share of women and foreigners on corporate boards is low.	Carefully monitor the implementation of the principles in the Codes to encourage firms to use large cash holdings for investment, increase diversity on corporate boards and reduce cross-shareholding.
Productivity in SMEs lags far below large companies, and they tend to remain small. Many elderly SME owners cannot find successors.	Encourage mergers, acquisitions and divestitures of SMEs in the face of labour shortages to promote consolidation of managerial resources in viable firms.
Achieving fiscal sustainability	
Japan's gross government debt, which reached 226% of GDP in 2018, will continue to rise inexorably unless tax revenue is raised from its currently low level and the upward trend in ageing-related social spending is contained.	Develop a comprehensive fiscal consolidation plan covering specific spending cuts and tax increases, including a further gradual rise of the consumption tax, to ensure fiscal sustainability.
The average hospital stay in Japan is the longest in the OECD, while per capita outlays on pharmaceuticals are relatively high. Medical consultations are much more frequent than the OECD average.	Take long-term care out of hospitals and shift its focus to home-based care. Promote greater use of generic drugs by making them the standard for reimbursement by health insurance and raise the co-payment rate of the elderly by establishing the ability-to-pay principle through an effective system for assessing income and assets.
Falling population limits economies of scale in local public administration and infrastructure investment and management, threatening the sustainability of public services.	Promote the joint provision of local public services and infrastructure across jurisdictions and the development of compact cities.
The fall in the share of the population contributing to the basic pension system will reduce the share of elderly receiving public pensions. Macroeconomic indexation of pension benefits is likely to reduce the replacement rate and may increase the already high poverty rate among the elderly.	Raise the pension eligibility age above 65 to maintain a sufficiently high replacement rate, while taking measures to expand the employment of older persons. Remove distortions in tax and social benefit systems, such as the spousal deduction, that discourage labour force participation, while increasing the coverage of firm-based social insurance.
Promoting green growth	
Japan has a strategy to reach its target of reducing greenhouse gas (GHG) emissions by 26% below 2013 levels by 2030. There is no similar plan for reaching the 80% reduction in GHG emissions by 2050.	Develop a low greenhouse gas emission development strategy with a horizon to 2050.
The fragmentation of the electricity system into ten regions with vertically-integrated incumbent monopolies and limited grid integration weakens incentives for the rapid uptake of renewable generation. Incumbents are required to set up legally separate companies for transmission and distribution from 2020.	Strengthen competition in electricity markets by ensuring that the transmission systems operator is fully independent from the vertically-integrated incumbent utilities and expand interconnection capacity.
While energy prices are high, most of Japan's CO_2 emissions are priced well below estimated climate-cost benchmarks in terms of effective carbon prices.	Gradually increase the effective carbon price, while taking account of the social and economic impact.

Key policy insights

The current expansion, which began in late 2012, is now the longest in Japan's post-war history, though not its fastest. Output growth picked up from an annual pace of 0.5% over 1997-2012 to 1.3% since Abenomics was launched (Figure 1, Panel A). At the same time, persistent deflation has been replaced with positive, albeit low, inflation, helping boost nominal growth to 1.7%. On a per capita basis, output growth has converged toward the rate for the OECD area (Panel B). Moreover, output per working-age population has risen significantly along with the employment rate. Labour productivity growth, however, remains sluggish.

Figure 1. Abenomics has contributed to faster output growth and higher inflation

Annual average percentage change



1. The 20-64 age group.
Source: OECD Economic Outlook database.

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The three arrows of Abenomics — a bold monetary policy, flexible fiscal policy and a growth strategy — helped Japan overcome two decades of sluggish growth. The Bank of Japan's quantitative and qualitative easing, accompanied by yield curve control and negative interest rates since 2016, have ended deflation, though inflation remains below the 2% target. Fiscal policy has provided timely support, while helping to reduce Japan's primary deficit by about 5% of GDP over 2012-18. Growth strategies have included welcome reforms, such as introducing a corporate governance code and a sizeable cut in the corporate income tax rate (Table 1). The expansion of childcare capacity has facilitated a sharp rise in female employment. Japan has also taken steps to boost the role of foreign workers and has been actively involved in regional trade agreements. Nevertheless, labour productivity growth has slowed to an annual pace of 1.0% since 2012.

Prime Minister Abe has stated that rapid population ageing is Japan's "biggest challenge". Japan's working-age population (aged 20-64) has fallen by 12% since 2000, compared to a 2% decline in Germany and increases in other G7 countries (Figure 2, Panel A). The share of the population over age 65 rose from 26% of the working-age population in 2000 to 50% in 2017. Despite a significant rise in the labour force participation rate, Japan is facing severe labour shortages that have forced some firms to

curtail or cease operations and has led to a decline in the quality of services (Morikawa, 2018).

Table 1. Key reforms introduced since the launch of Abenomics

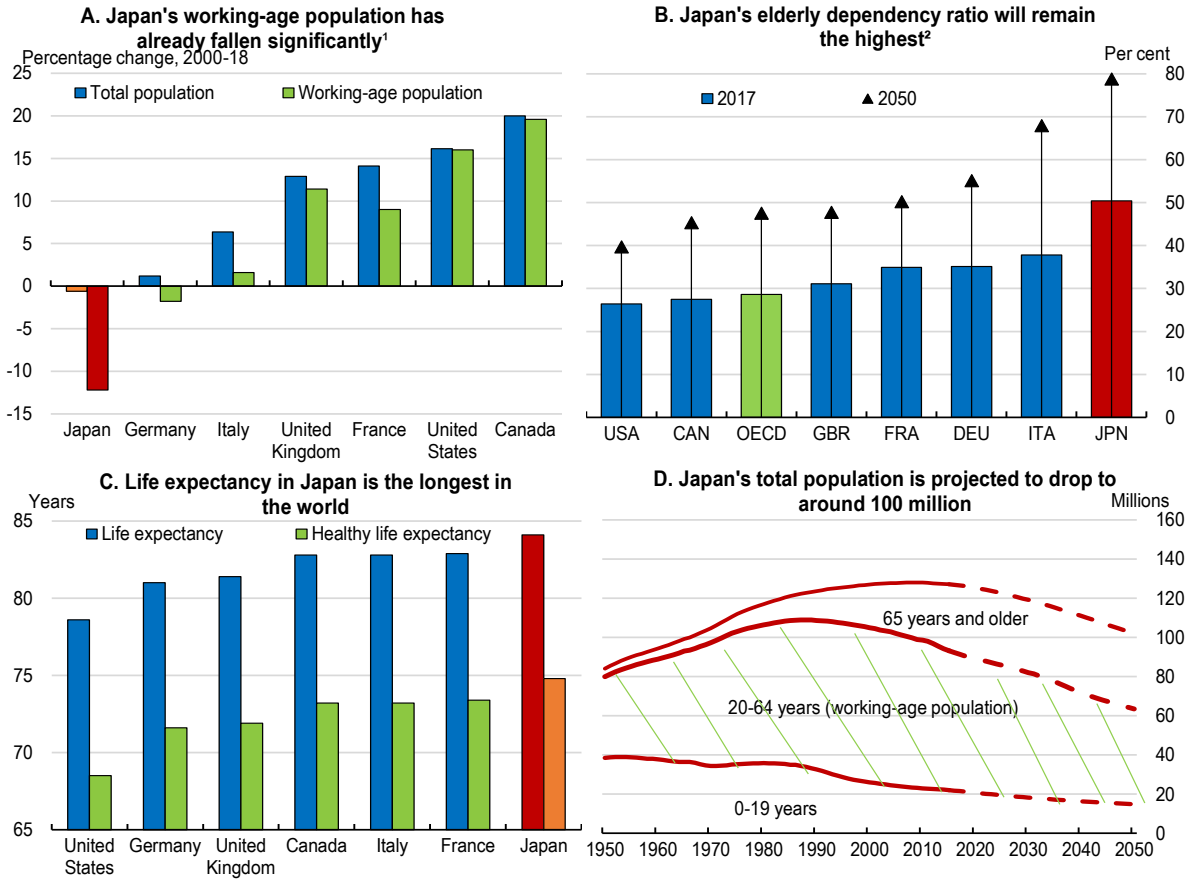
Reform	Objective	Actions taken
1. Strengthen corporate governance	Sustained growth in corporate value through enhanced corporate governance as well as improved management and strengthened fundamentals to support listed companies and financial institutions.	The Stewardship Code launched in early 2014 has been accepted by more than 200 institutional investors. A Corporate Governance Code, launched in 2015, applies to more than 2 500 listed firms. The share of firms in the first section of the Tokyo Stock Exchange that have at least two independent outside directors increased from 22% in 2014 to 91.3% in 2018.
2. Corporate tax reform	Encourage companies to invest more and raise wages.	The corporate tax rate was cut from 37% in FY 2013 to 29.74% in FY 2018, along with the broadening of the tax base. Over that period, national corporate income tax revenue is estimated to have risen 17.2%.
3. Enhance women's participation and advancement	Provide a working environment conducive to women with children and improve the business environment to enhance women's career advancement at workplaces.	Japan increased the number of childcare places by 0.53 million and the number of after-school care places by 0.3 million over FY 2013-17. This helped to push up the female employment rate from 60.7% in 2012 to 69.6% in 2018.
4. Attract talent from overseas	Create an environment where skilled professionals from overseas can play an active role. Conduct a thorough review of the Technical Intern Training Programme (TITP) for foreign workers in Japan.	In 2017, the government introduced the "Japanese Green Card for Highly Skilled Foreign Professionals" that reduces the period of stay required before they can apply for permanent residence. In 2018, the government approved a new residency status for work-ready foreigners with expertise in industries that need more workers, such as construction, agriculture and long-term care.
5. Reform agricultural policy	Double the income of farmers and farming communities by making agriculture a growth industry. Accelerate private-sector participation in agriculture, drawing on corporate experience.	Production quotas for table rice were abolished in FY 2018 to enable farmers to produce rice in response to demand without relying on government quotas. Requirements for the ownership of farmland by agricultural production corporations were relaxed and agricultural co-operatives reformed.
6. Promote international trade	Extend free, fair, rule-based markets across the world. Increase the share of Japanese trade covered by free trade agreements from 24% to 70%.	Japan ratified the Comprehensive and Progressive Agreement for Trans-Pacific Partnership and an Economic Partnership Agreement with the European Union, which took effect in December 2018 and February 2019, respectively.

Source: Government of Japan; and OECD.

The elderly population is projected to reach 79% of the working-age population by 2050, remaining the highest in the OECD (Figure 2, Panel B). Japan's life expectancy is the longest in the world at 84 years, up from 68 in 1960, and so is healthy life expectancy, at 75 years (Panel C). Half of the children born in Japan in 2007 are expected to live until the age of 107. Meanwhile, the fertility rate, though it edged up from 1.3 in 2007 to 1.4 in 2016, remains below the OECD average of 1.7. Deaths have exceeded births since 2007. Fewer than one million babies were born in 2016, the lowest number since Japan began counting in 1899. After falling by 6.2 million in the 2020s, Japan's population is expected to decline by 8.2 million in the 2030s, the equivalent of losing Tokyo. Consequently, its total population is projected to fall by one-fifth to around 100 million, by 2050 (Panel D). A smaller population has a number of advantages for well-being, such as reducing environmental problems and climate change, alleviating congestion and lowering housing

costs. However, the transition to a smaller population entails a number of challenges and risks.

Figure 2. Population ageing arrived early in Japan and continues at a rapid pace



1. Based on the last quarter in 2018 for which data are available. Working-age population is those aged 20-64.
2. Population aged 65 and over as a percentage of the population aged 20-64.
Source: OECD Demography and Population Statistics database; and World Health Organization (2018), *World Health Statistics 2018.*

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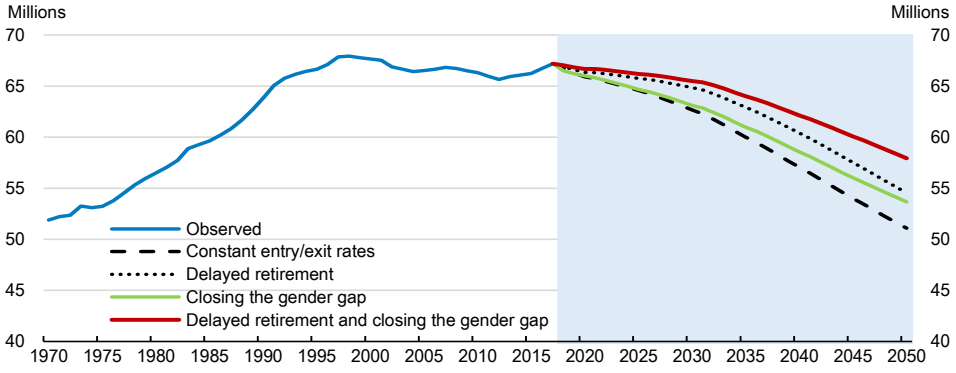
The prospects of 100-year – or even longer – lifespans comes with a number of opportunities and risks for individuals that will lead to fundamental changes in all aspects of life. Enlightened policies are needed to ensure that longer life is a blessing rather than a curse. Promoting well-being (see below), good health, work-life balance and flexibility in adapting to change is even more important in an era of 100-year lifespans. Inclusive growth is essential to ensure that increased longevity, especially healthy longevity, is not limited to high-income groups. Indeed, the gap in life expectancy between rich and poor has been widening (Bosworth et al., 2016).

As Japan is a front-runner in confronting the issues of an aged society, the rest of the world will be watching the policy reforms, innovations and experiments that it pursues. One important challenge of demographic change is a shrinking labour force. Assuming constant labour market entry and exit rates by gender for each five-year age group, Japan's labour force would drop by a quarter from 67 million to 51 million by 2050 (Figure 3). Reforms of labour policies and practices to remove obstacles and disincentives

that discourage work for men and women of all ages would limit the decline in the workforce. For example, the mandatory retirement age of 60 set by four-fifths of firms is anachronistic. Moreover, in an era of 100-year lifespans, the tradition of three clearly defined stages of education, work and retirement is no longer feasible (Gratton and Scott, 2017). Education of young adults in their teens and early 20s will not be sufficient for careers that will last into their 70s and even 80s, and may include several professions, particularly in the context of rapid technological change. Workers may welcome longer careers: a recent government survey reported that 71% of seniors would like to work past the current retirement age (Cabinet Office, 2017a). Policies that allow workers to extend their careers and remove obstacles to female employment would help mitigate the demographic effect.

Figure 3. Japan's labour force faces a significant decline



Note: The baseline assumes constant labour market entry and exit rates by gender for each five-year age group. In the "delayed retirement scenario", exit rates are reduced for both men and women by 10% for each five-year age group between the ages 55 and 74. In the "closing the gender gap" scenario, the participation rates for women converge to those for men in each five-year age group by 2050.
Source: OECD projections based on data from the OECD Population and Labour Force Projections database.

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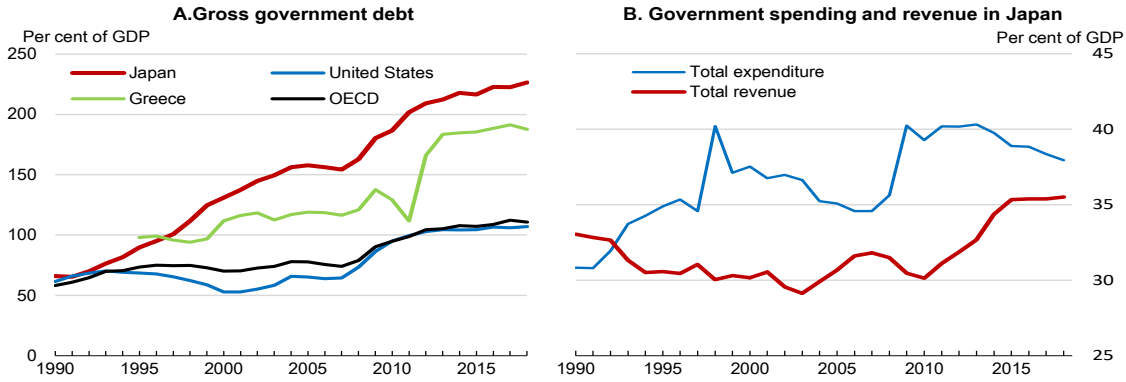
Demographic change is also having a big impact on Japan's fiscal situation. Public social spending rose doubled from 11% of GDP in 1991 to 22% in 2018, surpassing the OECD average. Around 80% of social spending is for pensions, health and long-term care, the second-highest share in the OECD. Twenty-seven consecutive years of budget deficits have driven up gross public debt from 60% of GDP in 1991 to around 226% in 2018, the highest ever recorded in the OECD area (Figure 4). Population ageing is projected to raise social spending by another 4.7% of GDP over 2020-60, assuming that planned reforms are implemented (Cabinet Secretariat et al., 2018; Fiscal System Council, 2018).

Against this backdrop of rapid ageing and shrinking of Japan's population, the main messages of this *Economic Survey* are:

- Bold structural reforms, including improved corporate governance and policies to make small and medium-sized enterprises more dynamic, are needed to boost productivity and promote inclusive growth as labour inputs decline.
- Achieving fiscal sustainability requires a detailed consolidation plan that includes measures to control spending in the face of rapid population ageing and gradual hikes in revenue, beginning with the 2019 consumption tax hike (Chapter 2).

- Fundamental labour market reform is a priority to enable Japan to make full use of its human resources, thereby mitigating the impact of a shrinking labour force (Chapter 1).

Figure 4. Japan's fiscal situation has deteriorated considerably since the early 1990s[1]



1. OECD estimate for 2018.
Source: OECD Economic Outlook database.

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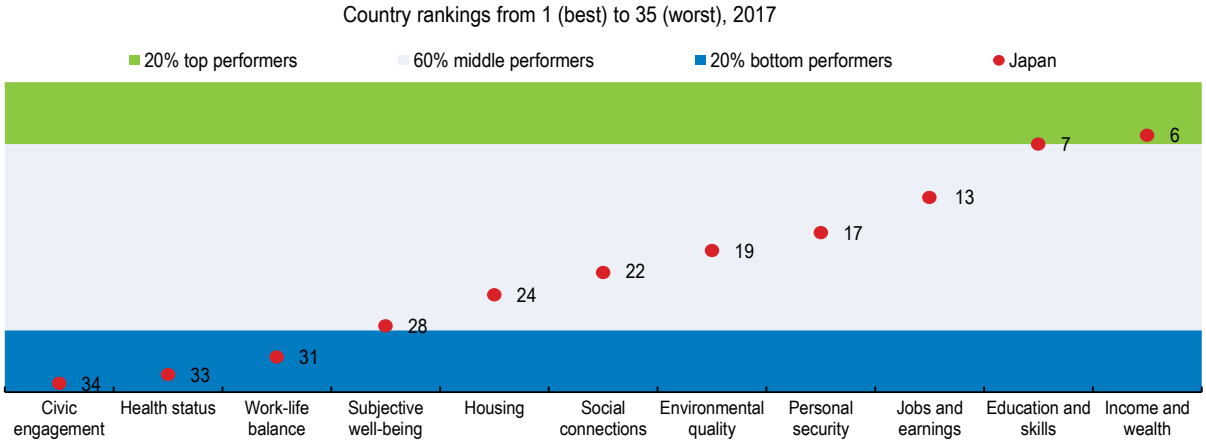
Such policies would also contribute to well-being (Figure 5) by removing obstacles that prevent some people from working and by ensuring the sustainability of social insurance programmes providing pensions and health and long-term care. Labour market reforms that change how Japan works would improve work-life balance and reduce the stress of long hours, which may have a negative impact on health. In 2016, 22% of those employed worked over 49 hours per week. Only 35% of Japanese adults perceive their health as good compared to the OECD average of 69% despite Japan's long life expectancy. Japan also ranks well below the OECD average in subjective well-being. Labour market reform would also promote social inclusion by removing obstacles to employment by those who historically have faced barriers in the labour market, notably women and older persons. Japan's literacy and numeracy skills, which are among the highest in the OECD, provide a firm foundation for labour market reform.

Figure 5. Well-being indicators for Japan give a mixed picture



Note: Each well-being dimension is measured by between one and four indicators from the OECD Better Life Index set. Normalised indicators are averaged with equal weights.
Source: OECD (2017), *OECD Better Life Index*, www.oecdbetterlifeindex.org.

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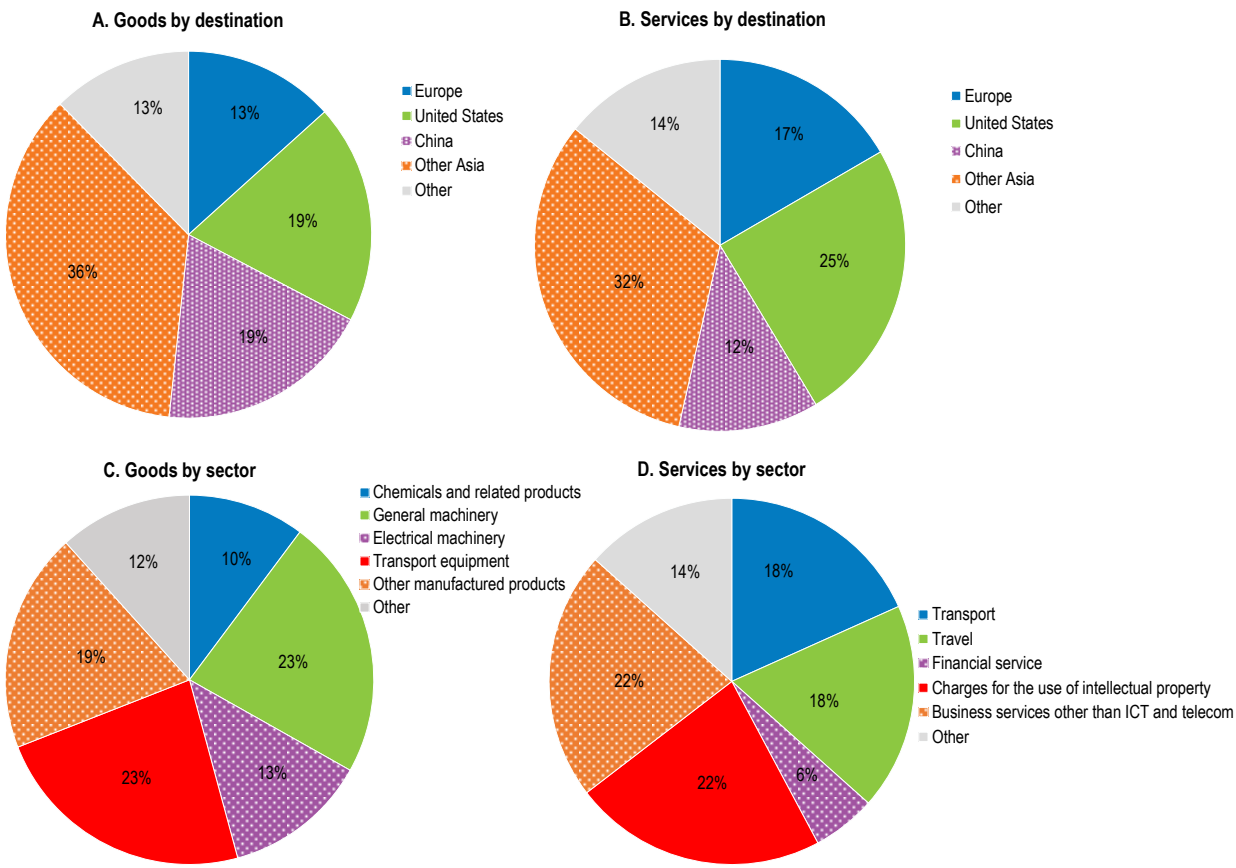
Improving environmental quality, which is close to the OECD average, would also enhance well-being. Most of Japan's population is exposed to small particle pollution above the WHO-recommended limit and premature mortality from air pollution is estimated to be high for a high-income country (see below).

Output growth has peaked, but is projected to continue at a moderate pace

After peaking at 1.9% in 2017, output growth slowed to 0.8% in 2018. Growth was driven by an export boom, led by China and other Asian economies, which account for more than half of Japanese exports (Figure 6). In addition, the number of foreign tourists grew at a 26% annual average rate over 2011-18, boosting travel receipts from 8% of service exports to 21% over that period. In 2018, however, exports to the United States, China and other Asian economies stagnated in the context of slowing world trade and rising trade tensions (Figure 7, Panel A). In addition, natural disasters, including a number of typhoons and the Hokkaido earthquake, disrupted production and exports in the third quarter of 2018 and contributed to declines in private consumption and business investment.

Figure 6. Composition of Japan's exports by destination and product category in 2017



Source: OECD International Trade Statistics database.

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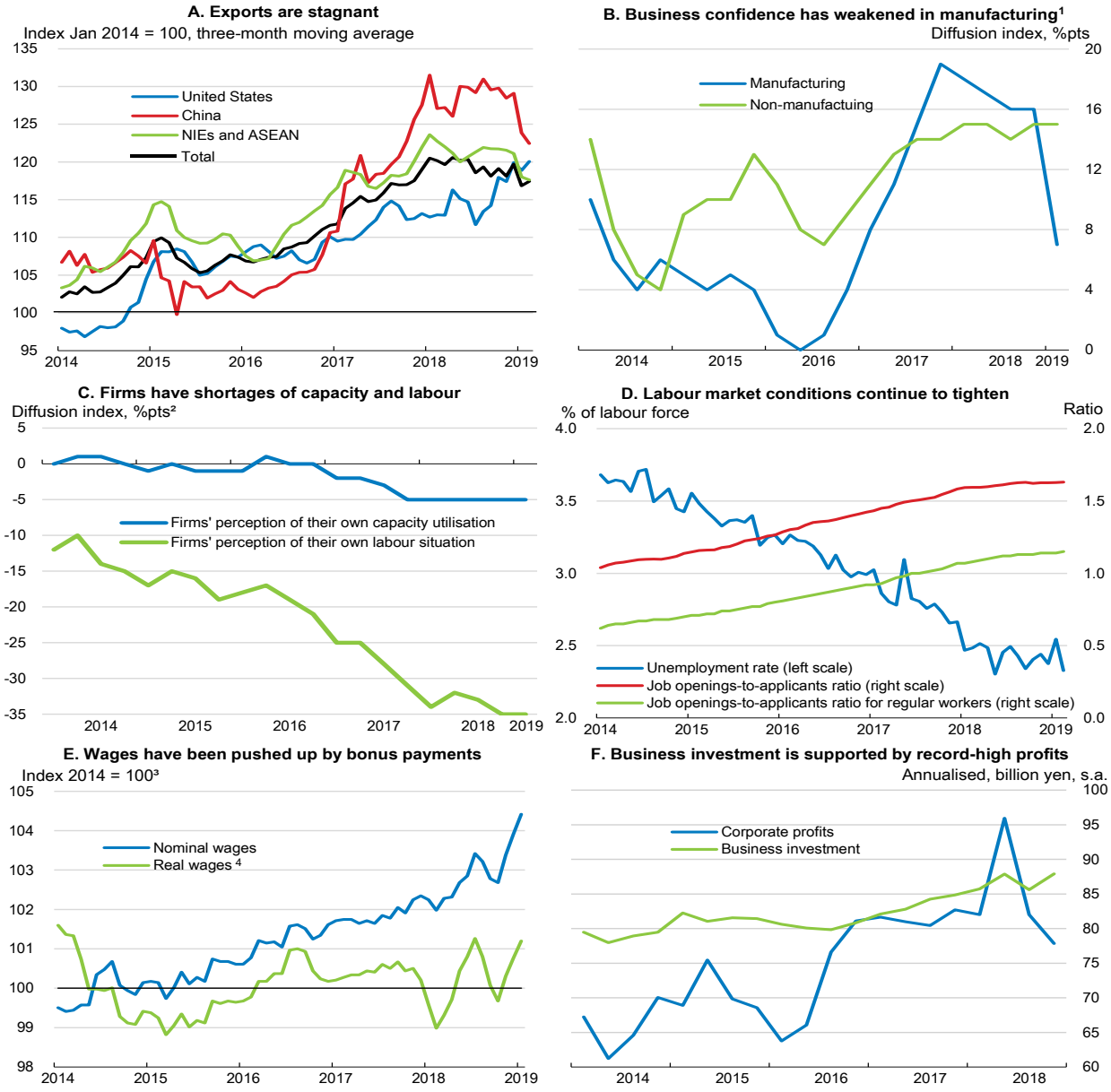
Figure 7. Key macroeconomic indicators



1. The number of firms responding that business conditions are favourable minus those responding that they are unfavourable.
2. The number of firms responding they had an excess number of workers minus those reporting a shortage and the number responding that they had excess capacity minus those with a capacity shortage.
3. Seasonally-adjusted data (three-month moving average) based on establishments with 30 or more workers.
4. Deflated by the consumer price index, excluding rent.
Source: Bank of Japan; Ministry of Health, Labour and Welfare; Cabinet Office; and Ministry of Finance.

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Growth is projected to be sustained at around ¾ per cent in 2019, led by private consumption and business investment (Table 2). Although business sentiment in the manufacturing sector has fallen from its end-2017 peak, it remains high in the non-manufacturing sector (Figure 7, Panel B). The steepening decline in the working-age

population has been offset by a sharp rise in the employment rate, from 70.6% in 2012 to 76.9% in 2018, led by women. Nevertheless, labour shortages have become more severe (Panel C). The unemployment rate has fallen to around 2½ per cent, while the ratio of job openings-to-applicants has risen to its highest level since 1974 (Panel D).

Table 2. Macroeconomic indicators and projections

Annual percentage change, volume, unless otherwise specified[1]

	2016	2017	2018	2019	2020
Gross domestic product	0.6	1.9	0.8	0.8	0.7
Gross domestic product per capita	0.8	2.1	1.0	1.1	1.0
Private consumption	-0.1	1.1	0.4	0.6	-0.1
Government consumption	1.4	0.3	0.8	0.8	1.0
Gross fixed investment	-0.3	3.0	1.1	1.9	0.6
Public[2]	-0.3	0.7	-3.2	3.2	-1.2
Residential	5.9	2.1	-5.7	0.6	-1.6
Business	-1.5	3.9	3.9	1.8	1.5
Final domestic demand	0.1	1.4	0.6	1.0	0.3
Stockbuilding[3]	-0.1	0.0	0.2	0.1	0.0
Total domestic demand	0.0	1.4	0.8	1.0	0.3
Exports of goods and services	1.7	6.8	3.1	1.6	3.8
Imports of goods and services	-1.6	3.4	3.3	3.5	2.0
Net exports[3]	0.6	0.6	0.0	-0.3	0.3
Other indicators					
Potential GDP	0.7	0.7	0.8	0.8	0.6
Output gap[4]	0.9	2.1	2.0	2.0	1.7
Employment	1.0	1.0	2.0	0.6	0.0
Labour force participation rate[5]	70.8	71.7	73.4	74.4	75.0
Unemployment rate[6]	3.1	2.8	2.4	2.4	2.4
GDP deflator	0.3	-0.2	-0.1	0.3	1.3
Nominal GDP	0.9	1.7	0.7	1.1	2.0
CPI[7]	-0.1	0.5	1.0	0.7	1.3
Core CPI[7]	0.4	-0.1	0.2	0.8	1.3
Household saving ratio, net[8]	2.9	2.5	4.3	4.5	4.4
Trade balance[9]	1.0	0.9	0.2	-0.4	0.0
Current account[9]	3.8	4.0	3.4	3.0	3.4
General government financial balance[9]	-3.5	-3.0	-2.4	-2.4	-1.9
General government primary balance[9]	-3.0	-2.7	-2.4	-2.4	-2.1
Underlying government primary balance[4]	-4.0	-3.9	-3.3	-3.3	-2.9
Gross government debt [9]	223.4	224.2	225.8	226.8	226.1
Net government debt[9]	126.9	127.7	129.3	130.3	129.6
Three-month money market rate average	0.0	0.0	-0.1	-0.1	-0.1
Ten-year government bond yield average	0.0	0.1	0.1	0.1	0.1

1. Based on the Interim Economic Outlook released on 6 March 2019, taking account of the second estimate of 2018Q4 on 8 March 2019.
2. Including public corporations.
3. Contribution to GDP growth (percentage points).
4. As a percentage of potential GDP.
5. Employment as a percentage of the population aged 15 to 74.
6. As a percentage of the labour force.
7. Excluding the impact of the planned consumption tax hike in October 2019. See footnote 1 to Figure 8. The core CPI is the OECD definition, which excludes both food and energy.
8. As a percentage of household disposable income.
9. As a percentage of GDP.

Source: OECD Economic Outlook database.

Despite tight labour market conditions, real wages are below their level at the beginning of 2014 (Panel E). Weak income gains have held private consumption to an annual growth rate of only 0.6% in per capita terms since the expansion began in 2012, well below the 1.3% pace of per capita output. In 2018, however, real wages rebounded due to an 8.6% rise in summer bonuses and a 6.1% rise in winter bonuses in large firms. To promote faster growth in base wages, the government implemented a three-year tax break for firms that increase employees' pay by 3% a year or more and reach a certain threshold for domestic investment. It is also raising the minimum wage, which is only around 40% of the median wage, by 3% per year.

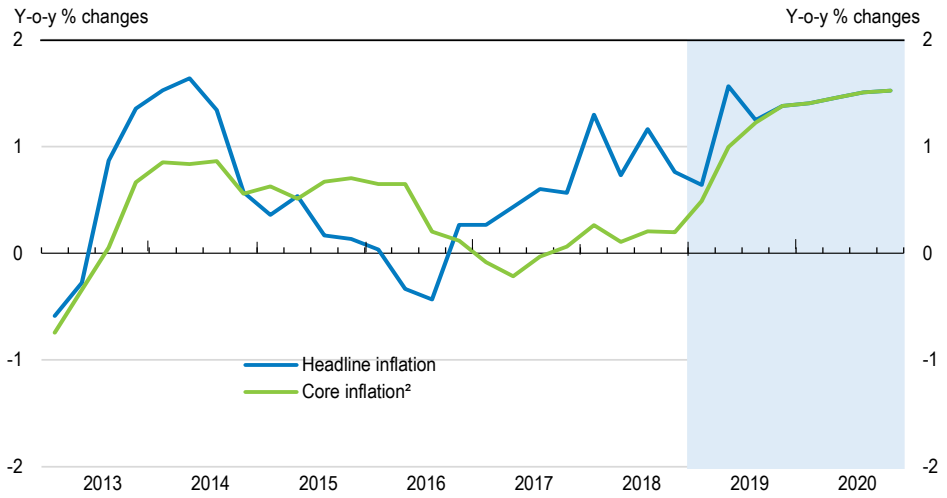
Firms are reporting growing capacity shortages (Figure 7, Panel C), which, combined with record-high profits, is promoting business investment (Panel F). In addition, the government has implemented tax breaks for firms that expand investment in fixed assets and human resources. These factors are likely to sustain business investment, although the surge in capital spending related to the 2020 Tokyo Olympics is waning. Moreover, the expected decline in industrial production in the first quarter of 2019 may slow business investment.

The government is planning exceptional fiscal measures (see below) to mitigate the impact of the planned hike in the consumption tax from 8% to 10% in October 2019. These measures are expected to prevent a repeat of the sharp growth slowdown that followed the 2014 consumption tax hike from 5% to 8%, keeping output growth close to ¾ per cent in 2020.

Higher wage increases are key to boosting private consumption and raising consumer price inflation towards the Bank of Japan's 2% target. Inflation picked up during 2018, but has been driven by soaring vegetable prices and higher energy prices, rather than fundamentals (Figure 8). Thus, core inflation (excluding fresh food) has been stable at around 1.0%, and is only around 0.2% according to the OECD definition (excluding food and energy). During 2019, inflation is likely to increase as the 2.2% hike in unit labour costs in 2018 – the largest since the collapse of the bubble economy -- feeds into the prices of goods and services. In 2020, inflation is projected to reach 1¼ per cent, excluding the impact of the planned consumption tax hike from 8% to 10% and the provision of free childcare for children aged three to five.

Japan faces many uncertainties in a global economy with escalating downside risks. Trade tensions have clouded the outlook for businesses and risk disrupting investment and global value chains. Japan is particularly vulnerable to US-China trade frictions, as those two countries account for 38% of its exports (Figure 6). However, no new trade restrictions against Japan are to be introduced during the consultations based on the September 2018 Japan-US Joint Statement. Another risk to international trade is a reversal of capital flows, which have fuelled growth in emerging markets, towards advanced economies as their interest rates rise. A further slowdown in China's domestic demand would particularly affect Japan. On the domestic side, a key concern is wage growth. While the jump in bonus payments in 2018 is a positive sign, larger increases in basic wages are important to sustain private consumption. Japan is also potentially vulnerable to exogenous shocks that are not factored into the central projection scenario (Table 3).

Figure 8. Underlying consumer price inflation has been trending up but remains below the 2% target[1]



1. Excluding the effects of the April 2014 consumption tax hike, which added 2 percentage points to inflation in FY 2014 according to a government estimate. It also excludes the scheduled October 2019 consumption tax hike, which would add 1.0 point to inflation in the fourth quarter of 2019, and the impact of free childcare for children aged three to five, which would reduce it by 0.5 percentage points, according to OECD estimates.
2. OECD measure, which excludes food and energy.
Source: OECD Economic Outlook 104 database; and Bank of Japan.

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Table 3. Possible shocks to the Japanese economy

Shocks	Possible outcome
A loss of confidence in Japan's fiscal sustainability	A rise in real interest rates, which could destabilise the financial sector and the real economy, with large spillovers to the world economy
An increase in trade protectionism in major trading partners	A contraction in exports and business investment and a disruption of global value chains
Natural disasters, such as earthquakes, tsunamis and typhoons	Significant loss of life, disruption of economic activity and high costs for reconstruction
The large expansion of the Bank of Japan's balance sheet results in excessively high inflation	A fall in the value of households' savings and real wages, increased uncertainty and a reversal of the monetary policy stance

Fiscal policy: short-term challenges and threats to long-run fiscal sustainability

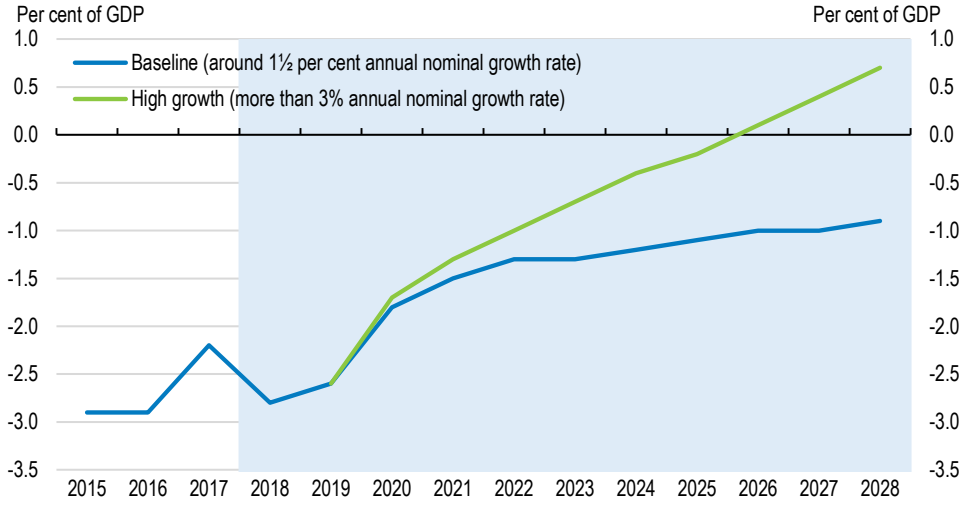
After three years of significant fiscal consolidation aimed at the target of a primary surplus by FY 2020, fiscal policy in 2017 contributed to strong growth. With a primary deficit of 2.7% of GDP in 2017, a surplus in FY 2020 is out of reach. The failure to reach the benchmark of a primary deficit of around 1% of GDP in FY 2018 reflects: *i)* shortfalls in tax revenue due to slower-than-projected economic growth; and *ii)* the postponement of the second consumption tax hike (from 8% to 10%), originally planned for 2015, to 2019 (Committee for Promotion of Integrated Economic and Fiscal Reform, 2018). This slippage plus the decision to use half of the revenue from the tax hike for additional spending on early childhood education and care and social programmes put the FY 2020 target out of reach.

Missing the FY 2020 target, which was decided in 2010, strengthens the case for an independent fiscal institution in Japan, an approach that has improved fiscal policymaking, made clear the fiscal problems and helped build public consensus for consolidation in a number of OECD countries. The OECD has proposed 22 principles for independent fiscal institutions (OECD, 2014a).

The new fiscal targets and preparing for the 2019 tax hike

In 2018, the government pushed back the target date for achieving a primary surplus to FY 2025. The new plan includes three interim benchmarks in FY 2021: *i)* halving the primary deficit from its FY 2017 level to around 1.5% of GDP; *ii)* lowering government debt to 180-185% of GDP (by the government's measure, it was 188% in FY 2017); and *iii)* reducing the fiscal deficit of central and local governments to below 3% of GDP. The fiscal deficit depends in part on the interest rate, which the government assumes will remain at 0% for ten-year bonds through FY 2020. Based on these benchmarks, the government will decide what additional measures are needed to achieve a primary surplus by FY 2025. In the government's January 2019 projection, a primary surplus will not be achieved until FY 2026 (Figure 9) even assuming nominal annual output growth of more than 3%, which is well above the average of less than 2% since 2012 (Figure 1). In the baseline scenario, with growth of 1½ per cent, the primary deficit would remain around 1% of GDP in FY 2027.

Figure 9. A primary deficit is projected to continue through FY 2025 under current policies



Note: Government projections in January 2019. It assumes that the hike in the consumption tax rate from 8% to 10% is implemented as planned in 2019. The primary balance is central and local governments, as a percentage of GDP on a fiscal year basis.
Source: Cabinet Office (2019).

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Since FY 2016, the increase in social security spending has been limited to that resulting from population ageing and this effort will continue through FY 2021. The government intends to decide new policies for social security in FY 2020. It is committed to raising the consumption tax rate from 8% to 10% in October 2019, with about half of the additional revenue earmarked for additional social spending. The government is also considering a number of measures to avoid the economic volatility that followed the 2014 consumption tax hike, including:

- Providing free early childhood education and care for children aged three to five.
- Maintaining the consumption tax rate at 8% for food and non-alcoholic beverages.
- Increasing public investment in FY 2019-20.
- Introducing tax or spending measures to support purchases of cars and homes.
- Increasing support for older persons through subsidies and reduced long-term care insurance premiums for those with low income.
- Providing vouchers for purchases of goods and services by low-income households and those with children under the age of three.
- Introducing point rewards for purchases using cashless payment at small retailers.

The proposed measures may cost around 1.0% of GDP, offsetting the revenue from the tax hike (Table 4) in FY 2019-20, when the temporary and special measures are implemented. It is important to calibrate them in such a way so that the FY 2021 benchmark of a primary deficit of 1.5% remains within reach. Some of the proposed measures may have limited effects on demand. Vouchers for purchases are estimated to have boosted household spending by only JPY 340 billion (0.1% of GDP) in 2014, at a cost of JPY 250 billion (Cabinet Office, 2017b). Moreover, the effectiveness of the point system may be limited, given that prices are higher at small retailers.

Table 4. Illustrative annual fiscal impact of proposed reforms

Per cent of GDP on an annual basis

	Short term	Around 2035
Expenditures		
A. Increase of age-related spending under current policy	-0.1	-1.7
B. Expenditures proposed by government that are related to the 2019 consumption tax hike	-1.0	-0.6
Temporary budget measures, including public investment	-0.4	
Free early childhood education and care for children aged three to five	-0.2	-0.2
Benefits for supporting low-income pensioners, etc.	-0.4	-0.4
C. Spending cuts to achieve the FY 2025 primary surplus goal	+0.0	+0.2
Sub-total	-1.1	-2.3
Revenues		
A. Increase in the consumption tax rate from 8% to 10%	+1.0	+1.0
B. Revenues proposed by the government to cope with the 2019 consumption tax hike	-0.1	-0.1
Tax breaks for purchases of cars and homes (temporary)[1]	-0.1	-0.0
Maintaining the consumption tax rate at 8% for food and non-alcohol beverages	-0.2	-0.2
Increasing the cigarette and other taxes to finance the reduced consumption tax rate	+0.1	+0.1
C. Additional measures proposed by the OECD		+7.0
Increasing the consumption tax rate from 10% to 20%		+5.0
Raising environmentally-related tax[2]		+1.0
Broadening the personal income tax base		+1.0
Sub-total	+0.9	+7.9
Total	-0.2	+5.6
Memorandum item: net cost of measures to cope with the 2019 consumption tax hike	0.0	-0.4

1. In addition to the temporary measures, a proposed tax cut on owning cars would be permanent.
2. Assumes that all CO_2 emissions in Japan are priced at EUR 60 per tonne.

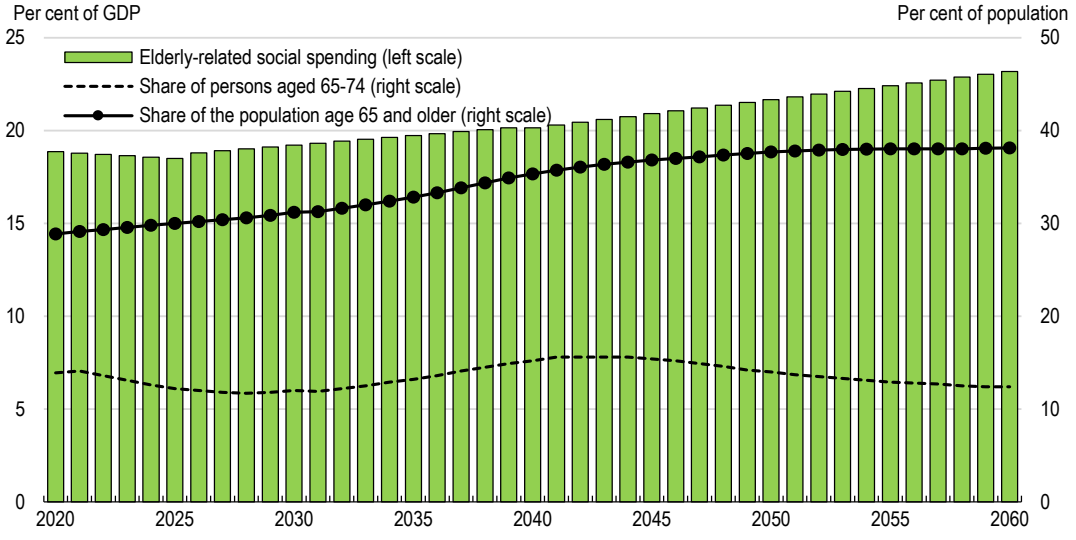
Source: Council on Economic and Fiscal Policy (2018); and OECD calculations.

In addition, the introduction of multiple consumption tax rates to soften the regressive impact of the tax hike is not effective, as the benefits are larger for high-income households (OECD, 2014b). If the revenue foregone by introducing a lower rate were used instead to finance a successful system of earned income tax credits, the gains would be better targeted on low-income earners. Introducing multiple VAT rates has additional drawbacks. *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 (2017 *OECD Economic Survey of Japan)*.

Ensuring long-run fiscal sustainability

The revised fiscal consolidation plan of the government needs to be accompanied by a more concrete strategy to control spending, with effective rules to govern each year's budgeting process. Spending has been contained below 40% of GDP despite the rise in social spending, but the government projects that ageing-related social spending will increase from 18.8% of GDP in FY 2018 to 23.2% in FY 2060 under current policies (Figure 10). The rise is driven by a 4.7% of GDP increase in health and long-term care spending, which is in the middle of the range of OECD estimates (de la Maisonneuve and Oliveira Martins, 2013). The priority is to control social spending related to the elderly. *First*, there is considerable scope for re-optimising the allocation of healthcare resources at the community level away from hospitals. *Second*, pharmaceutical spending could be reduced by further promotion of generic drugs. *Third*, raising co-payment rates for those with higher income and assets, including the elderly, would help finance healthcare while curbing excessive use. *Fourth*, raising the pension eligibility age is important to ensure income security for the elderly, while taking measures to promote their employment opportunities, which could limit their reliance on social welfare programmes.

Figure 10. Elderly-related social spending is projected to rise further



Note: The estimates of pension and health and long-term care spending by the government are based on current per capita benefit levels by age, taking changes in the demographic structure over 2020-60 into account. For more details, see Annex 2.1.
Source: Cabinet Secretariat et al. (2018); Fiscal System Council (2018); Ministry of Internal Affairs and Communications; and OECD calculations.

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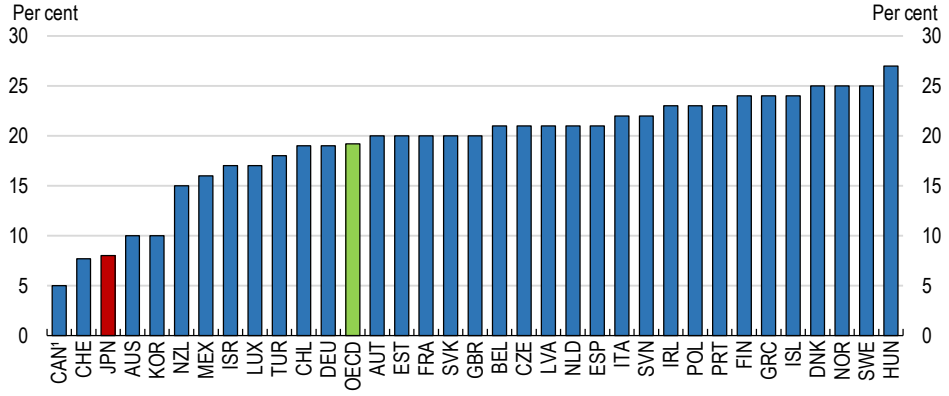
Local governments account for three-quarters of total government spending (excluding social security funds), while 45% of their revenues are transfers from the central government. To ensure the sustainability of local governments, it is essential to improve their efficiency in both public administration and in social infrastructure investment and maintenance. A promising way to ensure economies of scale in the face of a falling population is to consolidate administration and infrastructure across jurisdictions. This would also promote Japan's objective of creating compact cities, which would reduce energy consumption, pollution and CO_2 emissions. However, the growing problem of abandoned and unclaimed land and houses is an obstacle. A 2016 government survey of 100 locations concluded that it was difficult to locate the owners of 20% of the land (Ministry of Land, Infrastructure, Transport and Tourism, 2016), indicating the need to reform the local land-use framework. Finally, a greater role for the private sector through outsourcing and private financial initiatives could also be effective, although it involves risks.

To achieve a primary surplus large enough to stabilise government debt relative to GDP, measures to limit spending must be accompanied by higher government revenue, which was the fourth lowest in the OECD in 2017 at 35% of GDP. Moreover, the composition of government revenue should be shifted toward less distortive sources through a further gradual hike of the consumption tax and greater use of environmentally-related taxes. Even with the planned hike to 10% in 2019, Japan's consumption tax will remain among the lowest in the OECD (Figure 11). Another key is to broaden tax bases while removing distortions in tax and social benefit systems that discourage the labour participation of certain groups, notably women and older persons. This requires a comprehensive approach that reforms the spousal deduction, the public pension deduction and the earnings test for public pension benefits. Broadening the base of the personal income tax would also make it more effective in reducing income inequality.

Figure 11. Japan's consumption tax rate is relatively low

In 2018



1. In Canada, the provinces can levy a consumption tax on top of the federal tax, making it higher than in Japan.
Source: OECD (2018a).

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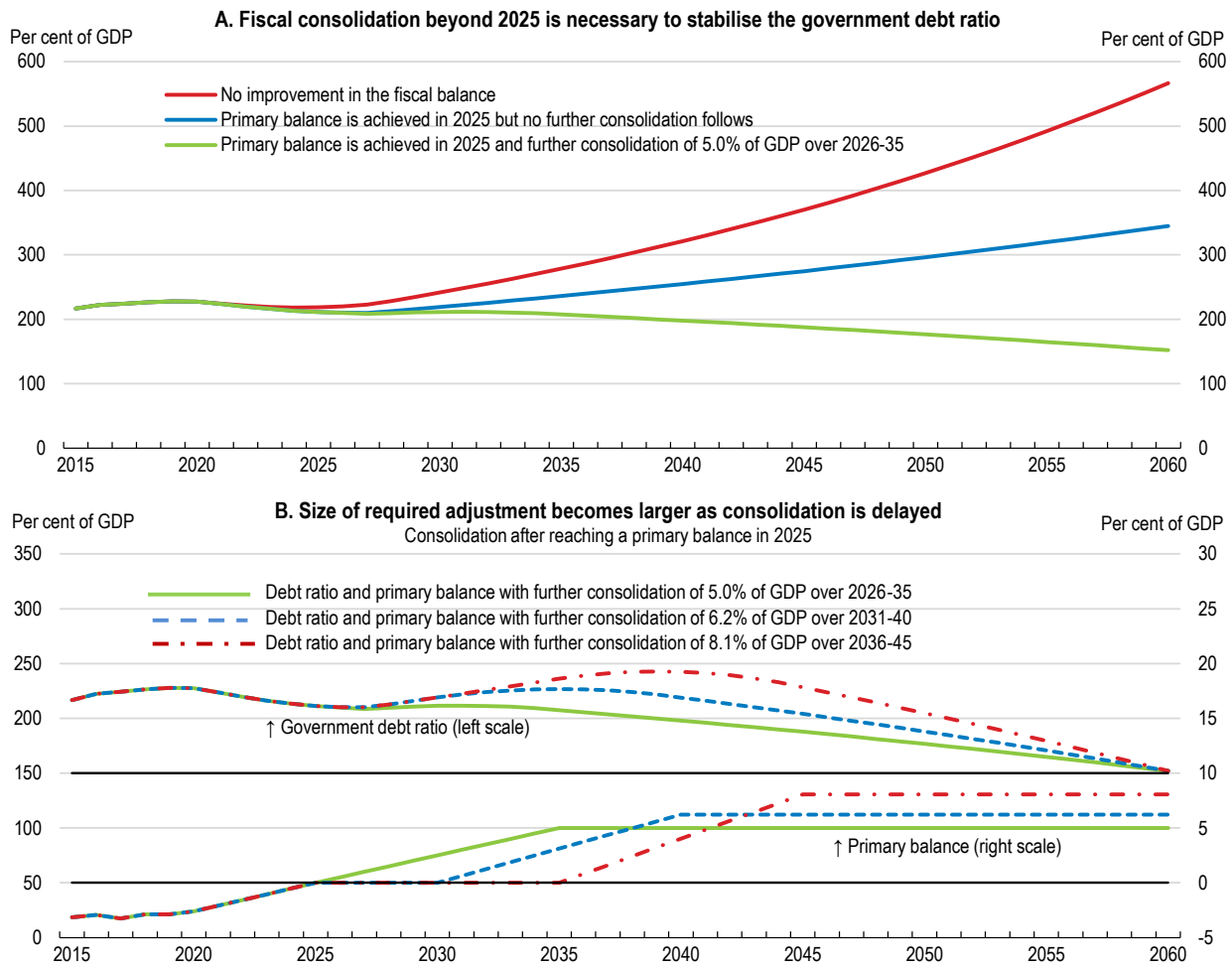
A primary surplus in FY 2025 is just a first step to putting the government debt ratio on a downward trend. In the simulation below, public social spending rises in line with government estimates, while other spending is held constant as a share of GDP. If there

were no further consolidation after FY 2025, the government debt ratio would rise to around 560% of GDP by 2060 (Figure 12, Panel A). In contrast, policies over 2026-35 to raise the primary surplus to 5% of GDP would reduce the debt ratio to 150% of GDP by 2060. A fiscal consolidation of this magnitude is equivalent to a 10 percentage-point hike in the consumption tax over a decade. This implies raising the rate gradually to 20%, still below the current EU average of 22%. The simulation also shows that delaying fiscal tightening raises the amount of consolidation necessary to reduce the debt ratio to 150%. If further tightening were delayed to 2036-45, the necessary amount of consolidation would be 8.1% of GDP, rather than 5% (Panel B). Even though government financial assets amount to nearly 100% of GDP, Japan's net public debt is among the highest in the OECD and has been increasing rapidly.

Figure 12. Long-run simulation of Japan's fiscal balance and government debt



Source: OECD calculations based on *OECD Economic Outlook No. 104* through 2020, Cabinet Office projections through 2027 (using the "Economic Growth Achieved Case", which implies real growth of more than 2% and nominal growth of more than 3% a year in the first half of the 2020s) and government assumptions for growth, spending and interest rates through 2060 (see Chapter 2).

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While these simulations are merely illustrative, the message is clear: stabilising net government debt at a level close to the current OECD average requires more than a

decade of consolidation to achieve a large primary surplus. The amount of the required fiscal consolidation depends on the economic assumptions. In this simulation, real output growth averages 1.4% per year and inflation 2.0%. If real output growth and inflation were below these assumptions, even greater consolidation would be needed. In sum, fiscal sustainability becomes more difficult, perhaps even impossible, without economic revitalisation and positive inflation.

Table 5. Implementation of OECD recommendations to achieve fiscal sustainability

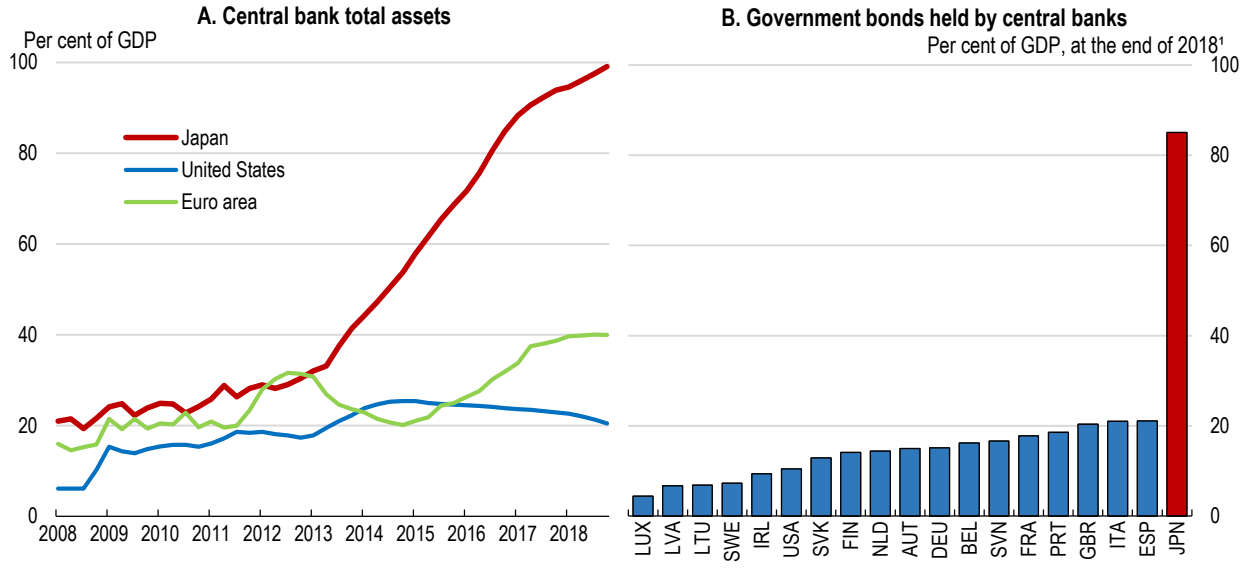
Earlier OECD Survey recommendations	Action taken or planned
Commit to a more detailed medium-term fiscal consolidation path with specific spending cuts and tax increases to strengthen confidence in Japan's fiscal sustainability.	In June 2018, the government set a new target of a primary surplus by FY 2025. A new timetable for expenditure reform in FY 2019-21 was set in December 2018.
Gradually raise the consumption tax rate.	The government is committed to raising the rate from 8% to 10% in October 2019, but no further increase is planned.
Enhance equity by introducing an earned income tax credit.	No action taken.
Fully apply macroeconomic indexation to pension benefits.	The carry-over system was implemented in April 2018. The carry-over of macroeconomic indexation by 0.3% in 2018 is to be applied in 2019.
Raise the pension eligibility age above 65.	The government is considering the expansion of the range of the pensionable age.
Take long-term care out of hospitals and reduce long-term care insurance coverage for those with less severe needs.	In 2018, the government established a new type of facility covered by long-term care insurance that combines "daily healthcare administration" and "end-of-life care", as well as "residential space", to respond to increasing demand for medical care and long-term care services for people in a chronic phase of illness.
Increase the use of generic drugs.	The FY 2018 medical fee schedule revision strengthened the preferential treatment for generic drugs, including additional fees for prescription and penalties for dispensaries with low use of generics. The government proposed an amendment to use generics, in principle, in medical assistance.

Monetary policy and the financial sector

Higher inflation and a decisive exit from deflation are essential, in part for fiscal sustainability as noted above. In 2013, the Bank of Japan (BoJ) set a 2% target for consumer price inflation (Table 6) and launched "quantitative and qualitative monetary easing" (QQE), which has more than tripled the size of its balance sheet. It reached 100% of GDP in 2018, much larger than in the United States and the euro area (Figure 13). QQE has made the BoJ the dominant holder of government bonds (Panel B). Following the introduction of QQE, core inflation (excluding energy and food) rose from -0.7% (year-on-year) in 2013Q1 to 0.9% in 2014Q1 (Figure 8).

However, weak demand following the 2014 consumption tax hike, falling oil and commodity prices and slower growth in emerging economies partially reversed the rise in inflation (Bank of Japan, 2016a). In a government survey that asked firms why they do not pass on cost increases to sales prices, 52% said that they prioritise long-term relationships with business partners and consumers (Figure 14). Other reasons are increased competition and households' low tolerance of price increases after a long period of zero or negative inflation. Indeed, 43% of firms said that they keep prices constant until competitors raise prices and another 33% said that feared higher prices would lead to falls in sales volume. Another 22% said that they were able to offset a rise in costs by cutting other costs, suggesting scope for raising productivity. In addition, tight labour market conditions have had only a small effect on wages so far, reflecting workers' focus on job security and backward-looking inflation expectations.

Figure 13. The run-up in central bank assets has been the largest in Japan



1. March 2019 for Japan, January for the United States and November 2018 for Sweden.
Source: OECD Economic Outlook database.

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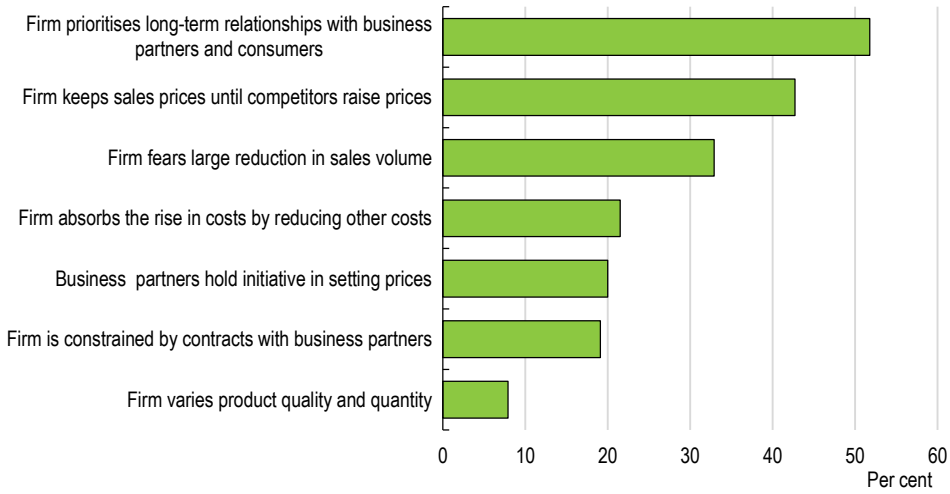
Table 6. Chronology of major monetary policy measures and announcements since 2013

2013	**January**	The BoJ sets a 2% price stability target that it aims to reach "at the earliest possible time".
	March	Haruhiko Kuroda becomes the governor of the BoJ.
	April	The BoJ launches "quantitative and qualitative monetary easing", which aims to double the size of the monetary base by end-2014 by purchasing government bonds at a rate of JPY 50 trillion (10% of GDP) per year.
	April	In the *Outlook for Economic Activity and Prices*, CPI inflation (excluding fresh food) is projected at 1.9% in FY 2015.
2014	**October**	The BoJ accelerates its purchases of JGBs to an annual pace of JPY 80 trillion.
2015	**January**	In the *Outlook for Economic Activity and Prices*, the projection for CPI inflation (excluding fresh food) for FY 2015 is cut to 1.0%, and the 2% target will not be achieved until FY 2016.
2016	**January**	The *Outlook for Economic Activity and Prices* states that the 2% inflation target will be met "around the first half of FY 2017".
	January	The BoJ introduces a negative interest rate of 0.1%, which initially applies to about 4% of bank deposits at the central bank.
	July	The BoJ expands its purchases of Exchange Trade Funds (ETFs) from JPY 3.3 trillion yen (0.7% of GDP) per year to JPY 6 trillion yen (1.2% of GDP) and doubled its lending in dollars to USD 24 billion.
	September	The BoJ introduces "QQE with yield curve control", which targets JGB yields rather than asset purchases. The new policy includes an "inflation-overshooting commitment".
	October	In the *Outlook for Economic Activity and Prices*, the projection for CPI inflation (excluding fresh food) is cut to 1.5% in FY 2017 and to 1.7% in 2018, and the 2% target is to be met "around FY 2018".
2017	**July**	In the *Outlook for Economic Activity and Prices*, the projection for CPI inflation (excluding fresh food) is cut to 1.5% in FY 2018 and to 1.8% in FY 2019, and the 2% target is to be met around FY 2019.
2018	**April**	Haruhiko Kuroda is appointed to a second term as governor of the BoJ.
	July	The BoJ announces the "Strengthening the Framework for Continuous Powerful Monetary Easing", which introduces more flexibility in the yield target on ten-year government bonds and in the purchase of other assets.
	October	In the *Outlook for Economic Activity and Prices*, the projection for CPI inflation (excluding fresh food) is cut to 1.4% in FY 2019 and to 1.5% in FY 2020 and the 2% target will not be met until FY 2021.

Source: Bank of Japan; and OECD.

Figure 14. Reasons why firms do not pass on cost increases to sales prices



Source: Cabinet Office (2013).

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Recent developments in monetary policy

The BoJ added another tool to its policy framework in January 2016 by introducing a negative interest rate of -0.1% on banks' excess reserves, a policy also used by a number of European central banks. With headline inflation falling back into negative territory in 2016Q2, the BoJ introduced "QQE with yield curve control" in September 2016. Its aim is to enable the central bank to achieve the yield curve it believes necessary to achieve the 2% inflation target and allow it to adjust more flexibly to economic and financial conditions (Bank of Japan, 2016b). The new framework has two components. *First*, the BoJ decided to keep the 10-year government bond yield around 0%, though the target level may change depending on economic activity, prices and financial conditions going forward. *Second*, the BoJ made an "inflation-overshooting commitment" to continue expanding the monetary base until the year-on-year inflation rate for the CPI excluding fresh food exceeds the 2% target and stays above it in a stable manner. This policy aims to strengthen inflation expectations.

With the introduction of negative interest rates and yield curve control, the yield curve shifted further down (Figure 15). Lower government bond yields were passed through to corporate bonds and lending rates, thus helping boost residential and business investment. Although the benchmark purchase amount of government bonds by the BoJ remains at JPY 80 trillion, the shift to focusing on yields has enhanced flexibility in the amount of bonds purchased (Sudo and Tanaka, 2018). Indeed, BoJ bond purchases fell to JPY 58 trillion in 2017 and to JPY 37.6 trillion in 2018 (Figure 16). According to one estimate, only 10% of changes in government bond yields is determined by its purchases, with the remainder due to the large stock of its holdings (Sudo and Tanaka, 2018).

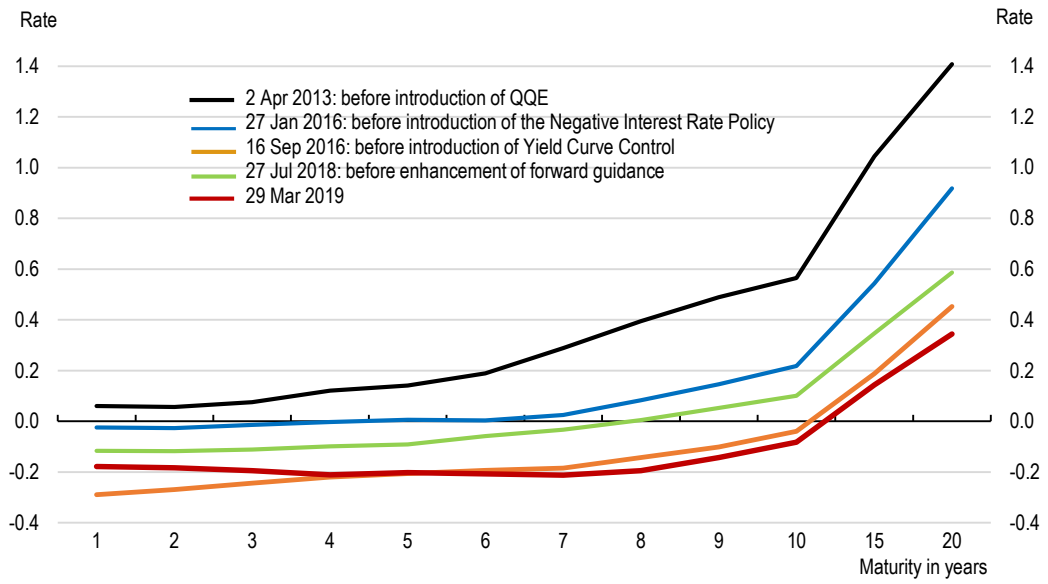
The BoJ fine-tuned its policy framework in July 2018 with a view to making it more sustainable:

- *Allowing flexibility in the yield target on ten-year government bonds:* While the target remains at 0%, the BoJ will allow deviations of up to about 20 basis points, depending on economic and inflation developments. Even though the benchmark

purchase amount of government bonds is unchanged at JPY 80 trillion, in practice it will be flexibly determined to maintain a desirable shape of the yield curve.

- *Enhancing flexibility in the purchase of other assets*: While the goal of purchasing JPY 6 trillion of ETFs and JPY 90 billion of Japan Real Estate Investment Trusts (J-REITs) each year is maintained, the BoJ will allow some flexibility in response to changes in the market environment.

Figure 15. The yield curve has become flatter[1]



1. Market-based rate using compounded rates.
Source: Ministry of Finance.

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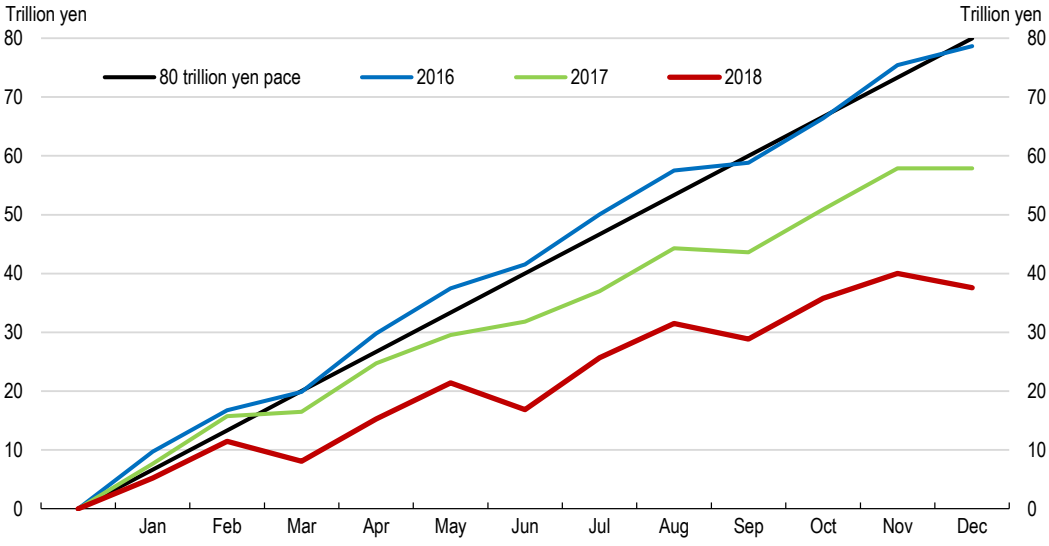
Figure 16. The Bank of Japan's net government bond purchases have slowed



Source: Bank of Japan.

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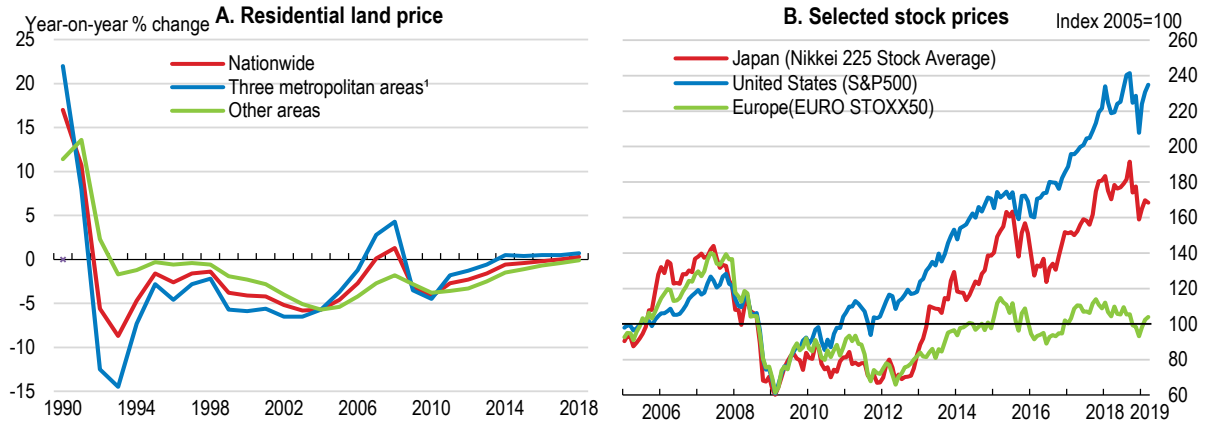
- *Strengthening forward guidance*: Given that achieving the 2% inflation target is likely to take longer than previously expected, the BoJ declared that it "intends to maintain the current extremely low levels of short- and long-term interest rates for an extended period of time, taking into account uncertainties regarding economic activity and prices, including the effects of the consumption tax hike scheduled to take place in October 2019".

How far to go in the direction of highly expansionary monetary policy and how long to maintain such policies hinges on the balance of marginal benefits and costs. A number of potential costs and side effects can be identified (Rawdanowicz et al., 2013). Perhaps most importantly, overly expansionary monetary policy can lead to excessive risk-taking that fuels asset price booms that result in financial instability in the future. In Japan, land prices have finally stabilised after more than two decades of decline, a positive development (Figure 17). Equity prices have rebounded, reflecting record-high corporate profits (Panel B). Still, the price-earnings ratio is around 24, well below the average of the past decade. The biggest run-up in asset prices is in government bonds, as interest rates have fallen across the yield curve (Figure 15). Exit from QQE can thus lead to a risk of bond market instability and losses for financial institutions. Maintaining market liquidity in the government bond market will be essential. However, with inflation still far from the 2% target, it may be premature to focus on the details of the exit strategy, which will depend on economic and market conditions at that time. The BoJ's successful exit from quantitative easing in 2006 is a positive precedent, although the size of the BoJ balance sheet was much smaller at 30% of GDP (2008 *OECD Economic Survey of Japan*). Moreover, Japan may benefit from the experience of other major economies exiting quantitative easing.

Figure 17. Asset price trends in Japan have improved



1. Tokyo area (Tokyo, Kanagawa, Saitama, Chiba, and Ibaraki prefectures), Osaka area (Osaka, Hyogo, Kyoto, and Nara prefectures), and the Nagoya area (Aichi and Mie prefectures).
Source: Ministry of Land, Infrastructure, Transport and Tourism; and Thomson Reuters Datastream.

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Another concern is the BoJ's purchases of ETFs; it now owns more than three-quarters of the ETF market, putting it among the top ten shareholders, indirectly, in 40% of Japanese listed companies (Nikkei Asian Review, 2018a). Central bank purchases of ETFs may lead to the overvaluation of some stocks (Shirai, 2018). Moreover, the BoJ programme is eroding market discipline as companies are rewarded simply for being in major market

indexes, rather than for having new business strategies or offering more dividends (Nikkei Asian Review, 2018a). Finally, the large-scale purchases will make it difficult for the BoJ to sell their holdings. There are some signs that the BoJ is showing more flexibility in its ETF purchases in line with its July 2018 decision and the shift from the Nikkei 225 stock average, which focuses on the largest firms, to the broader Topix equities index.

Despite these concerns, achieving the 2% target should remain the BoJ's priority, while monitoring the potential costs and side effects, including those related to financial institutions (see below). Deflation lowers nominal GDP, thereby boosting the government debt ratio and threatening fiscal sustainability. Reducing the debt ratio in a deflationary context is thus very difficult, even more so as deflation also has a negative impact on growth.

Table 7. Implementation of OECD recommendations for monetary policy

Earlier OECD Survey recommendations	Action taken or planned
Monetary easing should be maintained as planned until inflation is durably above the 2% target, while taking account of costs and risks.	The Bank of Japan introduced forward guidance to signal its determination to maintain ultra-low short and long-term interest rates for an extended period of time. The sustainability of monetary policy has been enhanced by yield curve control, which targets the yield rather than the quantity of government bonds purchased.

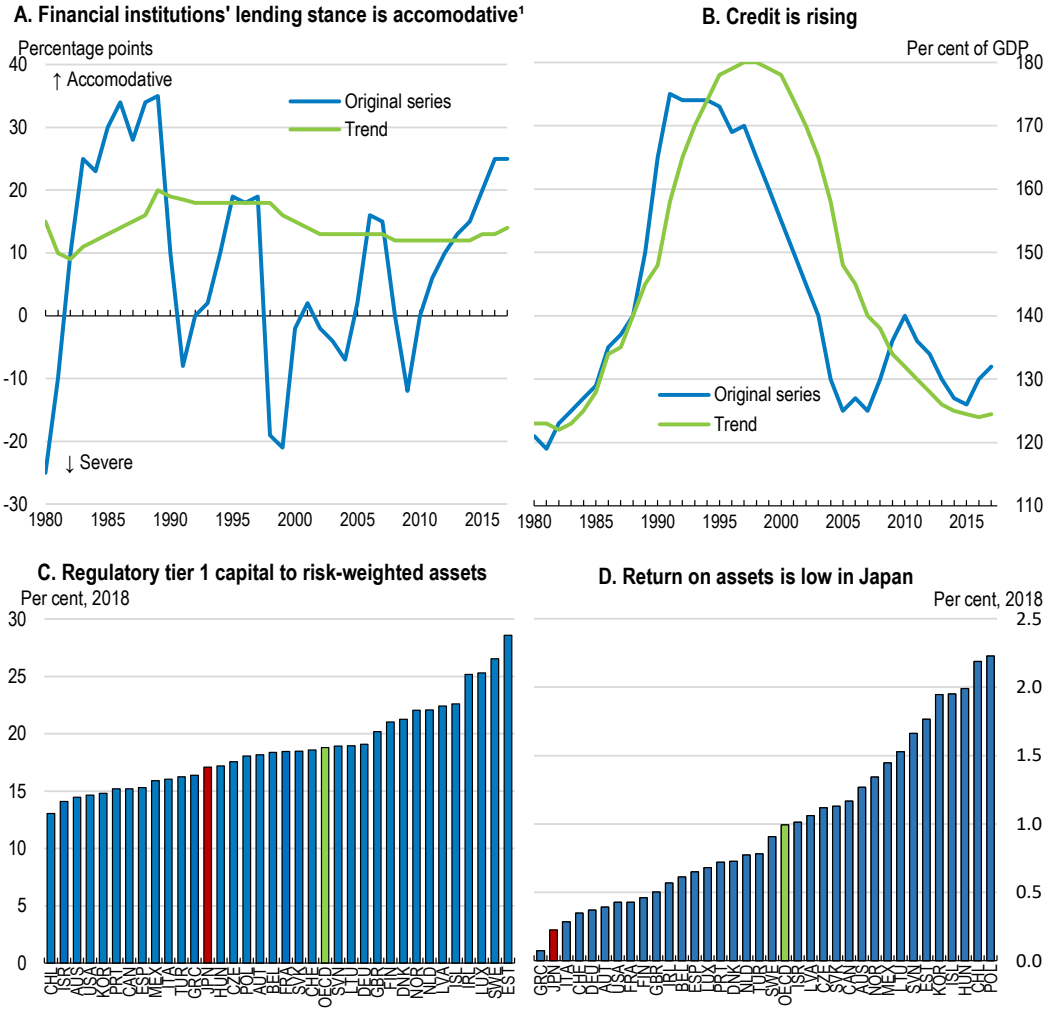
The financial sector: strong at present but emerging concerns

The financial sector is supporting the economic expansion. Lending attitudes of financial institution have remained at their most accommodative level since the collapse of the bubble economy in the early 1990s (Figure 18). Total credit has risen as a share of GDP during the past few years, reversing the downward trend (Panel B). Banks' non-performing loans are low, reflecting aggressive efforts by the supervisory authorities to reduce them. Tier 1 regulatory capital rose from 15.3% of risk-adjusted assets in 2014 to 17.1% in early 2018, close to the OECD average (Panel C). Macro stress testing by the BoJ finds that financial institutions have generally strong resilience in terms of both capital and liquidity against tail events, such as those during the global financial crisis (Bank of Japan, 2018). The overall banking sector "remains well capitalised and liquid" (IMF, 2018).

However, banks' return on assets is the second lowest in the OECD area (Figure 18, Panel D). Net income has remained relatively high from a long-term perspective for all types of financial institutions, underpinned by realised gains on stockholdings and the fall in borrowing costs (Figure 19). Nevertheless, net interest income has trended down, reflecting narrower deposit-lending margins during a prolonged period of low interest rates. A second factor is intensified competition among financial institutions, as the number of firms shrinks and the share that are debt-free rises. In a BoJ survey, almost half of regional banks, which are major lenders to SMEs, reported that interest rates on their loans to middle-risk firms do not match credit costs through the business cycle. More than 85% responded that it is difficult to raise their lending rates because of competition with other financial institutions, suggesting a structural problem in this sector (Bank of Japan, 2018). Consolidation of the regional banking sector could help strengthen their balance sheets. The government should move ahead with its late 2018 proposal to either create a new system to approve M&As of regional banks or to enhance the predictability of the review process by the Japan Fair Trade Commission, which would help maintain services throughout the country.

QQE has been effective in achieving portfolio rebalancing by encouraging financial institutions to accept more risk. However, recent trends create a number of concerns. *First*, the share of loans to "low-return borrowers" – which are primarily SMEs with relatively weak financial conditions whose borrowing interest rates are low relative to their credit risk through the business cycle – have increased substantially (Figure 20). *Second*, real estate lending, fuelled by loans to the rental-housing sector, is rising rapidly (Panel B). *Third*, overseas lending has also increased markedly (Panel C). Although about 70% is investment grade, overseas loans create foreign exchange risks and the risk of a snapback in foreign interest rates. *Fourth*, financial institutions have increased their holdings of investment trusts (Panel D). Effective financial supervision is essential in the face of these increasing risks.

Figure 18. The financial sector is contributing to the economic expansion



1. A diffusion index that measures the difference between the number of firms responding that financial institutions' lending stance is accommodative minus those responding that it is severe.
Source: Bank of Japan (2018); and International Monetary Fund.

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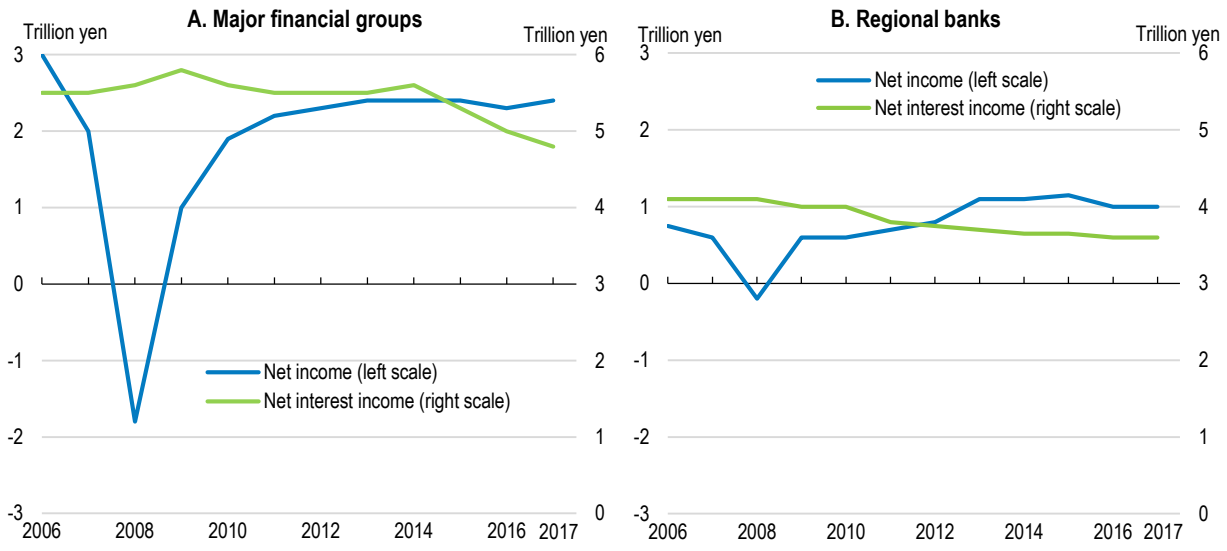
A declining and ageing population will tend to reduce both the supply and demand for funds due to an increasing share of retirees and a shrinking economy. The life-cycle hypothesis implies that Japan's saving rate will decline. However, empirical studies find that precautionary saving and bequest motives in Japan have slowed its fall (Horioka and Niimi, 2017; Hamaaki et al., 2019). In addition, the share of risky assets in household portfolios increases with age as the burden of repaying mortgages declines (Iwaisako et al., 2016). Given the elderly's saving behaviour and willingness to accept risk, Japan should have enough funding to create profitable businesses. A bigger concern is a lack of demand for such funds.

Figure 19. Net income is high, although net interest income is falling



Source: Bank of Japan (2018).

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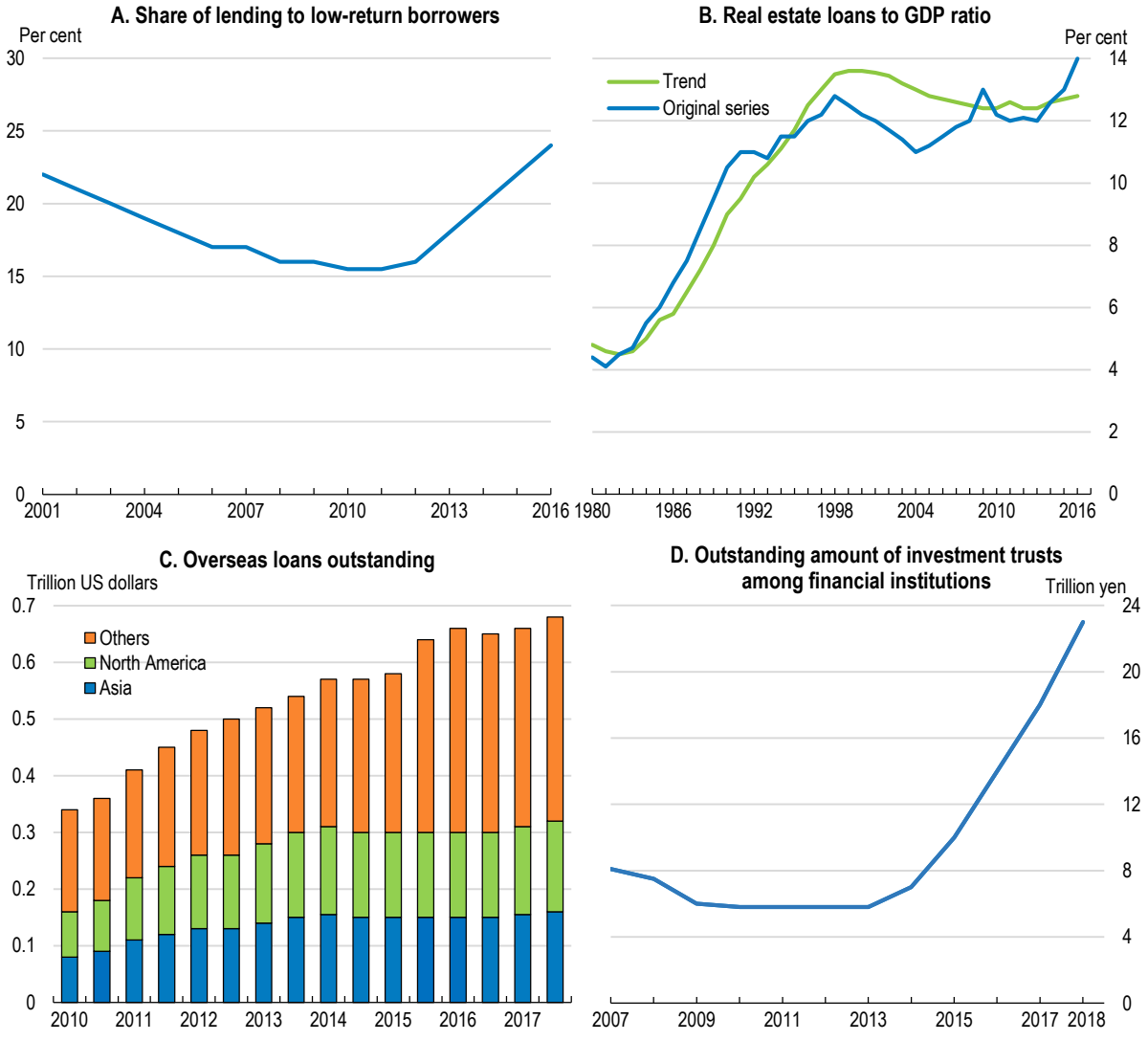
Sustaining labour inputs in the face of population ageing

Japan's labour force will decline by 25% by 2050 if labour market entry and exit rates remain unchanged (Figure 3). Labour inputs will also be constrained by the 2018 work style reform bill, which limits overtime work to 45 hours per month and 360 hours per year (Table 8). However, up to 720 hours per year is allowed if employers and employees agree. The demographic challenge makes fundamental labour market reform a top priority. Japan's traditional model – based on lifetime employment, seniority-based wage and promotion systems, mandatory retirement, simultaneous recruitment of new graduates and company-based training -- was effective when the population was young and growing. However, it is inappropriate in the era of 100-year lives, as it discourages the employment of older persons and women and reduces labour mobility. A shift to more flexible employment and wage systems based more on ability and less on age would enable Japan to better utilise its human capital.

A shift to more flexible employment and wage systems would also help break down labour market dualism, which results in a large wage gap between regular workers and non-regular workers, who are predominately women. The "equal pay for equal work" provision, which will be implemented in 2020-21, aims at resolving "irrational gaps in working conditions between regular and non-regular workers in the same firm". In

practice, it is difficult to determine whether a pay gap is rational, as it requires employers to carefully evaluate the performance of individual workers. *OECD Economic Surveys of Japan* have long recommended a comprehensive strategy to break down labour market dualism by increasing the coverage of social insurance and upgrading training programmes for non-regular workers, raising the minimum wage and reducing employment protection for regular workers, in part by increasing transparency. Given the difficulty of reforming employment protection, Japan could consider the approach of Italy, which has "grandfathered" the existing rights of current employees, while introducing a single contract for new workers (OECD, 2017b).

Figure 20. Increased risk-taking by financial institutions is creating some concerns



Source: Bank of Japan (2018).

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Table 8. Basic Policy on Economic and Fiscal Management and Reform 2018

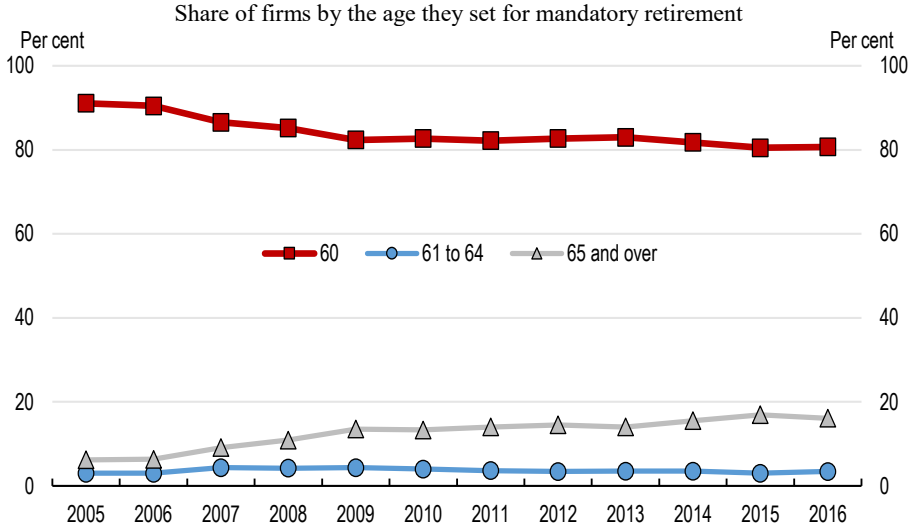
Agenda	Objective	Actions taken or planed
1. Realisation and expansion of the "human resource development revolution"	Provide an environment that enables all citizens to play active roles in society throughout their lifetime.	(1) Investment in human resources A plan to expand childcare capacity by 320 000 children by 2020 was launched in 2018. Free early childhood education and care for children aged three to five is to be introduced in October 2019. Exemption and reduction of tuition for higher education for students from low-income households is to be introduced in 2020. Job training programmes will be enhanced, as will education curricula through collaboration between business and universities. (2) Promoting the engagement of all talents in Japan A plan will be formulated by summer 2019 to secure employment opportunities until age 70.
2. Realisation and expansion of the productivity revolution	Double annual labour productivity growth to 2% by 2020. Implement the technologies of the Fourth Industrial Revolution to realise "Society 5.0", which will promote sustainability and inclusiveness.	(1) Flagship projects for the realisation of "Society 5.0" Promote such projects as: *i)* automated mobility systems; *ii)* data-driven healthcare systems; *iii)* smart energy management and finance; *iv)* digital government; and *v)* smart industry, community and SMEs. (2) Building a foundation for innovation 5G frequency bands were allocated in 2019, with commercial services to begin in 2020. A framework for project-based regulatory sandboxes was created in 2018. (3) Establishment of innovation ecosystem Preferential treatment in public procurement will be granted for advanced technology and SMEs and venture businesses.
3. Promotion of work style reform	Implement drastic labour market reform to realise a society that enables workers to flexibly choose varied work styles.	(1) Reduction of long working-hours A compulsory cap on overtime hours on a monthly and annual basis will be enforced in 2019 for large firms and in 2020 for SMEs. (2) Realisation of equal pay for equal work The equal-pay-for-equal-work principle will be enforced in 2020 for large firms and in 2021 for SMEs. Guidelines for equal or balanced treatment between regular and non-regular workers were announced in 2018. (3) Creation of a flexible employment system to promote performance-based pay for specialised workers A new type of employment contract that exempts highly specialised workers with specific job descriptions from the limits on overtime hours will be introduced in 2019. (4) Minimum wage will continue to increase Minimum wages, set at a national average of JPY 874 per hour in 2018, will continued to be hiked around 3% per year until they reach JPY 1 000.
4. Acceptance of new human resources from overseas	Accepting more foreign workers to cope with the serious labour shortage.	(1) Creation of a new residency status for lower-skilled foreign workers A new residency status was created in 2018 to allow foreign nationals who have completed Technical Intern Training II in Japan to remain for up to five additional years to work in sectors that face severe labour shortages.

Source: Cabinet Office (2018).

More than 80% of firms continue to set mandatory retirement at age 60 (Figure 21), even though life expectancy at that age is 26 years, up from 17 in 1970. While workers can continue until age 65, most are re-hired as non-regular workers at significantly lower wages and in jobs that make less use of their skills. The right of firms to set a mandatory retirement age should be abolished to allow more workers to continue their careers, while fully utilising their skills. An end to mandatory retirement requires shifting away from seniority-based wage systems by giving more weight to job category and performance. In addition, the pension eligibility age should be raised above 65, as healthy life expectancy has reached 75. Lengthening careers in the era of 100-year life spans also requires lifelong learning and job-related training to avoid the decline in skill levels among older workers. An end to mandatory retirement would increase firms' incentives to increase such investment in older workers, which is currently low in Japan. Finally, longer working lives would also be facilitated by better work-life balance for all workers by strictly enforcing the new 360-hour annual limit on overtime hours, imposing adequate penalties on firms that exceed it and introducing a mandatory minimum period of rest between periods of work.

The employment rate for women has risen sharply over the past five years, from 60.7% in 2012 to 69.6% in 2018, well above the 60.1% OECD average in 2017 (Table 9). However, half of the new workers are non-regular workers. The working lives of women are interrupted and shortened by the burden of providing care for family members, leaving them under-represented in managerial positions and on boards of directors (Figure 22). Removing obstacles to female employment requires improving work-life balance, eliminating the concentration of women in career tracks with fewer opportunities for advancement and fighting discrimination. The government plans to provide free childcare for all children between the ages of three and five, which it expects to boost the fertility rate. Eliminating the waiting list for childcare should be a priority to encourage female employment. In addition, the spousal deduction on personal income tax should be further reformed in line with the recommendation of the OECD Council at Ministerial Level that countries should "design tax-benefit systems so that both parents have broadly similar financial incentives to work" (OECD, 2013).

Figure 21. Most firms have kept their mandatory retirement age at 60



Source: Ministry of Health, Labour and Welfare, *General Survey on Working Conditions,* 2017.

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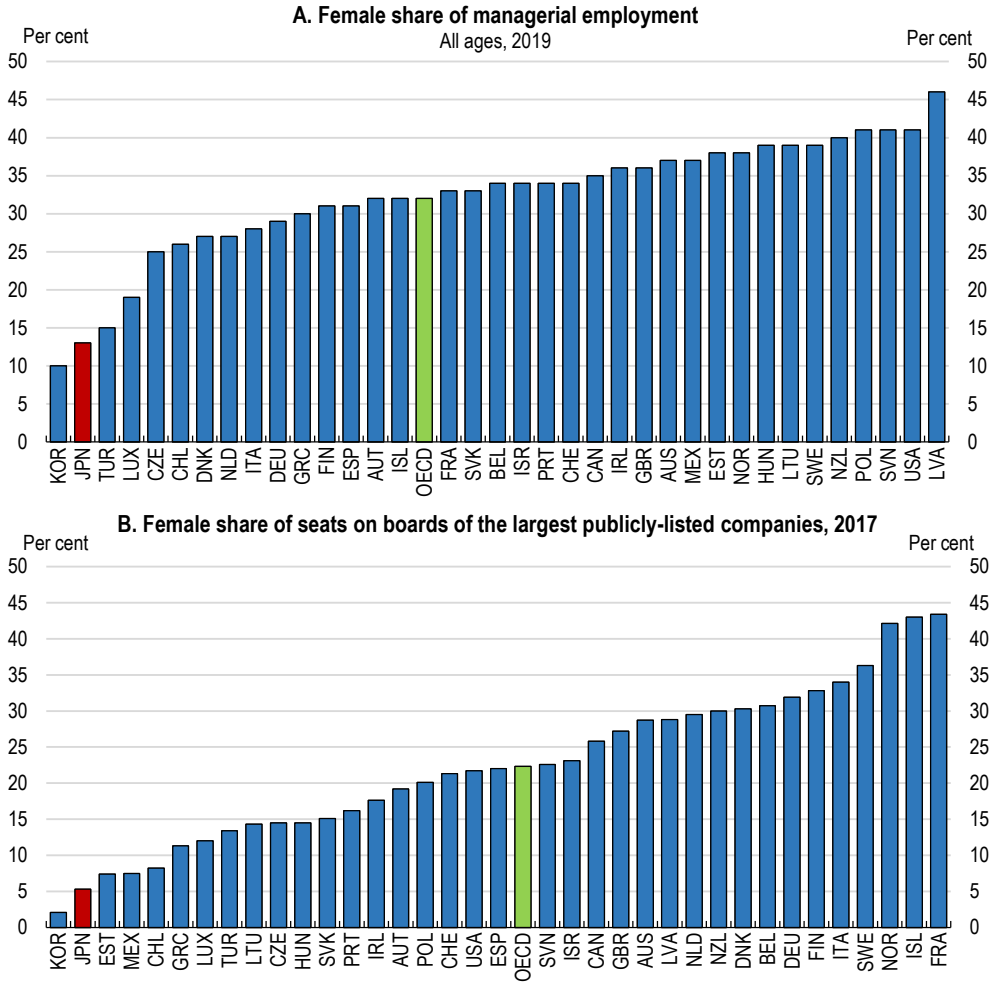
Table 9. Employment rates by age and gender

In 2017

	Japan				OECD			
	15-24	25-54	55-64	15-64	15-24	25-54	55-64	15-64
Men	42.0	92.7	85.0	82.9	44.7	86.8	69.1	75.5
Women	42.9	75.3	61.9	67.4	38.5	68.9	52.2	60.1
Total	42.5	84.1	73.3	75.3	41.6	77.8	60.4	67.8

Source: OECD Employment and Labour Market Statistics database.

Figure 22. Japanese women are under-represented in leadership positions



Source: OECD Gender database.

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The number of foreign workers (including trainees) in Japan nearly doubled from 0.7 million in 2013 to 1.3 million in 2017, indicating the willingness of employers to hire foreign workers. Still, they accounted for only 2% of Japan's labour force, one of the lowest shares in the OECD. Moreover, the Technical Intern Training Programme, which allows foreigners to stay in Japan for up to five years, has been criticised as a scheme to provide cheap labour, resulting in human rights abuses. In 2017, the Ministry of Health,

Labour and Welfare introduced regulations with penalties attached to "reduce human rights violations", stating, "trainees are no different than Japanese labourers" (Japan Times, 2017).

A December 2018 law introduced a new residency status for work-ready foreigners with expertise in sectors facing labour shortages. This landmark legislation will allow lower-skilled workers to be employed in Japan based on worker residency status for the first time. The government plans to accept 345 150 foreign workers over 2019-24 under this law. Although international migration on a scale sufficient to substantially change Japan's demographic picture is unrealistic, increased inflows of foreign workers should be part of a comprehensive approach to coping with population decline. OECD research shows a wealth of evidence demonstrating that the medium and longer-term effects of migration on public finance, economic growth and the labour market are generally positive (OECD, 2016). Maintaining a no-immigration approach based on temporary foreign workers is not enough. Realising the economic benefits of migration requires significant investment in the education of new migrants and assistance in adjusting to life in Japan.

Table 10. Implementation of OECD recommendations to support employment

Earlier OECD Survey recommendations	Action taken or planned
Remove obstacles to female employment by increasing the capacity of childcare and improving work-life balance through a binding ceiling on overtime work.	The government plans to expand childcare capacity by 320 000 children by the end of FY 2020. Free early childhood education and care for children aged three to five is to be introduced in October 2019.
Break down dualism by relaxing employment protection for regular workers and expanding social insurance coverage and training for non-regular workers.	Since April 2017, part-time workers in enterprise with fewer than 500 employees can be included in Employees' Pension Insurance if there is an agreement between the employer and employees, The government has enlarged support for vocational training for non-regular workers.

Narrowing the productivity gap with leading OECD countries

Japan's exceptionally large labour inputs (on a per capita basis) have offset low labour productivity, which was more than a quarter below the top half of OECD countries in 2017 (Figure 23). This reflects the widening productivity gap between Japan's manufacturing and service sectors (2017 *OECD Economic Survey of Japan*). Consequently, per capita income was 19% below the top half of OECD countries. The government's 2013 goal of boosting real output growth to an annual rate of 2% through 2022 remains out of reach with productivity growing at a 1.0% annual rate over 2012-17. The New Economic Policy Package announced at end-2017 set a goal of doubling productivity growth to 2% by 2020.

The top priority will be Japan's Society 5.0 agenda, which aims at the systematic integration of digital technologies and the physical world to spur economic growth and provide solutions to social challenges. Japan is a world leader in the development of digital infrastructure, which is welcomed as a strategy to cope with labour shortages and a declining population (OECD, 2018e). To fully reap the benefits of the digital infrastructure, it needs to be complemented by investment in skills, particularly for middle-aged and older workers, and policies to minimise the digital divide. Regulatory reform is another priority to allow the development of new technologies, such as driverless cars. The regulatory sandbox system introduced in 2018, which exempts projects using new technology from existing regulations under certain conditions, is a welcome step forward. Two other key areas for reform to achieve faster growth are

corporate governance, one of the three key priorities in the 2016 Growth Strategy, and SME policies.

Box 1. Quantification of the impact of structural reforms

The labour market reforms discussed in this *Survey* are estimated to have large benefits (Table 11). In the baseline scenario below, labour market entry and exit rates are constant for men and women for each five-year age cohort, leading to a 24.0% fall in the labour force over 2017-50. Nevertheless, real GDP per capita would rise 1.8%, even assuming no change in labour productivity. In reality, labour productivity is likely to increase, so the rise in real GDP per capita would be larger, but this occurs in the two reform scenarios so this would not affect the percentage gain in real GDP per capita associated with reform.

Table 11. The impact of policies to boost employment on per capita GDP

Percentage change over 2017-50

	Labour force	Real GDP per capita	Difference from baseline
Baseline[1]	-24.0	1.8	0.0
Delayed retirement[2]	-18.9	8.4	6.5
Closing the gender gap[3]	-20.2	6.8	4.9

1. Assuming unchanged labour market entry and exit rates men and women for each five-year age cohort.
2. Labour market exit rates from age 55 onwards are adjusted downwards by 10% over the period 2017-30.
3. The participation rates for women converge to those for men in each five-year age group.

Source: OECD (2018h); and OECD calculations.

In the "delayed retirement" scenario, exit rates from age 55 onwards fall by 10% over the period 2017-30. This would raise the average effective age of retirement by 1.1 and 0.7 years for men and women, respectively, by 2030. Such a scenario appears reasonable, given that the effective retirement age increased 1.1 years for men and 3.2 years for women over 2004-17. Moreover, the projected increase in the effective age of retirement would still be slightly less than the projected rise in life expectancy, increasing the expected number of years in retirement slightly from 15.2 in 2017 to 15.4 in 2030 for men and from 20.5 to 21.0 for women (OECD, 2018h). With a smaller decline in employment, real GDP per capita in 2050 would be 6.5% higher than in the baseline scenario.

In the "closing the gender gap" scenario, the participation rates of women converge to those of men in each five-year age group. The gender gap in participation narrowed from 24 percentage points (84% for men and 60% for women) in 2004 to 16 points (85.5 for men and 69.4 for women) in 2017. Further narrowing the gap at the same pace would eliminate it before 2050. In this scenario, real GDP per capita in 2050 would be 4.9% higher than in the baseline scenario.

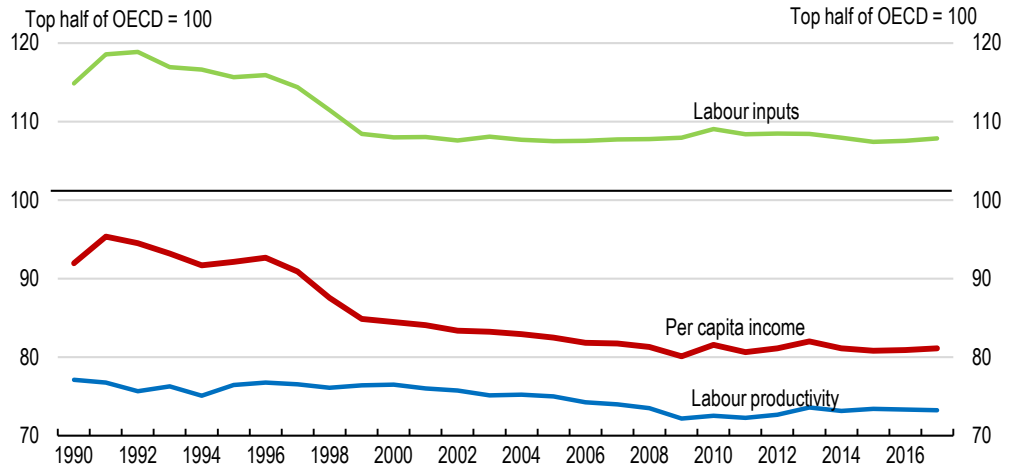
The other structural recommendations in this *Survey* relate to corporate governance and SME policy. While reforms in these areas are expected to have a significant impact, quantitative estimates are not possible at this point.

Improving corporate governance in Japan

Japanese firms have long been characterised by low returns on equity compared to their European and US counterparts. Corporate boards of directors have been primarily composed of insiders who fail to effectively scrutinise management decisions (2017 *OECD Economic Survey of Japan*). One factor was the lack of a corporate governance code until 2015. Better corporate governance has the potential to improve the allocation of capital and the monitoring of firm performance, leading to better use of Japan's high

level of business R&D and human capital. It would also facilitate the downsizing or closing of low-productivity activities and the shift of resources to high-productivity activities.

Figure 23. Labour productivity in Japan is more than a quarter below the top half of OECD countries



Source: OECD Economic Outlook database.

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The Stewardship Code introduced in 2014 aims at encouraging "institutional investors to fulfil stewardship responsibilities by improving and fostering their investee companies' corporate value and sustainable growth through constructive engagement". By November 2018, 237 institutional investors had adopted the Code, of which nearly half were foreign institutions. While almost all major asset managers and public pension funds have signed up, only 12 of the more than 10 000 corporate pension funds have joined, reflecting their lack of human resources for stewardship activities. By end-2016, the implementation rate of each of the Code's seven principles was more than 90%. The Code was revised in 2017 to require asset managers to resolve conflicts of interest and to promote effective monitoring of asset managers by asset owners (e.g. corporate pension funds).

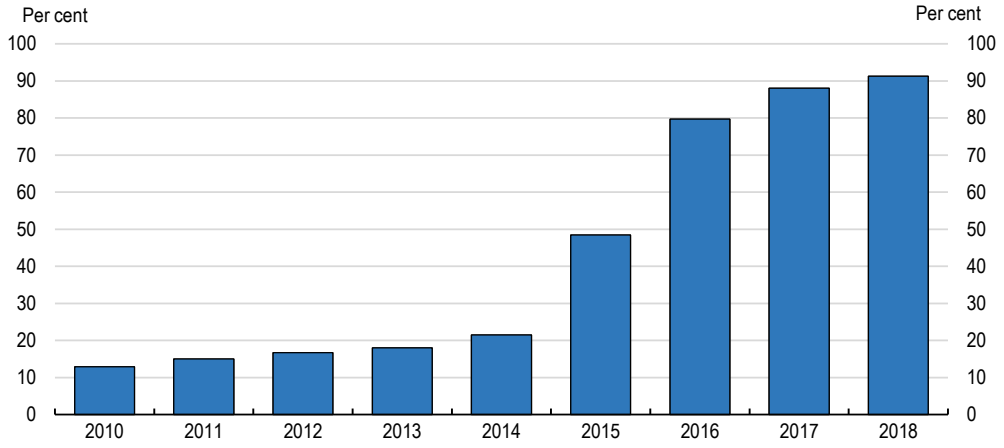
The Corporate Governance Code created in 2015 is based on the G20/OECD Principles of Corporate Governance. It urges "companies to enhance mid- to long-term earnings power, under effective business strategies, with appropriate cooperation with stakeholders" (Financial Services Agency, 2018). Both Codes take a principles-based approach on a comply-or-explain basis. One of the key principles of the Corporate Governance Code, which applies to more than 2 500 listed companies, is having at least two independent directors. The share of companies in the first section of the Tokyo Stock Exchange (2 021 in total) with two or more outside directors increased from 22% in 2014 to 91.3% in 2018 (Figure 24), raising the average number of outside directors per company from 1.6 to 2.3.

As of July 2017, 32% of companies had complied with all 73 principles in the Code, while another 61% complied with more than 90%. The share of companies with nomination committees increased from 21% in 2015 to 32% in 2017, while the share with remuneration committees rose from 13% to 35%. Another sign of progress is that the share of companies holding their regular general shareholder meeting on the most

crowded day of the year fell from 96% in 1995 to 31% in 2018, suggesting increased interest in listening to shareholders.

Figure 24. Share of firms with two or more independent directors

Among companies listed in the first section of the Tokyo Stock Exchange



Source: Japan Exchange Group (2018).

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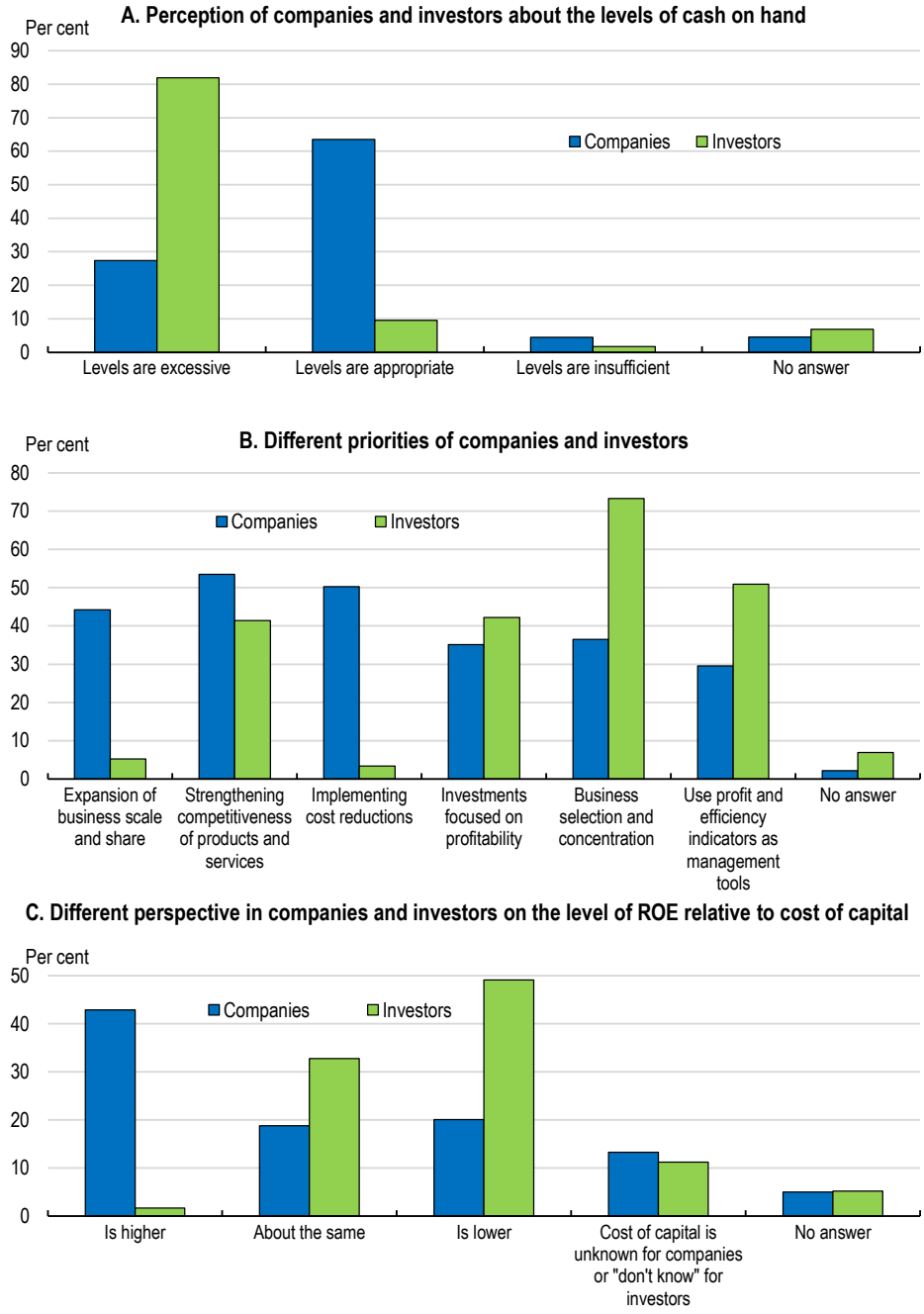
The 2017 New Economic Policy Package called for improving corporate governance to boost strategic investment in fixed assets, R&D and human resources. Indeed, upgraded corporate governance could help unlock the corporate sector's large stash of cash for investment to boost productivity. A 2017 survey of 581 listed companies and 116 institutional investors found that 64% of companies felt that their cash holdings were appropriate, while 82% of investors said that they were too high (Figure 25, Panel A). Moreover, 70% of investors said the surplus cash should be invested and about two-thirds complained that companies had offered little or no explanation for their level of cash holdings. Companies and investors also diverged on the priorities for management. While 73% of investors said that companies should concentrate on selecting the correct business lines and focus on them, only 36% of firms listed that as a priority (Panel B). Finally, half of investors complained that companies' returns on equity (ROE) were below the firms' cost of capital. However, companies felt that their ROE matched (43%) or exceeded (19%) their cost of capital (Panel C). Surprisingly, 13% of companies did not know their cost of capital.

The revision of the Corporate Governance Code and the Corporate Governance System Guideline in 2018 made a number of important changes:

- *Cross-shareholdings*: companies are required to annually assess whether or not to maintain each individual cross-shareholding and disclose the results of the assessment. This is expected to reduce cross-shareholdings, which have been found to have a negative impact on productivity.
- *Diversity of corporate boards*: the shares of women and foreigners on boards are both below 5%, while the average age of outside directors is 67. The authorities expect to see greater diversity. The Guideline also includes principles on the qualifications of outside directors and states that the chair of the board should be a non-executive director.

- *CEOs*: boards should appoint and dismiss CEOs through objective, timely and transparent procedures.
- *Independent advisory committees*: the establishment of committees, such as those for nominations and remuneration, was added to the Code.

Figure 25. Divergent views of investors and companies



Source: Japan Exchange Group (2018).

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While Japan has established a corporate governance system in line with best practices, its full impact will only be seen gradually. The reforms thus have mainly changed form rather than substance (Financial Services Agency, 2018). According to a 2018 survey by the Government Pension Investment Fund, 40% of companies see improvements in the attitudes of at least some institutional investors, but 46% have not seen any change. The government should closely monitor and promote the implementation of the Codes to improve the performance of the business sector.

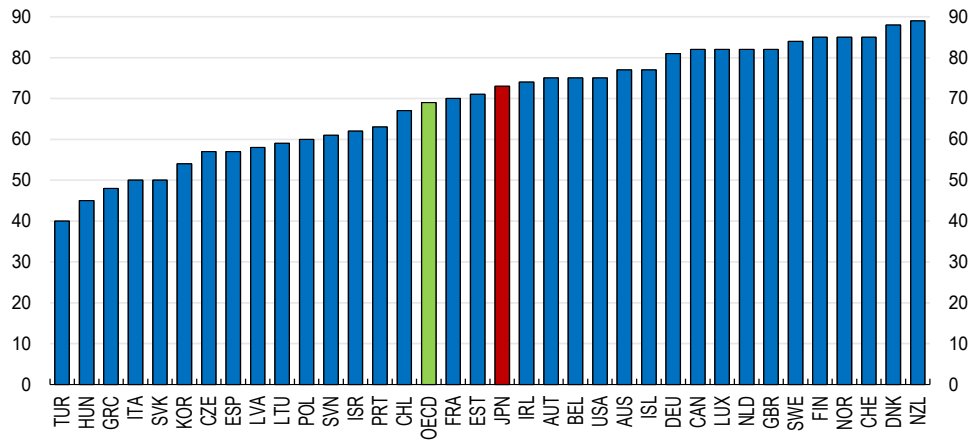
Table 12. Implementation of OECD recommendations on corporate governance

Earlier OECD Survey recommendations	Action taken or planned
Work in tandem with the stock exchange and the private sector to promote compliance with the principles contained in the new Stewardship and Corporate Governance Codes.	The Stewardship Code was revised in May 2017 to require asset managers to resolve conflicts of interest and to require asset owners to monitor asset managers effectively. The number of institutional investors adopting the Code has risen from around 200 in late 2016 to 239 in December 2018. The Corporate Governance Code was revised in June 2018 to focus on reducing cross-shareholdings and establishment of independent advisory committees. The share of large listed firms with more than two independent directors has risen from less than half in 2015 to 91% in 2018.

Addressing corruption and other serious corporate offences

Improved corporate governance could also reduce corruption. Japan ranks in the middle of the OECD in the index of perceived corruption by Transparency International (Figure 26). Fighting corruption is important for ethical and economic reasons, as it harms the business climate, distorts competition and diverts public resources into overpriced or worthless projects. Compared to other countries, corruption and other serious corporate offences in Japan stands out for their long duration (Coney and Coney, 2018). For example, a steel company admitted falsifying data going back to the 1970s, while a car company confessed to covering up defects for 23 years. Accounting fraud at a company producing cameras continued for 20 years under a series of CEOs. An electronics company admitted that it had overstated its profits by more than USD 2 billion over seven years, prompting the resignation of the CEO and two previous CEOs.

Figure 26. Perceived corruption in Japan was near the OECD average in 2017



Source: Transparency International (2018).

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In contrast, corporate fraud episodes in the United States last an average of 20 months (Dyck et al., 2017). The longevity of corruption cases in Japan reflects the domination of insiders, including corporate boards consisting primarily of former employees, with few outside directors, and weak auditing procedures. Auditors, who are appointed by the board, have no voting rights, cannot dismiss directors or impose sanctions on them, and are poorly paid.

In addition, whistleblowing has traditionally not been common in Japan. Japan established a Whistleblowers Protection Act in 2004, but a 2013 government survey found that more than two-thirds of employees were unaware of it (Consumer Affairs Agency, 2013). Moreover, those who point out fraud often face retaliation or are fired by their employers, although they can sue to invalidate their firing or receive compensation. Following a series of systemic cheating and wrongdoing by companies over the past few years, the government is considering ways to improve protection for whistleblowers (Nikkei, 2018b). The Corporate Governance Code states that companies should establish whistleblower contact points "independent of company management", such as a panel consisting of independent directors. Among other measures, making such a system mandatory for firms would help reduce corruption.

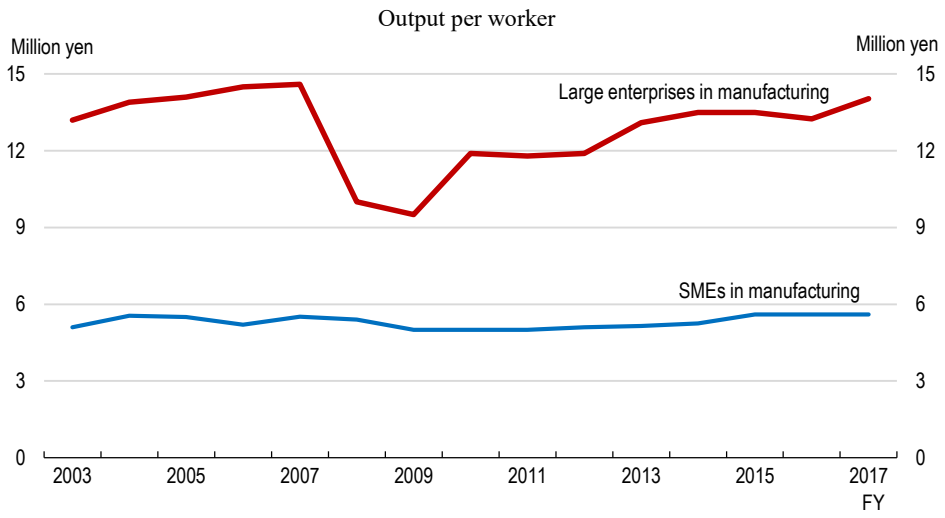
Japan should also strengthen efforts to fight bribery by Japanese companies and individuals in their foreign activities by better implementing the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions. Only four cases of foreign bribery in Japan have resulted in punishment since 1999, when its legislation was amended to make it a criminal offence to bribe foreign public officials to obtain advantages in international business. In June 2017, Japan amended its legislation so that companies and individuals convicted of bribing foreign public officials do not keep the proceeds or benefits of this crime. With this measure, Japan took a step toward implementing the OECD Convention.

Improving the performance of SMEs

Improving the performance of SMEs is necessary to raise productivity, promote inclusive growth and strengthen financial institutions. SMEs have low productivity relative to large firms in Japan (Figure 27). In addition, the gap has been widening as productivity has been rising in large firms since 2010, while stagnating in SMEs. The gap between large firms and SMEs in Japan is large compared to other OECD countries (Figure 28). The productivity gap is important as SMEs account for more than two-thirds of employment and around half of output. Enhancing the dynamism of SMEs was an objective of Japan's 2013 Revitalisation Strategy.

Low productivity in the SME sector has several causes. *First*, three-quarters of SMEs are in the service sector, which has relatively low productivity, making it important to address regulations and other factors that limit service sector productivity (Fukao, 2010). *Second*, the firm entry rate in Japan, although rising, is still well below other major economies (Figure 29). Consequently, firms over ten years old account for three-quarters of Japan's small enterprises (less than 50 workers) compared to less than half in most OECD countries. Firm creation is essential to boost productivity given the key role of start-ups in innovation (OECD, 2018f). New firms boost aggregate productivity by displacing less-productive firms, placing incumbents under competitive pressure and enabling the commercialisation of knowledge that would otherwise remain unused.

Figure 27. The productivity gap between large firms and SMEs is wide in Japan

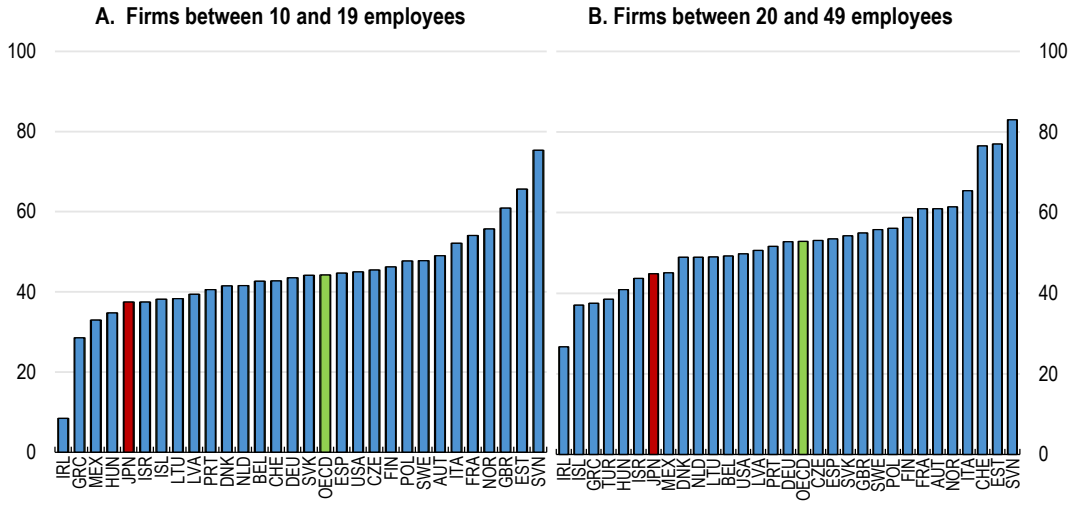


Source: Ministry of Finance, *Financial Statement Statistics of Corporations by Industry*.

StatLink http://dx.doi.org/10.1787/888933953658

Figure 28. The productivity gap between SMEs and large firms is relatively wide in Japan

Value added per person employed in 2016 relative to that in firms with more than 250 workers = 100



Source: OECD (2018c).

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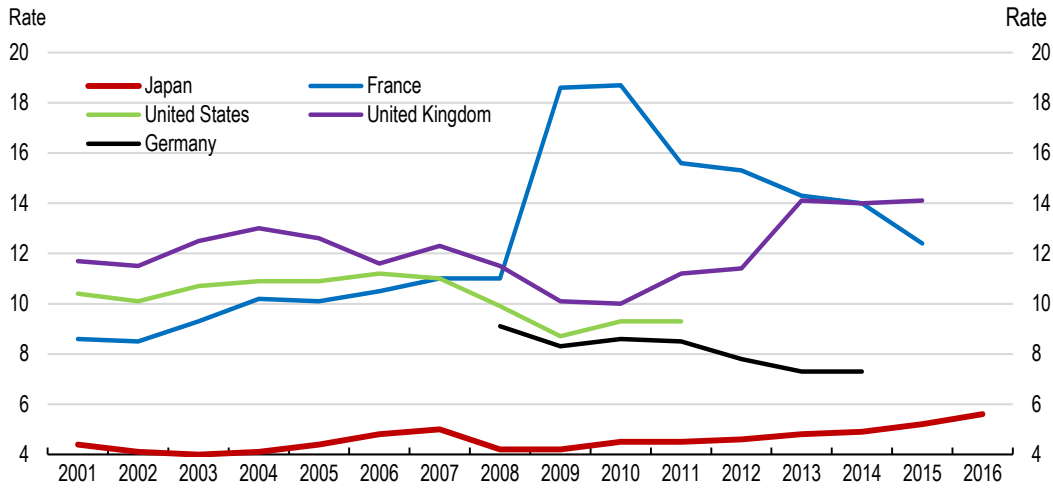
The Revitalisation Strategy set a goal of boosting the firm entry rate to 10%. The weakness of entrepreneurship is one obstacle to achieving this goal. Indeed, the number of entrepreneurs (as a share of those employed) in Japan is the lowest in the OECD (OECD, 2017a). Promoting entrepreneurship also requires improving its image: less than a quarter of the Japanese views entrepreneurship as a good career choice, compared to a global average of 62% (GEM, 2017), in part as they perceive few opportunities. The widespread use of personal guarantees for loans may also discourage entrepreneurship. The government is encouraging lending without personal guarantees. In FY 2017, such loans accounted for 34% of loans from public institutions and 16% from private

institutions. Finally, the low entry rate is partly a reflection of a low exit rate at 3.5%. The government reformed the legal framework for promoting entrepreneurship in 2018 and should step up its efforts to foster public awareness of entrepreneurship.

Figure 29. The firm entry rate in Japan is rising, but remains below other major economies



Source: Ministry of Economy, Trade and Industry (2017b).

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Low SME productivity stems in part from less investment in new technology and digitalisation, reflecting their weaker financial position, lack of human capital and the advanced age of many owners. Government financial support for investments in new technology by SMEs has been expanded. Since 2018, investment in advanced equipment by firms with a plan to raise their productivity growth rate to 3% or more on average over three years can have its property tax reduced to zero for up to three years. The government is also using public procurement to promote innovation in SMEs, whose share of R&D is about 5%, compared to around 30% in the OECD area. Policies to spur competition are needed to encourage reallocation and increase firms' incentives to adopt digitalisation and other key technology. The most effective policies in this regard include (Andrews et al., 2018):

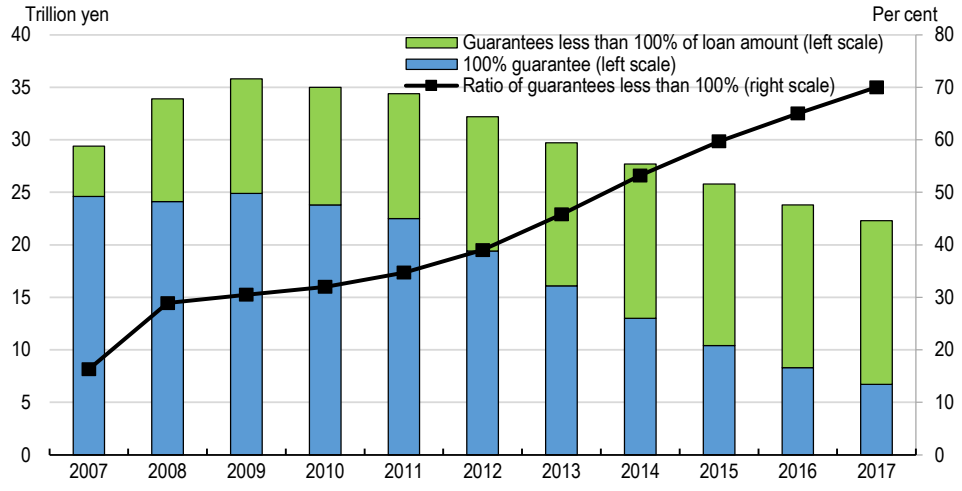
- Lower barriers to international trade and inward FDI.
- Employment flexibility, which facilitates the expansion of innovative firms and the downsizing of lagging firms.
- Better insolvency regimes to promote productivity by strengthening market selection and the reallocation of resources to more productive uses.
- Venture capital investment, which promotes the creation of innovative firms.
- Low corporate income tax rates to promote firm creation.

Another factor holding back productivity is that Japanese SMEs show little growth, limiting the gains from economies of scale. For example, the average number of employees at manufacturing firms that are more than 10 years old is less than ten compared to more than 70 in the United States (Criscuolo et al., 2014). Structural change led by new firms that continuously displace obsolete firms can raise productivity. High

public support discourages small firms from growing and losing the benefits associated with SME status. A recent study found that the thresholds on capital in the definition of SMEs significantly discouraged investment by firms just below the limit (Tsuruta, 2017b). Another factor impeding the growth of SMEs is a quantitative and qualitative lack of human resources (Ministry of Economy, Trade and Industry, 2018).

SMEs receive substantial government support, although improved economic conditions have reduced public credit guarantees for SME loans from a peak of JPY 36 trillion (7.5% of GDP) in FY 2009 to JPY 22 trillion (4.2%) in FY 2017 (Figure 30). In addition, the share of guarantees covering less than 100% of the loan amount rose from 30% to 70% over that period. Guarantees of 100% weaken market forces as banks have little incentive to monitor such loans. In 2018, the major 100% guarantee programme, Safety Net Programme No. 5, was reformed by reducing the share of loans covered to 80%. One major concern is government pressure on banks to loan to SMEs. The 2009 SME Financing Facilitation Act required banks to review the terms of their loans to SMEs in response to requests by the borrowers. Although the law lapsed in 2013, the Financial Services Agency has continued to encourage financial institutions to modify the terms of loans to SMEs.

Figure 30. The amount of guaranteed loans has fallen along with the share guaranteed



Source: Ministry of Economy, Trade and Industry.

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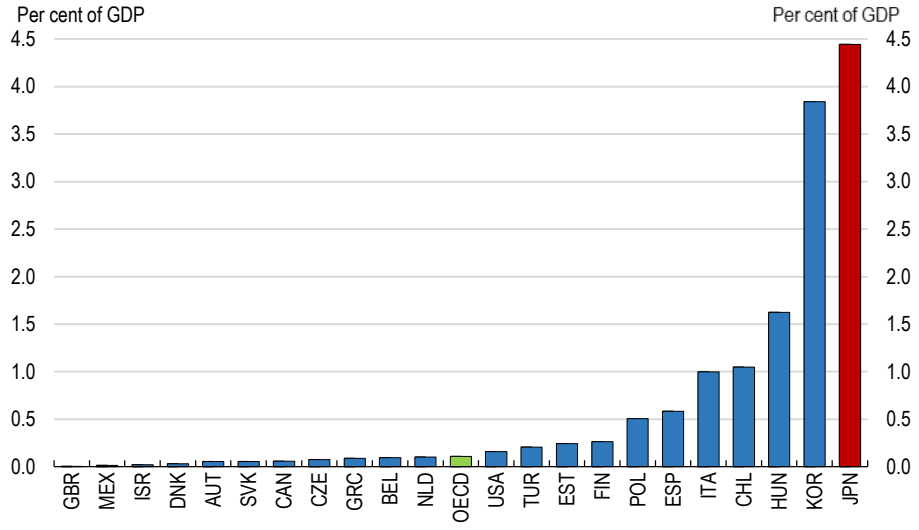
Despite the decline, government guarantees for loans to SMEs in Japan remained exceptionally high at 4.4% of GDP in 2016 (Figure 31), reflecting the fact that the proportion of loans to SMEs is also high as a share of GDP. The share of SME loans that is guaranteed is 9%, compared to 13% in the United States and 14% in Korea. High levels of public support can delay restructuring by keeping non-viable enterprises afloat. This distorts resource allocation by limiting the scope for entry of new firms and expansion of innovative firms. Public support for SMEs has other negative side effects, such as hindering the development of market-based financing. SMEs tend to prefer government loans, as they carry relatively low interest rates compared to the risk. Moreover, 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. Therefore, providing public support for SMEs can also increase adverse selection and moral hazard from the side of the banks.

Figure 31. Government credit guarantees for SMEs in Japan are exceptionally high



Source: OECD (2018d).

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Table 13. Implementation of OECD recommendations on SME policies

Earlier OECD Survey recommendations	Action taken or planned
Increase the productivity of SMEs by strengthening R&D links between firms and universities.	In 2018, the guideline for the strategic basic technology advancement/collaboration support projects was revised and its coverage expanded to include R&D projects related to AI and IoT between SMEs and universities and government research institutes.
Facilitate the exit of non-viable firms by reducing the use of personal guarantees. Make greater use of the Guidelines for Personal Guarantees Provided by Business Owners to expedite out-of-court settlements for failed SMEs.	The 2014 Guidelines for Personal Guarantees Provided by Business Owners promotes loans without personal guarantees. In FY 2017, 34% of loans from public financial institutions and 16% from private ones did not require personal guarantees by business owners.
Promote second chances for failed entrepreneurs by making the personal bankruptcy system less stringent.	The growing share of loans without personal guarantees is expanding second chances for failed entrepreneurs.
Implement the planned reform of the credit guarantee system to strengthen market forces and keep public guarantees of SME loans on a downward trend.	The public credit guarantee system was revised in April 2018. Public credit guarantees for SME loans fell from a peak of 7.5% of GDP in FY 2009 to 4.2% in FY 2017. The share of guarantees covering less than 100% of the loan amount rose from 30% to 70% over that period.
Focus SME support on overcoming market failures that limit private financing rather than supporting mature firms.	Firms over ten years old received only 3% of public credit guarantees for their loan.

The succession issue is a major concern; around two-thirds of Japan's 3.8 million SMEs will have an owner age 70 and older by 2025. Among owners in their 60s, over half have not designated a successor. The government is trying to match SMEs with elderly owners to potential buyers, and provides grants, preferential tax treatments, and low-interest loans and loan guarantees for business succession. It is important to maintain a focus on promoting viable firms rather than trying to preserve even non-viable SMEs. The large share of older SME owners creates succession issues but also opportunities to achieve economies of scale. The government has set a goal of raising the exit and entry rates from

around 5% to around 10%. In addition, the retirement of elderly managers of SMEs has been found to have a positive effect on sales, assets, employment, investment and cash holdings (Tsuruta, 2017a).

Green growth policies to improve well-being and promote sustainable growth

Japan's energy intensity fell by 18% over 2010-17 and is now one-fifth below the OECD area (Figure 32, Panel A). Japan's success in achieving high energy efficiency reflects in part the Top Runner Programme, which sets mandatory energy efficiency targets for products, including vehicles and household appliances, sold in Japan. Japan has also made much progress in boosting material productivity and cutting final disposal, reducing municipal waste well below the OECD average (Panel B). Only a small proportion of the waste is landfilled, though recycling remains modest.

CO_2 emissions in 2016 were 5% lower than in 2000 despite the nuclear accident caused by the 2011 Great East Japan Earthquake. CO_2 emissions peaked in 2013, as imported coal and gas replaced nuclear power, and then fell by 8% by 2016, reflecting a reduction in electricity demand, an increase in renewables and the re-starting of some nuclear power plants that were closed following the nuclear accident. Carbon intensity is now in line with the OECD average.

More than 90% of greenhouse gas (GHG) emissions in Japan are CO_2 emissions. Electricity generation accounts for almost half, reflecting electrification of energy demand and reliance on fossil fuels, notably coal. One important strategy for an effective climate mitigation policy is further electrification in combination with decarbonisation of power generation. Increased energy efficiency also plays a role, particularly in sectors where electrification is difficult or uneconomic. Renewables accounted for less than 5% of total primary energy supply in 2015 (Figure 32, Panel D), the fourth-lowest share in the OECD. Renewables share of electricity generation increased from 12% in 2010 to almost 17% in 2017.

More ambitious climate policy would have many benefits

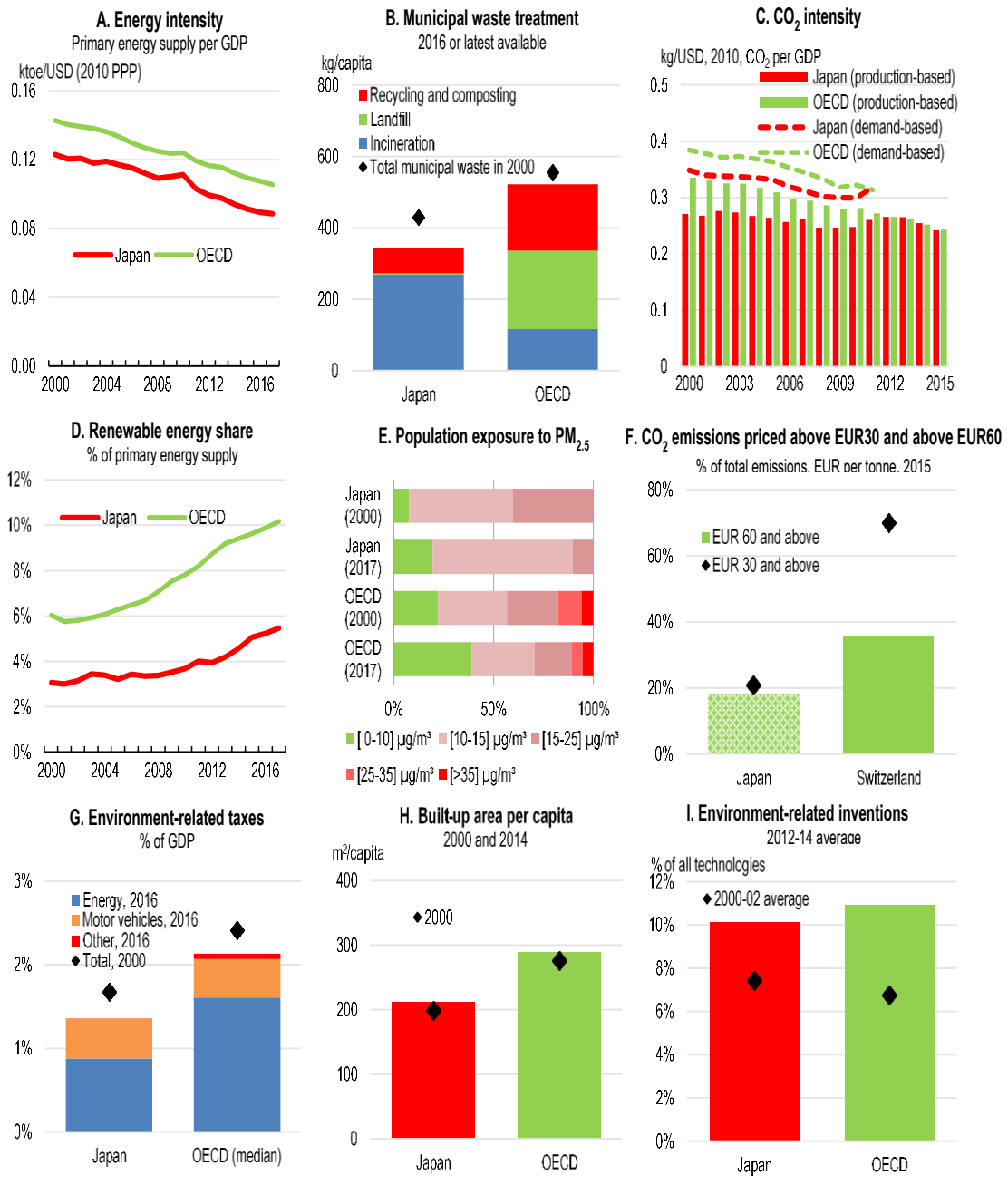
The 2015 Paris Agreement commits countries to limit global warming to well below 2 degrees Celsius and to pursue efforts to limit it to 1.5 degrees. The International Energy Agency's Sustainable Development Scenario (SDS), which is fully aligned with the Paris Agreement and is at the lower end of a range of scenarios projecting a global temperature rise of 1.7-1.8 degrees, sees global energy-related CO_2 emissions falling by 46% by 2040. In this ambitious scenario, energy-related CO_2 emissions in Japan are around 570 Mt in 2030 (49% below 2017) and 300 Mt in 2040 (73% below 2017) (International Energy Agency, 2018). An alternative scenario of the Intergovernmental Panel on Climate Change finds that worldwide CO_2 emissions resulting from human activity should reach net zero around 2050 to limit global warming to 1.5 degrees. Uncertainty remains substantial around how much CO_2 can be emitted before emissions reach net zero (Intergovernmental Panel on Climate Change, 2018).

Japan's Nationally Determined Contribution under the Paris Agreement aims to reduce GHG emissions by 26% relative to the 2013 level by 2030. Japan has also committed to cutting GHG emissions by 80% by 2050, while promoting economic growth.

Most of Japan's population is exposed to small particle pollution above the WHO-recommended limit of 10 micrograms per m^3 (Figure 32, Panel E). Premature mortality from air pollution is high for a high-income country, estimated at more than 500 deaths

per million people, and has increased strongly since 2010 (Roy and Braathen, 2017). In part, this reflects high population density and the large share of elderly in Japan.

Figure 32. Green growth indicators



Source: OECD Green Growth Indicators database.

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Some countries have set up comprehensive long-term low-emissions strategies to guide expectations and investment decisions (United Nations Climate Change, 2018). While Japan has a plan for achieving its 2030 target, it lacks a detailed strategy for 2050, although the 5th Strategic Energy Plan, which began in 2018, provides some guidelines.

Japan needs a comprehensive programme, including innovative low-carbon technologies, further reform of the electricity sector and continued improvements in energy efficiency.

Based on its 5th Strategic Energy Plan, Japan is promoting the development of technologies to improve power generation efficiency and drastically reduce GHG emissions, in part through carbon capture, utilisation and storage (CCUS). This is welcome, as achieving the Paris Agreement objective will require such technologies to neutralise emissions from sources for which no mitigation technologies have been identified, including industrial processes, and achieve net negative emissions.

Japan is a leader in environment-related innovation, with about three times as many inventions per capita as in the OECD area. Japan has a long-term innovation strategy, the Energy and Environment Innovation Strategy (NESTI 2050) and a Basic Environmental Plan, which is revised every six years. It sets out long-term environmental priorities, including policies to foster sustainable materials use, protect biodiversity and improve environmental risk management. Planned cross-sectoral measures include developing low-carbon cities (Ministry of Land, Infrastructure, Transport and Tourism, 2014). The government aims to largely eliminate CO_2 emissions by passenger vehicles, which will boost electric vehicle production. Decarbonising electricity generation would provide a strong foundation for decarbonising transport.

Japan is producing hydrogen-fuelled cars, which have a longer range than electric cars. More broadly, the government aims to create a "hydrogen society". Hydrogen can be deployed in nearly all end-use sectors, can be produced with renewable energy and does not emit GHG when used. However, zero-carbon hydrogen use is projected to remain more expensive than liquefied natural gas over the next 20 years, though there is much uncertainty (International Energy Agency, 2018).

Policies to reach 2030 targets rely on higher efficiency as well as expanding nuclear energy and renewables

Japan's 2016 Plan for Global Warming Countermeasures emphasises action by industry, based on the introduction of best available technology. In addition to the Top Runner Programme, mandatory building codes for new buildings will be introduced in 2020. The government also plans to use the Joint Crediting Mechanism with developing countries to appropriately count as Japan's reduction. The government has established a regulatory framework to promote the use of non-fossil energy sources and the effective use of fossil fuels. To reach its 2030 CO_2 emission targets, Japan has set a carbon intensity target in electricity generation and has tightened standards of thermal efficiency in power plants. In addition, Japan is promoting the development of technologies to improve power generation efficiency.

Decarbonising electricity supply is a key challenge, particularly given the uncertainty following the 2011 nuclear accident. Before 2011, nuclear power provided around one-third of total electricity. The 2015 Long-term Energy Supply and Demand Outlook envisages raising nuclear power's share from about 3% to 20-22%. This would necessitate re-starting a significant number of nuclear power plants, which requires the approval of the fully independent Nuclear Regulatory Agency (NRA). The NRA, created following the 2011 nuclear accident, has imposed nuclear safety standards that are among the most stringent in the world, making the extent of the expansion of nuclear power uncertain (Climate Action Tracker, 2018). Public opinion remains ambivalent as the decontamination of areas affected by the nuclear accident continues and evacuation orders may remain in effect until 2021 (Ministry of Environment, 2018). Renewable

energy's share in electricity generation is to rise from 17% to 22-24% by 2030. Nuclear and renewable energy are supported by the non-fossil value trading market, which requires electricity retailers to procure 44% of their supply from non-fossil sources by 2030.

If the targeted share of nuclear power is not achieved, a wide range of efforts would be needed to meet Japan's 2030 emissions reduction target. These should include further boosting the supply of renewable energy, increasing energy efficiency and shifting away from coal toward natural gas.

Planned coal-fired power plants may lock in high carbon infrastructure

The share of coal in electricity generation is expected to remain large, at 26% in 2030, compared to 32% in 2015. Although Japanese coal-fired power plants have the highest efficiency in the world, they remain a high-carbon source of electricity. Japan will promote high efficiency and next-generation coal power generation as well as the phase-out of below ultra-super-critical efficient coal power generation. The government has introduced stringent efficiency requirements for new plants. As many as 30 new coal-fired power plants are planned.

Even with the planned efficiency improvements, Japan faces a major challenge in reconciling its continued reliance on coal with its commitment to reduce emissions by 26% by 2030 (International Energy Agency, 2016a). To decarbonise coal-fired electricity generation, it would need to be combined with carbon capture, use and storage (CCUS). Since there is uncertainty about the scope for scaling up CCUS, relying on it extensively is a risk for achieving climate mitigation objectives (Intergovernmental Panel on Climate Change, 2018). Japan should thus carefully evaluate the construction of new coal-fired power plants, while promoting energy security and economic efficiency.

Investing more in renewables can boost Japan's competitiveness

Japan needs to increase the share of renewable energy. Producing electricity with utility-scale solar photovoltaic plants in Japan is becoming more competitive with coal-fired power, particularly if pricing of CO_2 emissions is taken into account. For example, at a price of USD 50 per tonne of CO_2, the estimated cost of utility-scale solar PV is lower than coal before 2030, even including the estimated cost of electricity storage (International Energy Agency, 2018). Given that the downward trend in the cost of producing electricity from renewable sources has consistently exceeded expectations, the cost of renewables could decline even faster than expected. In contrast to the sharp falls in the cost of renewables, carbon capture and storage (CCS) technologies have not experienced cost reductions over the past ten years (Intergovernmental Panel on Climate Change, 2018). Japan has a policy target of lowering capture costs and is conducting pilot projects in Tomakomai Hokkaido and R&D development projects in the field of carbon capture, which accounts for about 60% of the total CCS cost.

Expanding renewable electricity generation may also have some non-price advantages, such as enhancing energy security, when combined with adequate storage and micro-grids (International Energy Agency, 2016b). Flexibility mechanisms other than storage can help cope with the intermittency of solar and wind. Japan has significant potential to develop offshore wind, which is less intermittent, though deep waters close to shore would likely require the use of floating turbines, a technology still in its infancy. A bill passed in 2018 takes concrete steps to promote offshore wind. This development is very welcome.

Feed-in tariffs (FITs), launched in 2012 to support renewable energy generation, have increased Japan's solar PV capacity from 4 gigawatt (GW) in 2010 to 49 GW in 2017 and led to high local photovoltaic production penetration rates (International Energy Agency, 2016a). However, this sector confronts challenges such as higher costs resulting from FIT surcharges, inadequate diversification of renewable sources and grid constraints. The government revised the FITs and introduced reverse tendering for large-scale solar energy projects in 2017 (Ministry of Economy, Trade and Industry, 2017a). Prices fell, but are still higher than in other countries. Measures in other countries to diminish uncertainty for investors regarding, for example, access to land and grid connections have reduced costs (International Energy Agency, 2016b). Japan also provides generous FITs for biomass use in newly constructed power plants. However, the rules that biomass must be obtained from sustainably managed sources have exceptions, such as for imported palm kernel shells, raising concerns about sustainability. It is important that all imported biomass be from sustainable sources (Aikawa, 2016).

Japan needs to reform energy markets further to make the most of renewables

The Japanese power system is fragmented into ten areas, operated by vertically-integrated incumbent monopolies with limited grid integration and little commercial incentive to foster a rapid uptake of renewables. The Organisation for Cross-regional Coordination of Transmission Operators (OCCTO), created in 2015, is in charge of transmission operations. It is essential that OCCTO continue to support the development of a competitive environment that is more open to renewable electricity generation and approaches grid integration in a neutral way (International Energy Agency, 2016a). Incumbents are required to set up legally separate companies for transmission and distribution from 2020. Regulations also prohibit discriminatory treatment of competitors and sets rules limiting the positions that key individuals can hold across the legally separated entities. Many details on how the markets will function are still being developed. There may still be incentives for the incumbents to discriminate against market entrants (Fuentes, 2009). Regulations need to be implemented effectively to limit this risk.

The integration of increasing renewable energy can also be achieved through stronger regional integration of grids, the use of higher-resolution prices (including prices closer to real-time and locational prices that reflect grid constraints) and appropriate allocation of transmission and distribution networks costs, as well as the use of smart grids and storage (International Energy Agency, 2016b). Already, intra-day and day-ahead wholesale markets have been introduced and smart meters are being deployed. Remuneration of electricity produced from intermittent renewable sources should be designed to respond to market prices so providers have incentives to maximise market value (International Energy Agency, 2016b). Japan's island geography increases the technical challenge of grid integration of variable renewable electricity.

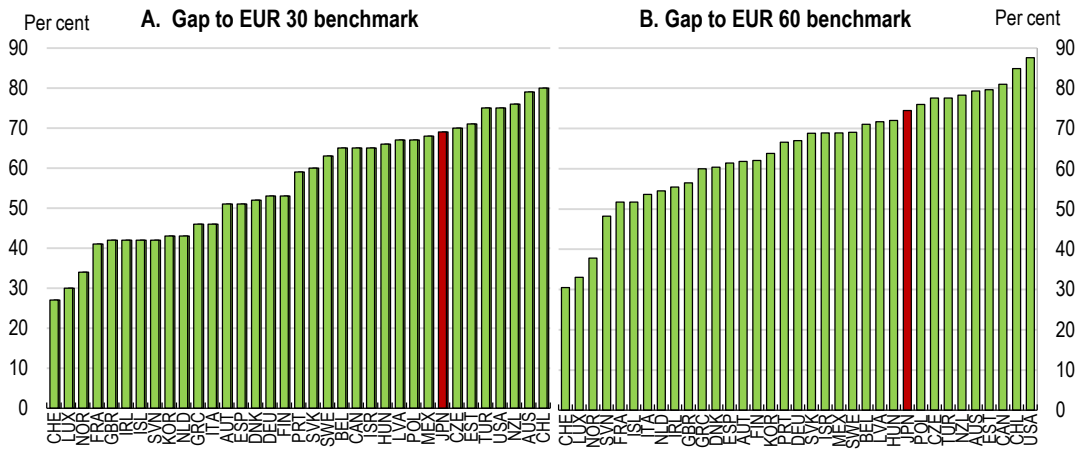
The scope for increasing carbon taxation is large

Carbon pricing is a cost-effective way to reduce emissions. Evidence from various countries suggests that carbon pricing need not hurt competitiveness, at least at the moderate levels introduced thus far in most countries (Arlinghaus, 2015; Calel and Dechezleprêtre, 2016; Dechezleprêtre et al., 2018).

Although electricity prices are high, focusing only on effective carbon prices, Japan prices most of its CO_2 emissions well below estimated climate-cost benchmarks (Figure

33). Carbon pricing in Japan mostly results from excise taxes on various fossil fuels. In addition, a tax for climate change mitigation was introduced in 2012 and raised since then to around EUR 2 per tonne of CO_2. Tokyo and Saitama prefecture introduced emissions trading systems (ETS), but they only cover a minor share of national emissions.

Figure 33. The carbon pricing gap in Japan is relatively large



Note: The carbon pricing gap measures the difference between a benchmark value and the actual effective carbon price for every percentile of emissions, summing all positive differences, for each country. The actual effective carbon price is computed from the taxation of fossil fuels and the prices of tradable emission permits. The benchmark value of EUR 30 is a low-end estimate of climate-related carbon costs. The benchmark value of EUR 60 is a midpoint estimate of the carbon costs in 2020 and a low-end estimate for 2030. The figure for Japan does not include the increase in the tax for climate change mitigation in 2016, which raised the carbon tax by about EUR 0.70.to around EUR 2.
Source: OECD (2018b).

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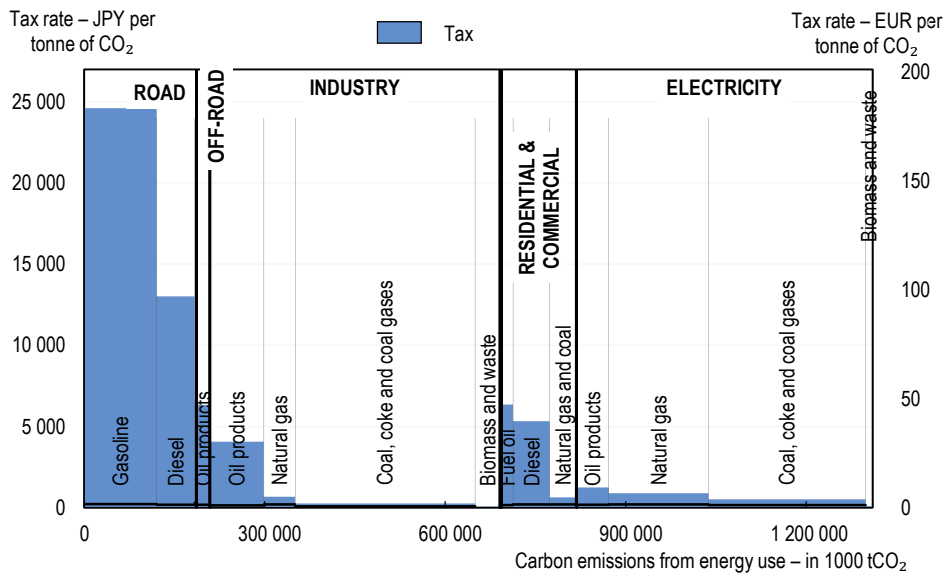
Effective carbon prices are particularly low for coal (Figure 34). As in other OECD countries, transport fuel is taxed more than other fuels, which can also reflect other costs, such as road congestion, accidents and air pollution. Transport fuels are taxed less than in most OECD countries, and diesel less than petrol, although it contributes more to air pollution.

Carbon pricing policies need to take into account the specific circumstances of Japan. In particular, industrial electricity prices in Japan are high, even though energy taxes are rather modest (Figure 35). The high share of fossil fuels in electricity generation could result in strong short-term impacts on energy prices if carbon prices were raised quickly. A gradual rise in the effective carbon price, while limiting disruptions and a negative impact on competitiveness in specific sectors and locations, would be a policy option for Japan to achieve emission reductions cost-effectively and further increase Japan's high level of energy efficiency.

International experience indicates that raising the level of carbon pricing would generate tax revenues, contributing to an improvement in the fiscal position. Offsetting the negative effect of increasing taxes on fuel and electricity for low-income households may require using a third of the revenues for income-tested cash transfers (Flues and van Dender, 2017).

Figure 34. Energy taxes are particularly low on coal

Effective tax rates on energy use in national currency and EUR per tonne, including electricity output taxes, 2015



Source: OECD (2018g).

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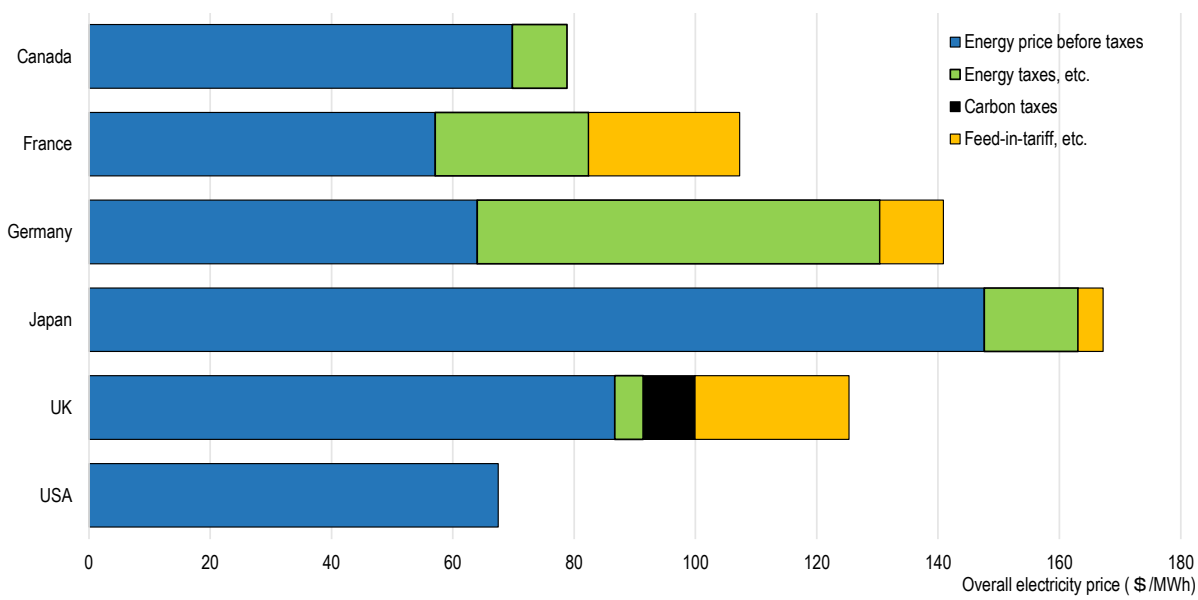
Figure 35. Prices for electricity in the industrial sector are high in Japan



Source: Ministry of Economy, Trade and Industry.

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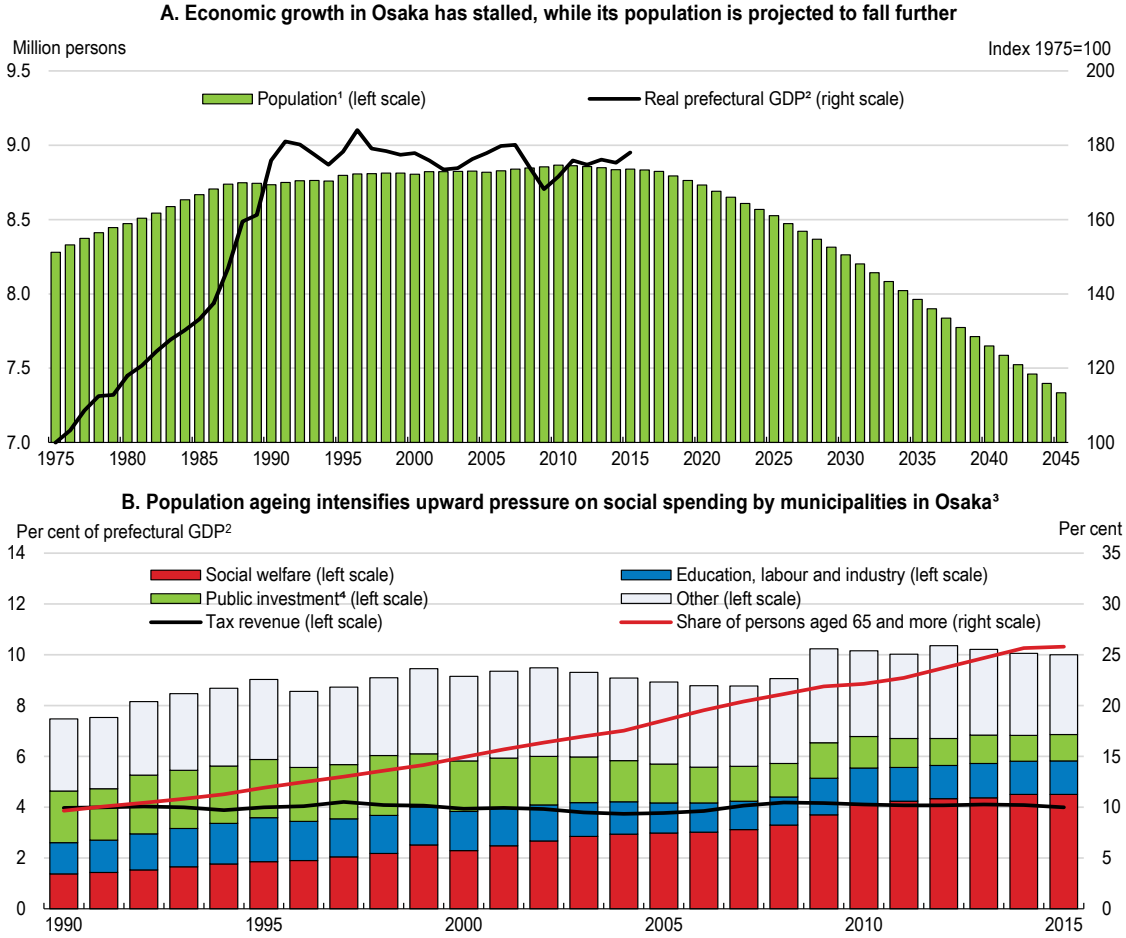
Annex 1.A. Osaka: meeting the challenges of sustaining growth and providing social services in the face of population ageing

Osaka Prefecture is the third largest in Japan in terms of population and home to Japan's third-largest city. As in many areas of Japan, Osaka's population is falling and ageing. The share of persons aged 65 and older rose from 9.7% in 1990 to 27.2% in 2017 and is projected to reach 36.2% by 2045 (Figure A1.1). Osaka's population, which peaked in 2010, is projected to fall from 8.8 million in 2017 to 7.3 million in 2045. While economic growth stalled as population growth decelerated in the 1990s, the rising share of the elderly is intensifying spending pressure on social welfare (Panel B). Revitalising the economy and ensuring the sustainability of public services are major challenges for Osaka.

Figure A1.1. Ensuring economic and fiscal sustainability is a challenge for Osaka



1. The projections from 2018 onward is from the National Institute of Population and Social Security Research.
2. The numbers, which are based on different base years and different standards of the system of national accounts, are connected based on their growth rates.
3. Aggregated numbers of the municipalities in Osaka Prefecture.
4. Including maintenance costs.
Source: Cabinet Office; Ministry of Internal Affairs and Communications; National Institute of Population and Social Security Research; and OECD calculations.

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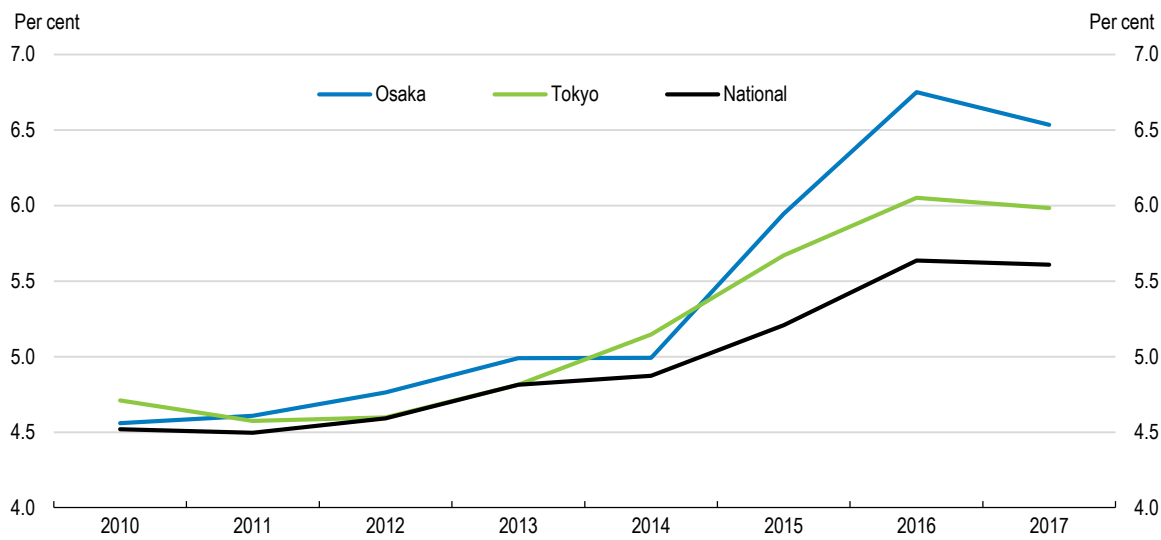
Rapid population ageing brings opportunities as well as challenges. Osaka's legacy as a national centre for pharmaceuticals during the past 400 years gives it a special opportunity to link rising medical needs driven by population ageing to local innovation and business dynamism. In 2004, the national government approved Osaka Prefecture's proposal to designate a district in its northern area as a Structural Reform Special Zone to promote the creation of a biomedical innovation cluster (2005 *OECD Economic Survey of Japan*). Reforms introduced in the zone included lifting the ban on businesses run by professors at national universities to foster collaboration between business and academia and accepting more foreign researchers.

This initiative resulted in important advances in medical technology, such as the "heart sheet" developed by Professor Yoshiki Sawa at Osaka University Graduate School of Medicine and TERUMO, one of the biggest Japanese medical device companies. This innovation regenerates cardiac function using a sheet made with cultured myoblast cells obtained from the patient's thigh muscle. The heart sheet became the first application using the expedited approval system in the Act on Securing Quality, Efficacy and Safety of Products Including Pharmaceuticals and Medical Devices, which was passed in 2014 to shorten Japan's long "drug lag" (2009 *OECD Economic Survey of Japan*). Professor Sawa and his team continue to develop the heart sheet technology.

In addition to the national special zones, Osaka Prefecture promotes growth through local special zones in which the local corporate income tax rate is cut to as low as zero for approved life science or alternative energy businesses. Moreover, it closely coordinates with municipal incubation centres and the Osaka Chamber of Commerce and Industry to provide hands-on support for start-ups. These initiatives have helped lift Osaka's firm entry rate above Tokyo's and the national average (Figure A1.2).

Figure A1.2. The firm entry rate in Osaka is higher than in Tokyo



Source: Ministry of Health, Labour and Welfare.

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The start-up friendly environment also contributed to creating unique business ideas. In 2017, a renovation company and five other start-ups launched a project named "Sekai (world) Hotel" in a deteriorating traditional shopping street located in an area that had

become a popular destination as the number of foreign tourists surged. Faced with a shortage of accommodations for tourists, Osaka lifted the ban on guesthouses in its National Strategic Special Zone in 2016 (2015 *OECD Economic Survey of Japan*). The Sekai Hotel used this opportunity to turn uninhabited houses in the area into guesthouses. The project also attracts tourists to local shops by collaborating with local merchants to make the entire street a hotel with restaurants, cafés, and spas (Nikkei Asian Review, 2017). Furthermore, Osaka is hosting the World Expo 2025, with the theme "Designing Future Society", which will attract more tourists.

While start-ups are increasing, Osaka faces a severe labour shortage, with a job openings-to-applicants ratio of 1.77 at end-2018, exceeding the national average of 1.63. Given that Osaka's labour force participation rate of women aged 30-39 in 2015 was the third lowest among Japanese prefectures at 60.8%, improving the work environment for women is key to coping with the labour shortage. One priority is to expand childcare capacity in Osaka. In addition to the national plan to add childcare capacity for 320 000 children by 2020 (see Chapter 1), Osaka has been utilising the National Strategic Special Zone to expedite the qualification of childcare staff by improving the exam system. Osaka is also establishing childcare centres in municipal parks. Such measures helped to reduce the waiting list for childcare from 1 434 children in 2016 to 677 in 2018. Another option would be to accept more foreign workers based on the amendment of the Immigration Control and Refugee Recognition Act in December 2018.

The prefectural government is also taking initiatives to ensure the sustainability of public services. *First*, following the National Health Insurance (NHI) reform in FY 2018 to shift the responsibility for insurance finance from municipalities to prefectures, Osaka immediately introduced a uniform premium rate across municipalities that will be phased in over six years to avoid abrupt changes. This eliminated a significant gap in annual premiums, which had ranged from JPY 79 999 (USD 711) to JPY 150 070 (USD 1 335) in FY 2016, and is expected to contribute to stabilising the finances of the NHI. *Second*, the Osaka Waterworks Vision developed in 2012 is promoting consolidation of all municipal waterworks. Around 30% of the water pipes in Osaka are older than the standard set by law, the highest share in Japan. Consolidation of waterworks is essential to achieve the optimal scale of operation needed to cope with the maintenance cost of ageing infrastructure.

Osaka's initiatives underscore the importance of transforming economic and fiscal systems to meet the needs of an ageing population and adapt to new challenges. Regulatory reform provides firms and workers with incentives to respond to new economic needs created by a changing environment. Inter-jurisdictional co-operation among municipalities ensures efficient operation of public administration in the face of falling populations. Prefectural governments can play critical roles in advancing regulatory reform and in facilitating joint provision of local public services.

Annex 1.B. Progress in structural reform

This Annex reviews actions taken on recommendations from the 2017 OECD Economic Survey of Japan that are not covered in tables within the main body of the Key Policy Insights chapter. Recommendations that are new in this Survey are listed in the Key Recommendations box and at the end of the thematic chapters.

Recommendations in the previous *Survey*	Action taken since April 2017
Supporting output growth	
Raise the minimum wage toward half of the median wage and reduce the amount of unpaid overtime by firms.	The weighted mean of the regional minimum wage in 2018 increased by 3.1%. In 2017, the Labour Standard Inspection Office rectified unpaid overtime by 1 870 firms, resulting in the payment of JPY 446 billion of unpaid overtime to 205 235 workers.
Promoting green growth	
Rely on environmentally-related taxes and promote energy efficiency and the use of low-carbon energy sources to further cut greenhouse gas emissions.	A bill passed in 2018 takes concrete steps to promote offshore wind for electricity generation. To help electricity retailers achieve the requirement to procure 44% of their supply from non-fossil sources, the government established a non-fossil value trading market in 2018.
Boosting productivity for inclusive growth	
Make greater use of the Guidelines for Personal Guarantees Provided by Business Owners to expedite out-of-court settlements for failed SMEs.	The number of cases settled using the Guidelines increased from 236 in FY 2016 to 298 in FY 2017 for private financial institutions and from 135 to 162 for public financial institutions.
Promote entrepreneurship by enhancing the availability of education, training and financing, particularly for women	The Japan Finance Corporation will apply preferential interest rates to loans to women and to people under the age of 35 or aged 55 or older, who have started a business within the past seven years or so.
Scale back commodity-specific agricultural subsidies and promote farm consolidation to lower production costs and strengthen market forces in the farming sector.	Production quotas for table rice were abolished in FY 2018 to enable farmers to produce rice in response to demand without relying on government quotas. The Act on Promotion of Improvement of Agricultural Management Foundation was amended in May 2018 to facilitate the renting of farmland to Farmland Banks by those who inherit farms.
Continue to pursue regional and bilateral free trade agreements.	The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) entered into force at the end of 2018. The Japan-EU EPA entered into force in February 2019. Japan is working toward the steady implementation of both agreements and the expansion of CPTPP. Japan is also participating in RCEP negotiations.
Focus SME support on overcoming market failures that limit private financing rather than supporting mature firms.	Firms over ten years old received only 3% of public credit guarantees for their loans in FY 2017.
Encourage FDI inflows by addressing problems in the M&A market, corporate governance, regulation and employment flexibility.	The Working Group for Revising Regulations and Administrative Procedures under the Council for Promotion of Foreign Direct Investment in Japan completed its final report on the simplification of regulations and administrative procedures related to foreign companies' investments in Japan in April 2017. To promote corporate governance reform, the Stewardship Code and Corporate Governance Code were revised in 2017 and 2018, respectively.
Focus regulatory reform on administrative burdens on start-ups and regulatory protection of incumbents to encourage firm creation.	No action taken since the 2017 *Survey*.
Expand the use of ICT in education to prepare for the digital revolution.	Programming education will be compulsory in schools from FY 2020. The government is promoting the proactive use of ICT devices in educational activities.
Use the new guidelines in labour laws to reduce discrimination against non-regular workers.	Guidelines for equal or balanced treatments between regular and non-regular workers were announced in December 2018.
Ensuring fiscal sustainability in the context of a shrinking and ageing population	

Recommendations in the previous *Survey*	Action taken since April 2017
Improve the fiscal framework.	The Committee for Promoting the Integrated Economic and Fiscal Reforms under the Council on Economic and Fiscal Policy manages fiscal reforms using a Plan, Do, Check, Action cycle. A new timetable for expenditure reform was set out in 2018 based on "the New Plan to Advance Economic and Fiscal Revitalisation."
Scale back transfers from the working-age population to the elderly by raising co-payments and the ceilings on total co-payments for the elderly for health and long-term care, while taking account of equity implications.	For medical insurance, the review of High-Cost Medical Expense Benefit for those above age 70 was held in 2017 and 2018, from the perspective of inter-generational and intra-generational equality. Exceptions on the insurance premium reduction for those above 75 years old has been reviewed since 2017.
Expand the coverage of the Basic Livelihood Protection Programme, while reforming it to encourage work.	The government aims to increase the share of public assistance recipients who participate in the employment support programmes and who later move to work or receive income increased from 43.6% in December 2017 to above 50%.
Require local governments to pursue fiscal consolidation in tandem with the central government by reducing transfers from central to local governments and imposing spending rules.	Transfers from central to local governments remained on a downward trend in FY 2018. The issuance of bonds by local governments to address shortages of their general revenue will fall by 18% in FY 2019, continuing the downward trend in the amount of local government debt.
Enhance incentives for school consolidation to adjust to the falling number of children.	The government is providing information to each board of education on how to decide whether to consolidate their schools, including information regarding the effect of school consolidation on students and schools.
Focus increases in childcare capacity on urban areas facing shortages, in part by facilitating greater entry by private firms.	The government is promoting the building of small-sized childcare service centres and arranging the venues. This helped to reduce the number of children on waiting lists by 6 000 in 2018 relative to 2017, with half of the decline in Tokyo prefecture. The number of childcare centres built by private firms is rising.
Lower public investment by carefully reducing public infrastructure in line with demographic changes and concentrating new investment on projects with the highest returns.	The government is encouraging each local government to develop maintenance plans for individual public facilities by FY 2020 and to revise their master plans for public facility management by FY 2021. Each year, the central government monitors the progress of the local government plans, including in consolidating infrastructure.
Maintain the financial viability of local public corporations through consolidation, expansion of business areas and increased user fees.	The government is encouraging each local public entity to prepare a management strategy and to make various management reforms, such as expanding their business areas and utilising private-sector vitality. The management strategy was developed for 47.9% of public enterprises by FY 2017, and is to cover 95% by FY 2020.
Raise taxes on capital income to increase the effective tax rate on high-income earners.	No action taken since the 2017 *Survey*.
Increase the coverage of firm-based social insurance and ensure better compliance with the public pension schemes.	Since April 2017, part-time workers in enterprises with fewer than 500 employees can be covered by Employees' Pensions Insurance based on agreements between employers and employees.

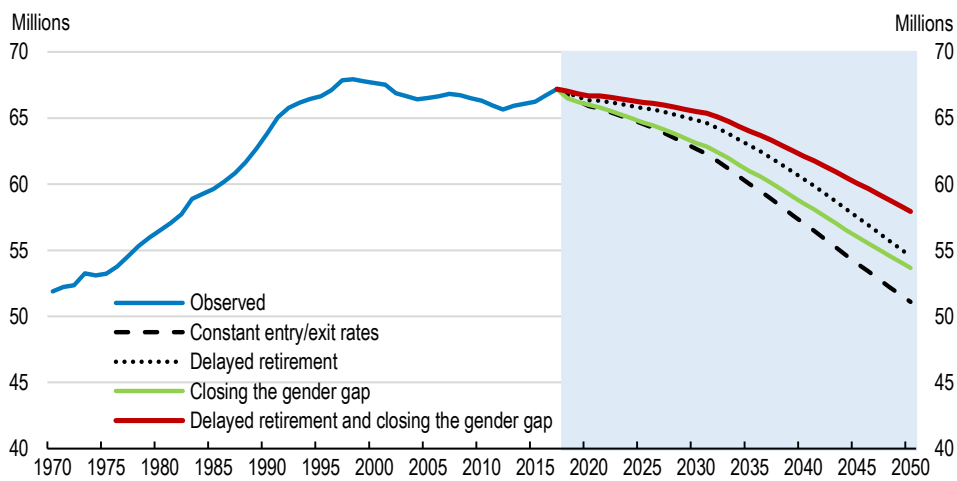
Chapter 1. Labour market reform to cope with a shrinking and ageing population

Fundamental reform of traditional Japanese labour market practices is essential to cope with rapid population ageing and the era of 100-year lives. A shift to more flexible employment and wage systems based on performance rather than age would enable Japan to better utilise its human capital. Abolishing the right of firms to set mandatory retirement – typically at age 60 – would enable employees to extend their careers and reduce the link between wages and seniority. It would also facilitate a further increase in the pension eligibility age above 65, thereby helping to reduce poverty among the elderly. Life-long learning is another key element to extending careers. It is also crucial to address a range of issues that discourage the employment of women, namely the lack of work-life balance and shortages of high quality and affordable childcare and long-term care for the elderly. Fighting discrimination and gender stereotypes is also important to allow women to assume greater leadership roles. Coping with population decline also requires pursuing recent efforts to increase the role of foreign workers in Japan. Breaking down labour market dualism is crucial to expand employment opportunities for women and older people, while reducing income inequality and relative poverty.

Population ageing entails significant opportunities and challenges for individuals, firms and governments. Being a front-runner in ageing gives Japan some important advantages in terms of developing new business opportunities and technologies to cope with labour shortages. Japan's working-age population (20 to 64) peaked in 1998 and has been falling more than 1% per year since 2012. The unemployment rate has remained below 3% since 2017 and the job openings-to-applicants ratio has been around 1.6 since May 2018, the highest since the 1970s. Even for regular workers, the ratio exceeds one. More than 80% of firms surveyed in a 2017 poll reported that they expect labour shortages will force them to restrict the number of services they can offer over the next few years (Reuters, 2017). Already, Japan Post plans to end Saturday mail delivery, joining others in the logistics industry that are curtailing services. A survey of 10 000 firms by the Teikoku Data Bank in 2018 found that half reported a lack of labour and 70 went bankrupt in the first half of the year due to labour shortages (Martinez, 2018).

Labour shortages are likely to intensify as Japan's population is projected to fall by one-fifth to around 100 million by 2050, while the share of elderly rises from 28% to 38%. If labour market entry and exit by age and gender remain constant at 2017 levels, the labour force would contract by 4.5 million by 2030 and by 16.1 million (24%) by 2050 (Figure 1.1). Increased social spending for the elderly and slower economic growth will put further upward pressure on gross government debt, which in 2018 reached 226% of GDP, the highest ever in the OECD (Chapter 2). Sustaining employment and economic growth is essential to help Japan achieve fiscal sustainability and fulfil its promises to provide health and long-term care and pensions for the growing number of elderly.

Figure 1.1. Japan's labour force faces a significant decline



Note: The baseline assumes constant labour market entry and exit rates by gender and five-year age groups. In the "delayed retirement scenario", exit rates are reduced for both men and women by 10% for each five-year age group between the ages 55 and 74. In the "closing the gender gap" scenario, the participation rates for women converge to those for men in each five-year age group by 2050.
Source: OECD projections based on data from the OECD Population and Labour Force Projections database.

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Removing obstacles to employment would help Japan meet its fiscal challenges. It would also improve well-being by expanding opportunities, particularly for older persons and women. Indeed, a 2012 government survey found that 75% of workers who reach the mandatory retirement age of 60 want to continue working (Takayama, 2013). Longer

working lives would also enhance well-being by increasing labour and pension income for the elderly, thereby reducing their high relative poverty rate of 20%. If labour market exit rates were reduced by 10% for each five-year age cohort between 55 and 74 (the "delayed retirement scenario"), the labour force in 2050 would be 7% larger than if labour market entry and exit rates were constant. Moreover, real output per capita would be 8.4% higher in 2050.

Removing disincentives to employment of women would also help to mitigate the impact of demographic changes. If the participation rates of women for each five-year age group were to converge to those of men by 2050, the labour force would be 5% larger and real output per capita would be 6.8% higher. Combining the delayed retirement scenario with the convergence of participation rates of men and women, the labour force would be 13% larger than in the baseline scenario.

Fundamental labour market reform is a top priority. Japan's traditional model – simultaneous recruitment of new graduates, lifetime employment, a seniority-based wage and promotion system, mandatory retirement and company-based training – was effective when Japan had a young and growing population. However, it is poorly suited to the era of 100-year lives, as it discourages the employment of older persons and women and labour mobility. A shift to more flexible employment and wage systems based on performance rather than age would enable Japan to better utilise its human capital. In addition, such an approach would help break down labour market dualism, which results in a large wage and income gaps between regular workers and non-regular workers, who are predominantly women and older persons. In sum, fundamental labour reform is necessary to improve well-being by expanding opportunities and improving job quality by overcoming the negative aspects of the traditional model, such as long working hours.

As discussed in the 2017 *OECD Economic Survey of Japan*, boosting labour productivity is also a priority to ensure fiscal sustainability in the face of a shrinking labour force and sustain living standards. Labour productivity in Japan is a quarter below the top half of OECD countries, suggesting considerable scope to increase it. Moreover, Japan faces large productivity gaps between manufacturing and services and between large firms and SMEs. New technologies, such as digitalisation and robotics, could play a key role in narrowing such gaps and offsetting the fall in the labour force, though technological progress requires lifelong learning to ensure that workers have the necessary skills.

This chapter begins by analysing obstacles to employment of older workers and women and policies to overcome them. The third section discusses recent measures to increase the number of foreign workers in Japan. The fourth section focuses on the issue of labour market dualism, which has implications for employment and social inclusion. Policy recommendations are presented at the end of the chapter.

Extending working lives

In 2015, Prime Minister Abe appointed a Minister for Promoting Dynamic Engagement of All Citizens and then created the Council for Designing 100-Year Life Society in 2017. He stated that the focus should be on "improving each individual's abilities and responding to people's desire to learn and work" (Cabinet Secretariat, 2017).

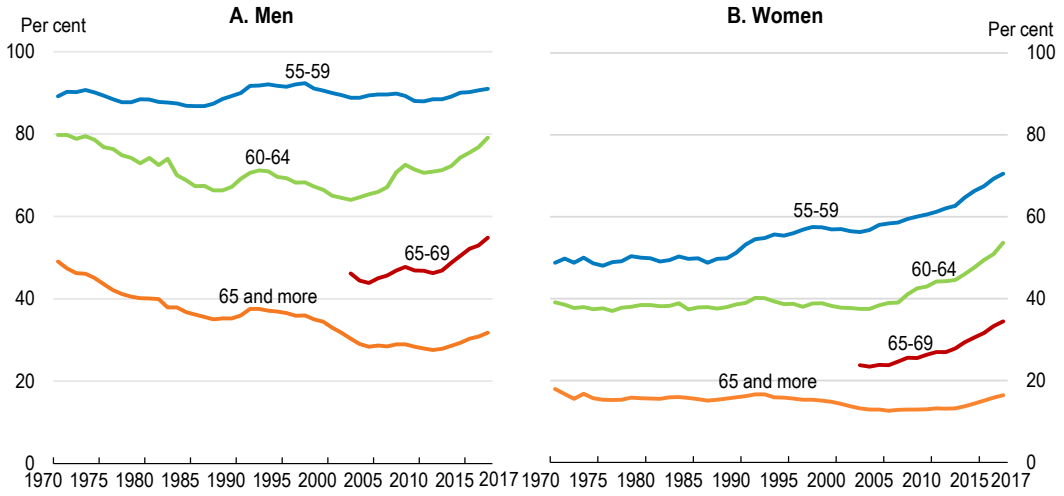
A reversal of falling employment rates for older persons since 2000

The employment rate of men and women in their 60s has risen since the turn of the century, reversing the long-term decline that began in 1970 (Figure 1.2). The fall

reflected the increasing generosity of public pensions and the shrinking number of self-employed workers (Usui et al., 2016). The upward trend in elderly employment rates since 2000 occurred in almost all OECD countries, and in many cases, was stronger than in Japan. The rise in Japan was driven by a number of factors:

- Improved health and longer longevity: since 1970, life expectancy at age 60 has risen from 19 years to 29 for women and from 16 years to 24 years for men.
- Increased educational attainment: the number of male workers with university degrees, who accounted for only 7% of the male labour force in the 55-64 age group in 1975, surpassed the number of men without university degrees in 1990. Employment rates rise with education in advanced countries (Grigoli et al., 2018).
- The transition toward less physically demanding jobs (Oshio et al., 2018).
- Policy reforms have encouraged older persons to continue working: for example, in 1995, the government introduced a subsidy equivalent to 15% of the wage to workers between ages 60 and 64. In addition, pension reform has also played an important role (see below).

Figure 1.2. The employment rate of older persons in Japan has been trending up



Source: OECD LFS by Sex and Age – Indicators database.

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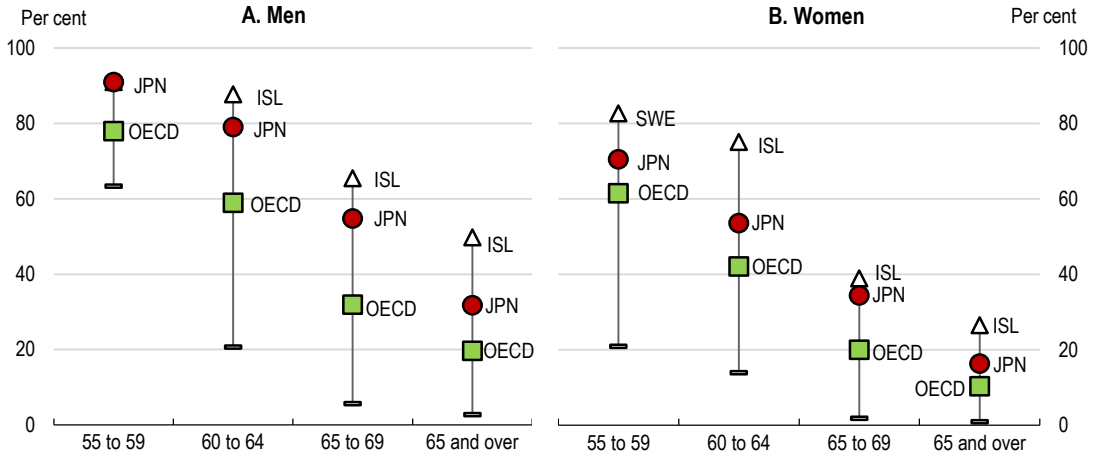
The employment rate for Japanese men is the highest in the OECD for the 55-59 age group and fifth highest for those in their early 60s (Figure 1.3). Japanese women's employment rates are above the OECD average for each age cohort between the ages of 55 and 69 (Panel B). However, for the elderly population (over 65), Japan's employment rates of 32% for men and 16% for women are closer to the OECD average, and far below leading countries, suggesting scope for increases.

The challenge is to further boost the employment rate of those aged 55 and up to mitigate the decline in the labour force (Figure 1.1). Changing the incentives to work for those aged 60 to 64, an age group that is typically in the transition from work to retirement, is a priority, in part, as it would also boost employment rates for subsequent age cohorts. The following sections discuss traditional Japanese labour market practices, the impact of recent reforms to lengthen working lives and the skills of older workers.

Figure 1.3. Older Japanese have relatively high employment rates

Persons in the labour force as a percentage of the population in each age group in 2017



Note: The OECD is a weighted average.
Source: OECD LFS by Sex and Age – Indicators database.

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Japan's traditional labour market practices

Japan's lifetime employment system is an implicit long-term employment contract for regular workers. Under this system, firms hire new graduates to work in a variety of positions, with the promise of a job until the mandatory retirement age. Seniority-based wages generate a lifetime commitment of workers to their firm by setting wages below marginal productivity for younger workers and offering wages greater than marginal productivity for those with long tenures. The long-term commitment encourages employers to develop company-specific skills by investing in their workers. This enhances firms' competitiveness and the productivity of workers, who are motivated to work hard for the survival of their firms. Firms use two mechanisms to raise wages: *i*) the base-up, which is set in annual labour-management negotiations; and *ii*) the seniority-based component determined by the company. In 2018, wages increased by 2.3%, according to the government, with seniority-based pay accounting for about 1.8 percentage points. Wages rise quite steeply, particularly in large firms, until age 60, the mandatory retirement age set by most firms (Figure 1.4). The seniority component of wages is large compared to other countries (Figure 1.5). As workers move from 10 to 20 years of tenure, wages are estimated to increase by 11%, controlling for skills and other factors. This is the third highest in the OECD, behind Korea and Turkey.

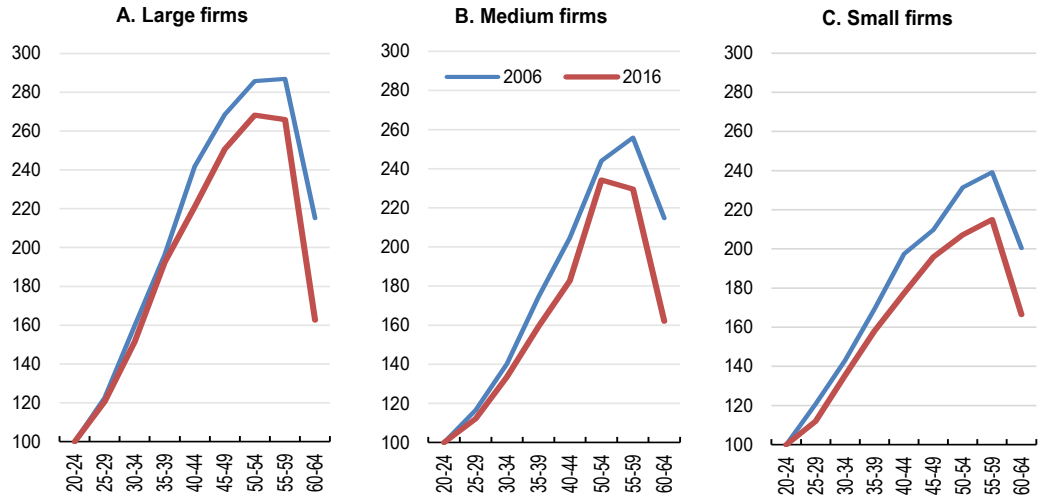
Mandatory retirement is an essential component of lifetime employment, given that employment protection makes it difficult for firms to dismiss regular workers. Firms do not wish to keep older workers once their rising seniority-based wage exceeds their productivity (Miyamoto, 2016). Firms rely on mandatory retirement to end implicit lifetime contracts.

Lifetime employment is not universal. In large firms, 38.9% of employees in 2016 were lifetime employees, defined as those who have worked continuously for the same firm since finishing their education (Table 1.1). Lifetime employment is less prevalent in small firms and more so in manufacturing. Among workers in the 50-59 age group who were hired at graduation by large manufacturing firms, 46% had never changed employer,

compared to 36% in non-manufacturing (OECD, 2018f). The share of female graduates who are lifetime employees is higher than for men until age 40 (Panel B), but it falls sharply beyond that age as many women exit the labour force to care for children or elderly relatives.

Figure 1.4. The seniority-based wage system in Japan remains strong

Wage profile for male lifetime employees, 20-24 age group = 100



Note: Lifetime employees are all employees who were continuously employed by enterprises directly after leaving school or university. Large firms are those with more than 1 000 employees and small firms are those with between 10 and 99.
Source: Japanese Ministry of Health, Labour and Welfare, *Basic Survey on Wage Structure* (2006, 2016).

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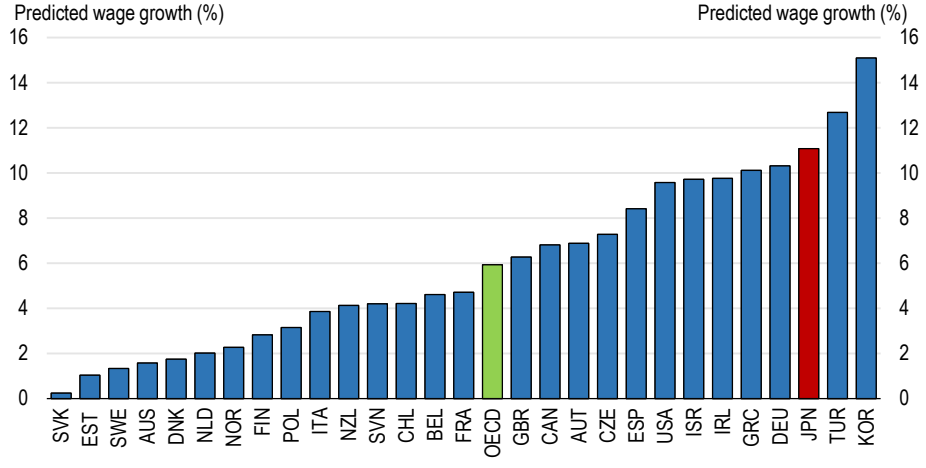
Figure 1.5. The link between tenure and wages in Japan is one of the strongest in the OECD

Predicted wage growth (in percent) moving from 10 to 20 years of tenure, for persons aged 50-60, 2013



Note: Predicted wage growth estimates were obtained from a cross-sectional regression of tenure, squared tenure and controls for gender, experience, years of education, literacy and numeracy skills, occupation, skill use at work, and educational status of the parents.
Source: OECD (2018f).

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Table 1.1. Japan's lifetime employment system

A. Lifetime employment is more prevalent in large firms

Male lifetime employees as a percentage of all male employees by age and firm size in 2016

Age	Total	Large firms	Medium firms	Small firms
15-29	46.7	52.4	49.9	32.4
30-39	23.5	31.0	24.6	11.8
40-49	24.3	36.8	23.3	8.9
50-59	23.8	38.9	20.6	7.3

B. Lifetime employment is more prevalent among graduates and among men after age 40

Lifetime employees as a percentage of all employees by age, gender and graduate status in 2016

Age	Female junior or high school graduates	Female university graduates	Male junior or high school graduates	Male university graduates
All ages	14.3	43.9	21.0	37.9
15-29	32.1	69.2	37.8	58.2
30-39	11.0	34.0	15.9	32.3
40-49	10.1	22.2	18.5	33.1
50-59	6.3	14.5	17.1	33.9

Note: Lifetime employees are all employees who were continuously employed by enterprises directly after leaving school or university. Large firms are those with more than 1 000 employees and small firms are those with between 10 and 99. The total in Panel A does not include persons over age 60. For university graduates in Panel B, the share is underestimated, as persons with masters degrees are included in the denominator (all university graduates) but not in the numerator (university graduates who are lifetime employees).
Source: Ministry of Health, Labour and Welfare, *Basic Survey on Wage Structure, 2016*.

Japan's labour market is also characterised by the simultaneous hiring of new graduates, which helps to avoid periods of joblessness and contributes to the relatively low youth unemployment rate. However, young people who are not university graduates have a low rate of lifetime employment (Table 1.1, Panel B). The simultaneous hiring of graduates also limits lifetime employment opportunities for those who graduate during economic downturns. The Japanese business federation, Keidanren, which comprises over 1 300 companies, has announced that it will no longer set guidelines for simultaneous hiring.

Lifetime employment is fading in the face of slow growth and intensifying competitive pressures (Table 1.2). Among workers in their 30s and 40s in large firms, the share who have remained with the same employer since leaving education was 15.0 and 9.4 percentage points, respectively, lower in 2016 than it was in 2006. The decline in lifetime employment has contributed to some flattening of the seniority wage curve (Figure 1.4). In large firms, the ratio of wages for men aged 55 to 59 relative to the 20-24 age cohort edged down from 2.9 times in 2006 to 2.7 in 2016, as firms place greater importance on the specific jobs and roles of individual workers when setting wages. In addition, performance has become more important in setting bonuses (Ministry of Health, Labour and Welfare, 2017a). These developments tend to reduce discrepancies between wages and productivity.

The seniority-based wage system and mandatory retirement are among the most important barriers to the employment of older workers in Japan and their difficult transition to retirement. Seniority-based pay schemes have a negative impact on the employment of older workers in other countries as well. A cross-country comparison of the relationship between the age-wage premium and the retention rate of workers aged 60-64 shows a negative correlation in OECD countries (OECD, 2018f).

Table 1.2. Lifetime employment was less prevalent in 2016 than in 2006

Change in the share of male employees who are lifetime employees (in percentage points)

Age	Total	Large firms	Medium-sized firms	Small firms
15-29	3.5	1.1	2.9	2.1
30-39	- 7.7	- 15.0	- 7.6	- 1.2
40-49	- 5.1	- 9.4	- 4.3	- 1.5
50-59	1.1	-1.9	- 0.8	0.0

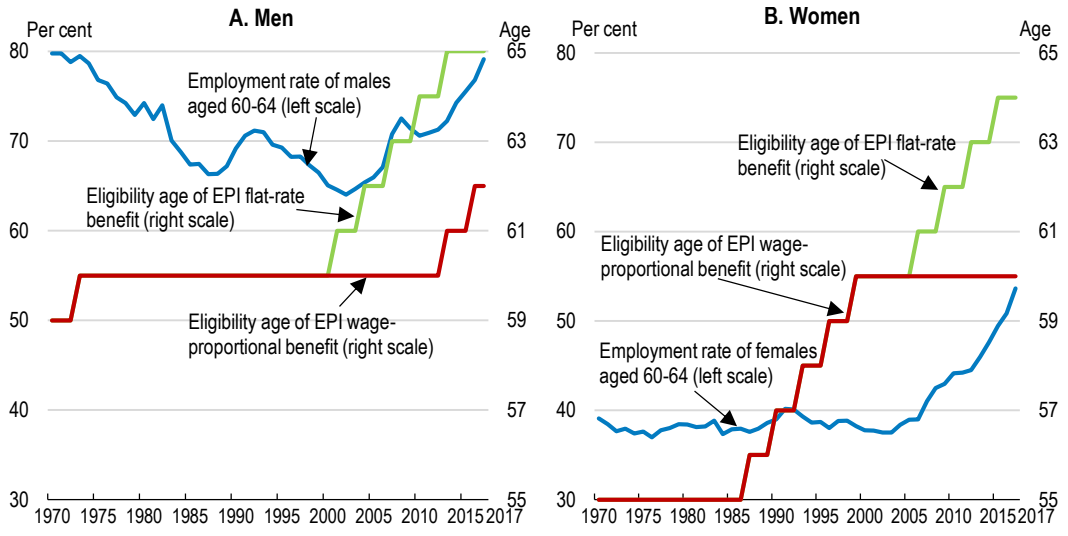
Note: Lifetime employees are all employees who were continuously employed by enterprises directly after leaving education. Large firms are those with more than 1 000 employees and small firms are those with between 10 and 99.
Source: Ministry of Health, Labour and Welfare, *Basic Survey on Wage Structure,* 2006 and 2016.

Policies that have helped to lengthen working lives

Changes in the public pension system have contributed to the rising employment rate for older persons in Japan (Figure 1.2):

- The eligibility age for the flat-rate component of Employees' Pension Insurance (EPI), the public pension programme for private-sector employees, was hiked for men by one year every three years starting in 2001, reaching 65 in 2013 (Table 1.3). The increase in the employment rate for the 60-64 age group coincided with this reform (Figure 1.6). As for women, the hike in the eligibility age for the wage-proportional benefit in the EPI (from 55 to 60) over 1987-99 and the flat-rate benefit (from 60 to 65) over 2006-18 are associated with the rise in the employment rate for those aged 55 to 59 (Panel B). However, the increase in the pension eligibility age has not kept pace with the rise in life expectancy at age 65.
- Pension benefits have become less generous since 1985, as shown by the declining replacement rate.

Figure 1.6. The rise in the employment rate is linked to hikes in the pension eligibility age



Source: OECD LFS by Sex and Age – Indicators database.

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- The earnings test continues to limit the labour supply of older workers by reducing pension payments for those who continue to work. However, the easing of this disincentive is estimated to have increased the labour force by 0.7% to 1.9% per year for men over 1995-2007 and by 0.65% to 0.9% for women (Oshio et al., 2011).

The growing gap between the mandatory retirement age set by firms, typically at 60, and the pensionable age (rising to 65) created a serious social concern. The Act for the Stabilisation of Employment of Elderly Persons was revised to require employers who have set a retirement age below 65 to introduce one of the three measures from 2006: *i)* raise the mandatory retirement age to at least 65, which would allow employees to continue as regular workers; *ii)* abolish mandatory retirement; or *iii)* retain or re-hire older workers who wish to continue working until age 65. The third option, the so-called "continuous employment system", does not require firms to maintain wages or working hours past age 60. In some cases, firms and workers cannot reach agreement on working conditions after age 60.

Table 1.3. Measures affecting the employment of older persons

Year	Measures related to mandatory retirement	Pension reform
1986	Firms obliged to make an effort to not set mandatory retirement below the age of 60.	
1987		The eligibility age for women for the wage-proportional benefit in the EPI begins rising from age 55 to 60.
1990	Firms obliged to make an effort to continue employment after the mandatory retirement age.	
1994	The government announces that firms will be prohibited from setting mandatory retirement below age 60.	Announcement that the eligibility age for men for the flat-rate benefit in the EPI will be raised gradually from 60 to 65 over 2001-13.
1998	Mandatory retirement below age 60 is prohibited. Firms are obliged to make an effort to continue employment to age 65.	
1999		The eligibility age for women for the wage-proportional benefit in the EPI reaches 60.
2001		The eligibility age for men for the flat-rate benefit in the EPI begins increasing from 60.
2004	The government announces that firms will be required to offer continued employment until age 65 beginning in 2006.	The income test to receive the EPI is relaxed.
2006	Firms are required to continue employment until the pension eligibility age subject to screening based on ability or service record.	The eligibility age for women for the flat-rate benefit in the EPI begins to rise from 60 to 65.
2012	The government announces that firms will be required to offer continued employment until age 65 for everyone who wants to remain in the firm (i.e. no screening) from 2013.	
2013		The eligibility age for men for the flat-rate benefit in the EPI reaches 65. Their eligibility age for the wage-proportional benefit in the EPI begins rising from 60 to 65 by 2025.
2018		The eligibility age for women for the flat-rate EPI benefit reaches 65. Their eligibility age for the wage-proportional benefit in the EPI begins rising from 60 to 65 by 2030.

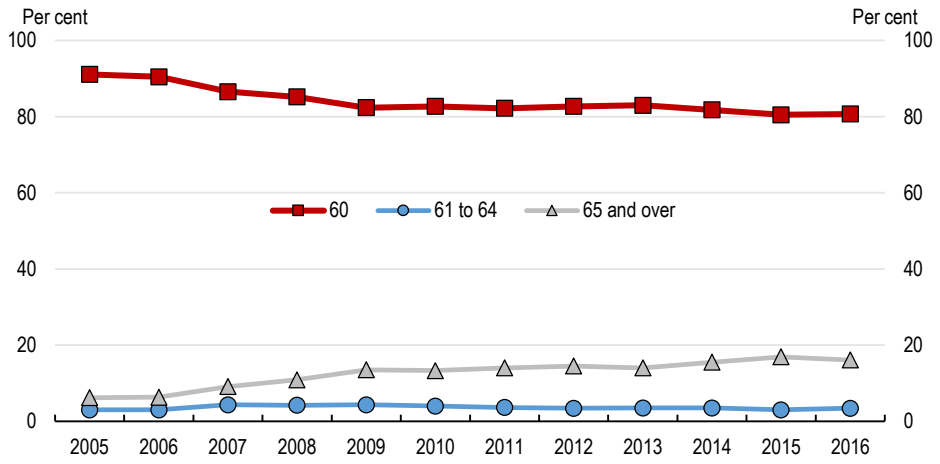
Note: Japan's public pension system includes the National Pension, which is mandatory in principle for the self-employed, students, part-timers who are not eligible to join the EPI and full-time homemakers whose spouses are not covered by the EPI. The EPI includes a flat-rate portion, which equals the full benefit under the National Pension, and an income-related portion.
Source: OECD Secretariat.

Few companies have opted to raise their mandatory retirement age or eliminate it, reflecting the high wage costs due to steep seniority-based wage increases and the high

employment protection for regular workers. Instead, a large majority of firms of all sizes have opted for the third option of keeping the mandatory retirement age at 60 and re-hiring workers at lower wages. Indeed, the share of firms setting mandatory retirement at age 60 declined only modestly from 91% in 2005 to 81% in 2016 (Figure 1.7). Not surprisingly, firms that include a large seniority pay component in their wage systems are more likely to choose to re-hire workers at age 60 (OECD, 2018f).

Figure 1.7. Most firms have kept their mandatory retirement age at 60

Trends in mandatory retirement age adopted by companies



Source: Ministry of Health, Labour and Welfare, *General Survey on Working Conditions,* 2017.

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The employment rate of the 60-64 age group has risen as they face the higher pension eligibility age and the opportunity for continuous employment. The increase is particularly large in the case of those employed at large firms where mandatory retirement is more strictly enforced (Kondo and Shigeoka, 2016). However, only about one-fifth of firms extend regular employment for workers reaching age 60. The remainder re-hire them as non-regular workers, a category that includes fixed-term, part-time and dispatched workers. As a result, the share of employees who were non-regular employees in 2017 jumps from only 11% for men aged 55-59 to 45% for men in their early 60s and to 57% for those in their late 60s (Figure 1.8). For women, the share of non-regular workers at age 55-59 is much higher at 58%, and rises to 72% for those in their early 60s.

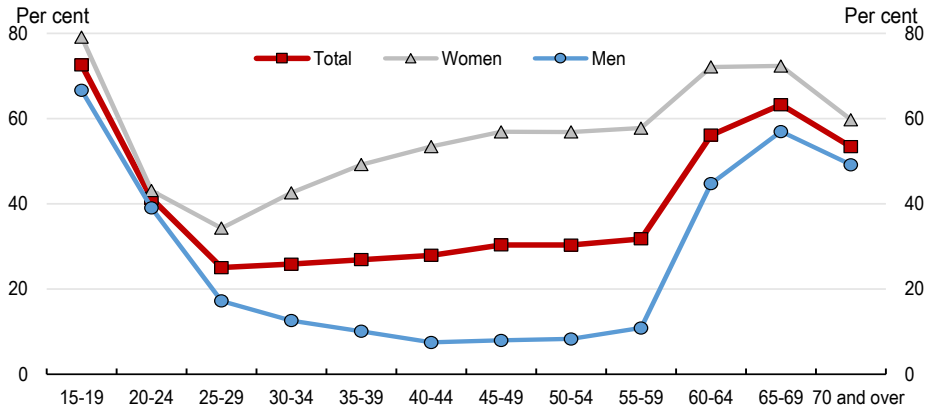
Given that non-regular workers are paid around 40% less per hour on average than regular workers, the increase in non-regular employment in the 60-64 age group lowers wages. A government firm-level survey of workers in their 60s found that nearly one-third of rehired workers experienced a wage cut of more than 40%, while only 10% earn the same as previously (JILPT, 2016). Men in the 60-64 age cohort in 2016 faced wage declines ranging from 39% in large firms to 23% in small firms, compared to the wages of the 55-59 age cohort (Figure 1.4). The decline is much larger than those faced by workers in 2006, before the implementation of the continuous employment system, which leads to the shift to non-regular employment. Lower wages, to some extent, are consistent with changes in job responsibilities. With the move to non-regular status at age 60, a government survey found that many workers are transferred to jobs with fewer responsibilities (JILPT, 2016), implying less use of their skills than in their former jobs. Following the National Personnel Authority's recommendation in 2018 that government

officials be allowed to work past age 60 by cutting their wages by 30%, the government is considering gradually raising their retirement age towards 65.

While a lower wage may be justified by declining productivity of older workers and the shift to jobs with fewer tasks, older workers complain about the size of wage cuts. In a government survey, 30% of re-hired older workers said that the wage cut was not justified "because their job duties have hardly changed" or because their "contribution to the company is not less than previously" (21%). Another 17% reported that "although the weight of work responsibility has changed slightly, the wage was reduced too much" (JILPT, 2015).

Figure 1.8. Many workers become non-regular employees after reaching the age of 60

Non-regular employees as a percent of all employees by age, 2017



Source: Ministry of Internal Affairs and Communications. *Labour Force Survey (Basic Tabulation)*, 2017.

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In sum, the reforms to lengthen working lives have benefited firms by allowing them to re-hire regular workers in low paid non-regular positions, thereby avoiding the costs imposed by the seniority wage system and high employment protection. However, the change in workers' status, responsibilities and wages when they are rehired in non-regular jobs has negative consequences for their well-being. According to a 2018 government survey, about 16% of workers who reach age 60 do not continue employment, resulting in a significant fall in employment rates between the 55-59 and 60-64 age groups (Figure 1.3). Demoting older workers, regardless of individual capacities, tends to lower their productivity, as many do not fully utilise the job-specific skills they acquired prior to mandatory retirement. Moreover, they may be less motivated because of lower job satisfaction and pay. It is essential to increase wage flexibility over workers' lifetime and avoid sizeable wage cuts at age 60 that undermine workers' well-being and motivation to work and reduce productivity.

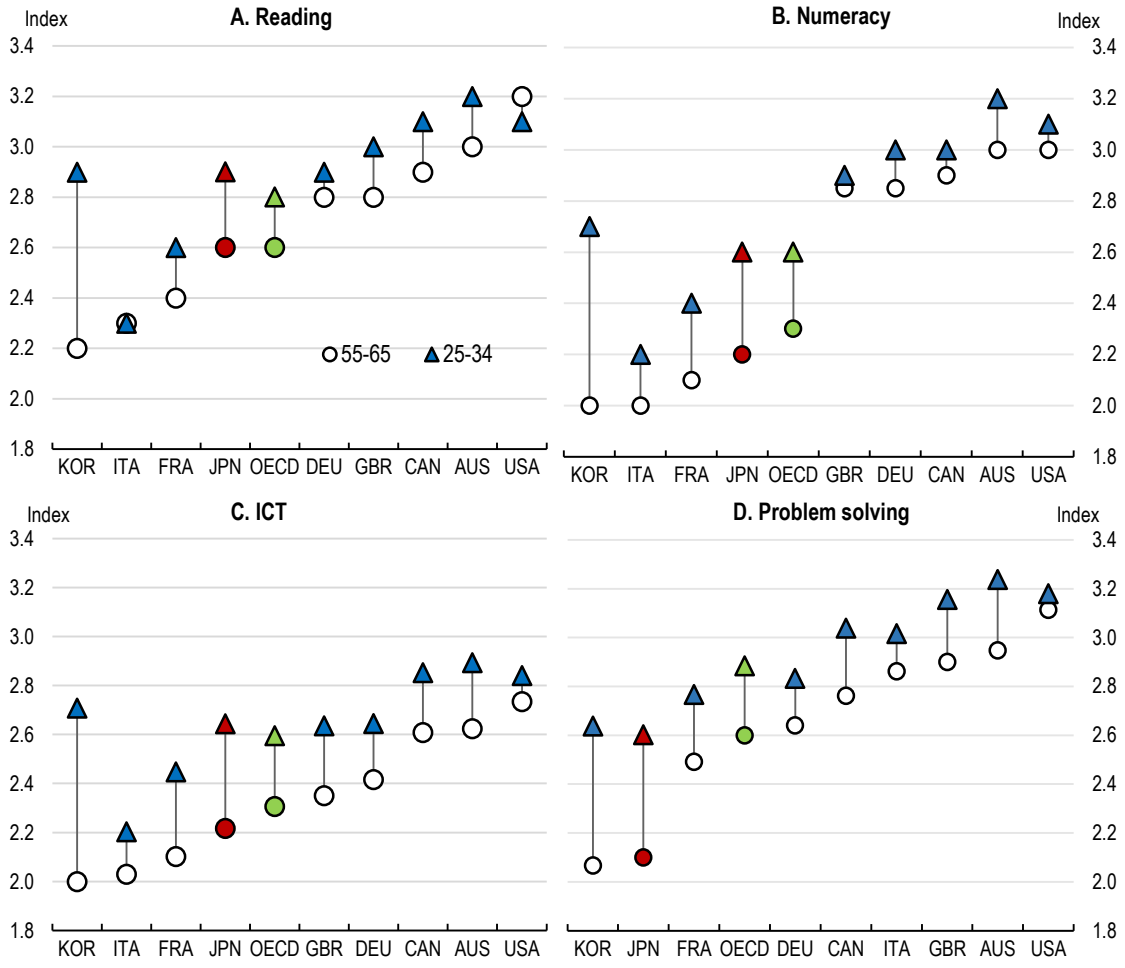
The skills of older workers

Japan has a high level of human capital. Japanese 15-year-olds are consistently among the top performers in the OECD's Programme for International Student Assessment (PISA). The share of its adult population with a tertiary education is well above the OECD average. Japanese adults have the highest proficiency in literacy and numeracy in the Survey for Adult Skills, according to the OECD Programme for the International Assessment of Adult Competencies (PIAAC). However, the use of numeracy, ICT and

problem-solving skills at work by older persons (55 to 65) is below the OECD average (Figure 1.9). Moreover, the gap in skill use between older workers and younger workers (25-34) is large compared to the OECD average, especially in problem solving. In addition, the use of supervising, planning and influencing skills drops off sharply after age 60, which also reflects the shift of workers to less demanding, non-regular jobs once they reach the mandatory retirement age. Less use of skills by older workers may also be linked to their lower skill levels in Japan (Figure 1.10). The gap in skill levels between prime-age and older workers suggests that workers would benefit from increased investment in life-long learning.

Figure 1.9. Older workers' use of skills at work in Japan is relatively low

Index, ranging from 1 (not used) to 5 (used daily), for the 55-65 age group



Note: The OECD is a weighted average and excludes Hungary, Iceland, Latvia, Luxembourg, Mexico, Portugal and Switzerland. Data for the United Kingdom refer to England and Northern Ireland. For Panels B and D, the estimated levels of proficiency control for individual differences in own and parental educational.
Source: OECD (2018f).

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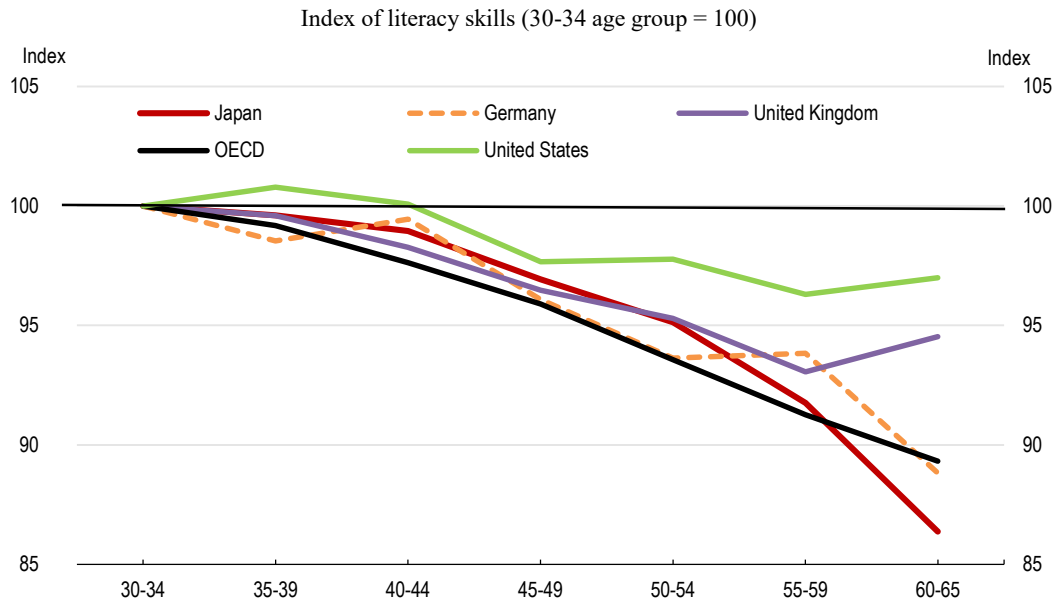
Figure 1.10. Skills of older workers in Japan are well below those of younger workers



Note: The OECD is a weighted average and excludes Hungary, Iceland, Latvia, Luxembourg, Mexico, Portugal and Switzerland. Estimates were obtained by regressing factor variables indicating age, gender, and country on literacy proficiency.
Source: OECD (2018f).

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Reforms to extend the careers of older persons

The structural factors noted above – improved health and longer longevity, higher educational attainment and the changing nature of work – will continue to boost the employment of older persons. A recent OECD study estimated that the labour force participation rate of the 55-74 age group in Japan will rise by 6 percentage points by 2030, led by increased education and life expectancy (Guillemette et al., 2019). Structural factors should be reinforced by a number of reforms. *First*, the right of firms to set a mandatory retirement age should be abolished, as stressed in past OECD Economic Surveys of Japan (OECD, 2011; OECD, 2013a; OECD, 2015c; OECD, 2017b). *Second*, the pension eligibility age should be further increased beyond the current target of 65 by 2030. *Third*, wage-setting systems should give less weight to seniority and more to job and performance. *Fourth*, expanding lifelong training and education is necessary to equip older persons with the skills for an increasingly digital economy to extend their employability. *Fifth*, ensuring adequate job search support would help workers remain active. *Sixth*, promoting appropriate working conditions is important to encourage longer working lives.

Abolishing mandatory retirement

Mandatory retirement and the seniority-based wage system, combined with high employment protection, reduce the quantity and quality of employment opportunities for older persons. Indeed, firms' efforts to downsize their staff are concentrated on older workers. Japan is unique in setting a mandatory retirement age (60 in 81% of firms) below the pension eligibility age (65 for the flat-rate portion of the EPI). The best

solution is to abolish mandatory retirement, as in many other OECD countries, to allow workers the right to choose when they leave the labour force. Giving people better choices and incentives to continue working at an older age is crucial for responding to the challenge of rapid population ageing. The *OECD Recommendation of the Council on Ageing and Employment Policies* stated that countries should "discourage or further restrict mandatory retirement by employers" (2018e).

Allowing workers to continue their main careers beyond age 60 would avoid the demotion to non-regular jobs that do not fully utilise their skills. A study of workers aged 60 and older shows that fully using their skills increases the probability of job satisfaction by 28% (OECD, 2018f). Letting older persons remain in their career jobs past age 60 would increase the share that choose to work. Moreover, the productivity of older workers would be higher if they remain in their career jobs, in part by increasing incentives for firms to invest more in their training. Higher labour force participation, productivity and wages for older workers would also boost their incomes and eventually their pensions, reducing poverty among the elderly.

Reducing age discrimination would help expand employment opportunities for older persons. Unlike many other OECD countries, Japan does not have general age discrimination legislation. However, a 2007 law forbids age discrimination during recruitment and employment, which in principle prevents employers from setting age limits in job offers. This principle should be extended to prevent age from being a criterion to force a worker to leave a firm. It should be accompanied by reductions in employment protection for regular workers so that firms do not focus reductions in staffing on older workers (see below).

Raising the pension eligibility age and reforming the pension system

Abolishing mandatory retirement and removing other obstacles to the employment of older persons would facilitate further hikes in the pension eligibility age. Even after reaching age 65 by 2025 for men and 2030 for women (Table 1.3), the eligibility age will remain low relative to the average healthy life span, which is currently 72.1 years for men and 74.8 years for women. A recent OECD study found that raising the standard retirement age by one year increased the participation rate of the 55-74 age group by 0.8 percentage points (Guillemette et al., 2019). By 2016, 12 OECD countries had raised their pension eligibility age above 65 and 18 countries have legislated reforms to raise the age (OECD, 2017c). This is in line with the *OECD Recommendation of the Council on Ageing and Employment Policies*, which stated that countries should "ensure that the old-age pension system encourages and rewards later retirement in line with increased life expectancy" (OECD, 2018e).

Raising the eligibility age is also essential to ensure adequate retirement income. The relative poverty rate of the elderly in Japan is 20%, well above the 12.5% OECD average. Relying on social welfare, notably the Basic Livelihood Protection Programme, to limit elderly poverty would be costly and would undermine incentives to contribute to the public pension system. Under its current parameters, the future gross replacement rate of public pensions in Japan is one of the lowest in the OECD at 35% for one-person households (Figure 1.11). By law, the replacement rate must remain above 50% for couple households (by the Japanese calculation method) in the actuarial valuations conducted every five years. With the pension contribution rate reaching 18.3% in FY 2017, the best way to raise the replacement rate is to increase the pension eligibility age. The government's 2014 actuarial valuation suggests that delaying the start of pension

benefits to 68 would increase the replacement rate by more than 10 percentage points in all scenarios by 2050 (Table 1.4). If it were delayed further to age 70, it would have an even stronger impact on the replacement rate. In addition to promoting the employment of older persons and reducing elderly poverty, a hike in the pension eligibility age would also lift output growth and improve intergenerational equity. Indeed, a person born in 1940 receives 16.4% of lifetime earnings in net transfers, while one born in 2010 pays 12% (OECD, 2017b).

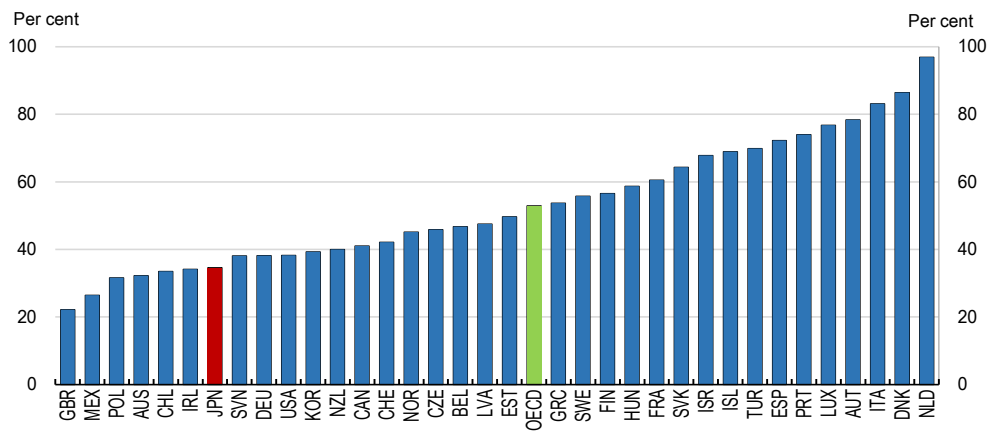
Table 1.4. Raising the pensionable age leads to a large increase in the replacement rate

Per cent

Cases[1]	Real GDP growth rate		Replacement rate[2] (%) in 2050 for pension eligibility age of:			Replacement rate[2] (%) in 2050 for retirement age of:		
	FY 2014-23	FY 2024 onward	65 years	68 years	70 years	65 years	68 years	70 years
Case C	1.1	0.9	51.0	63.9	72.5	57.6	74.4	86.2
Case E	1.1	0.4	50.6	63.3	71.8	57.1	73.8	85.4
Case G[3]	0.2	-0.2	42.0	52.8	60.0	48.4	62.6	72.6
Case H[4]	0.2	-0.4	41.9	52.7	59.8	47.9	61.9	71.7

1. The table shows four of the eight simulations done by the Ministry of Health, Labour and Welfare (2014). Total pension benefit payments are fixed, resulting in variations in the replacement rate. The simulations assume that the earnings test to receive pension benefits is abolished.
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 (2014); and OECD calculations.

Figure 1.11. The projected replacement rate of Japan's public pension system is low



Note: Future gross replacement rates for full-career average-wage workers under current legislation. The replacement rate is the pension payment as a percentage of a pre-retirement income.
Source: OECD (2017c).

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The government has proposed allowing older persons to delay the start of pension benefits, which can begin as early as age 60, until after age 70, while raising the continuous employment age to 70. The pension amount is adjusted depending on the age that payments begin. A delayed pension at age 70 is 142% of that at age 65, in principle,

and an early pension at age 60 is 70%, which in both cases are not far from actuarial neutrality. Once pension benefits begin, the receivable rate is permanently fixed. The impact of allowing workers to delay the start of pension benefits beyond 70 is likely to be modest, as only 1% of pension recipients currently choose to start receiving pensions after age 65. Delaying the receipt of pension benefits would be more attractive if the earnings test were not used to calculate benefits. In the Basic Policy on Economic and Fiscal Management and Reform 2018, the government stated that it would consider amending the earnings test.

The coverage of EPI for non-regular workers should be expanded in order to reduce old age poverty, especially for women. In 2016, EPI coverage was expanded to include part-time workers in firms with more than 500 employees, working at least 20 hours per week and receiving a monthly wage of at least JPY 88 000 (USD 783). The same rule has applied since 2017 to workers in firms with 500 employees or less if there is an agreement between labour and management. Coverage should be further expanded to non-regular workers with fewer working hours and lower earnings.

Flattening the seniority wage curve

An end to mandatory retirement, or even an increase in the retirement age, would force firms to reduce the link between wages and seniority to limit the financial impact from employing more older workers (Seike, 2015). An empirical study found that the rise in the retirement age from 55 to 60 in the mid-1980s in Japan significantly flattened the wage curve (Clark and Ogawa, 1992). As noted above, mandatory retirement allows firms to limit wage costs, given the link between wages and seniority, combined with high employment protection that makes it difficult to dismiss regular workers. The *OECD Recommendation of the Council on Ageing and Employment Policies* called on employers and worker representatives to "review their practices in setting pay to reflect productivity and competences, not age" (OECD, 2018e). Japanese firms, particularly large ones, are beginning to give greater importance to workers' job duties and performance and less to seniority in determining wages. Although the move away from seniority creates uncertainty among workers about their lifetime earnings, they would benefit from being able to work longer. As noted above, a government survey found that around three-quarters of older persons who have reached the mandatory retirement age want to continue working.

A better alignment between the costs of employing older workers and their productivity is necessary to boost the employment of older persons. The introduction of the principle of "equal pay for equal work" in the work style reform bill that was passed in 2018 is a step in this regard. Applying this principle would directly link wages and workers' productivity (Miyamoto, 2016), although this is difficult in practice (see below). Moreover, it would encourage mid-career hiring (so-called "secondary hiring"), as workers who change firms would not face the loss in wages typical under a seniority-based system. However, the practice of demoting workers at age 60 to less demanding positions, as noted above, would limit the benefit of the equal pay for equal work principle. Making equal pay for equal work beneficial for older workers thus requires eliminating mandatory retirement.

Ultimately, wages are decided by employers and employees, making it difficult for the government to push firms away from seniority-based wages. However, the government could provide an example in public-sector wage-setting arrangements by introducing performance pay and limiting automatic rises in salary with tenure. This will be

particularly important when it designs the system to raise the retirement age of government officials toward 65. It could also promote mid-career hiring, which creates competition among employers for workers. Under seniority-based wages, young workers accept lower pay in exchange for a promise of higher pay in the future. With more competition across firms, workers may thereby be able to negotiate higher wages at younger ages, thereby weakening the role of tenure in pay scales, which may support young families. Another issue related to mid-career mobility is the retirement allowance, which is based on an agreement between employers and workers. The retirement allowance is a deferred payment of wages that rewards long-time employees, thereby encouraging long tenure. In addition, tax deductions on the retirement allowance rise sharply after 20 years of tenure, discouraging workers from changing firms before reaching that point. To facilitate mid-career labour mobility, the government should smooth the tax deduction.

Maintaining and improving skills requires life-long learning in the digital age

The tradition of a three-stage life – education, followed by a career, and then retirement – is no longer appropriate in the context of 100-year life spans and accelerating technological change. The skills mastered by young people in their teens or early 20s cannot last an entire career that will extend into their 70s or even 80s, especially in the context of a rapidly changing job market (Gratton and Scott, 2017). A skills shortage is already evident in Japan, as employers struggle to find workers with the necessary skills to fill vacancies, with more than 1.6 job openings per applicant since May 2018. Moreover, skills erode with age.

Lifelong learning is essential to achieve the government's Society 5.0 agenda and plan to launch a "productivity revolution" by capitalising on the technological innovations of the Fourth Industrial Revolution (Government of Japan, 2018). This includes a variety of digital technologies, such as the Internet of Things and advanced robotics, industrial biotechnology, new materials and nanotechnology. The confluence of digital technologies is driving the transformation of industrial production and has the potential to significantly boost productivity and mitigate the impact of a shrinking labour force (OECD, 2017d). Lifelong learning is needed to prepare for jobs that have not yet been created and to use technologies that have not yet been invented. The digital transformation requires workers to be increasingly flexible in order to adapt to new or different tasks and to be more mobile across occupations (Bechichi et al., 2018). In many countries, digitalisation and automation faces opposition due to concern about the risks of job losses and the disruption of economic and social structures. However, in Japan, the labour shortage removes this obstacle to digitalisation.

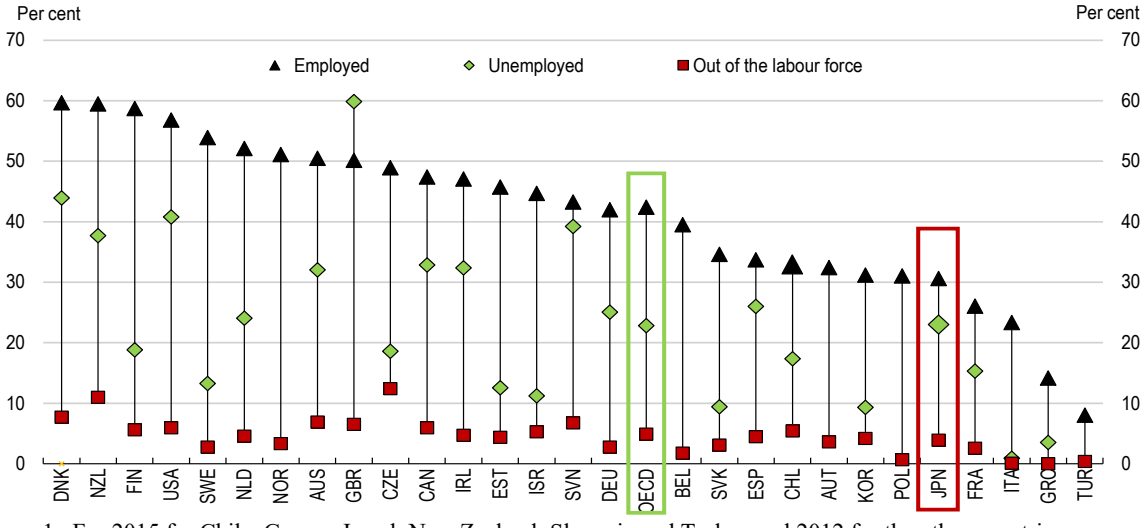
Even so, digitalisation may widen inequality through job polarisation and productivity gaps. A study based on occupational titles finds that almost half of all jobs are at risk of being eliminated by automation technology within 20 years (Frey and Osborne, 2017). An OECD study based on the task content of individual jobs predicts that around 14% of jobs in OECD countries are at a high risk of automation (Nedelkoska and Quintini, 2018). An additional 32% of jobs, which are characterised by large routine tasks, may experience radical changes in how they are performed. However, jobs characterised by either high-skilled tasks requiring problem-solving and interpersonal skills or low-skilled non-routine tasks, such as caring and personal services, will be harder to automate. Consequently, digitalisation may result in job polarisation and "technological unemployment" if workers cannot adapt to changes induced by technological progress. In addition, another OECD study finds evidence that digitalisation in European countries has

a positive impact on productivity but the gains are distributed unevenly across firms, suggesting complementarities between digital technologies and skills, organisation, and intangibles (Gal et al., 2019). On the positive side, digitalisation may enhance well-being by reducing long working hours and improving work-life balance.

As technological change accelerates, the government and firms need to enable workers of all ages to maintain and acquire appropriate skills through an effective system of lifelong vocational training (OECD, 2018a), thereby extending careers and mitigating the impact of population decline. More than two-thirds of Japanese workers believe that they need further training, double the OECD average. However, the *OECD Survey of Adult Skills* finds that participation in lifelong learning in Japan is in the bottom quartile of countries in the *Survey*. Spending on institutional training is the fifth lowest in the OECD, as the rise in the proportion of non-regular workers from 15% in 1984 to nearly 40% has reduced the incentive for such investments. A key challenge is that skill training provided by workplaces and educational institutions often does not reach workers in jobs at high risk of automation, typically non-regular workers in routine jobs. Participation in training in Japan is thus lower for non-regular workers and those who are less skilled, and it drops with age (OECD, 2018a). The share of firms in Japan providing on-the-job training for regular employees in 2015 was 62%, but only 31% for non-regular employees (OECD, 2018f). Consequently, the share of older Japanese workers participating in job-related training is among the lowest in the OECD (Figure 1.12). Abolishing the right of firms to set mandatory retirement would increase incentives for lifelong learning and for job mobility.

Figure 1.12. Participation in job-related training is low for older Japanese

Share of job-related participation in education and training by employment status for 55-64 age group[1]



1. For 2015 for Chile, Greece, Israel, New Zealand, Slovenia and Turkey and 2012 for the other countries.
Source: OECD (2018f).

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Traditionally, institutions of higher education in Japan have focused on general education, leaving companies responsible for providing job-specific skills. Tertiary institutions emphasising vocational training have seen a decline in enrolments, as students shift to university (Jones, 2011). The government has realised the importance of enhancing the vocational training role of universities by increasing their links to the business sector. In

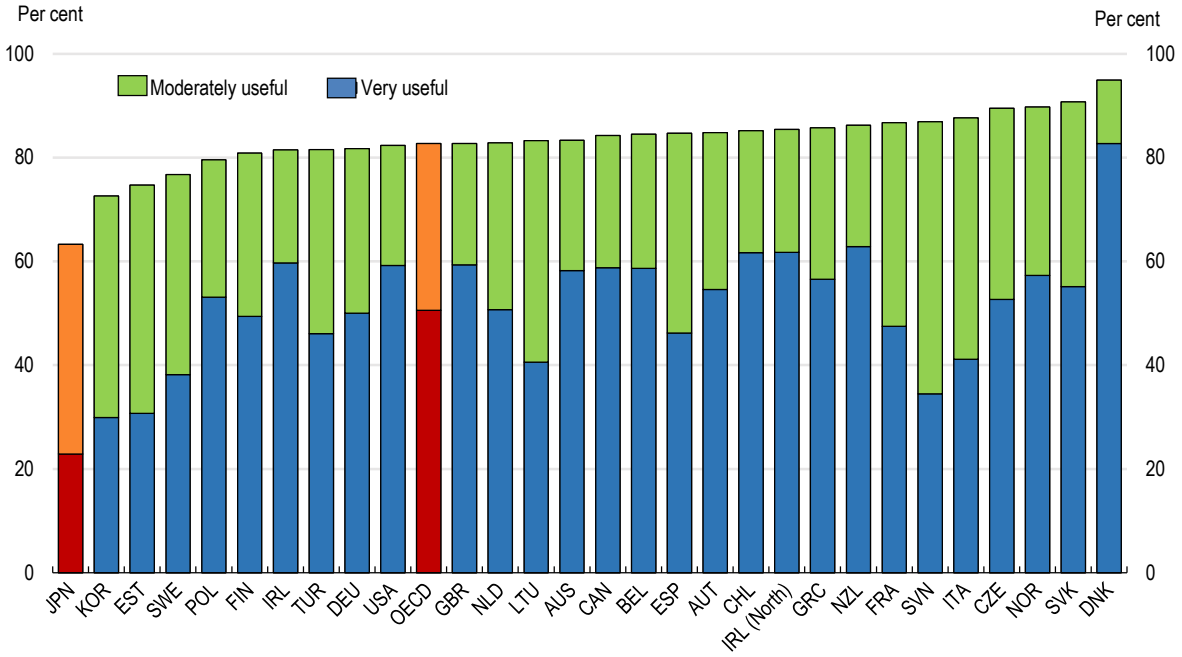
April 2019, Japan will launch a system of professional and vocational universities (PVU) and professional and vocational junior colleges (PVJC). In contrast to conventional universities, these new institutions are asked to provide practical, creative vocational education in close cooperation with industry, including long-term firm-based training. In addition, as part of the 2018-22 National Basic Plan for the Promotion of Education, the government aims to improve access to adult learning through new programmes by encouraging universities to explore opportunities to expand lifelong learning. Tertiary education institutions are accepting an increasing number of older students as the number of university-aged youth declines. However, some of their lifelong learning initiatives focus on qualifications traditionally developed for younger students, which cover a broad range of topics and take considerable time. In short, traditional tertiary education programmes are unlikely to meet the urgent needs of employers (OECD, 2018a).

Japan needs to overcome three major obstacles to expanding lifelong learning:

- *The lack of relevance of lifelong learning*: Japanese adults participating in lifelong learning were less likely than those in any other country to rate their learning as useful for their work (Figure 1.13). Lifelong learning needs to target key competencies that match labour market needs, although identifying the key skills in the digital economy is difficult.

Figure 1.13. Share of workers who find education and training useful for their job is low in Japan

25-65 year-olds participating in formal or non-formal education and training for job-related reasons



Note: For 2015 for Chile, Greece, Lithuania, New Zealand, Slovenia and Turkey are from 2015, and 2012 for the other countries.
Source: OECD (2018a).

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- *Time constraints*: Many Japanese workers work long hours. Lifelong learning has a high opportunity cost, given the high value of leisure time in Japan. With long working hours and limited time for study, shorter and more flexible modules of

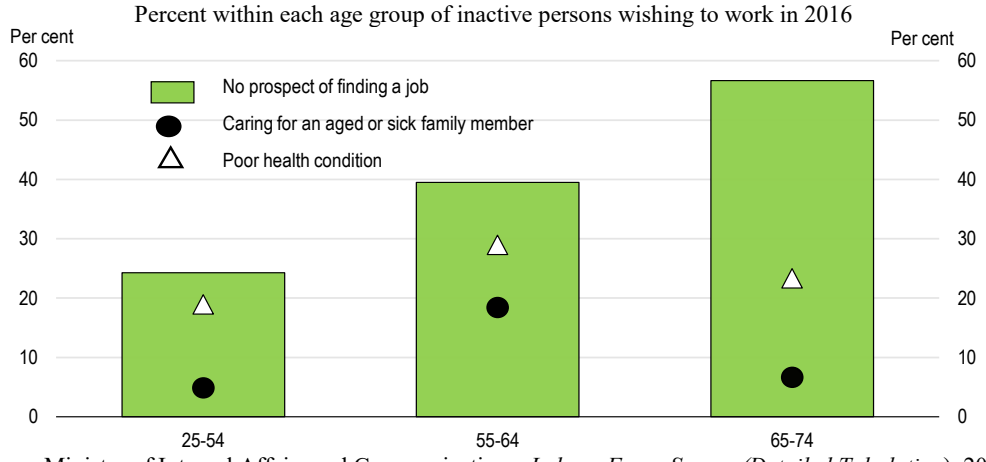
lifelong learning would be more effective than traditional approaches at tertiary institutions. The development of micro-credentials and nano-qualifications offer opportunities to close skill gaps quickly.

- *Financial constraints*: The proportion of Japanese workers engaged in lifelong learning who were supported financially by their employer was in the lowest quartile of participating countries in 2015. Given that the benefits of lifelong learning are shared by workers, employers and society, the cost should be split between those participating in the learning, companies and the government. Otherwise, Japan's "working poor" population, primarily non-regular and low-skilled workers, risk being excluded from lifelong learning (OECD, 2018a).

Providing effective job placement services

Effective job placement services would help older workers shift to a second career. Persons who are not searching for a job but express a desire to work account for 10% of the inactive population aged 55-64 and 3% of those aged 65-74. The 2016 Labour Force Survey found that almost 40% of the people in this group in the 55-64 age group and 57% in the 65-74 age group were not looking for work because they think that there is no prospect of finding a job despite Japan's severe labour shortages (Figure 1.14). Other factors, such as poor health and the need to care for family members, are less important (OECD, 2018f). Total spending on labour market policies in Japan, including job training and placement services, was the third lowest in the OECD in 2016 as a share of GDP.

Figure 1.14. Reasons why some inactive persons who wish to work do not search for jobs



Source: Ministry of Internal Affairs and Communications, *Labour Force Survey (Detailed Tabulation)*, 2016.

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Improving working conditions

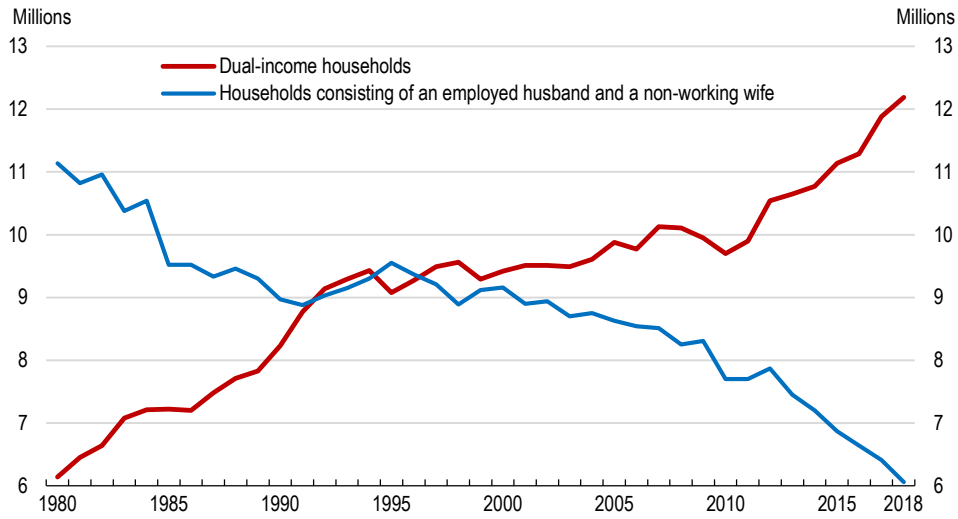
Job quality is an important determinant of well-being for older workers and plays an important role in their decisions of whether to continue working or to take up work. Promoting good working conditions at all ages is essential to protect health. In addition, it enhances the ability and motivation to continue working at an older age. It is also essential to ensure that working conditions are adapted to meet the needs of older persons, as well as those with responsibility as caregivers. Poor working conditions have a compounding adverse effect on health over a person's career. Those with poor health tend to work and earn less, which limits their chance to accumulate human capital and extend

their working life (OECD, 2018f). Having good physical and mental health is crucial to allow older workers to stay in the labour market. Reducing working time is a key aspect of appropriate working conditions (see below).

Reducing obstacles to the employment of women

The share of dual-income households doubled from around 6 million in 1980 to more than 12 million by 2018 (Figure 1.15). Japan has added 2.5 million women to the labour force since 2013, boosting the female employment rate from 60.7% in 2012 to 69.6% in 2018, above the OECD median of 67.5% (Figure 1.16). The increase was primarily a result of labour shortages resulting from demographic factors, although government policies – notably the increase in childcare capacity since 2013 – has also contributed.

Figure 1.15. Dual-income households now account for two-thirds of all households



Source: Ministry of Internal Affairs and Communications, *Special Survey of the Labour Force Survey* from 1980 to 2001 and *Labour Force Survey* (Detailed Tabulation) since 2002 (annual average).

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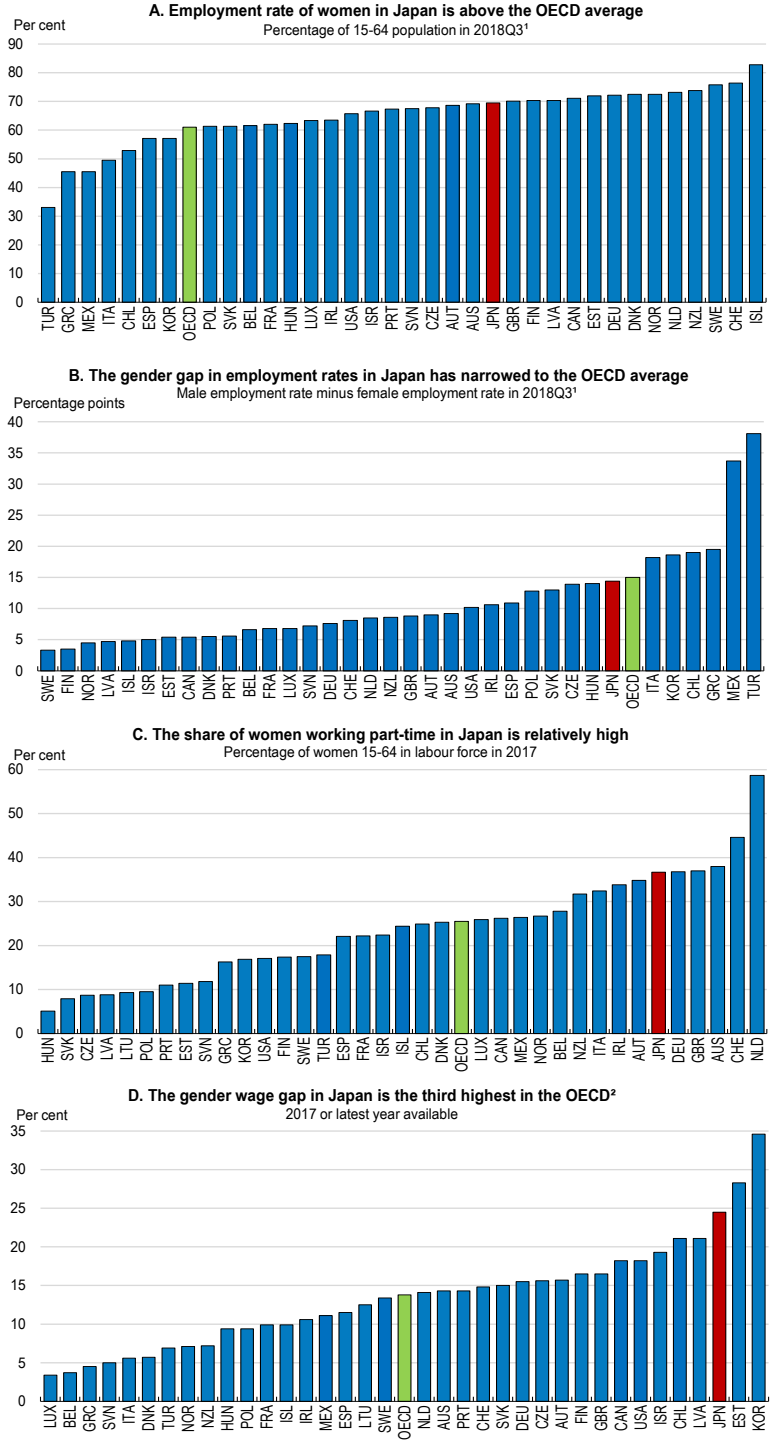
However, the gains in female employment mask significant gender inequality:

- The female employment rate was 14 percentage points below the rate for men in 2018, slightly below the OECD average (Panel B).
- Non-regular jobs, primarily part-time positions, accounted for about half of the rise in female employment since 2013. Female regular employees who leave the labour force to care for children typically return to the labour market as non-regular workers. Indeed, 61% of women in the 25-34 age group in 2017 were regular workers, compared to 41% in the 45-54 age group. Overall, only 45% of women were regular workers, compared to 78% for men. Consequently, women account for two-thirds of non-regular workers. In Japan, the share of women working part-time (less than 30 hours per week) was 37% in 2017, well above the 25% OECD average and the sixth highest in the OECD (Panel C).
- The concentration of women in low-paying non-regular jobs contributes to a gender wage gap of 25%, the third highest in the OECD (Panel D), although it has declined from 33% in 2005.
- Women's share of leadership roles remains low (see below).

Figure 1.16. Female employment has increased, but gender inequality remains high



1. The year 2018 for Japan.
2. The difference between median earnings of men and women relative to the median earnings of men who are full-time employees.
Source: OECD Gender database.

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Raising the participation of women in the labour market is an important element of coping with a declining population. If the female participation rate were to converge to the male rate by 2050, the labour force would be 5% higher than with unchanged participation rates. This section focuses on strategies to enhance the employment of women in high-quality jobs, namely improving work-life balance, ensuring high quality and affordable childcare and long-term care for the elderly, reforming the tax and benefit system to remove disincentives to work for secondary earners and fighting discrimination and gender stereotypes. Breaking down labour market dualism, which is discussed in a later section, is also a key priority to address gender inequality and raise the quality of female employment.

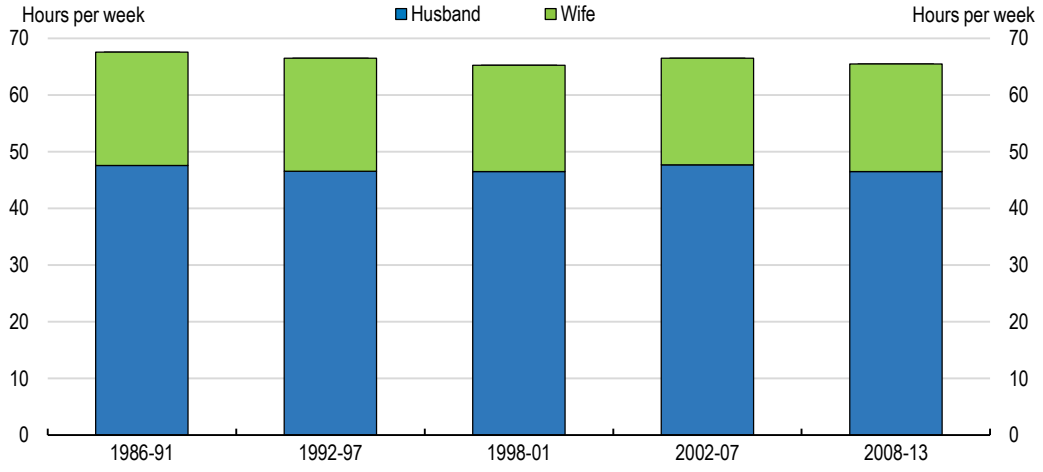
Improving work-life balance

Japan ranks in the bottom fifth in the OECD in work-life balance, reflecting long working hours. Working hours in Japan were among the longest in the OECD area for many decades, but have fallen by 16% since 1990 to an average of 1 710 hours per year, slightly below the OECD average. However, the decline was primarily a result of a substantial increase in the number of non-regular workers with relatively short working hours. In households with a married couple, the change in average working hours for husbands and wives combined over the past 30 years is quite small (Figure 1.17). The effects of legislative measures that shortened the statutory working week from 46 hours in 1988 to 40 hours in 1997 appear to have been minimal.

Japan's labour market culture has fostered a chronic and voluntary underuse of paid time off. In 2017, private-sector workers took only 51% (nine days) of their paid vacation time. The government in 2010 set a goal of 70% by 2020. Another key problem is the proportion of men working long hours. In 2017, 12% worked 60 hours a week or more, the fifth highest in the OECD, compared to only 3% for women (Figure 1.18). A 2016 government survey found that 23% of firms had full-time employees who worked more than 80 hours of overtime per month (Ministry of Health, Labour and Welfare, 2017b). Many Japanese workers would benefit from shorter working hours.

Figure 1.17. Working hours in Japan have changed little during the past 30 years

In households with a married couple, with both employed



Source: Nagamachi and Yugami (2015).

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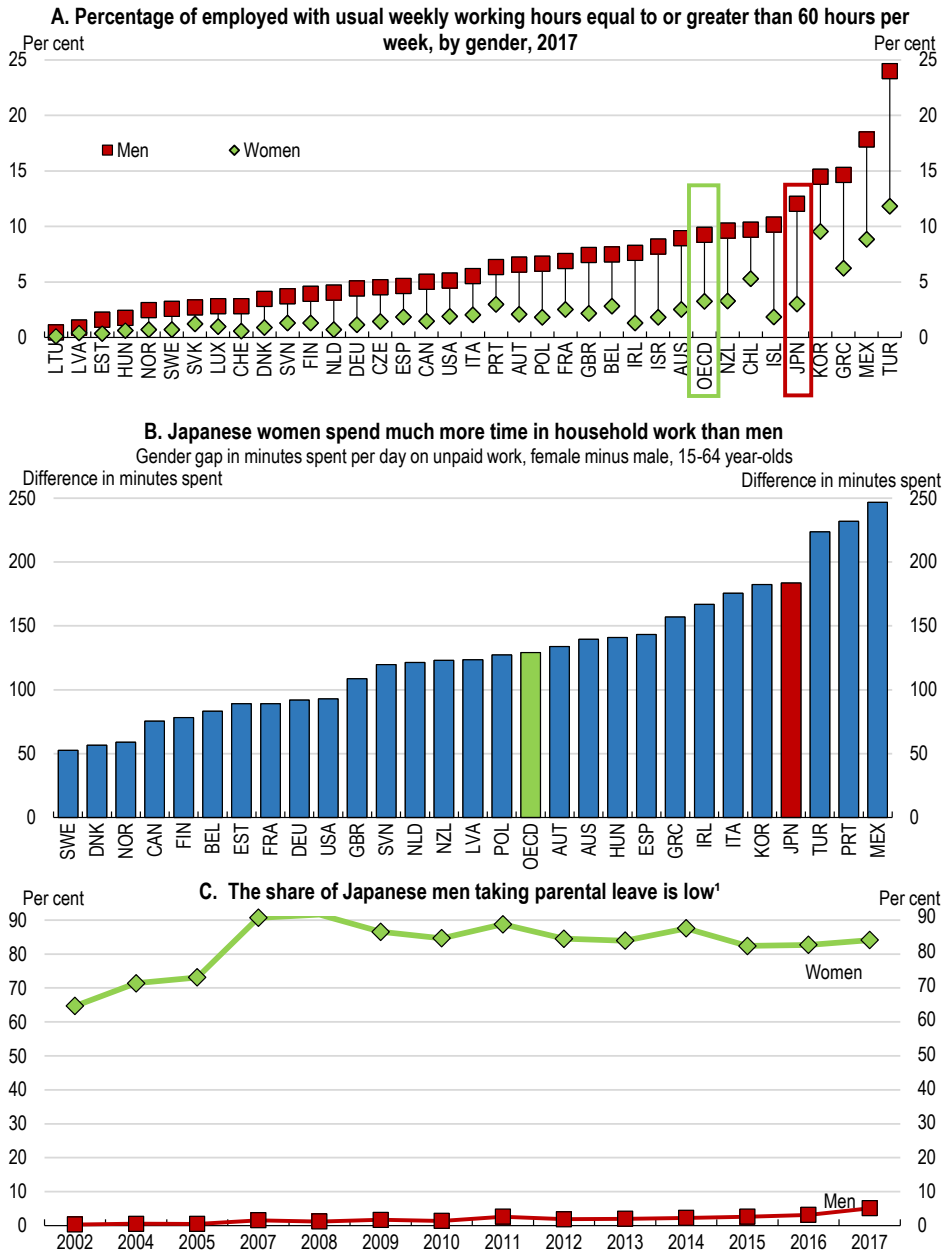
Figure 1.18. Long working hours in Japan have negative consequences



1. For women, those taking parental leave as a share of the total number of female workers with new-borns. For men, those taking parental leave as a share of the total number of male workers with spouses who have recently given birth.

Source: OECD Employment database; OECD Gender database; and Ministry of Health, Labour and Welfare, *Basic Survey of Gender Equality in Employment Management*.

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A lack of work-life balance has a strong negative influence on workers, as well as on their families. Long hours for men leave women devoting nearly four hours a day to housework and childcare compared to less than one hour for men. The gender gap in unpaid work in Japan is thus 183 minutes per day, the fourth longest in the OECD (Figure

1.18, Panel B). The commitment of men to their jobs also makes parental leave less attractive, even though it is the most generous in the OECD (along with Korea). Both men and women are entitled to one year of parental leave paid at 67% of earnings (up to a threshold) for the first 180 calendar days and 50% for the remainder until their children reach age one. Despite an upward trend, the share of men taking parental leave was 5% in 2017, compared to 83% for women (Panel C). Consequently, men account for about 7% of parental leave users, compared to up to 40% or more in some Nordic countries and Portugal (OECD, 2018d). One positive step is the 2017 revision of the Childcare and Family Care Leave Law to allow caregivers to apply for an exemption from overtime work.

The 2018 work style reform bill introduced mandatory limits on overtime hours for the first time in Japan. Previously, employers could demand unlimited overtime work if they had a written agreement with their employees. However, nearly half of firms with less than 30 workers do not have a labour-management agreement on overtime and holiday work (Ministry of Health, Labour and Welfare, 2013). Under the new legislation, which will take effect in 2019 for large firms and in 2020 for SMEs, overtime work is limited to 45 hours per month and 360 hours per year in principle. However, employers with an agreement with their workers can require them to work up to 100 hours of overtime per month, as long as they do not exceed an annual limit of 720 hours. Firms that violate these limits face a penalty of up to JPY 300 000 (USD 2 660) per worker exceeding the limit.

While work style reform goes in the right direction, it is unclear whether it will effectively change Japan's long working-hour culture. Given the low fines and more generous overtime limits for firms with a workplace agreement, the new law relies primarily on government recommendations to change social norms. One concern is that overtime work can exceed 80 hours a month, the level at which *karoshi* (death by overwork) becomes a serious concern. Work style reform also established a scheme that exempts highly specialised professional workers from the overtime limits. It is essential to ensure that employers strictly comply with the obligation to provide such workers with at least 104 days off from work per year and at least four days per four weeks, in addition to introducing measures to protect their health. Pressure by firms on workers to maintain their output despite shorter overtime hours made *jitan-harasumento* (short-time harassment) one of the most common new words in Japan in 2018 (Japan Times, 2018).

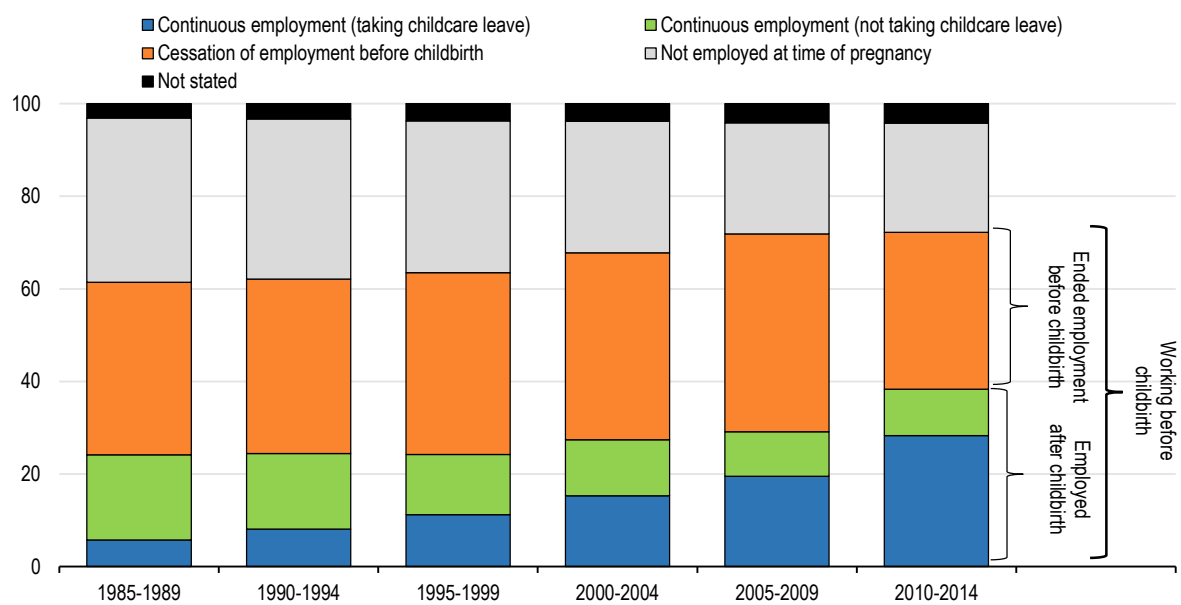
The government should also consider establishing a mandatory scheme applicable to all workers that requires rest periods between periods of work (interval-time regulation). The Overtime Work Improvement Subsidy established in FY 2017 encourages the introduction of rest periods in SMEs and the recently revised Act on Special Measures for Improvement of Working Hours Arrangements requires all firms to make "efforts" to establish an interval time. In addition, the government provides a subsidy if the interval time is at least nine hours. However, relying on voluntary efforts by firms and monetary incentives may not be sufficient. In 2017, only 1.4% of firms introduced this system. Taking into account average commuting time for employees in Japan, which in Japan is the third highest among OECD countries at 48 minutes per day, it would be beneficial to have an interval time of 11 hours, as in the European Union. A mandatory interval-time scheme that considers commuting time is necessary to create better work-life balance. Such a system should be applied to high-skilled professionals who are exempted from overtime regulations. Finally, the Childcare and Family Care Leave Law should be better enforced to increase working-time flexibility (OECD, 2018f).

Expanding the use of teleworking would also improve work-life balance, particularly given long commuting times, and reduce environmental and congestion costs. In 2015, 16% of Japanese companies allowed employees to telework occasionally and only 4% of workers telecommuted once a week according to a government survey. In 2017, the government set a target of increasing that number to10% by 2020 and designated 24 July as "Telework Day" to encourage people to work from home. The government is also encouraging teleworking in the public sector: in FY 2017, 12.4% of officials, primarily those responsible for clearly defined or divisible tasks, such as accounting, payroll, drafting documents and processing email inquiries, experienced teleworking (Cabinet Secretariat, 2018). The most frequently cited reason that companies give for not introducing teleworking is that they cannot find tasks suitable for it. In Japan, companies do not provide clear job descriptions and work is not always divisible into individual tasks. Companies rely on a culture of meetings and face-to-face relationships, which make teleworking difficult. Changes in business practices are therefore needed to increase the use of teleworking.

Providing high-quality, affordable childcare

A government survey reported that of the 500 000 workers who left jobs over 2007-12, 60% said that the main reason was that "it is difficult to balance work and family care". The share of women who were employed at the time of their first pregnancy rose from 61% in 1985-89 to 72% in 2010-14 (Figure 1.19). Moreover, among those who were employed, the share of those who chose to continue working rose from 39% to 53% over the same period. Still, nearly half of women withdraw from the labour market after the birth of their first child. Most women re-entering the labour force find non-regular employment rather than regular employment. The decision on whether to remain in the labour force after having a child depends in part on the availability of affordable, high-quality childcare, as well as other factors such as work-life balance.

Figure 1.19. The share of women remaining in the labour force after having children



Source: Cabinet Office (2018).

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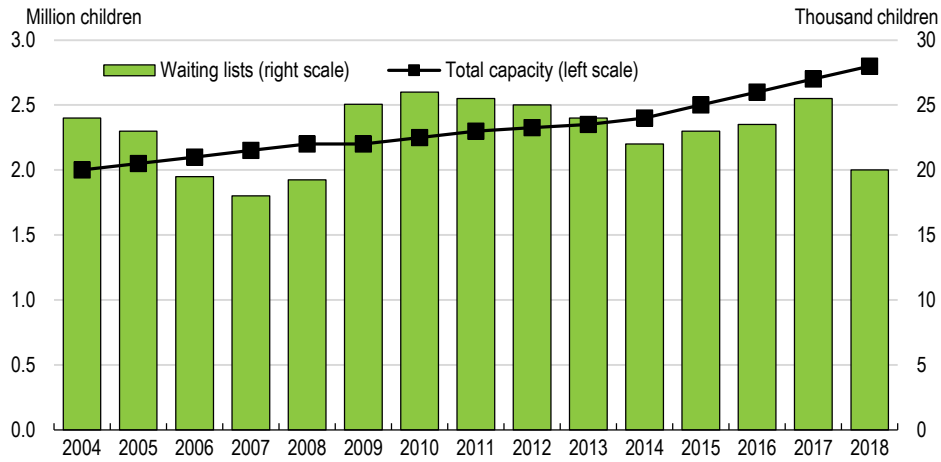
Japan added 0.53 million childcare places over FY 2013-17, with the aim of eliminating waiting lists by March 2018 (Figure 1.20). However, the waiting list was close to 20 000 in 2018, as the number of women in the labour force increased sharply. Parents who cannot find childcare are allowed to take a second year of parental leave from work. If the children in these families were included, the waiting list would be around 90 000 (Mainichi Newspaper, 2017). Moreover, many parents who realise that it is unlikely that their child will be accepted by a childcare centre may not bother to apply, suggesting that the shortage is actually much higher (Unayama, 2017). Childcare capacity varies widely between prefectures, with shortages observed primarily in urban areas, such as Tokyo and Osaka (Figure 1.21). Childcare capacity per child in Kochi prefecture is more than three time higher than in Saitama prefecture, which is close to Tokyo. Moreover, the options for in-home childcare in Japan are relatively limited by constraints on foreign workers.

Figure 1.20. Waiting lists remain long despite rising childcare capacity



Source: Ministry of Health, Labour and Welfare.

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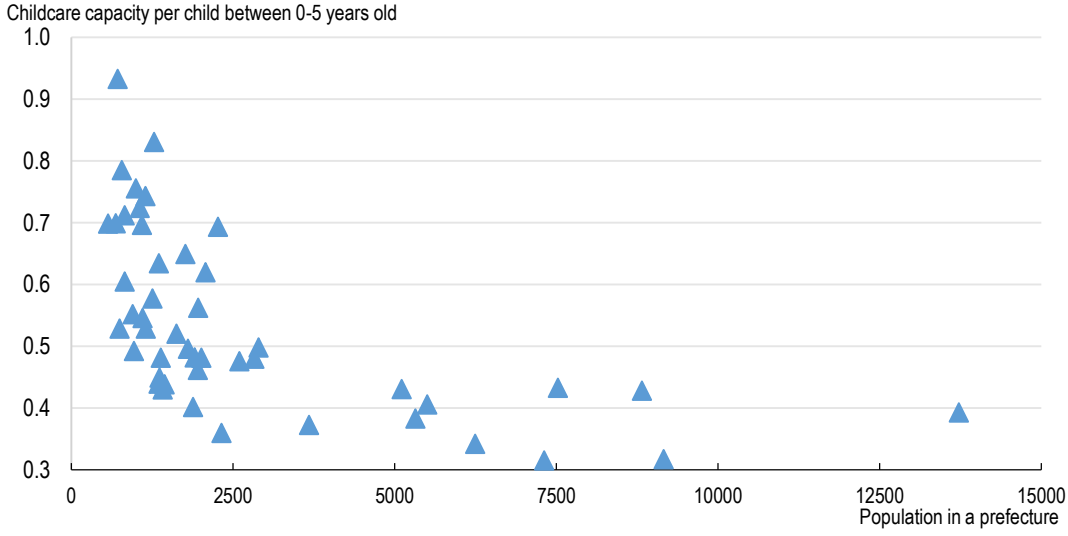
From a perspective of female employment, increasing the capacity of childcare should be the priority. Female employment is low in prefectures with less childcare capacity. In the 2015 Census, the prefectures with the lowest labour force participation rates for women aged 35-39 were Tokyo (55.7%), Kanagawa (58.5%) and Osaka (60.6%), which have limited childcare capacity. Childcare capacity increases should be focused on urban areas and on children aged 0 to 2, who account for 90% of the children on the waiting list. Such care is relatively expensive, as there must be one care giver for every six children, compared to one for 20 children aged 3 to 5. To increase capacity and eliminate waiting lists, public childcare centres should be supplemented by private institutions. *First*, entry by corporations, which is discouraged by policies such as a reduced corporate income tax and subsidies for social welfare organisations, should be facilitated. *Second*, quality regulations, such as the minimum area for childcare centres, set by some local governments exceed national standards. The rationale for more stringent standards, which limit entry by new suppliers, should be reviewed (Yashiro, 2016).

Figure 1.21. Childcare capacity is limited in major urban areas

Capacity in accredited childcare centres relative to the number of children[1] by prefecture in 2016



1. Number of children aged 0-5. Number of children aged 5 is calculated as one-fifth of children aged 5-9.
Source: Ministry of Health, Labour and Welfare; Ministry of Internal Affairs and Communications; and OECD calculations.

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In the 2017 "New Economic Policy Package", the government promised to eliminate waiting lists by March 2021 by adding 320 000 childcare places. This number is based on the estimated increase in the employment rate of women. Even with the planned expansion, eliminating childcare waiting lists is a big challenge, given latent demand. The government will introduce free childcare and kindergarten for children aged 3 to 5 in October 2019. For children aged 0 to 2, childcare is only free for low-income families who are exempt from the municipal residence tax. The hike in the consumption tax rate from 8% to 10% in October 2019 is to finance the new policy. Moreover, free childcare and kindergarten will not substantially boost enrolment, given that more than 91% of children aged 3 to 5 are already enrolled compared to the OECD average of 85%, and thus will not have a significant impact on employment. Its main effect will be to shift the burden of paying for childcare (which is already reduced by subsidies to childcare centres) and kindergarten from families to taxpayers. The government hopes that this policy will boost the birth rate, which was 1.4 in 2018.

Whether childcare centres are public or private, the shortage of childcare workers is a major obstacle. The job openings-to-applicants ratio for childcare workers is 2.3, compared to the nationwide average of around 1.6, and the government expects the ratio to remain high. In Tokyo, the ratio exceeds five. It is estimated that as many as 0.84 million persons who are certified to work in childcare are not working in that field, with low pay cited as the most important reason (Weathers, 2016). Indeed, more than half of childcare workers in the public sector are non-regular workers. Meeting shortages requires inducing qualified workers to return to childcare through better pay and working conditions. In addition, workers in related fields, such as nursing, could be allowed to work in childcare centres (2017 *OECD Economic Survey of Japan*).

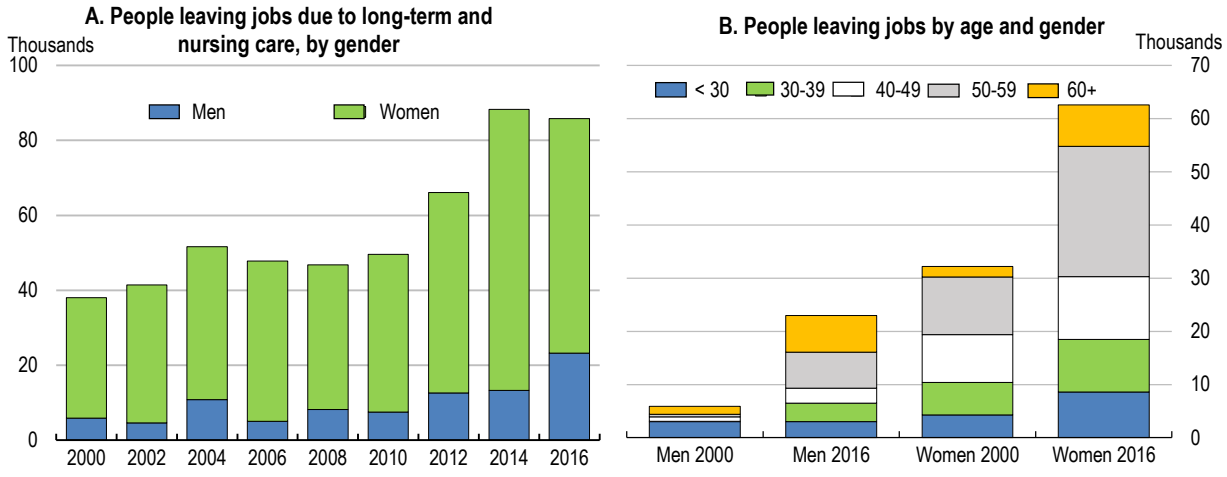
The lack of after-school care has become a serious problem. The end of childcare services when children enrol in primary school has become known as the "first-grade barrier".

Around 40% of the nationwide waiting list for after-school care is in Tokyo, Saitama, and Chiba (Sankei, 2018). Addressing this shortage should be a priority.

Ensuring that women do not have to leave their jobs to care for elderly relatives

Population ageing also reduces the labour force as workers, primarily women, withdraw to care for elderly relatives. Since 2010, there has been a considerable increase in the number of workers quitting their jobs to provide long-term care (Figure 1.22). One of the objectives of the 2016 "Plan for Dynamic Engagement of All Citizens" is that "No one will be forced to leave their jobs to provide nursing care". To achieve this target, the government intends to increase long-term care capacity for the elderly by at least 0.5 million by the early 2020s. It projects that 2.16 million long-term caregivers will be needed by the early 2020s. In addition, the Child Care and Family Care Leave Act was revised in 2017 to offer more generous long-term care leave options. According to the Employment Status Survey in 2012, only 3.2% of workers with long-term care responsibilities used leave (Ikeda, 2017). The revised Act allows workers to take long-term care leave three times for up to 93 days in total and exempts them from overtime work. It is important to increase awareness of long-term care leave entitlements among companies and workers and to provide incentives to promote its use.

Figure 1.22. The number of workers leaving jobs in Japan to provide long-term care is rising



Source: OECD (2018f).

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Reforming the tax system to remove disincentives to work for second earners

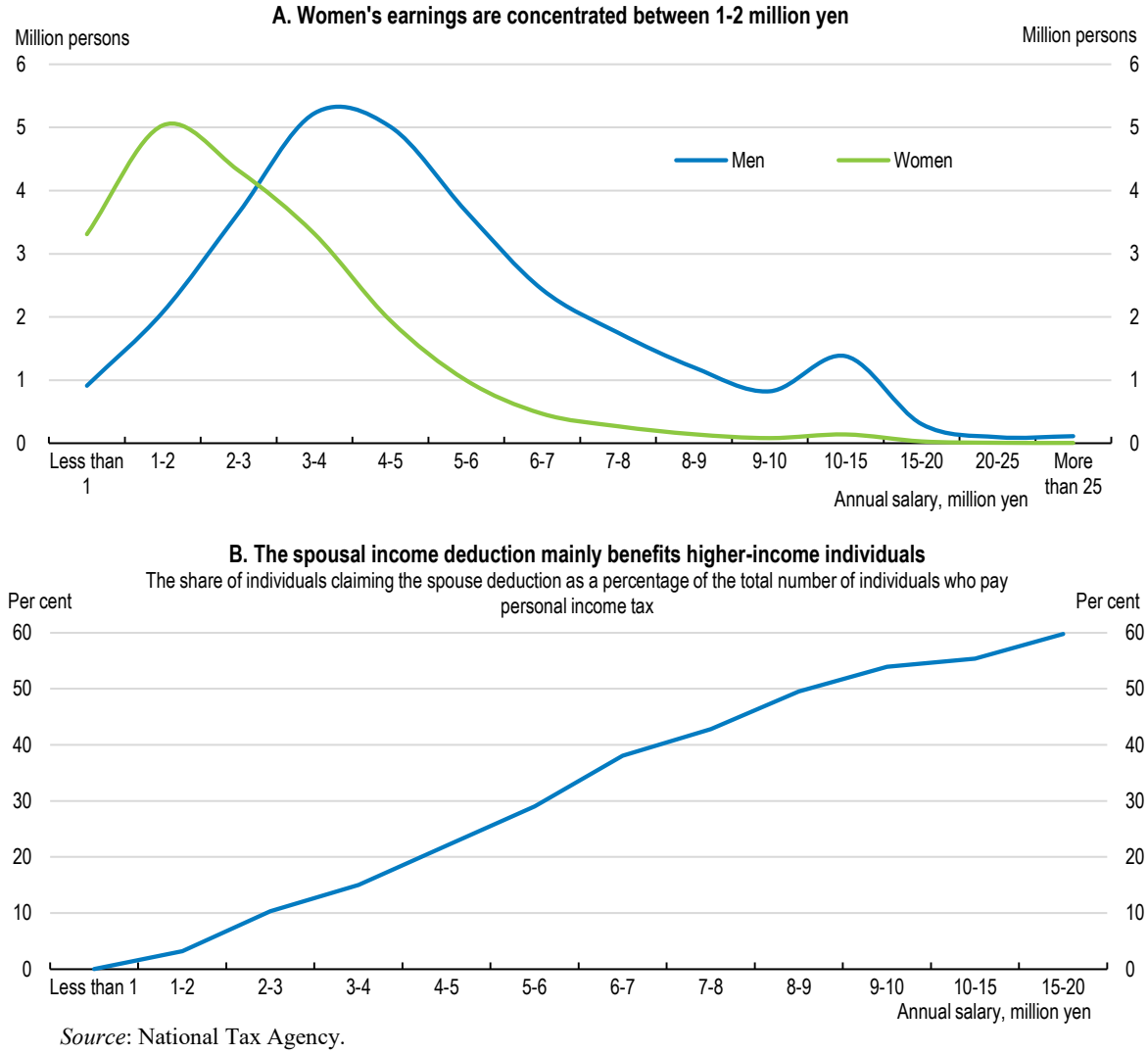
Empirical evidence shows that second earners tend to be highly responsive to work disincentives. Tax and benefit systems that weaken second-earner work incentives have consequences for gender equity, efficiency and income inequality. Removing such disincentives can have a positive impact on employment and GDP and may reduce income inequality (Thomas and O'Reilly, 2016). Japan's tax system is based on individuals rather than families, an approach that tends to result in lower marginal tax rates on second earners. Japan's spousal deduction, originally introduced in 1961, exempted up to JPY 380 000 (USD 3 382) from the main earner's taxable income, if the second earner earned less than JPY 1.03 million (USD 9 131). In addition, many private companies set JPY 1.03 million as the threshold for granting spousal benefits to their

employees. These policies resulted in the "JPY 1.03 million ceiling", as most second earners aimed to keep their earnings below that threshold (Figure 1.23). Moreover, most of the deductions go to high-income households (Panel B). Of those earning less than the average wage (JPY 3.8 million in 2016), less than one-fifth benefited from the spousal deduction. The impact of the spousal deduction is magnified by the fact that second earners are eligible for the national pension without paying premiums if their income is below JPY 1.3 million.

An OECD study (Thomas and O'Reilly, 2016) compares the incentives for a second earner to enter the labour force with those for a single person, assuming both have two children and earn 67% of the average wage. The average tax rate for the second earner (23%) in 2015 was considerably above that on a single individual (13%), reflecting the impact of the spousal deduction (Figure 1.24). Still, the level of the tax rate on second earners and the gap with single individuals was not high compared to the OECD average.

Figure 1.23. The spouse deduction negatively affects female labour participation and equality

In 2016



Source: National Tax Agency.

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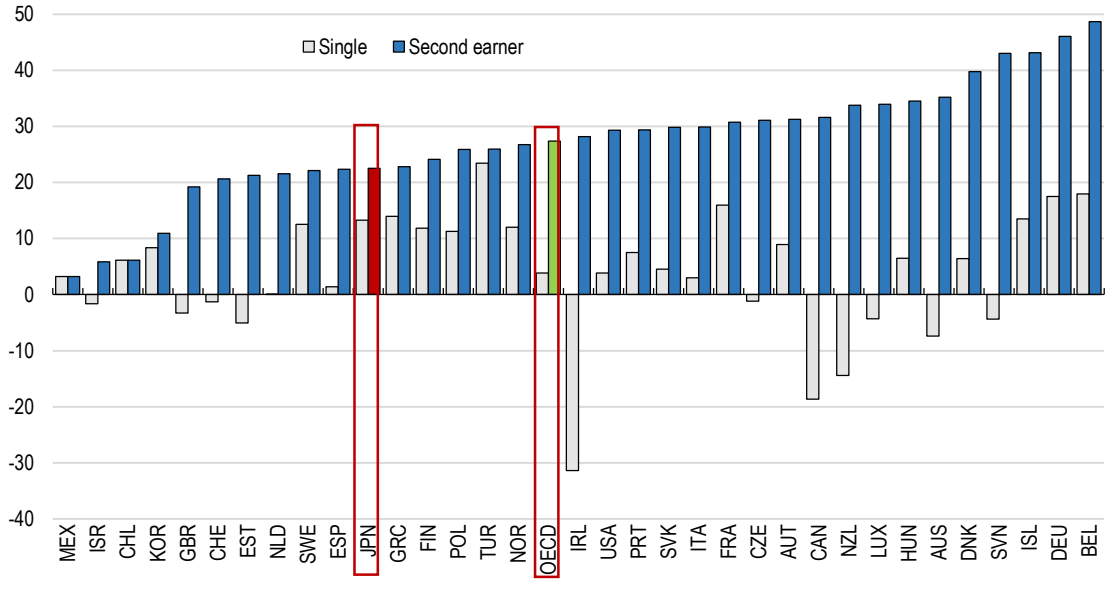
In addition to reducing the labour supply by encouraging second earners, who are often women, to work part-time, most of the spousal deductions go to high-income households, as noted above. In 2018, the income threshold for taking the deduction was raised to JPY 1.5 million yen (USD 13 298). In addition, the deduction is no longer available to primary earners with income of more than JPY 12.2 million (USD 108 580). By allowing second earners to earn more without being subject to tax, the reform is expected to increase labour inputs by married women. In addition, Keidanren asked its member companies to consider reducing or eliminating spousal allowances in order to encourage more active workforce participation by married women. While these steps go in the right direction, the spousal deduction should be phased out (OECD, 2018d). This would be in line with the *OECD Recommendation of the Council on Gender Equality in Education, Employment and Entrepreneurship*, calling on countries to "design tax-benefit systems so that both parents have broadly similar financial incentives to work" (OECD, 2013b).

Figure 1.24. Average tax rates tend to be higher on second earners than on individuals



Note: In 2015. Single earner compared to second earner, both with two children and earning 67% of the average wage. The spouse of the second earner has a salary equal to the average wage.
Source: Thomas and O'Reilly (2016).

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Enhancing women's role by reducing discrimination

In 2003, Japan adopted a target of increasing the share of leadership roles held by women to 30%. Prime Minister Abe promised in 2013 to create a society in which "all women can shine" and reaffirmed the 30% target for 2020. He also stated in 2014 that women's social and economic advancement is necessary for economic growth. Keidanren has urged its members to make voluntary efforts toward improving women's status (Nemoto, 2016).

However, the share of women in leadership positions has remained low by international standards despite the rising education level of women and the implementation of gender equality laws. Women held only 13% of managerial positions in Japan in 2019, the second lowest in the OECD (Figure 1.25), suggesting a serious misallocation of human

resources. Women accounted for only 4.9% of senior management positions in the central government in 2018 and 10.9% in the private sector in 2017 (Table 1.5). Moreover, women occupied only 5.3% of the seats on the boards of listed companies in 2017 (Figure 1.25, Panel B). Only 10% of the members in Japan's lower house are women, compared to 26% in France and 37% in Germany (Panel C). Japan thus ranks 161st out of 193 countries in female political representation. Japan's ranking in the gender equality index by the World Economic Forum fell from 101st in 2012 to 110th in 2018.

Given the slow progress toward the 30% goal by 2020, the Fourth Basic Plan for Gender Equality in 2015 set more realistic targets of 7% and 15% for women's share of management positions in the central government and private sector, respectively (Table 1.5). Strategies to achieve these goals include: *i)* reforming "male-oriented working styles"; *ii)* expanding women's participation in policymaking; *iii)* securing equal opportunities and treatment between men and women; *iv)* improving work-life balance; and *v)* promoting gender equality in a range of areas, including science and technology. Moreover, it has introduced a number of additional objectives, though none are binding and there are no penalties for failing to reach them:

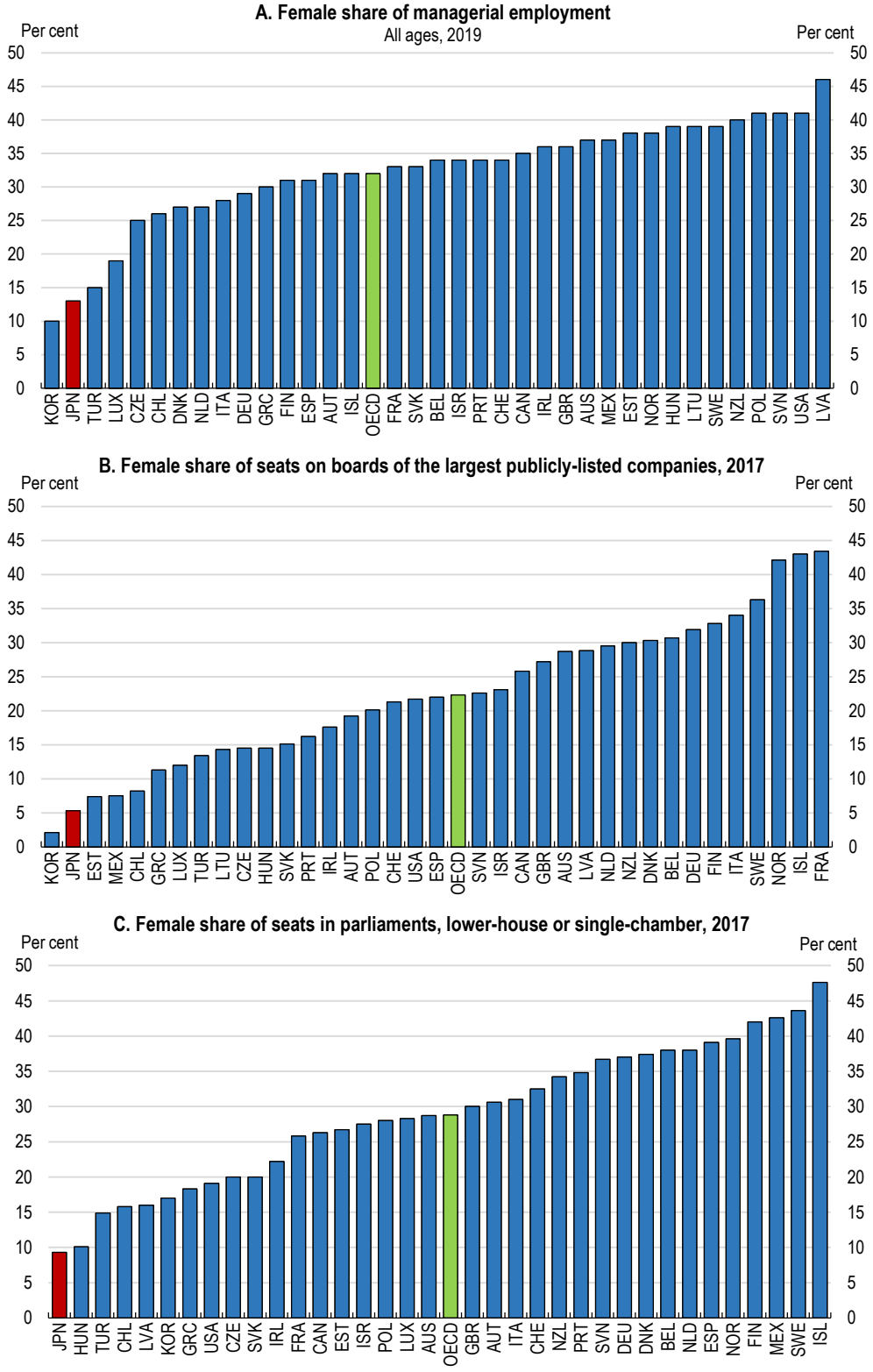
- In 2015, the government set a target of raising the share of women on companies' boards of directors to 10% by 2020.
- A 2015 law requires large companies to set targets, such as hiring and promoting women, but do not need to report on the results.
- The government has requested political parties to voluntarily set a target of raising the proportion of female candidates for the Diet to 30% by 2020.

Table 1.5. Targets set in the 2015 Fourth Basic Plan for Gender Equality

Sector	Indicator	Most recent level	Target (deadline)
National civil service	Share of female directors Share of female section chiefs	4.9% (July 2018) 25.0% (July 2018)	7% (end of FY 2020) 30% (end of FY 2020)
Prefectural civil service	Share of female directors Share of female section chiefs	10.5% (2018) 22.6% (2018)	15% (end of FY 2020) 30% (end of FY 2020)
Municipal civil service	Share of female directors Share of female section chiefs	16.7% (2018) 34.0% (2018)	20% (end of FY 2020) 35% (end of FY 2020)
Private corporations	Share of female directors Share of female section chiefs	10.9% (2017) 18.4% (2017)	15% (2020) 25% (2020)
Total economy	Employment rate for women aged 25-44	76.5% (2018)	77% (2020)
Total economy	Share of workers working more than 60 hours per week	Men: 10.56% (2018) Women: 2.4% (2018)	5.0% (2020) (for men)
National civil service	Share of male workers who take childcare leave	10.0% (FY 2017)	13.0% (2020)
Local civil service	Share of male workers who take childcare leave	3.6% (FY 2016)	13.0% (2020)
Private firms	Share of male workers who take childcare leave	5.1% (FY 2017)	13.0% (2020)

Source: Cabinet Office (2018).

Figure 1.25. Japanese women are under-represented in leadership positions



Source: OECD Gender database.

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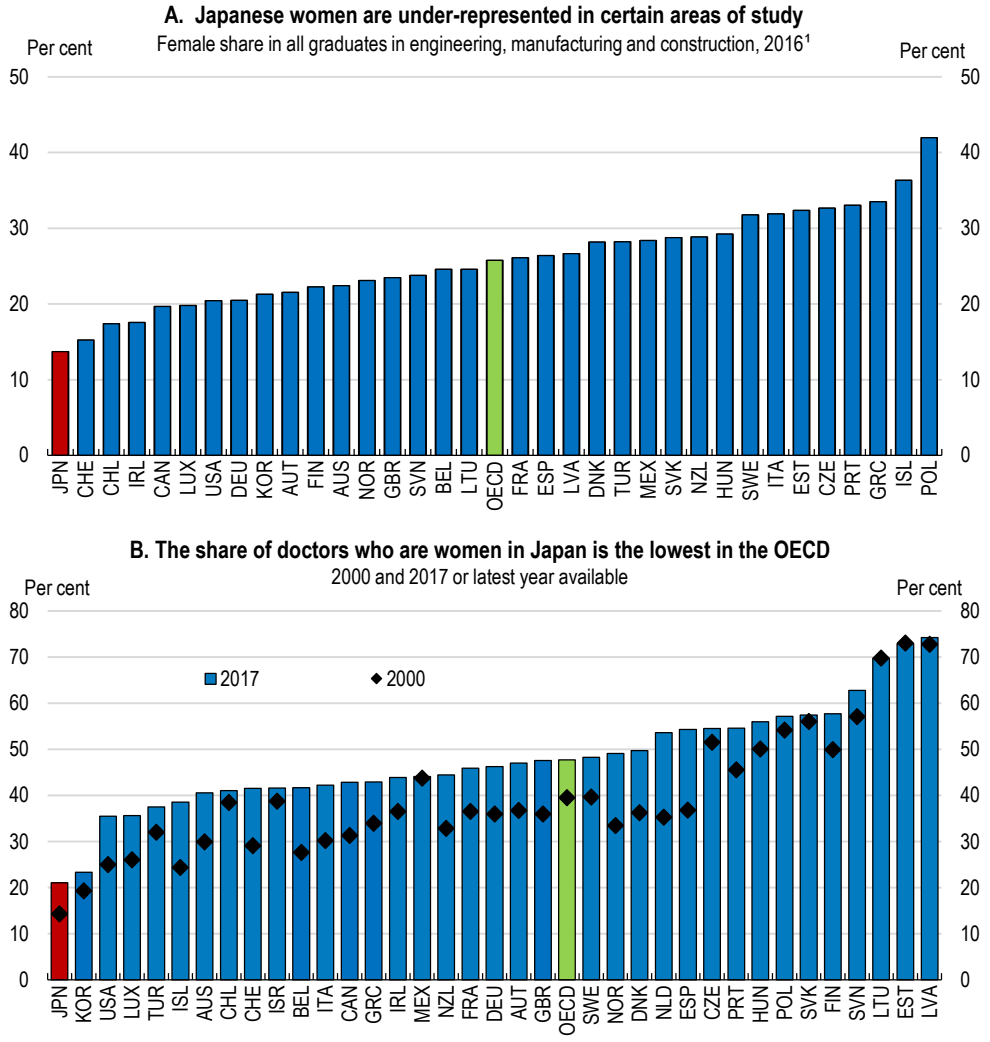
The low share of women in management partially reflects skills and education. Women's share of bachelor degrees granted in 2016 was 45%, the lowest in the OECD and well below the 58% OECD average (OECD, 2017e). Moreover, there is a large gender gap in what students study. The share of women graduating in engineering, manufacturing and construction was the lowest in the OECD at 14% in 2016 (Figure 1.26). While girls are more focused on careers in health services, boys are more interested in engineering and computing (OECD, 2016b). However, women face discrimination in the health sector. In 2018, the government announced that three medical universities had rigged their entrance exam to increase the number of young male doctors, thus limiting the increase in the number of female doctors. Although the share of women doctors rose from 14% in 2000 to 20% in 2015, it is still far below the OECD average of 47% (Panel B).

Figure 1.26. Japanese women are under-represented in certain areas of study and professions



1. Percentage share of women in all tertiary graduates in these subjects in 2016.
Source: OECD Gender database.

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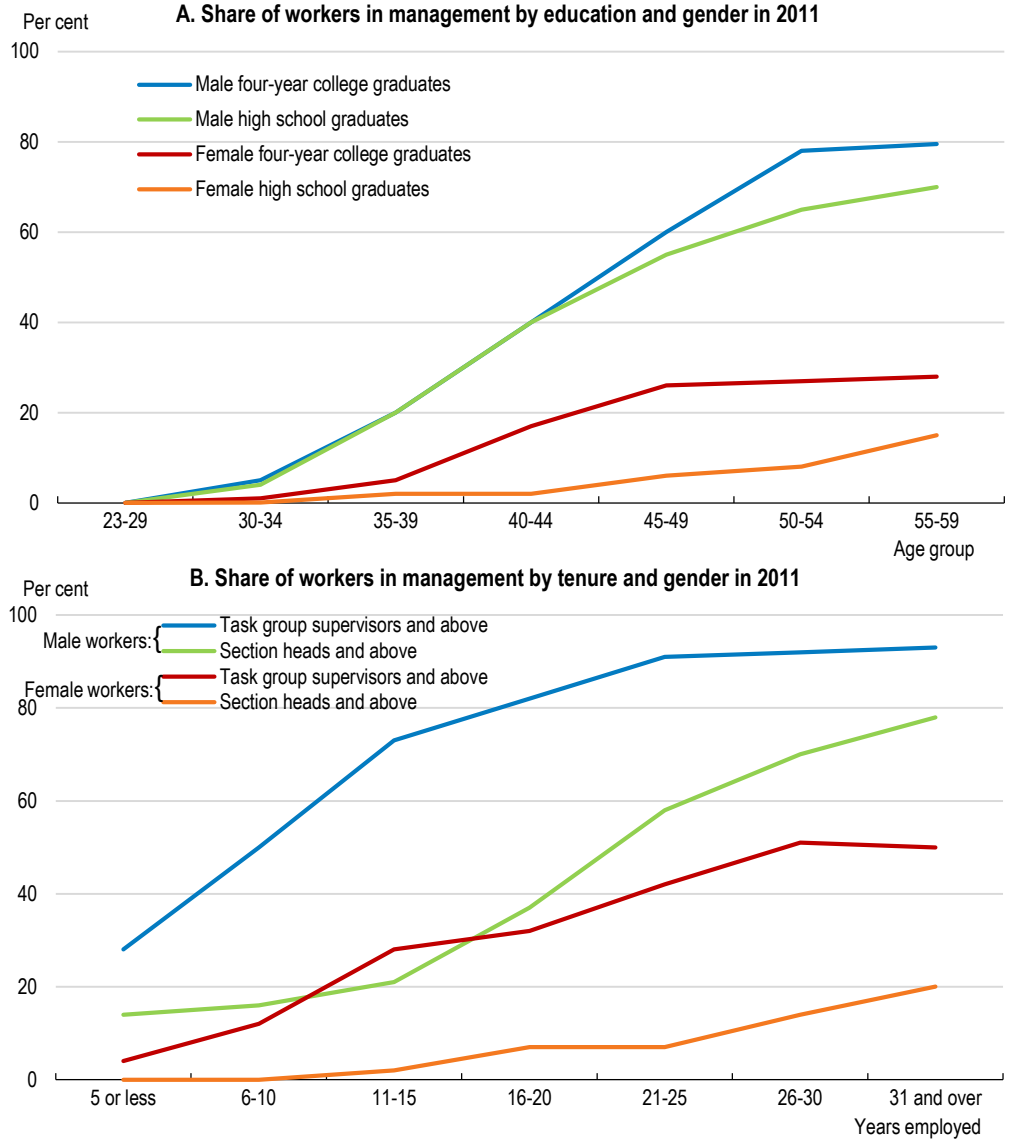
A government survey of firms in which the share of women in employment is less than 10% identified three major reasons for the lack of female leadership. The main reason,

cited by the majority of respondent companies was that, "There are no women who have the necessary knowledge, experience or judgment capability" (Yamaguchi, 2016). However, among women in the 55-59 age group who graduated from four-year universities, only around a quarter had attained a management position compared to four-fifths of men (Figure 1.27). Moreover, two-thirds of the men in that age group who had only graduated from high school reached management positions. In short, having as much or more education than men does not ensure equal outcomes for women.

Figure 1.27. The impact of education and tenure on the share of women in management



Note: Based on a sample of 6 480 male employees and 3 023 female employees in one of 1 677 firms with 100 or more employees.
Source: Yamaguchi (2016).

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In Japan's seniority-based system, tenure plays an important role in determining wages and promotions (Yashiro, 2014). Given that nearly half of women withdraw from the labour force when they have their first child, the average length of female employment is

shorter than that of men. The other major reasons cited by firms in the survey on the lack women in management was, "Women retire before attaining management positions due to their short duration of employment" (Yamaguchi, 2016). The firms thus blamed women for their small share of management positions without any mention of discriminatory practices.

However, the share of workers in managerial and supervisory positions is significantly lower for women even when comparing them to men with the same length of service. Among regular, white-collar workers with 31 years or more of tenure, only 20% of women served as section heads (*kacho*) and above compared to 78% of men (Figure 1.27, Panel B). For men, the 20% share of section heads and above was reached after only 11-15 years of tenure. Similarly, 50% of women with 31 years or more of tenure reached the level of task group heads (*kakaricho*) and above compared to 93% for men. The disparities between the rank of men and women increase as one climbs the organisational ladder.

Differences between male and female workers in education, age and tenure only explain between 20% and 30% of the gender gap in management positions (Youm and Yamaguchi, 2016). Japanese labour practices appear to explain much of the remaining inequality. Female graduates are less likely to enter regular employment and to enter fast-track career streams where workers are groomed for higher management. Track-based hiring of women (the "course system" in Japan), typically for clerical work, results in "indirect discrimination" (Yamaguchi, 2014). In addition, many employers still expect women to withdraw from the labour force around the time of childbirth and therefore are less likely to invest in on-the-job training for women to acquire skills specific to the firm. This self-fulfilling prophecy contributes to a very "leaky labour market pipeline" to management positions for women (Naito, 2016).

Other Japanese employment practices limit women's opportunities to reach management level. *First*, working long hours is a prerequisite to be promoted to management. Many women with family responsibilities thus opt out of career tracks (Yamaguchi, 2016). *Second*, high performance evaluations increase the probability of promotion for men, but not for women (Yamaguchi, 2014). *Third*, regular employees are frequently shifted between jobs in the process of climbing the corporate ladder, which often requires them to relocate. Such an approach is problematic in dual-income households (Macnaughtan, 2015). As in the case of older persons, moving away from traditional labour market practices to adapt to the changing needs of a more diverse workforce is important to increase the share of women in employment and in leadership positions.

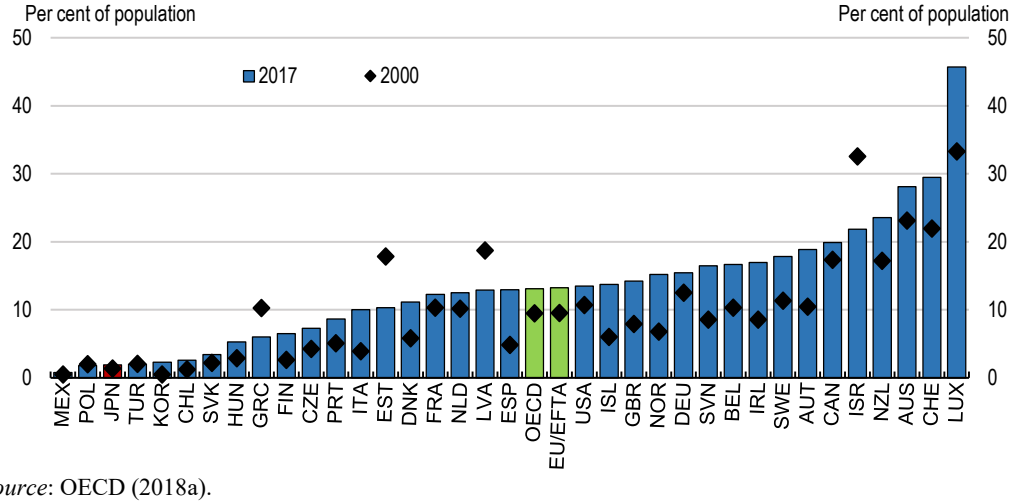
The 2006 amendment of the Act on Securing Equal Opportunity and Treatment between Men and Women in Employment aims to prohibit indirect discrimination, which consists of practices, policies or rules that apply to everyone in the same way, but have a detrimental impact on certain groups. However, the track-based hiring of women – the course system – is not regarded as indirect discrimination. In the United States, institutions or practices are considered to have an unfair impact on women if the rate for hiring or promoting women is less than 80% of the rate for men with equivalent qualifications. Moreover, statistically significant gender disparities are evidence of discrimination even when the 80% rule is not satisfied. Stronger rules against indirect discrimination in Japan would help women rise to leadership positions (Yamaguchi, 2014).

Making greater use of foreign workers

The number of foreign employees (including foreign trainees) reported by firms doubled from 0.7 million in 2013 to 1.46 million in October 2018. This reflects the willingness of employers to hire foreign workers and government policies aimed at making greater use of foreign workers. Still, they account for only about 2% of Japan's labour force, one of the lowest shares in the OECD. While foreign-born residents rose from 1.3% of Japan's population in 2000 to 1.9% in 2017, it is still the third lowest in the OECD and well below the 13% OECD average (Figure 1.28). About a third of foreign residents are Korean-Japanese, Japanese descendants (mainly from South America) and spouses of Japanese nationals. The remainder are roughly evenly divided between skilled workers, students (who may be authorised to work up to 28 hours a week), and trainees in the Technical Intern Training Programme.

Japan has admitted skilled foreigners but has limited migration for less-skilled employment and technical skills (Box 1.1). In December 2018, the Diet approved a new residency status for work-ready foreigners with expertise in industries that need more workers, such as construction, agriculture and long-term care. This landmark decision will allow lower-skilled workers with a certain level of knowledge and experience to be employed in Japan for the first time beginning in April 2019. The government estimates that up to 345 150 foreign workers will be accepted over 2019-24 under the new residency status in 14 industries. The new status will only be available to foreigners who pass proficiency tests in the Japanese language and vocational skill exams. However, foreign trainees who have completed Technical Intern Training II will be exempted from the language and skill exams. A new language exam will be held in Vietnam, China, the Philippines, Indonesia, Thailand, Myanmar, Cambodia, Nepal and Mongolia in 2019.

Figure 1.28. The share of the foreign-born population in Japan is one of the lowest in the OECD



Source: OECD (2018a).

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The new residency status has two categories. Workers in the first category will be allowed to stay in Japan for five years, but without their family. Those in the second category, who must have higher vocational skills, will be able to renew their status of residence beyond five years and to bring their spouse and children to Japan. Foreign workers shall be paid at least as much as Japanese workers doing the same job.

Box 1.1. The current framework for foreign workers in Japan

Japan's immigration system has developed over decades through the introduction of residency status categories for specific groups. Residency statuses are based on occupational categories (such as professors and entertainers), specific programmes (such as the Technical Intern Training Programme), and overseas Japanese descendants. The result is a collection of specific occupation-based permits, in contrast to most OECD countries where admission is subject to a labour market test, education or occupational skill requirement, or salary threshold. For the skilled occupation categories, Japan requires that foreigners demonstrate the requisite skill level and meet prevailing wage requirements. Family reunification is possible, although family members' access to the labour market depends on their residency status. Application for permanent residence for skilled workers is possible after ten years. Relative to most other OECD countries, these conditions are restrictive.

To make Japan's residence system more attractive for the highest qualified, the government introduced a points-based scheme (PBS) in 2012, under which high-scoring applicants are granted more favourable conditions for family members and faster access to permanent residence. Points are given for education, occupational characteristics, language skills, income and other factors (OECD, 2018c). The measure applies to both in-country applicants and those from abroad. The uptake of the PBS was limited in the first few years and primarily involved foreigners already resident in Japan. The PBS resulted in about 8 500 issuances in the first five years. The PBS was adjusted in 2017 to provide faster access to permanent residence for the highest-scoring applicants, who can acquire it after only one year. The PBS is not comparable to point-based systems in Australia, Canada and New Zealand, as it is contingent on employment in Japan and offers an initial temporary residence. The other countries use their PBS to select immigrants from a pool of candidates and grant them immediate permanent residence.

In principle, labour migration for employment in low-skilled jobs has not been allowed, although several important channels have been created to supply employers with workers in low-skilled jobs. The Technical Intern Training Programme, which dates back to the 1960s, allows foreigners to work in certain low-skill occupations. Trainees are placed by an intermediary agency with a specific employer. The Programme was extended from one year to three in 1993, and in 2017 trainees supervised by "outstanding supervisory organisations" were allowed to stay for two additional years. In 2010, coverage of the labour law was extended to first-year participants in the Programme. Around three-quarters of the 275 000 trainees in 2017 were from China and Vietnam.

The stated purpose of this government-supported Programme is to promote the growth of developing countries through the transfer of skills and expertise gained by "trainees". However, some reports say that the Programme is an employment opportunity and Japanese employers have used it to find workers for low-wage jobs. Furthermore, the Programme has been criticised as susceptible to employer exploitation of the trainees and more serious abuses. A government report found that 71% of firms violated the Labour Standards Act in 2017, although this was down from 80% in 2013 (Ministry of Health, Labour and Welfare, 2018). In 2017, the Ministry of Health, Labour and Welfare introduced regulations with penalties attached to "reduce human rights violations", stating that "trainees are no different than Japanese labourers" (Japan Times, 2017). In addition, a significant number of trainees left the companies that brought them to Japan to work without authorisation elsewhere (Menju, 2017).

In the 1990s, Japan opened a second channel for low-skilled workers by allowing overseas Japanese descendants – up to the third generation – to come to Japan for employment or to visit family. Many Brazilians and other South Americans came to Japan, where they were employed through temporary agencies as contract workers. Unlike trainees, they also brought their families, although their children did not generally attend Japanese schools and often did not acquire Japanese language skills. About one-third of these workers of Japanese descent left in the late 2000s as manufacturing employment declined, although some have since returned. In 2017, there were about 250 000. The government has instituted a more favourable policy for this group and extended eligibility to the fourth generation.

Japan also has around 150 000 foreign students enrolled in higher education, both universities and language schools. Ambitious targets to increase Japan's international student enrolment in higher education have not been met, although Japan has about 8% of global market share of international study. Students can be authorised to work up to 28 hours a week. Enforcement is difficult and some work more hours, in some cases with two jobs. Students at language and vocational schools (90 000 and 67 000 respectively in 2018) in particular appear at risk of working rather than studying.

It is not clear whether the policy change will lead to widespread recruitment of foreign workers by Japanese employers, who will drive the system. Moreover, employers may not be interested in expanding their hiring of foreigners even if the planned number pass the exams. Furthermore, the language exams, such as that for nursing care, may pose difficulties for candidates.

The government has stressed that the residency status is not a step towards immigration, which some fear would harm social cohesion and public safety in one of the world's most homogeneous societies. Even those in the second category under the new residency status will need to apply for an extension to stay in Japan (Burgess, 2018). International migration on a scale sufficient to substantially change Japan's demographic picture is unrealistic. To keep Japan's working-age population at its 1995 peak would require inflows of more than 0.6 million workers per year (Peng, 2016). Still, increased inflows of foreign workers in an important element of a comprehensive approach to coping with population decline. OECD research shows considerable evidence demonstrating that the medium and long-term effects of migration on public finance, economic growth and the labour market are generally positive (OECD, 2016a). Immigration can increase tax revenue and social security contributions, raise the share of the population that is working and fill some skill gaps and specific bottlenecks.

However, the benefits of foreign workers depend on their skills. Japan faces competition from other Asian economies in attracting talented foreign workers. Offering long-term residency to workers and their spouses and children and helping them cope with the challenges of moving to Japan would help Japan attract high-quality foreign workers. In the 2015 Migrant Integration Policy Index, which ranks 38 advanced countries in eight policy areas, Japan's lowest scores were for education (29th) and anti-discrimination (37th) (Barcelona Centre for International Affairs, 2015). According to a 2017 government study, nearly 40% of foreign residents had been refused housing during the preceding five years based on their nationality (Center for Human Rights Education and Training, 2017). Realising the economic benefits of migration also requires significant investment in the education of new migrants, notably the Japanese language. The government aims to avoid the concentration of foreign workers in Tokyo, though this may make it more difficult to

provide adequate support. In sum, Japan may not be able to realise the full benefits of foreign workers by relying on temporary workers.

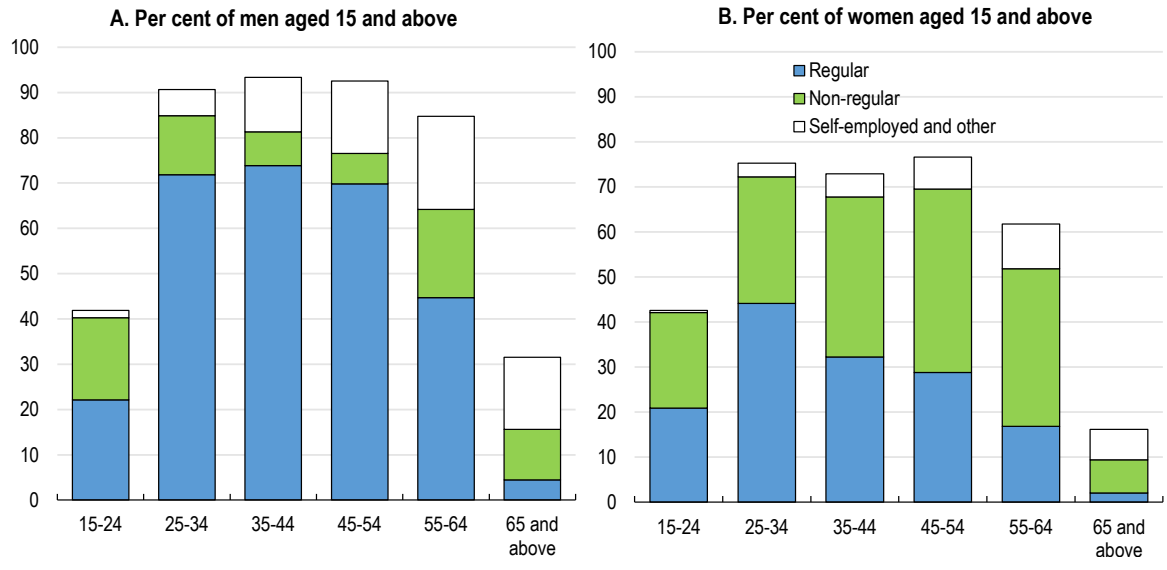
Japan also faces challenges in retaining skilled foreign workers, many of whom are language or university teachers and business managers at multinationals. Language barriers and differences in corporate culture are barriers to attracting and retaining skilled foreign workers (ADBI-OECD-ILO, 2018). Japan also has a low retention rate for international students. Although about half intend to remain in Japan, post-graduation transition to employment is about 15%. Mismatches between field of study and employer interest in international graduates partly explain this, as does the perception of Japanese firms that the main advantage of international graduates is to expand exports to their home countries (ADBI/OECD/ILO, 2015).

Promoting inclusive growth by breaking down labour market dualism

The large share of non-regular workers among young and prime-age workers has negative implications for extending employment of older persons, as non-regular workers often do not have the career progression and skills that would allow them to stay longer in the labour force. Non-regular employment, a category that includes fixed-term, part-time and dispatched workers, doubled from 9.7 million (20.3% of total employment) in 1994 to 20.4 million (37.3%) in 2017. For men, non-regular employment is concentrated among those under age 35 and those over age 55 (Figure 1.29, Panel A). Under Japan's seniority-based wage system, firms cannot afford to keep regular workers, prompting them to impose mandatory retirement and transform regular workers to non-regular status. This shift discourages some employees from continuing to work and lowers the productivity of those who stay, as noted above. Women account for two-thirds of non-regular workers (Panel B). Of women working as employees, 55.5% were non-regular workers in 2017, compared to only 21.9% among men. The large gender wage gap (Figure 1.16) is largely explained by the fact that women who leave the labour force to care for children tend to be relegated to non-regular status if they return to employment.

Figure 1.29. Non-regular employment is concentrated among women

Percentage employed in 2017 by type of worker



Source: Ministry of Internal Affairs and Communications, *Labour Force Survey, Basic Tabulation, 2017*.

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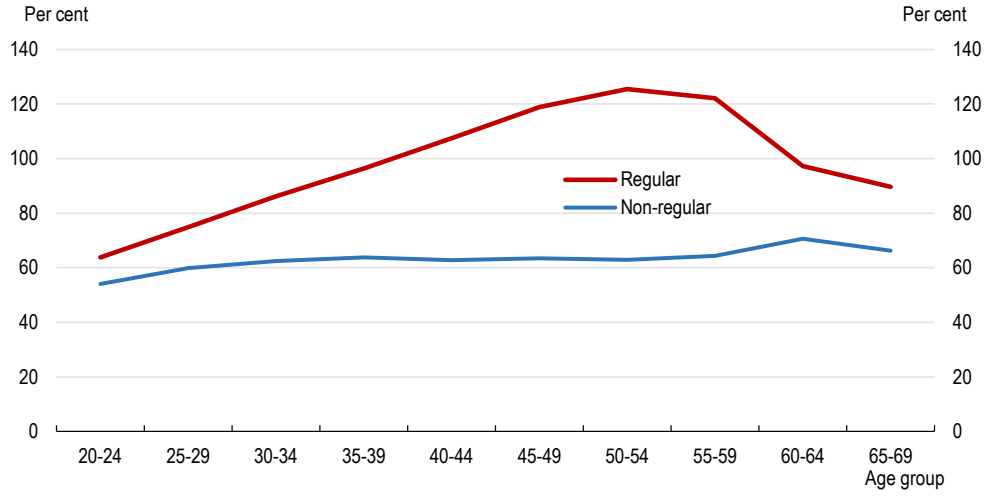
Dualism undermines productivity, as non-regular workers receive less training from firms, which have little incentive to invest in workers who are not permanent. Studies of other countries find that dualism results in less human capital and lowers productivity growth (Aoyagi and Ganelli, 2013). Low-quality jobs are detrimental to well-being. Dualism also worsens inequality and poverty due to wide wage gaps. On an hourly basis, non-regular workers earn around 60% as much as regular workers. The wage gap increases with age; in the 50-54 age group, regular workers earn twice as much as non-regular workers (Figure 1.30). This comparison understates the gap as it excludes bonus payments, which most non-regular workers do not receive. Low pay for non-regular workers results in high relative poverty rates. Among households with one earner, the poverty rate is 5% if the husband is a regular worker and 35% if he is a non-regular worker (OECD, 2017b). The negative consequences of dualism are exacerbated by limited mobility in a segmented labour market, in contrast to many other OECD countries, where temporary work is frequently a stepping stone to permanent employment.

Figure 1.30. The wage gap between regular and non-regular workers is large



Note: Hourly wage in June 2015, excluding overtime payments and bonuses. Only 30% of part-time workers, who account for 70% of non-regular employment, receive bonus payments so the pay gap is even larger.
Source: Ministry of Health, Labour and Welfare, *Basic Survey on Wage Structure 2015*.

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Breaking down labour market dualism is essential to boost productivity and achieve inclusive growth. Prime Minister Abe said that his goal is "to eliminate the expression 'non-regular workers' " (Prime Minister's Office, 2016). The "equal pay for equal work" principle introduced in 2018 intends to resolve irrational gaps in the working conditions between regular and most types of non-regular workers in the same firm. The fundamental objective is that everyone be treated fairly whatever their employment status. A guideline to accomplish equal pay for equal work was announced in December 2018. In practice, the decision on whether a practice is irrational will be determined by judicial decisions. The new law will take effect in 2020 (2021 for fixed-term and part-time workers in SMEs).

Introducing the principle of equal pay for equal work is challenging, as it requires employers to evaluate workers objectively and fairly. Changing the way that employers assess workers creates costs for both employers and employees. In 2018, the Ministry of

Health, Labour and Welfare introduced a subsidy of JPY 0.5 million (USD 4 433) to SMEs that set up a wage system that is based on workers' vocational ability rather than regular and automatic pay raises. Firms can receive a second subsidy of JPY 0.8 million if their staff turnover rate declines by 1 percentage point, total wage costs increase by 2% after one year and labour productivity rises by 6% three years after their initial application. Although there are no data available on the take-up of this subsidy, the current design may discourage firms' participation, as they have to wait three years for a small payment that does little to offset a 2% rise in wage costs. Moreover, the preparation of the application for the subsidy is burdensome and complicated (OECD, 2018f).

Moreover, it is difficult in practice for workers, given their limited information, the ambiguity of job assignments and the lack of transparency about pay, to take complaints of unfair treatment to the judicial system. Moreover, few OECD countries have laws that explicitly require that temporary workers be paid the same wages as equivalent permanent workers, given the difficulty of proving that their treatment is discriminatory (OECD, 2016c). To enable workers to make complaints of unfair treatment, Japan needs more transparency about pay. In many OECD countries, companies are increasingly required to carry out analyses of gender wage gaps, and are requested or required to share this information with employees, government auditors, or the public (OECD, 2018e). In Japan, the revised laws for equal pay for equal work oblige employers to explain, upon request from non–regular workers, how and on what grounds the treatment of non-regular workers is different from that of regular workers and expand administrative measures for enforcement and Alternative Dispute Resolution by the government. These measures can contribute to strengthening firms' accountability for discriminatory treatment of their employees. In addition, reducing the weight given to seniority in setting wages would support the principle of equal pay for equal work, as noted above. Nevertheless, enforcement of the equal pay for equal work is still challenging.

While laws to end discrimination are always welcome, breaking down dualism requires addressing the factors that encourage firms to hire non-regular workers, notably lower labour costs and greater employment flexibility. In addition to lower pay, non-regular workers receive less coverage by social security, which reduces employer social insurance contributions. Around a third of non-regular workers are not covered by employment insurance and about half are excluded from the EPI and firm-based health insurance. In addition, 70% of part-timers do not receive bonus payments and 90% do not receive the lump-sum retirement benefit paid by firms.

Firms also hire non-regular workers to increase employment flexibility due to the employment protection accorded to regular workers. The index of protection of permanent workers against individual dismissals in Japan is above the OECD average, mainly due to the requirements for maximum time for claim, length of trial and protection against unjustified and unfair dismissals (difficulty of dismissal) (Figure 1.31). According to the Global Competitiveness Index, restrictions on hiring and firing of workers in Japan is ranked as the tenth most severe among OECD countries (World Economic Forum, 2017). Japan's Labour Contract Act states that any dismissal of workers that "lacks objective, reasonable grounds and is not considered to be appropriate in general societal terms, [shall] be treated as an abuse of power and be invalid". This very general formulation allows the legal system considerable discretion in applying the law. Judicial precedents have established four criteria to determine whether employment adjustment as a result of corporate downsizing can be deemed an abuse of power by the employer:

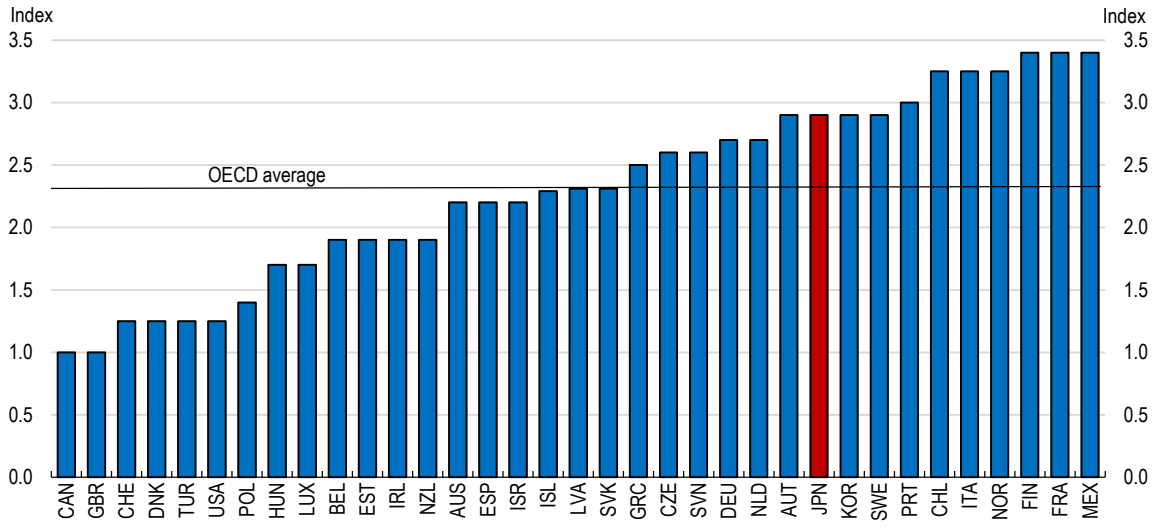
- The employer must establish the economic necessity for reducing its workforce.

- The firm must demonstrate that it made all reasonable efforts to avoid dismissals (i.e. reducing overtime hours, re-assigning or seconding staff, offering voluntary retirement packages).
- The employer must establish reasonable and objective criteria for selecting which workers will be dismissed.
- The employer must show that the overall dismissal procedure is acceptable, for example by showing that unions or worker representatives were consulted.

It is "exceedingly difficult to judge the validity of dismissal" (JETRO, 2016), as these criteria leave considerable room for interpretation (OECD, 2015a). If an employer is judged to fall short of any of the four criteria, the dismissal may be rendered invalid. The court usually orders reinstatement of dismissed workers with back pay. There is no time limit on when former workers may claim unfair dismissal. In sum, employers face great uncertainty in trying to dismiss regular workers, thus prompting them to turn to non-regular workers.

Against this backdrop, a comprehensive strategy is needed to break down labour market dualism by increasing the coverage of social insurance and upgrading training programmes for non-regular workers, raising the minimum wage and reducing employment protection for regular workers, in part by increasing transparency (2017 *OECD Economic Survey of Japan*). Reducing employment protection would also promote growth-enhancing labour mobility and economic dynamism more generally (OECD, 2015b). Another OECD study shows that relaxing employment protection results in greater job reallocation across sectors, which leads to higher productivity (Cournède et al., 2016). In addition, employment flexibility has been found to encourage firms to introduce digitalisation and other key technology (Andrews et al., 2018). The 2018 OECD Job Strategy states that, "Flexibility in product and labour markets is essential to create high-quality jobs in an ever more dynamic environment" (OECD, 2018b).

Figure 1.31. Japan has relatively strong employment protection for regular workers



Note: The employment protection index ranges from 0 to 6, with six being the most restrictive.
Source: OECD Employment Protection database.

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As a first step to reducing uncertainty, the government should set specific monetary compensation for dismissed workers in order to achieve its goal of a "highly foreseeable dispute settlement system". In addition, employment protection for regular workers should be reduced, although this is difficult to implement in practice. In some European countries, it has been achieved through grandfathering – allowing current workers to keep current levels of employment protection but not newly-hired workers (OECD, 2017a). Another option would be to compensate regular workers for a reduction in employment protection through reforms that also accomplish the goal of improving work-life balance. For example, regular workers could be given additional leave, the right to refuse involuntary relocations and a reduction in overtime work. Finally, as part of a strategy of protecting workers rather than jobs, the government must ensure adequate income and re-employment support to displaced workers.

Main policy recommendations to meet labour market challenges in a rapidly ageing society

Key recommendations

- Abolish the right of firms to set a mandatory retirement age and reinforce legislation against age discrimination.
- Strictly enforce the 360-hour annual limit on overtime hours that is being introduced in 2019-20 and ensure adequate penalties on firms that exceed it.
- Introduce a mandatory minimum period of rest between periods of work.
- Focus on reducing the waiting list for childcare by expanding capacity so that mothers are not forced to leave the work force.
- Strengthen measures to prevent discrimination against women in education and employment, including policies to stop indirect discrimination.
- Provide programmes to help foreign nationals adjust to Japan, including through education and language training, and ensure fair treatment in wages and conditions to attract foreign workers.

Other recommendations

- Raise the pension eligibility age above 65 to strengthen work incentives and reduce elderly poverty.
- Phase out the earnings test to encourage employment by older persons eligible for a pension.
- Break down dualism through a comprehensive strategy to reduce employment protection for regular workers, in part by setting clear rules on dismissal of workers, and expanding social insurance coverage and training for non-regular workers.
- Flatten the seniority wage curve by enforcing the equal pay for equal work provision in the work style reform.
- Improve lifelong learning by making it more relevant, including for older workers, and addressing the time and financial constraints that limit participation.
- Closely monitor the scheme that exempts skilled professional workers from

overtime regulation to avoid excessive working hours.

- Reform tax-benefit systems so that both parents have broadly similar financial incentives to work.
- Increase awareness of long-term care leave entitlements among companies and workers and to provide incentives to promote its use so fewer workers leave their jobs to care for elderly relatives.
- Amend the 2015 law that requires large companies to set targets for hiring and promoting women and to report on the results to include smaller companies.

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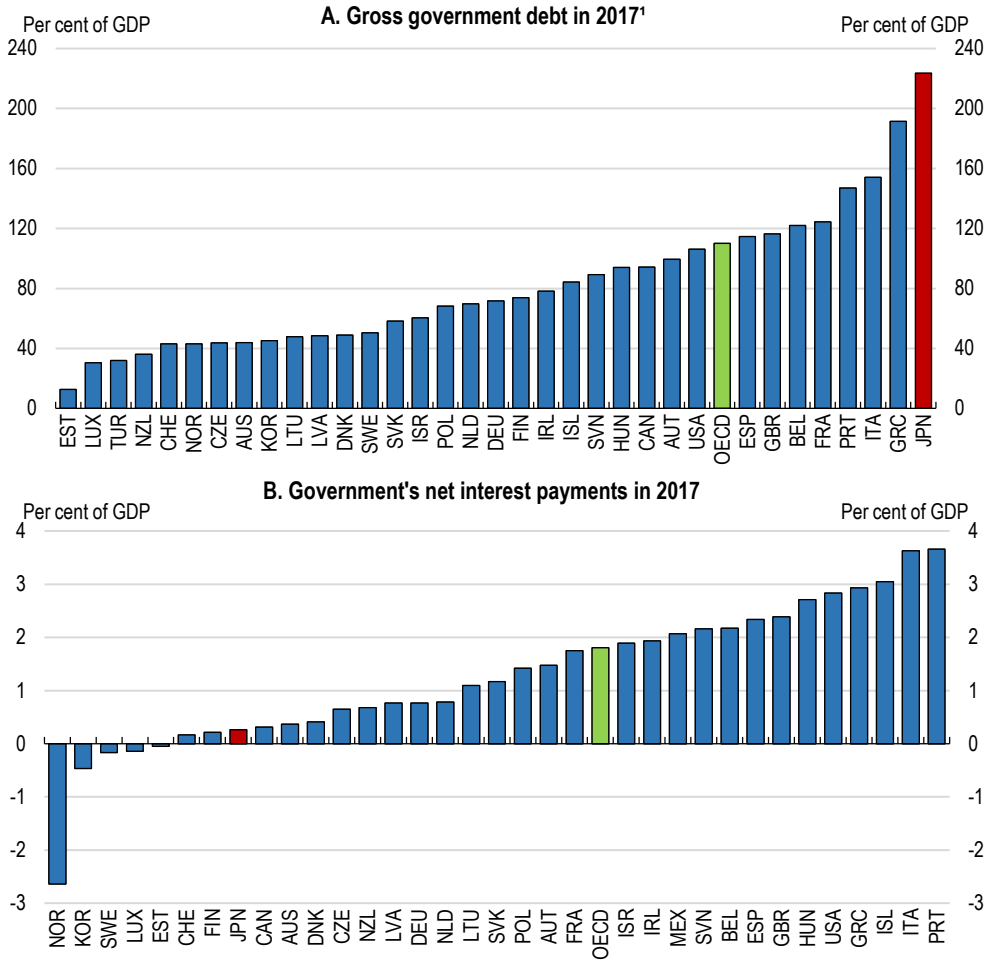
Chapter 2. Meeting fiscal challenges in a rapidly ageing society

Japan's fiscal situation, with gross government debt of 226% of GDP in 2018, is the highest ever recorded in the OECD area, and places the economy at risk. The government now aims to achieve a primary surplus by FY 2025. Additional fiscal consolidation, based on a detailed plan covering specific spending cuts and tax increases, is necessary to put the government debt ratio on a downward trend in the face of rapid population ageing. This is a very difficult task and a stronger fiscal framework would help keep policy on track to achieve fiscal targets. Controlling social spending requires making better use of healthcare resources, in part by reducing overinvestment in hospitals and increasing the use of generic drugs. Another priority is ensuring the sustainability of local government spending, in part by reducing costs through the joint provision of local public services and infrastructure across jurisdictions and the development of compact cities in the context of depopulation in many parts of Japan. Increased revenue should come primarily from hikes in the consumption tax rate, which is among the lowest in the OECD. In addition, disincentives to employment in the tax and benefit system should be removed, as sustained economic growth is crucial to ensure fiscal sustainability.

Japan's fiscal situation is in uncharted territory. Twenty-seven consecutive years of budget deficits have driven up gross government debt from 70% of GDP in 1992 to an estimated 226% in 2018, the highest ever recorded in the OECD (Figure 2.1, Panel A). Although the government has a large stock of assets, net debt, at 129% of GDP, is the second highest in the OECD and has also increased rapidly in recent years. Japan reduced its overall budget deficit from nearly 10% of GDP in 2009 to 3.6% in 2015, but progress has stalled since then. Even with the planned hike in the consumption tax rate in 2019, the primary deficit is projected to be around 2% of GDP in 2020.

Figure 2.1. Japan's government debt ratio is high, but interest payments are low



1. OECD estimate for some countries, including Japan.
Source: OECD Economic Outlook database.

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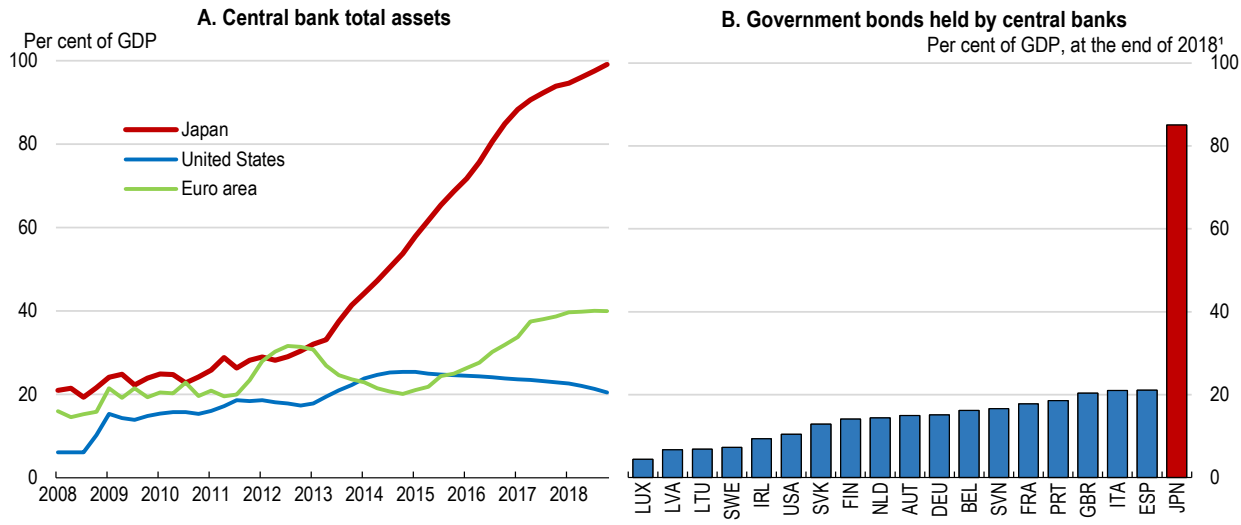
The burden of high debt is limited by the extremely low interest rate environment created by large-scale government bond purchases by the Bank of Japan (BoJ) under its Quantitative and Qualitative Monetary Easing (QQE) policy launched in 2013 to achieve its 2% inflation target (Figure 2.2). This was complemented by the 2016 Yield Curve Control policy, which has pushed government bond yields below zero for up to 10 years of maturity. As a result of these policies, the BoJ's holdings of government bonds reached 85% of GDP in March 2019 (Panel B). Monetary easing has also helped reduce the net

interest payments on government debt from around 2% of GDP in 2010 to only 0.3% in 2017 (Figure 2.1, Panel B). The central bank's share of outstanding government debt is likely to continue rising, as inflation remains well below the 2% target. However, the outlook for financing government deficits once the BoJ achieves its inflation target and phases out QQE is uncertain.

Figure 2.2. The run-up in central bank assets has been the largest in Japan



1. March 2019 for Japan, January for the United States and November 2018 for Sweden.
Source: OECD Economic Outlook database.

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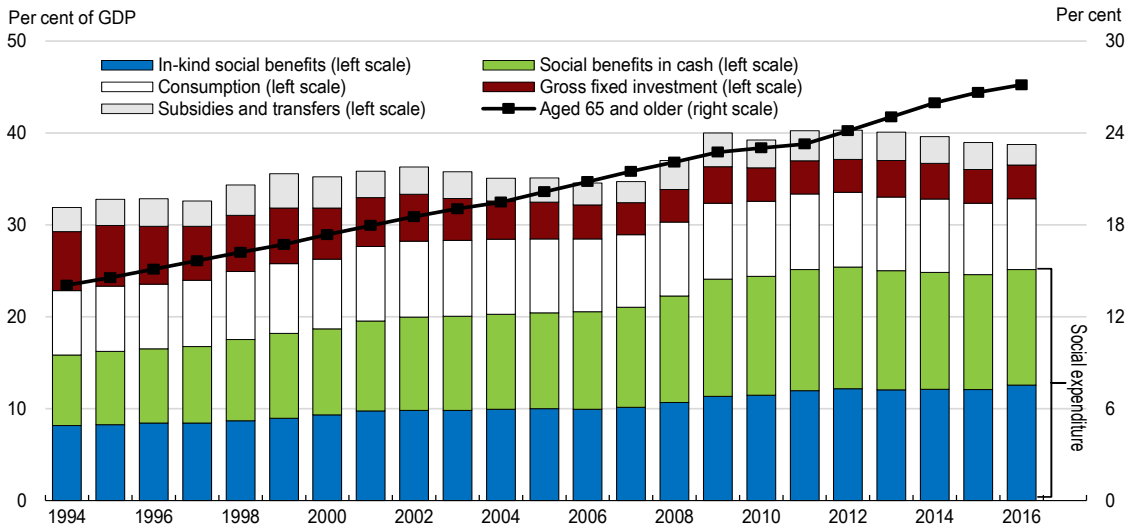
Population ageing creates strong pressure on fiscal sustainability. On the one hand, it tends to slow economic growth by reducing the working-age population, although the evolution of potential growth also depends on capital per worker and innovation (2017 *OECD Economic Survey of Japan*). Thus far, Japan has mitigated the impact of the fall in its working-age population since 1995 by an increase in employment rates, particularly for women. Consequently, the employment to population ratio of 51.5% in 2017 matches that of 1995, helping to support tax revenue. However, the elderly population (age 65 and over) is projected to rise from 50% of the working-age population (aged 20-64) in 2015 to 79% in 2050, remaining the highest in the OECD. Population ageing is expected to substantially shrink the labour force relative to the total population (see Chapter 1). The tax and benefit system should be redesigned to reduce its negative labour supply effects, particularly on women and the elderly. Health and long-term care resources should shift toward services that effectively increase the population's healthy life span.

Population ageing has had a strong impact on social spending, which has increased from 16% of GDP to 25% since 1994 (Figure 2.3). Japan's population is projected to fall by a fifth from 126 million in 2018 to 102 million in 2050, while the share above age 65 increases from 27.8% to 38.1% over that period. Meanwhile, the share above 75, the age when spending on health and long-term care increases sharply in Japan, will nearly double from 13.8% to 25.7%. In addition to increased spending on pensions and health and long-term care, higher income inequality and relative poverty rates among the elderly will necessitate further increases in social spending.

Figure 2.3. Population ageing has driven the rise in government spending



Source: Cabinet Office, *Annual Report on National Accounts*; and OECD calculations.

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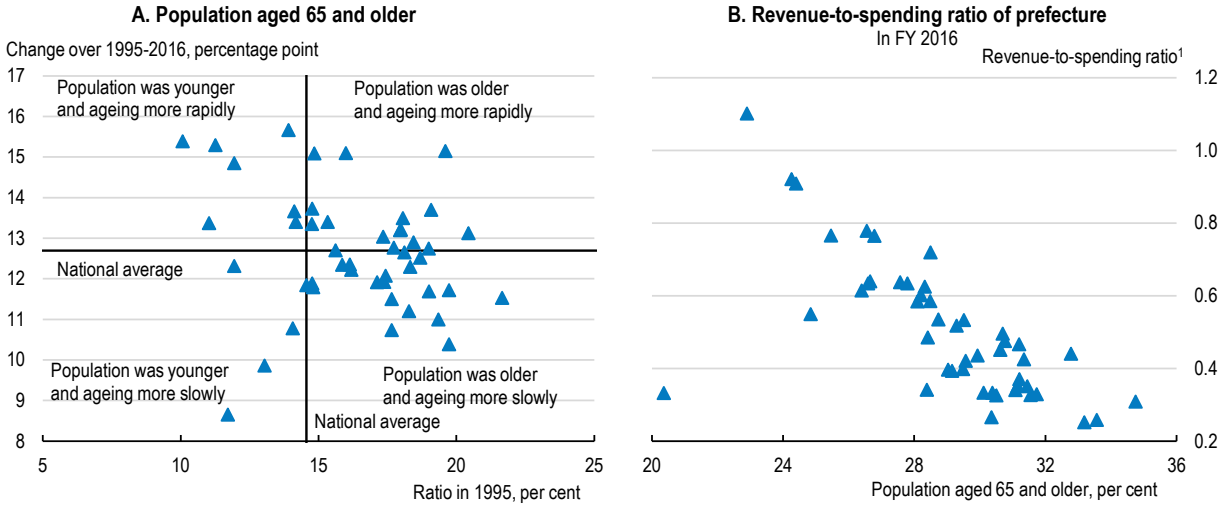
The impact of ageing will vary across regions. Many prefectures with a high share of elderly in 1995 have experienced more rapid ageing than those with a younger population (Figure 2.4, Panel A). In addition, prefectures with a high share of elderly tend to have weak revenue capacity compared to their spending needs (Panel B). A strategy for fiscal consolidation must explicitly take into account these regional gaps. In particular, the efficiency of social infrastructure and local public services should be enhanced to ensure their sustainability in the face of a falling population.

Figure 2.4. Variations across prefectures in the pace of ageing and fiscal capacity are large

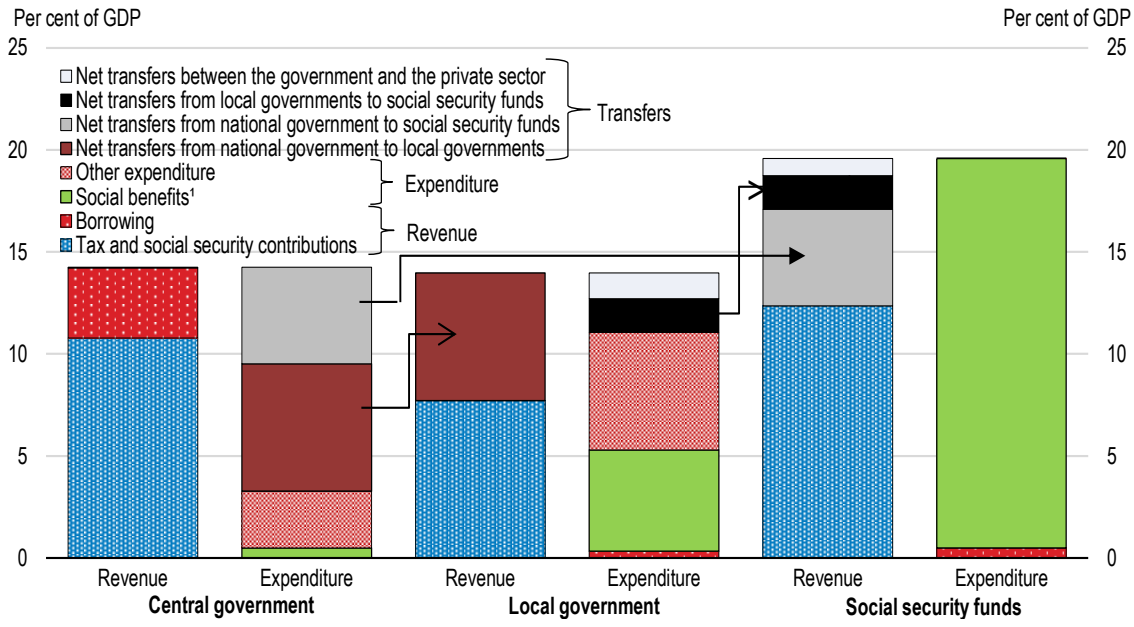


1. Measured by the standard local tax revenue and fiscal needs, which are used to calculate local allocation tax grants. Fiscal needs are based on population and adjusted for other factors.
Source: Ministry of Internal Affairs and Communications.

StatLink http://dx.doi.org/10.1787/888933954513

A distinctive feature of Japanese public finance is the low share of central government spending, at only 3.3% of GDP, even as the central government runs deficits to make transfers to local governments and social security (Figure 2.5). Social security outlays amount to 19.1% of GDP, while local governments account for another 10.7%, reflecting their primary role in providing health and long-term care, as well as other local services. Consequently, fiscal consolidation needs to focus more on limiting spending by local governments and social security. Indeed, each "Basic Policies for Economic and Fiscal Management and Reform" since 2015 has stated that local governments need to pursue fiscal consolidation in tandem with the central government.

Figure 2.5. Local governments and social security account for most of government spending



1. In-kind and cash social spending.
Source: Cabinet Office, *Annual Report on National Accounts*; Ministry of Internal Affairs and Communications; and OECD calculations.

StatLink http://dx.doi.org/10.1787/888933954532

Faced with a rapid demographic transition, Japan needs to transform its fiscal system to ensure sustainability of public services, while removing disincentives to employment. After an overview of the fiscal situation, this chapter reviews options to reform health and long-term care and ensure income security for the elderly. The fourth section focuses on policies to promote greater efficiency at the local government level, including through compact cities and addressing the unidentified landowner problem. Ensuring fiscal sustainability also requires measures to increase revenue while removing obstacles to employment, which is addressed in the final section. Policy recommendations are summarised at the end of the chapter.

Ensuring fiscal sustainability in Japan requires significant fiscal consolidation

In 2010, Japan set a target of a primary surplus (for central and local governments) by FY 2020. The hike in the consumption tax rate from 8% to 10% that was planned for 2015 was postponed to 2017 and the government adopted the Plan to Advance Economic

and Fiscal Revitalisation. It maintained the target of a primary surplus by FY 2020 and a steady reduction in the government debt to GDP ratio thereafter. The Plan designated the period FY 2016-18 as an "intensive reform period" and introduced budget guidelines for those years. In addition, it set an interim benchmark of reducing the primary deficit in FY 2018 from the 1.7% of GDP projected by the government in 2015 to around 1%.

Although the initial budgets between FY 2016 and FY 2018 strictly followed the spending guidelines aimed at the benchmark of a deficit of around 1% of GDP, the deficit increased to 2.9%. This reflected three factors, according to the interim evaluation by the Committee for Promoting Integrated Economic and Fiscal Reform (2018). *First*, increased spending in a series of supplementary budgets boosted the primary deficit by 0.4 percentage points of GDP, eroding the consolidation efforts in the initial budgets. *Second*, the government postponed the consumption tax hike, which would have improved the primary balance by 0.7 percentage points, a second time to October 2019. *Third*, lower-than-projected economic growth increased the deficit by 0.8 percentage points. The repeated supplementary budgets and the failure to implement the tax hike reflect the weakness of Japan's fiscal framework.

Japan's new fiscal consolidation plan

Given the increase in the primary deficit, the government pushed back the target date for a primary surplus from FY 2020 to FY 2025. The Council on Economic and Fiscal Policy, which is chaired by the Prime Minister and includes five ministers, the central bank governor and four private-sector experts, also proposed three benchmarks for FY 2021 to monitor progress: *i)* halving the primary deficit from its FY 2017 level to around 1.5% of GDP; *ii)* reducing government debt to 180-185% of GDP (by the government's measure, it was 189% in FY 2017); and *iii)* cutting the fiscal deficit of central and local governments to below 3% of GDP.

The authorities estimate that the burden of the consumption tax hike from 8% to 10% in October 2019 on households will amount to around JPY 5.7 trillion (1.0% of GDP). The introduction of multiple consumption tax rates will reduce the burden by 0.2% of GDP. The permanent introduction of free early childhood education and measures to enhance the social security system will reduce the burden to 0.4% of GDP. To mitigate the remaining impact of the tax hike, the Basic Policy on Economic and Fiscal Management and Reform 2018 decided that tax and budget measures, including a tax cut for purchases of durables and additional temporary spending, will be introduced (Table 2.1). The impact of the tax hike on households will thus be completely offset in the short run. Meeting the FY 2021 benchmark of a primary deficit of 1.5% of GDP will require rolling back the temporary spending measures or raising additional revenue.

Government projections indicate that, under current policies, a primary surplus for central and local governments will not be achieved by FY 2025 (Figure 2.6). Depending on the assumptions about economic growth, the deficit is projected to be between 0.2% and 1.1% of GDP in FY 2025. A primary surplus will only be achieved in FY 2026, assuming the high growth scenario (more than 3% nominal growth per year). In the baseline scenario (nominal growth of 1½ per cent per year), the primary deficit would be 1% of GDP in FY 2027. Limiting the size of the special measures planned in the FY 2019-20 budgets so that spending can be normalised in FY 2021 would help Japan meet the FY 2025 target.

Table 2.1. Expenditure and revenue measures proposed by government to mitigate the impact of the 2019 consumption tax hike

Per cent of GDP on an annual basis

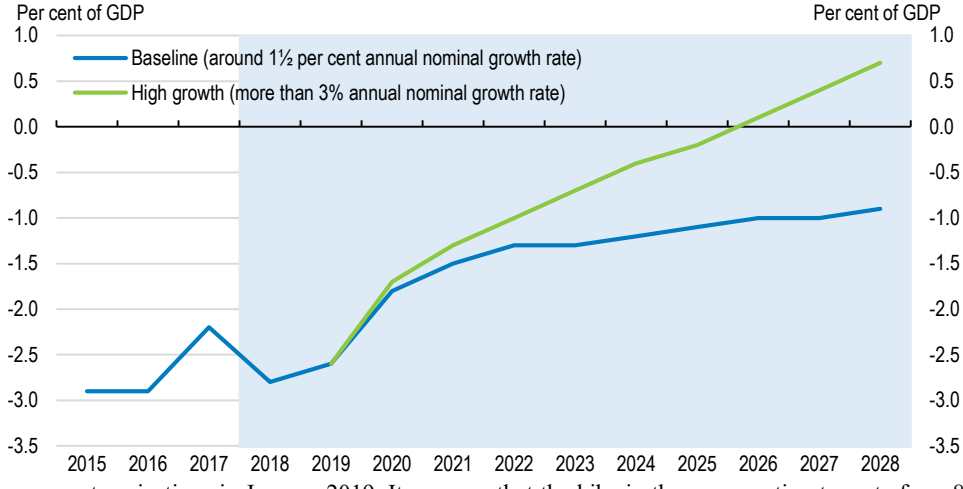
	Short-term	Around 2035
Impact of the 2019 consumption tax hike	1.0	1.0
Increasing the consumption tax rate from 8% to 10%	1.0	1.0
Maintaining the rate at 8% for food and non-alcoholic beverages	-0.2	-0.2
Increasing the cigarette and other taxes to finance the reduced 8% rate	0.1	0.1
Spending for free early childhood education and care and enhancing social security	0.6	0.6
Free early childhood education and care for children aged 3 to 5	0.2	0.2
Benefits for supporting low-income pensioners, etc.	0.4	0.4
Other measures to mitigate the impact of the consumption tax	0.4	
Temporary budget measures, including public investment	0.4	
Tax breaks for purchases of cars and homes (temporary and permanent)	0.1	
Net revenue impact of the 2019 consumption tax hike	0.0	0.4

Source: OECD calculations based on Council on Economic and Fiscal Policy (2018).

A path to fiscal sustainability

The first priority is to achieve the FY 2025 target for a primary surplus, but more is needed. Without further consolidation, government debt would rise to around 560% GDP by 2060, according to OECD simulations (Figure 2.7, Panel A), which incorporate the government's projection that health and long-term care spending will rise by 4.7% of GDP over 2020-60. The results are similar to those by the Fiscal System Council, which shows the debt ratio rising to 600% of GDP by 2060 if no further fiscal consolidation were undertaken after achieving a primary surplus in FY 2020 (Fiscal System Council, 2015).

Figure 2.6. A primary deficit is projected to continue through FY 2025 under current polices



1. Government projections in January 2019. It assumes that the hike in the consumption tax rate from 8% to 10% is implemented as planned in October 2019. The primary balance is central and local governments on a fiscal year basis.
Source: Cabinet Office (2019).

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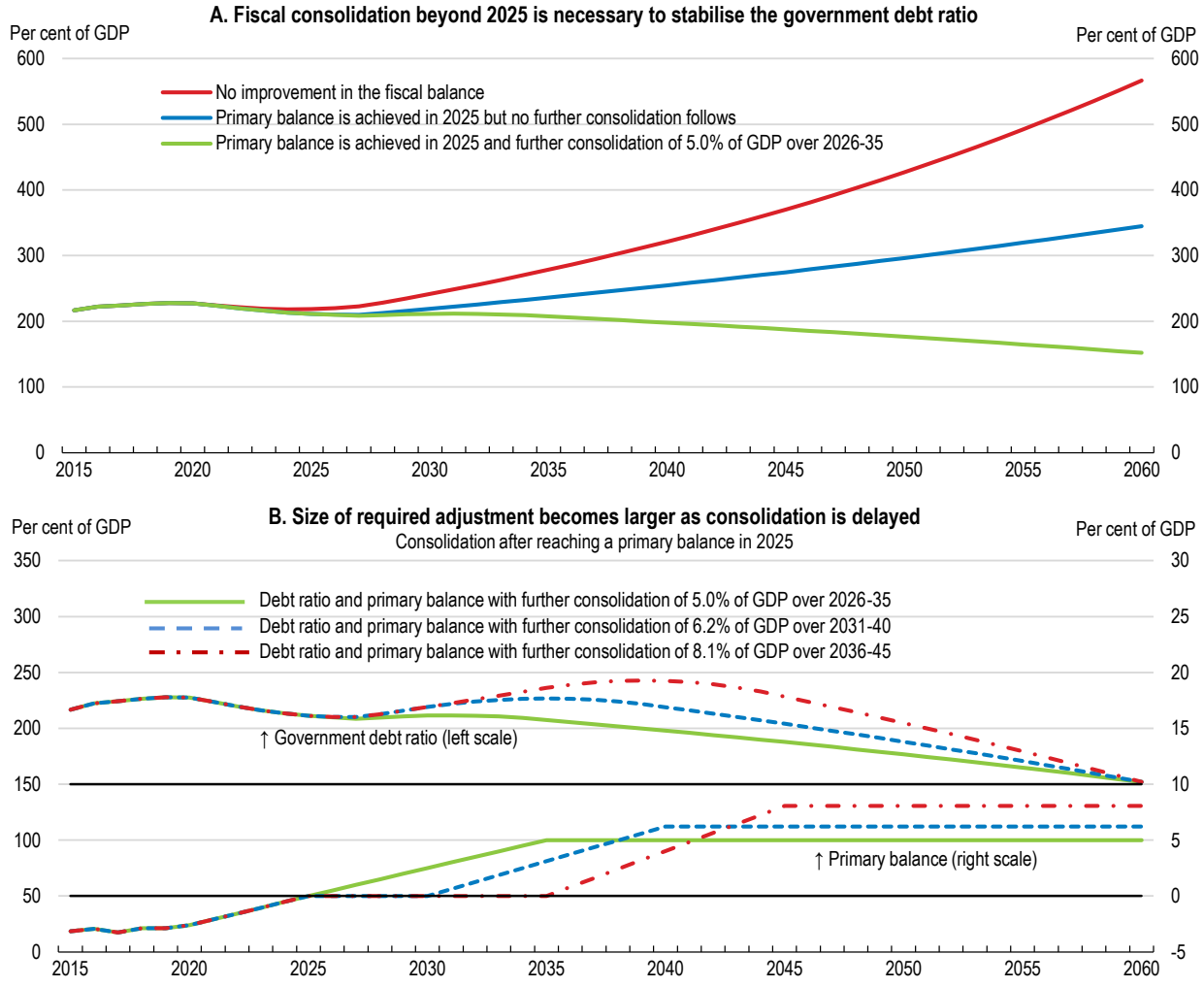
Policies over 2026-35 to raise the primary surplus to 5% of GDP would reduce the debt ratio to 150% of GDP by 2060, moving it closer to the 111% ratio for the OECD area in 2018 (Figure 2.7). To illustrate the scale of such a fiscal consolidation, it would be equivalent to a 10 percentage-point hike in the consumption tax rate. This implies raising the rate gradually to 20%, still below the average EU standard rate of 23%. Such an increase would boost the tax and social security burden from 30.7% of GDP in 2015 to slightly above the 34% OECD average. The simulation also shows that delaying fiscal tightening raises the amount of consolidation necessary to reduce the debt ratio to 150%. If further tightening were delayed to 2036-45, an 8.1% of GDP rise in the primary balance would be necessary (Panel B), implying a hike in the consumption tax rate to 26%.

Figure 2.7. Long-run simulation of Japan's fiscal balance and government debt



Source: OECD calculations based on *OECD Economic Outlook* No. 104 through 2020, Cabinet Office projections through 2027, "Economic Growth Achieved Case", which implies real growth of more than 2% and nominal growth of more than 3% a year in the first half of the 2020s and government assumptions for growth, spending and interest rates through 2060. Tax and social security contributions remain constant at 34.3% of GDP (see Annex 2.1).

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Even though government financial assets amount to nearly 100% of GDP, Japan's net public debt is among the highest in the OECD and its rapid increase is a cause of concern. Moreover, only about a third of government assets are in the form of liquid instruments and a large share, such as pension reserves, are linked to corresponding liabilities. Some observers have interpreted fiscal sustainability as achieving a positive net worth by including tangible fixed assets, such as roads and public buildings. However, such assets are difficult to value and in any case cannot be easily turned into cash. In sum, gross government debt is a better summary measure of the public sector's financial position in Japan (2015 *OECD Economic Survey of Japan*).

These simulations illustrate that stabilising government debt at a level close to the current OECD average requires as many as 15 years of consolidation to achieve a large primary surplus. The amount of the required fiscal consolidation depends on the economic assumptions. The OECD simulation is based on government assumptions of real output growth averaging 1.4% per year and inflation of 2.0%. Less optimistic assumptions imply that even greater consolidation is needed. In sum, fiscal sustainability becomes more difficult, perhaps even impossible, without economic revitalisation and positive inflation.

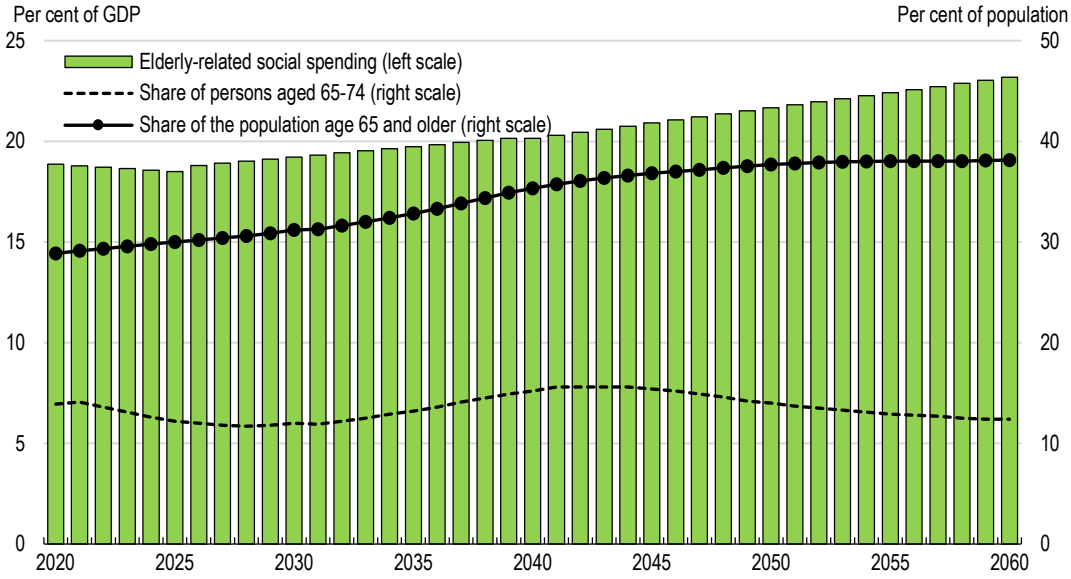
A key to sustaining 15 years of fiscal consolidation is maintaining confidence in the government bond market (Hoshi and Ito, 2014). Confidence would be supported by a comprehensive and detailed consolidation strategy based on well-articulated fiscal rules and a stronger institutional framework. One major shortfall of Japan's economic and fiscal revitalisation plan is the absence of a clearly defined debt target that can serve as a reference point to set fiscal rules. The current plan aims to reduce the debt to GDP ratio in a stable manner but does not identify a specific target level nor a timeline for reducing debt, apart from the benchmark year of FY 2021. To ensure that fiscal rules are sufficiently flexible to cope with economic uncertainty (Eyraud et al., 2018), they should be consistent with a prudent level of debt (Fall et al., 2015). Following rules consistent with a prudent debt target anchors fiscal policy expectations and allows counter-cyclical policies in the case of negative economic shocks.

An increasing number of OECD countries are using independent fiscal institutions (IFIs) to achieve fiscal consolidation. The OECD Council (OECD, 2014) stated that IFIs should operate under the core values of independence, non-partisanship, transparency and accountability. Assigning an institution that is outside normative policy-making responsibility to assess macroeconomic and fiscal forecasts and monitor fiscal plans helps counter biases in fiscal policy management towards higher spending and deficits (von Trapp et al., 2016). The failure to achieve the original economic and fiscal revitalisation plan makes a strong case for strengthening Japan's fiscal management framework, including the establishment of an IFI. Some countries, including Australia, Austria, Canada, Greece, Ireland, Italy, Korea, Mexico, and the United States, have established IFIs in their legislative branches. For example, Korea's National Assembly Budget Office (NABO) was established by the legislature in 2003 to provide projections of economic growth and tax revenue and to analyse national fiscal management, including the annual budget proposed by the president. It also evaluates government spending programmes and estimates the cost of legislation proposed in the National Assembly. Another important task is to estimate the medium and long-term fiscal requirements for government programmes. Thanks to its analytical capabilities, NABO has become a respected and influential institution.

Policies to control social spending while providing quality health and long-term care

Life expectancy at birth in Japan was 84.1 years in 2016, compared to the OECD average of 80.6 years. Universal access to high quality healthcare has contributed to favourable health outcomes (OECD, 2017b). Long life expectancy is also a result of relatively healthy lifestyles: the obesity rate of adults in Japan is 3.7%, the lowest in the OECD area, and alcohol consumption is below the OECD average. The priority is to control social spending related to the elderly, which the government projects will increase from 19.0% of GDP in FY 2018 to 23.2% in FY 2060 under current policies (Figure 2.8).

Figure 2.8. Elderly-related social spending is projected to rise further



Source: Cabinet Secretariat et al. (2018); Fiscal System Council (2018); Ministry of Internal Affairs and Communications; and OECD calculations.

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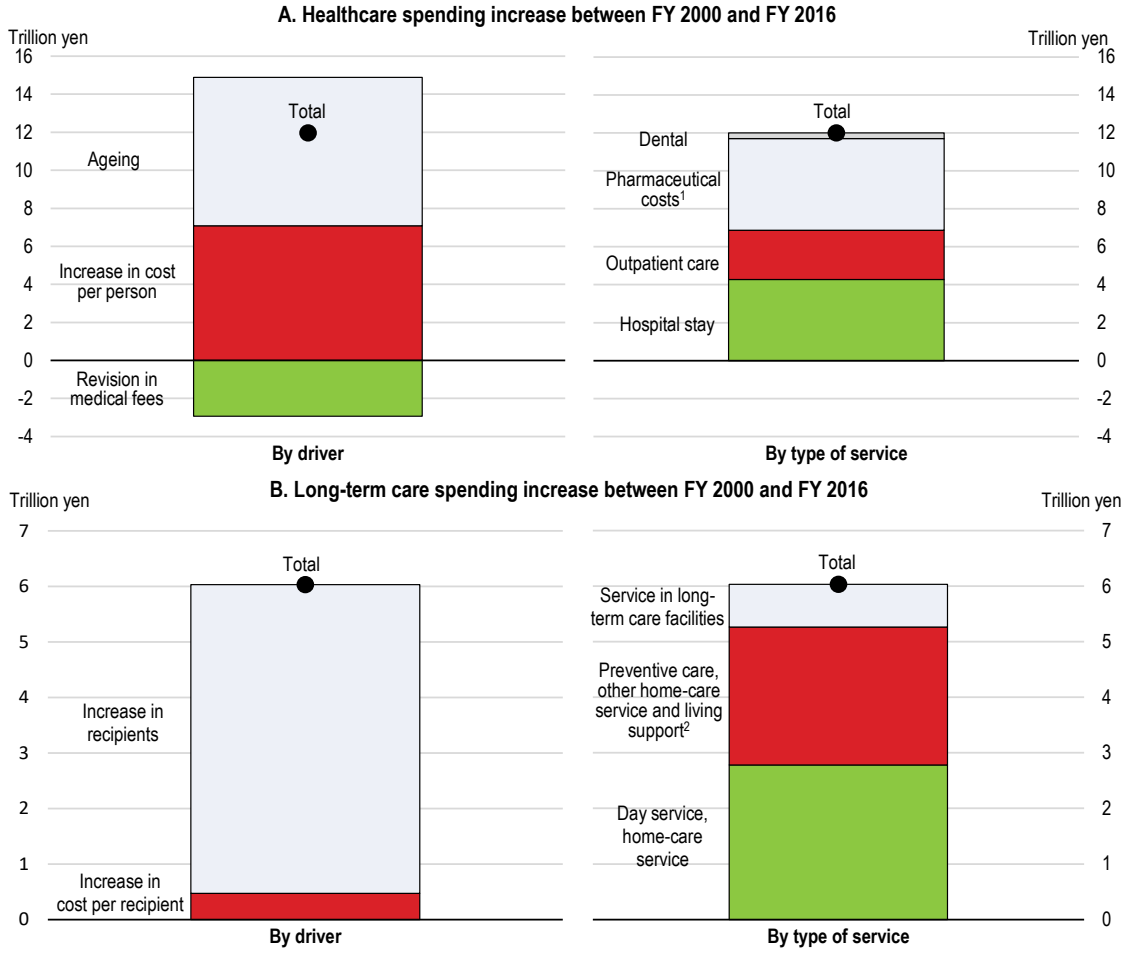
Factors driving health and long-term care spending

The share of the elderly in the population in Japan is the highest in the OECD and is expected to remain so in 2050, putting strong pressure on the healthcare system. Health and long-term care spending (public and private) rose from 7.2% of GDP in 2000, close to the OECD average, to 10.8% in 2016, the sixth highest. Nevertheless, Japan's healthcare spending is relatively low, given its large elderly population. Population ageing is a major factor driving healthcare spending, accounting for nearly 60% of the JPY 12 trillion (USD 107 billion) increase in healthcare spending over 2000-16 (Figure 2.9, Panel A). Rising cost per person boosted spending by another JPY 7 trillion, though these factors were partially offset by cuts in medical fees. In contrast, long-term care spending, which increased by 2.7 times over the same period, has been driven primarily by an increasing number of care recipients (Panel B). With further population ageing, the government projects that public health and long-term care spending will rise from 8.9% of GDP in FY 2018 to 11.7-12.0% in FY 2040, assuming the implementation of reforms envisaged in the regional health and long-term care plans (Cabinet Secretariat et al., 2018).

Figure 2.9. Health spending has increased due to ageing and more intensive care



1. Includes only pharmaceuticals sold at pharmacies. Those sold elsewhere are included in the other categories.
2. Preventive care and other home care include short-stay service, rental of welfare equipment and fees for home repair, etc. Preventive care services started in 2006.
Source: Ministry of Health, Labour and Welfare, *National Health Expenditure and Survey of Actual Condition of Long-term Care Benefits in FY 2000 and FY 2016*; Ministry of Internal Affairs and Communications; and OECD calculations.

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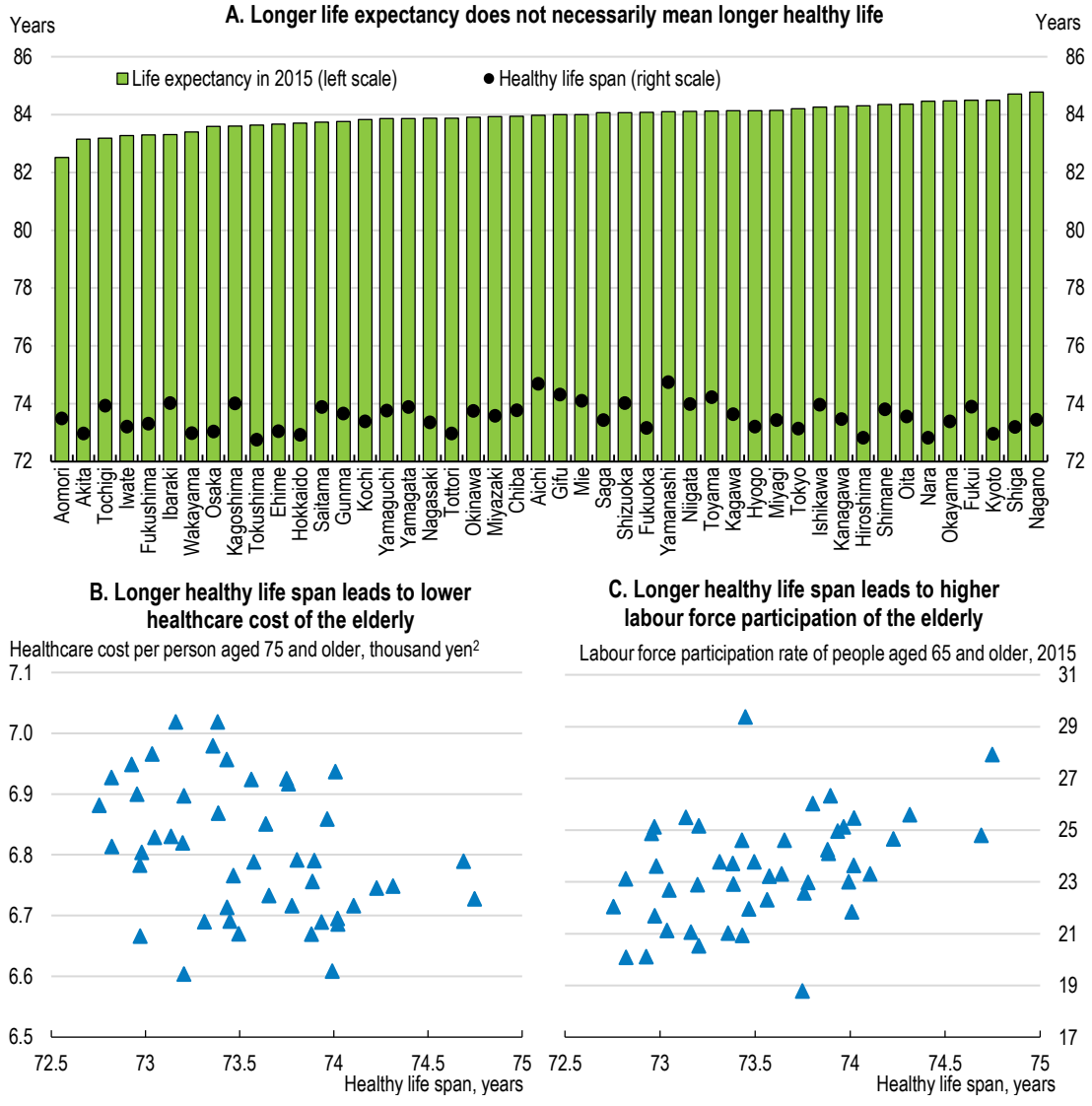
Longer life expectancy does not necessarily imply a longer healthy life span, defined as the number of years that a person can enjoy daily life without constraints due to health problems. The correlation between life expectancy and the healthy life span is low across Japan's 47 prefectures (Figure 2.10, Panel A). According to government estimates, the healthy life span was 72.1 years for men and 74.8 years for women in 2016, well below their respective life expectancies of 81.0 and 87.1 years. In other words, elderly men and women experience an average of nine and 12 years, respectively, of unhealthy life. A longer healthy life span is correlated with lower per capita healthcare costs for those aged 75 and older (Panel B). It is also correlated with higher labour force participation rates for those aged 65 and older (Panel C), which may partly reflect a positive effect from employment on the mental health and functional capacity of Japanese elderly (Minami et al., 2015). Lengthening the healthy life span thus has important implications for both

controlling health spending and increasing the productive population to finance the social security system.

In Japan, the leading causes of death are non-communicable diseases (NCDs), such as cancer, cardiac disorder and vascular disease, which are closely related to lifestyle habits. Indeed, the healthy life span has been shown to be closely linked with habits of daily exercise, a healthy diet, and lower consumption of alcohol and tobacco (Murray et al., 2015). Improving lifestyle habits is thus essential to extend healthy life spans.

Figure 2.10. Longer healthy life spans curb health costs and increase elderly employment

In 2016[1]



1. Data for the healthy life span in Kumamoto prefecture is not available due to the 2016 Kumamoto earthquake.
2. The vertical axis shows the natural log of a thousand yen. After adjustment for differences between prefectures in age distribution.
Source: Ministry of Health, Labour, and Welfare; Ministry of Internal Affairs and Communications; and OECD calculations.

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To tackle the rise in NCDs, the government launched a nation-wide programme in 2008 that requires all public healthcare insurers to conduct "specific health check-ups" and provide "specific health guidance" (SHCSHG) for persons aged 40-74 years. The objective is early detection of risks, notably of diabetes, and promoting changes in the lifestyle habits of individuals facing high risks. There is no consensus on whether the SHCSHG has indeed helped to improve health. The coverage of check-ups in 2016 was 51.4%, well below the government's target of 70% by 2023. In addition, only 18.8% of those examined received specific health guidance, well below the goal of 45%. The discrepancy in the coverage of SHCSHG across health insurers is large, with the rate of check-ups higher among full-time employees. Increasing the effectiveness of health guidance is a prerequisite for raising the take-up rate of check-ups among the entire population (Sakamoto et al., 2018). In the "Data Health Project" promoted by the government, insurers analyse receipt data for healthcare services, which could potentially help improve the effectiveness of SHCSHG. Ensuring a common architecture of electronic receipt data analysis is critically important to track the health status of individuals even as they change insurers due to job changes. Finally, strengthening linkages between health guidance and primary care is another priority (Matsuda, 2015).

More efficient use of healthcare resources

Reducing the number of hospital beds and improving their allocation

The Japanese health system relies heavily on hospitals. On a per capita basis, the total number of hospital beds and acute-care beds is the highest among OECD countries, while the number of beds in long-term care facilities is much lower (Table 2.2). Given such large investments in hospitals, persons who could be cared for at home or in long-term care facilities tend to stay in hospitals instead. In addition, the average hospital stay in Japan is the longest in the OECD and more than three times the OECD average, increasing costs. The heavy reliance on hospitals is a major source of wasteful spending, as hospital care is much more expensive than home or long-term care. The scope for improving the allocation of healthcare resources is thus large.

Table 2.2. International comparisons show room for healthcare cost savings in Japan

In 2017 or latest year available

	Number of doctor consultations per capita per year	Share of private expenditure on outpatient care (%)	Average total hospital stay[1]	Average hospital stay for acute care[1]	Total number of hospital beds[2]	Number of acute-care beds[2,3]	Number of long-term care beds[2,3]	Number of beds in long-term care facilities[2]
Japan	12.8	16.9	28.5	16.3	13.1	7.8	2.7	6.5
OECD average	7.4	31.7	8.4	6.6	4.9	3.7	0.7	7.6
Highest country	17.0	59.7	28.5	16.3	13.1	7.8	4.8	12.9
Lowest country	2.8	12.4	3.8	4.0	1.5	1.5	0.0	0.7

1. In days.
2. Per 1 000 population.
3. In hospitals.
Source: OECD Health Statistics database.

Long hospital stays are closely linked to the number of hospital beds (OECD, 2017b). The economic and fiscal revitalisation plan requires prefectures to develop Community Healthcare Visions, which project healthcare demand in 2025, and develop strategies to

optimise the regional allocation of medical resources through sharing and co-ordination among healthcare facilities. In the prefectures' visions for 2025, excess hospital beds accounted for 5.7% of the total number of beds in 2016. In addition, there is a significant mismatch in their medical functions, with too many acute and chronic-care beds and a shortage of convalescent-care beds (Table 2.3). Regions with the highest percentage of excess beds tend to have greater mismatches in their medical functions (Figure 2.11) and higher per capita hospitalisation costs (Panel B). Costs in the prefecture with the highest percentage of excess beds are more than twice those in the prefecture with the lowest percentage. The central government and prefectures should take all necessary measures to resolve both quantitative and qualitative mismatches of hospital beds by revising and implementing the community visions to optimise the allocation of medical resources.

Table 2.3. Hospital beds are in excess and there are significant mismatches in their functions

	Highly acute	Acute	Convalescent	Chronic	Total
Benchmark for 2025[1]	130 450	400 628	375 172	284 246	1 190 495
Actual numbers in 2016[2]	169 995	588 712	141 677	358 129	1 258 513
Excess or shortage (%)	30.3	46.9	-62.2	26.0	5.7

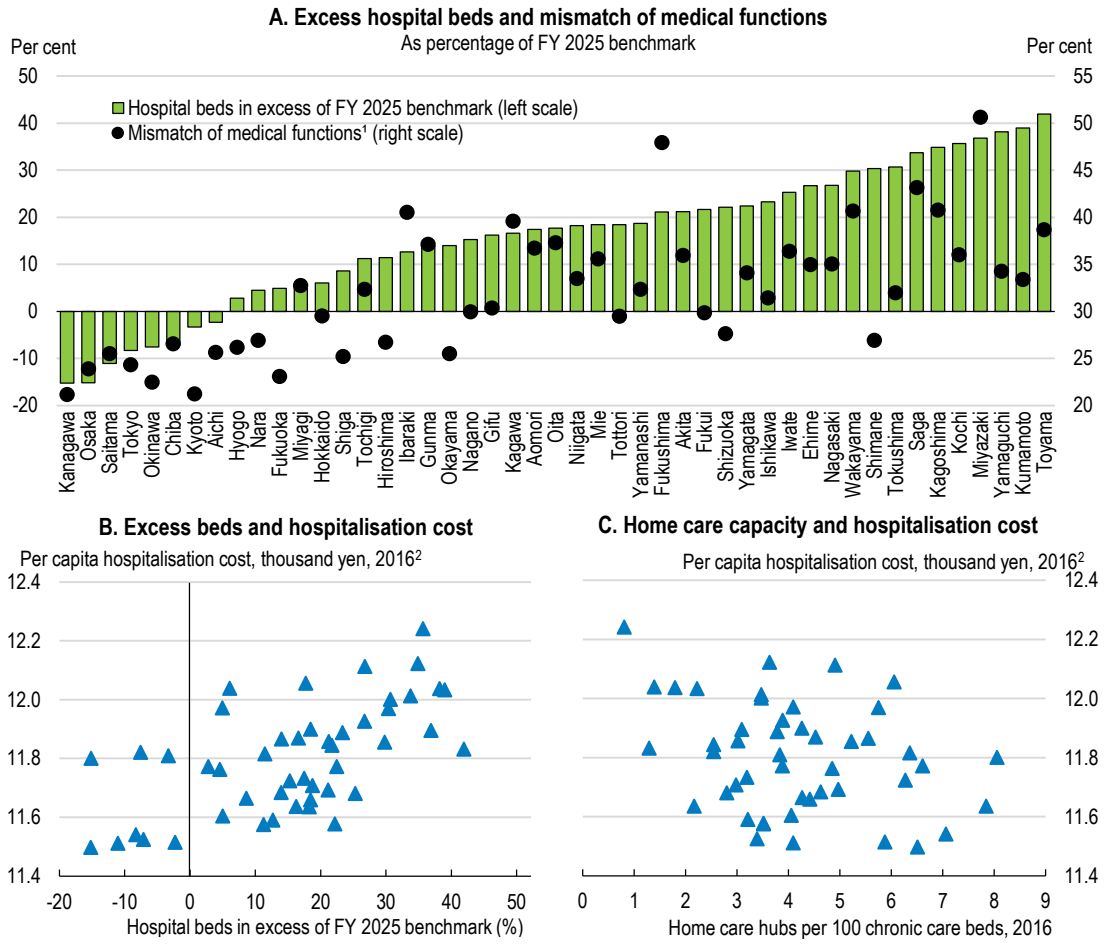
1. Sums of the benchmark numbers of beds based on projected medical needs in 2025, which are reported in the Community Healthcare Visions developed by prefectural governments.
2. Hospital beds that are not in use and whose functions are not reported are excluded.
Source: Prefectural governments, *Community Health Care Visions* and *FY 2016 Reports on Medical Functions of Hospital Beds*.

Providing incentives to shift medical resources into home-care service is another priority. Per capita hospitalisation costs tend to be lower in regions with a sufficient number of home-care support hospitals and clinics (so-called hub institutions) relative to chronic care beds (Figure 2.11, Panel C). Hub institutions maintain 24-hour contact with patients at home and provide doctor and nursing visits. Expanding home-care capacity would also enhance the quality of life of patients. According to a government survey, 47% of people prefer to be treated at home rather than in a hospital or a long-term care facility in cases of terminal cancer. Although only 29.3% and 14.8% prefer home-care in the case of serious cardiac illness or dementia, a majority of people want to receive end-of-life treatment at home irrespective of the type of terminal illness (75.7%, 82.5% and 89.6% in cases of terminal cancer, cardiac illness, and dementia, respectively) (Ministry of Health, Labour and Welfare, 2017).

Reducing the high level of spending on pharmaceuticals

Pharmaceuticals accounted for 40% of the rise in health spending over FY 2000-16 (Figure 2.9). Japan's per capita consumption of pharmaceuticals is the third highest in the OECD, driven by population ageing and the low use of generic drugs. In 2016, the government introduced a Health Technology Assessment to adjust the price at which pharmaceuticals are reimbursed by insurance. This system should be extended to a wider range of pharmaceuticals. In addition, some countries, such as Italy, New Zealand, Poland, Spain, Sweden and the United Kingdom, base the decision on whether to include a medicine in national health insurance coverage on its impact on patients' quality-adjusted life years. Japan's Health Technology Assessment initiative should perform a similar role.

Figure 2.11. Excess beds tend to lead to greater hospitalisation costs



1. Defined as the distance of the actual numbers of beds for each function from the FY 2025 benchmarks relative to the FY 2025 benchmark for total beds.
2. The vertical axis shows the natural log of a thousand yen. A gap of one unit corresponds to 100% difference.
Source: Ministry of Health, Labour, and Welfare, *National Health Expenditure*; Ministry of Internal Affairs and Communications; Prefectural governments, *Community Health Care Visions*, *FY 2016 Reports on Medical Functions of Hospital Beds*; and OECD calculations.

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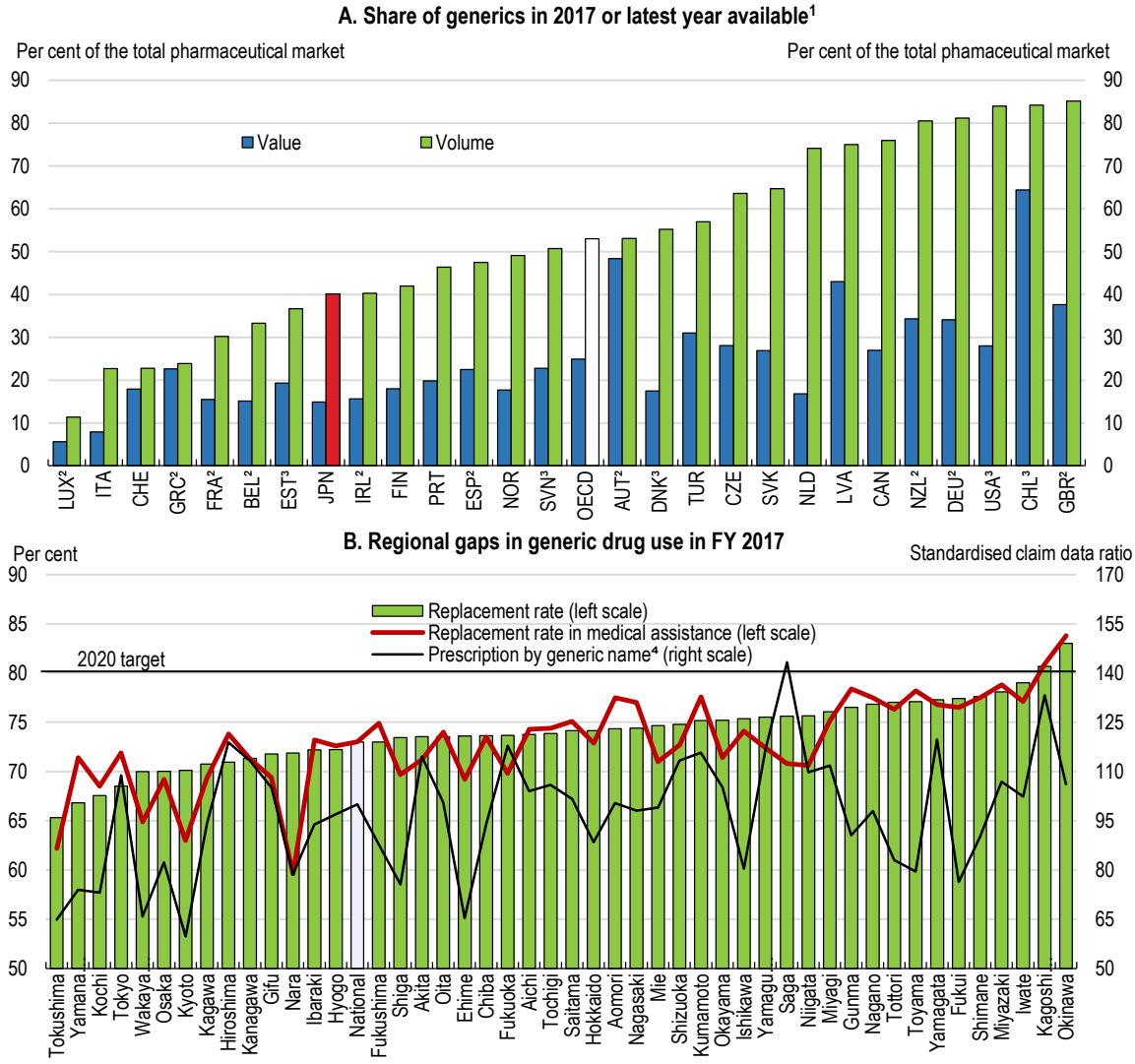
Increased use of generics is essential to control spending on pharmaceuticals. The government set a target to replace 80% of brand-name drugs for which generics are available by generics by 2020. It has also taken measures, such as paying fees to pharmacists whose prescriptions of generics surpass certain thresholds. Consequently, the share of generics in the pharmaceutical market in volume terms increased from 34% in 2015 to 40% in 2017 − though it remains below the 53% OECD average (Figure 2.12, Panel A). The replacement rate of brand-name drugs, as measured by the government, reached 73% in FY 2017, but there are large regional variations stemming from differences in medical practices as well as public policy. For example, the replacement rates are higher in prefectures where a larger share of drugs are prescribed by their generic name rather than the brand name and where medical assistance in the Basic Livelihood Protection Programme promotes greater use of generics (Panel B). The FY

2018 medical fee schedule revision strengthened the preferential treatment for generics, including additional fees paid to doctors who give prescriptions using the generic name and penalties for pharmacies with a replacement rate below 20%. In addition, the government proposed using generics in medical assistance. Increasing the share of generics beyond the 2020 target would require further efforts to narrow the regional gaps and make generics the standard for reimbursement for every prescription.

Figure 2.12. The use of generic drugs is low in Japan



1. Including medical non-durables.
2. Reimbursed pharmaceutical market.
3. Community pharmacy market.
4. Based on prescription and medical bill data in FY 2015. The numbers are expressed in the standardised claim data ratio, which compares the actual number of receipts in each prefecture with the national average normalised as 100.

Source: OECD Health Statistics database; Ministry of Health, Labour, and Welfare; and Cabinet Office, *Visualisation Database*.

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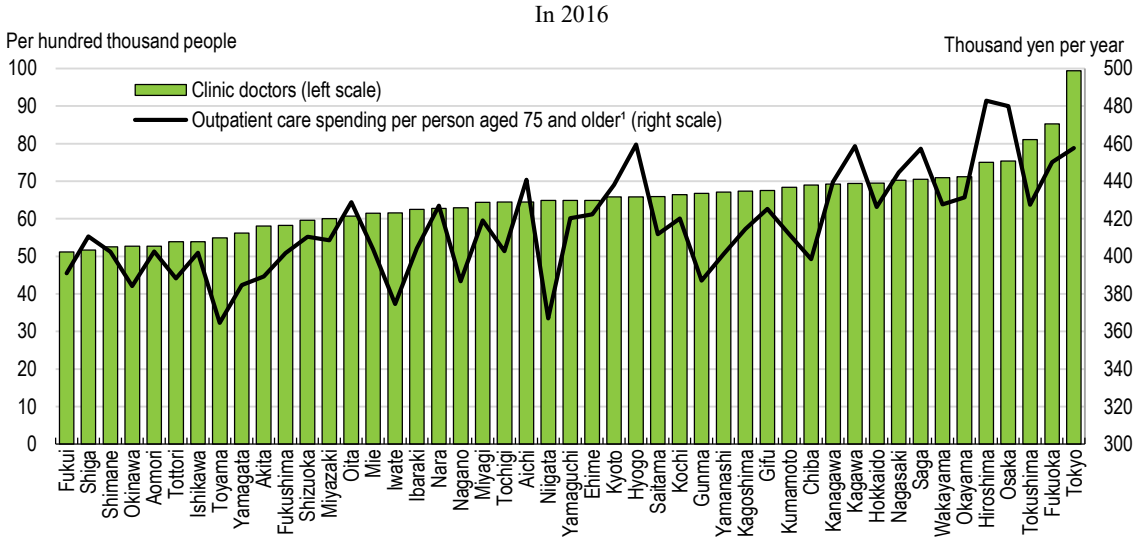
Limiting spending on outpatient care

Outpatient care accounted for 22% of the rise in health spending over FY 2000-16 (Figure 2.9). Japan stands out for exceptionally frequent medical consultations, which averaged 12.8 times per year per person, well above the OECD average of 7.4 (Table 2.2), reflecting a high number of visits by the elderly. The frequent use of outpatient care may be partly supply-induced, as suggested by the correlation between the number of clinic doctors in a prefecture and age-adjusted outpatient spending of persons aged 75 and older, although other factors, such as the share of elderly in a region, play a role (Figure 2.13). Shifting from a fee-for-service to a pay-for-performance system, which offers financial incentives to providers that meet performance standards, would help contain outpatient spending.

Figure 2.13. More clinic doctors is associated with more intensive outpatient care



1. After adjustment for difference in age distributions between prefectures.
Source: Ministry of Health, Labour, and Welfare.

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Low out-of-pocket payments are another factor driving the high number of medical consultations. Private expenditures cover only 16.9% of the cost of consultations in Japan compared to the OECD average of 31.7% (Table 2.2), reflecting the wide coverage of health insurance. While the working-age population pays the standard 30% rate, the co-payment rate is reduced to 20% for persons aged 70 to 74 and 10% for those aged 75 and older, subject to a means test. A married couple with an income over JPY 5.2 million (USD 46 400), which is well above the average income of JPY 4.2 million, pays the 30% rate. In addition, co-payments for outpatient care are limited to a ceiling of 18 000 (USD 161) per month for most persons aged 70 and older.

As population ageing advances, maintaining such preferential treatment for the elderly will impose increasingly heavy burdens on the working-age population. Given that persons in the 70-74 age group have been paying a 20% co-payment since 2014, when a special measure to reduce their co-payments to 10% expired, the 20% rate could be continued at age 75 and older. There is also scope for increasing the share of elderly who pay the 30% co-payment rate by lowering the annual income criterion. The income

ceilings on co-payments for the elderly should be in line with those for the working-age population. Ultimately, the principle of ability to pay should be based on financial assets held by the elderly as well as their income. The Social Security and Tax Number System ("My Number") has been linked to bank deposits since 2018, though it is voluntary at present and can only be used for limited purposes such as tax inspection. A system to judge co-payment capacity based on financial assets should be introduced when the government reviews the My Number system in 2021 and eventually real assets should be taken into account as well. Finally, introducing a small flat-rate fee on outpatient care for all groups would boost the low share of out-of-pocket payments.

The Act on Assurance of Medical Care for Elderly People allows application of different medical service fees in certain prefectures as a last resort as part of a Health Expense Adjustment Plan. Given considerable variations in per capita income and health conditions across prefectures, different fees can be justified. While this option has never been used, the economic and fiscal revitalisation plan requires defining the conditions under which this option is applicable. The government should take necessary steps so that this provision can be used when necessary.

Long-term care insurance

The 2.7-times rise in long-term care spending following the introduction of long-term care insurance in 2000 is the highest among social security programmes. This is primarily a result of the expanding number of care recipients, reflecting the increasing number of elderly and the rising share of them that are eligible for long-term care benefits under the insurance programme. The number of care recipients rose by 2.5 times over 2000-16, reaching 18% of the elderly population. To finance the increase in spending, the long-term care insurance premium, which must be paid by everyone aged 40 and over, increased by 2.8 times on average for persons aged 40-64 over FY 2000-18 and by 2.0 times for those over 65. For those unable to pay the premium, it is covered by social welfare. The government projects that the pace of increase in long-term care spending will continue to be the fastest among social insurance programmes.

Given the projected surge in the elderly population, shifting the focus to effective care services is essential to reduce the eligibility rate by improving the health status of the elderly and thereby control long-term care spending. Long-term care insurance provides benefits for those who are certified as needing care, with the amount and scope of services classified into five care levels (Table 2.4). In addition, long-term care insurance has provided preventive care since FY 2006 for those who are certified as needing assistance. The eligibility rates by prefecture for higher levels of care needs are correlated with the share of persons aged 75 and older. However, the share of those receiving assistance does not show a correlation with age, resulting in wider regional variations. This suggests significant scope for better targeting preventive care on those with the greatest needs.

The 2017 amendment of the Long-Term Care Insurance Act calls for introducing the payment of additional fees to care providers whose preventive care and rehabilitation programmes reduce the care needs of the recipients. Several local governments had been operating these so-called pay-for-performance (P4P) programmes but the empirical evidence about their effects is mixed. Some studies argue that the apparent success of the programme in some local jurisdictions is the result of the selective referral of recipients with higher potential for reducing care needs by the care managers affiliated with care providers (Iizuka et al., 2017). A nation-wide P4P programme should be introduced with

a careful incentive design, including a review of vertical integration of service providers and care managers and the introduction of risk adjustment for performance measures.

Table 2.4. Long-term care eligibility rate for persons aged 65 and older

In 2016

	Need for assistance[1]		Need for care[2]				
	Level 1	Level 2	Level 1	Level 2	Level 3	Level 4	Level 5
Spending share (%)	1.7	3.3	14.2	18.4	20.8	22.2	19.3
Eligibility rate							
National average (%)	2.5	2.5	3.6	3.1	2.4	2.2	1.7
Highest prefecture (%)	4.1	3.4	4.7	3.9	3.1	3.4	2.3
Lowest prefecture (%)	0.7	1.5	2.6	2.5	2.0	1.8	1.3
Standard deviation	0.70	0.46	0.49	0.33	0.26	0.30	0.28
Correlation with the share of age 75 and older	0.02	0.15	0.54	0.47	0.60	0.72	0.75

1. A level 2 need for assistance is higher than level 1. Preventive care is available for those who are certified.
2. Level 5 is the highest level of need for long-term care and level 1 is the lowest.
Source: Ministry of Health, Labour and Welfare.

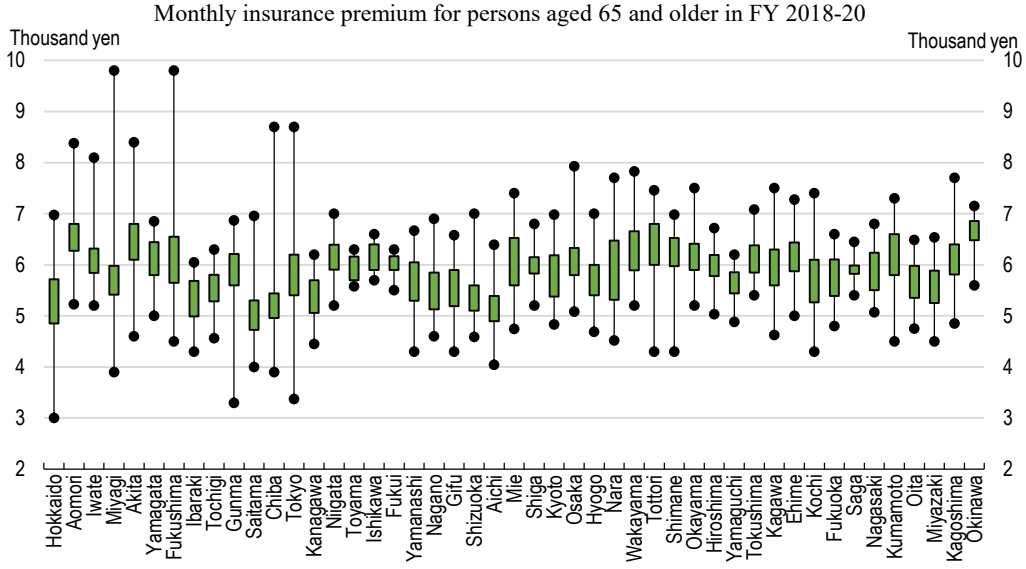
Coverage of long-term care insurance should be reviewed to exclude unnecessary services for those with less severe needs. Preventive care, other home-care service and living support accounted for 41.2% of the rise in long-term care costs over FY 2000-16. In particular, it is necessary to limit assistance, including living support (housecleaning, shopping, cooking, etc.), for which demand tends to be induced by providers (2017 *OECD Economic Survey of Japan*), while giving priority to care needs. Day care services could be reduced as well. In addition, the scope for combining care not covered by insurance with that which is covered (so-called "double billing") should be expanded.

Increasing co-payments is another priority to limit the projected rise in long-term care costs. Private expenditure covered 8.4% of long-term care spending in 2016, much lower than the 15.9% for total health spending. In 2015, the government increased the co-payment rate from 10% to 20% for those with annual income (including pension benefits) greater than JPY 2.8 million (USD 25 000). The co-payment rate was further raised to 30% in 2018 for those with income above JPY 3.4 million. While the reform is in the right direction, the 30% rate applies to less than 3% of the recipients. Further increasing the coverage of higher co-payment rates should be considered. In addition, co-payments should be based on assets as well, as discussed above for healthcare insurance.

The surge of the insurance premium has been accompanied by widening gaps between insurers, which are municipalities or their associations. On a nationwide basis, the monthly premiums for persons aged 65 and older range between JPY 3 000 (USD 26.8) and JPY 9 800 in FY 2018-20. There are significant differences between the highest and the lowest premiums even within a prefecture: the gap exceeds JPY 5 000 (USD 44.6) per month in several prefectures (Figure 2.14). The wide gaps reflect in part differences in service quality and in scale. While municipalities are deemed to be the appropriate unit to provide care in a community, they are less effective as insurers, especially in small towns and villages. It would be better to move the responsibility for long-term care insurance from municipalities to the prefectural level, as was done for National Health Insurance in 2018. This would also lower premiums through risk pooling.

Figure 2.14. Long-term care premiums significantly vary across municipalities

Monthly insurance premium for persons aged 65 and older in FY 2018-20



Note: The bars represent insurance premiums between the 25 and 75 percentiles in each prefecture. Upper and lower ends of the solid lines show the highest and the lowest premiums in each prefecture.
Source: Ministry of Health, Labour and Welfare.

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Ensuring adequate income for the elderly

Pension reform

Japan's public pension system includes the National Pension, which is mandatory in principle for the self-employed, students, part-time workers who are not eligible to join the Employees' Pension Insurance (EPI) and full-time homemakers whose spouses are not covered by the EPI. The EPI includes a flat-rate portion, which equals the full benefit under the National Pension, and an income-related portion. The failure to set the income-related benefits in line with indexation plans in place has resulted in overpayment of benefits since FY 2000:

- Price indexation of benefits was not fully applied over 2000-14 in the context of deflation.
- In 2004, the government decided to adjust pension benefits in line with wage growth when it is less than CPI inflation (as long as both were positive). Under the 2016 reform, which aims to make pension benefits secure for future generations, benefits will be based on wage growth when it is negative and less than CPI inflation beginning in FY 2021. If the 2016 reform had been implemented earlier, pension benefits would have been lower.
- In 2004, the government introduced "macroeconomic indexation", which adjusts pension benefits based on changes in the number of contributors and life expectancy. However, it has not been fully applied (OECD, 2017b).

These overpayments contributed to a fall in the reserve fund of the Employees' Pension Insurance, which declined on a book value basis from JPY 136.8 trillion (26% of GDP) in FY 2000 to JPY 111.9 trillion in FY 2017, despite the rise in the pension contribution rate from 13.6% in FY 2004 to 18.3% in FY 2017. The carryover system introduced in FY

2018, which will incorporate cancelled benefit revisions in years of negative inflation to later years, will improve the effectiveness of macroeconomic indexation. In addition, a rule to base benefits on wage growth when it is less than CPI inflation is to be enforced from FY 2021. However, the rule that prohibits a negative revision to pension benefits from macroeconomic indexation is still in place. This will lead to the overpayment of benefits, which will need to be corrected sometime in the future under the carryover system. To avoid this, macroeconomic and price indexation should be allowed to operate fully, even under deflation or low inflation of around 1% or less.

While applying macroeconomic indexation would ensure the long-term financial balance of the pension system, it does not guarantee income security for the retired. To provide adequate income for the elderly and reduce their high relative poverty rate, the pension eligibility age should be further increased. It is set to reach age 65 for men in 2025 and for women in 2030, but many OECD countries have raised pension eligibility beyond that age. Moreover, some countries, including Denmark and the Netherlands, have linked future increases in the pension eligibility age to life expectancy. Increasing the eligibility age beyond 65 would substantially raise the replacement rate, increase employment of the elderly, improve intergenerational equity and lift output growth (Chapter 1).

Strengthening the financial basis of the Basic Pension, which includes the National Pension and the flat-rate portion of the EPI, is another key to reinforce income security for the elderly. The share of the population contributing to the National Pension bottomed out at 58.6% (excluding those covered by EPI) in FY 2011. Despite rising for six consecutive years since then, it was still low at 66.3% in FY 2017. If persons exempted from paying contributions are excluded, the actual contribution rate was only 40.3%. With fewer people eligible to receive the full Basic Pension benefit, which was JPY 64 941 (USD 580) a month in 2018, the number of elderly relying on social welfare will rise significantly (see below). The contribution rate is lower among youth, suggesting that they have less confidence in the public pension system. Raising the eligibility age would allow an increase in Basic Pension benefits, thus helping to strengthen confidence in the programme.

Another measure to ensure adequate income for the elderly is to break down labour market dualism and reduce the number of non-regular workers, thereby increasing the coverage of the EPI. Moreover, deduction of pension insurance premiums at source under the EPI would also increase the low contribution rate of non-regular workers to the mandatory Basic Pension. A 2016 reform expanded the coverage of the EPI to include part-time workers in firms with more than 500 employees. While part-timers in smaller firms have been entitled to join the EPI based on an agreement between management and labour since 2017, mandatory coverage should be expanded further, which would also help increase pensions. At the same time, the government should strengthen measures to reduce the number of firms that fail to pay the employers' share of pension contributions.

Promoting private pensions to complement public pensions would also help promote adequate retirement income for the elderly. A 2015 government survey reported that 28.8% of respondents had joined individual private pensions (Ministry of Health, Labour and Welfare, 2015). In 2017, the Defined Contribution Pension Act was amended to entitle the self-employed, full-time homemakers, and government employees to join defined contribution pension plans for individuals (called "iDeCo"), which receive income deductions for contributions and tax exemptions for investment returns. In addition, in 2018, an annual capital income tax exemption scheme called Dollar-Cost Averaging NISA (Nippon Individual Savings Account) was established. It has a longer

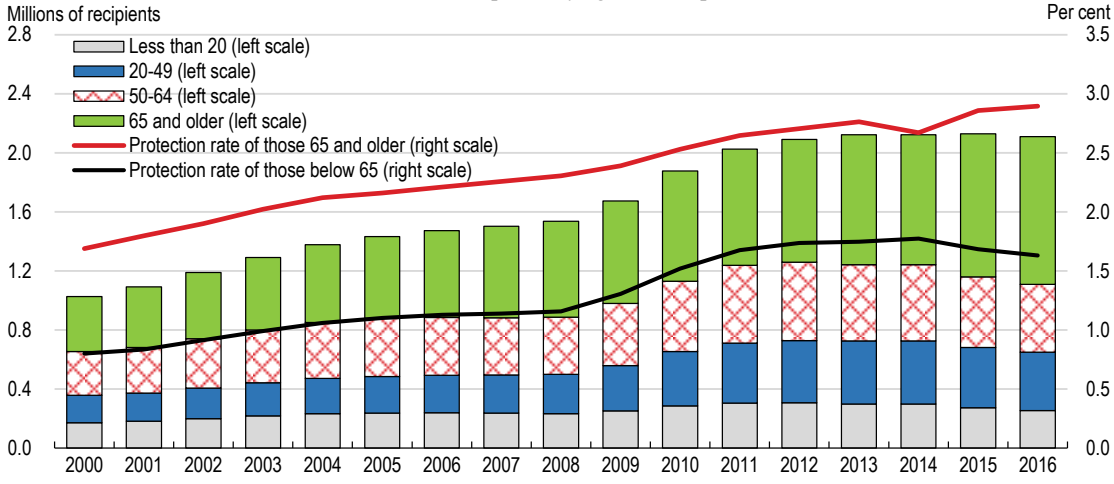
tax-exempted holding period (20 years) than that of a standard NISA (five years) for eligible assets up to JPY 400 000 (USD 3 571) per year that meet certain requirements This is an important first step to promote private pension plans and long-term, regular and diversified personal investment. The government should consider measures, including those that are not limited to tax incentives and exemptions, to encourage greater use of private pension plans.

Minimum income security in the rapidly ageing society

Population ageing in Japan is rapidly greying social welfare programmes. The Basic Livelihood Protection Programme (BLPP) assists those of all ages with an income below the minimum standard of living who meet the eligibility criteria, which take into account their assets and the ability of family members to provide help. Among recipients of the BLPP, the share age 65 and older rose from 36.3% to 47.4% over 2000-16 (Figure 2.15). The share of the elderly receiving the BLPP (the so-called "protection rate") rose from 1.7% to 2.9% over that period, raising the gap with the under-65 age group from 1.1 to 1.7 percentage points. The rise in the elderly's protection rate seems to have been driven primarily by further ageing of the elderly, which reduces opportunities to work. Moreover, the BLPP helps overcome weaknesses in the Basic Pension system. Given the projected rise of the share of the population above age 75, the protection rate of the elderly is likely to rise even faster, while the number of working-age recipients has fallen, reflecting the long economic expansion.

Figure 2.15. A rising share of social assistance recipients are elderly

Number of BLPP recipients by age and the protection rate



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

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In addition, the average duration of benefits for aged households was 9.7 years in 2016 compared to 5.3 years for working-age households without disabilities or sickness (Table 2.5). In 2016, death was the major reason (60.9%) for ending BLPP payments to the elderly, while only 2.4% left the programme because of an increase of employment income. In contrast, 30% of working-age households (excluding those with disabilities or illness) left the programme thanks to increased employment income. Population ageing is thus putting serious fiscal pressure on the tax-financed BLPP, which shows the importance of a strong public pension system. In the medium to long run, increased

spending for the rising number of old-age recipients could crowd out BLPP assistance for low-income households of working age. In addition, some elderly are excluded from the BLPP by the criterion that prohibits support to those with the possibility of family support. The effectiveness of the contribution-financed Basic Pension in reducing elderly poverty is limited by its small monthly benefit of JPY 64 941 (USD 576), which is below the minimum living standard set by the BLPP (JPY 80 000 for a single person in Tokyo), excluding housing and medical assistance and other benefits. It would be preferable to create a social insurance system under the Basic Pension for the current working-age population to provide minimum-income security when they are elderly (Oshio, 2018). This would also require raising participation in the Basic Pension, as noted above, to entitle everyone to receive a full pension.

The BLPP has a number of problems in addition to population ageing. The top priority is to reduce the high effective tax rates on persons who leave the BLPP to accept full-time employment. Raising the lump-sum benefit for recipients leaving the BLPP, which is based on the amount they earned while receiving public assistance, should be the first step. In addition, it is important to improve training and job support for working-age BLPP recipients with weak skills. Regional gaps in the participation rate in the programme as well as its outcomes are significant. The government should identify best practices and disseminate them to other regions. Moreover, Japan should introduce an earned income tax credit (EITC), an in-work benefit for low-income earners that encourages work (2017 *OECD Economic Survey of Japan*).

Table 2.5. Elderly BLPP recipients face difficulty in becoming self-sufficient

In 2016

	Elderly households[1]	Single-mother households	Households with disabilities or sickness	Other households
Average duration of protection (years)	9.7	5.3	7.3	5.3
Reason for end of protection (%)				
Increase of employment income	2.4	32.2	14.4	36.3
Death	60.9	1.1	24.0	4.8
Disappearance	3.4	1.2	9.5	17.0
Other	33.2	65.6	52.2	41.9

1. Households that consist of persons aged 65 and older only, or with persons aged below 18.
Source: Ministry of Health, Labour and Welfare; and OECD calculations.

Policies to ensure sustainability of local government services

Improving the efficiency of local government administration

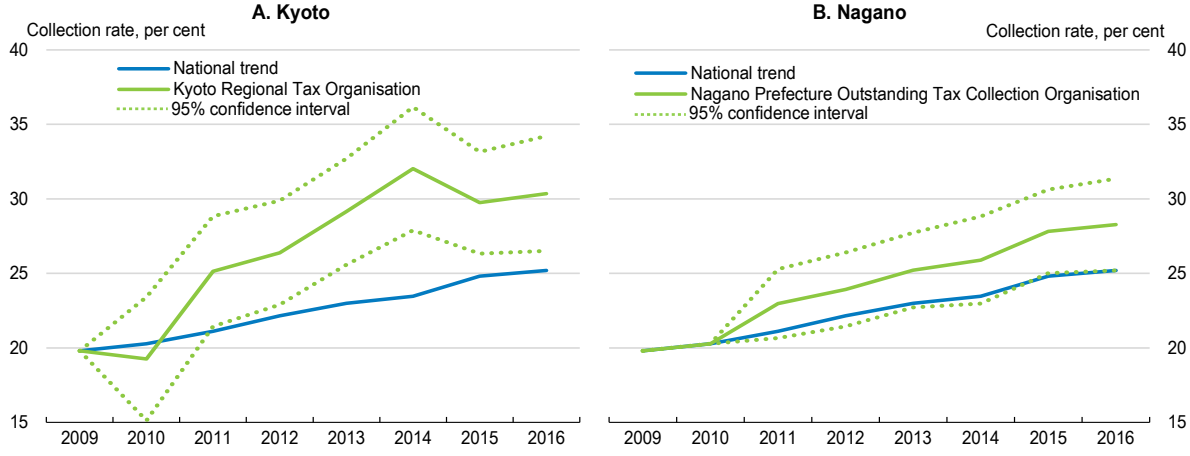
Japan has 47 prefectures with 1 741 municipalities (23 Tokyo special wards, 792 cities, 743 towns and 183 villages). Local government spending accounts for 35% of primary public spending and 45% of their primary revenues are transfers from the national government. Containing spending at the local level is therefore a priority for fiscal consolidation (Figure 2.5). While each Basic Policy on Economic and Fiscal Management and Reform since 2015 has called for local governments to pursue fiscal consolidation in tandem with the central government, many face severe demographic challenges. Indeed, population is shrinking more rapidly in regions where it is ageing faster, which drives up per capita public spending due to fewer economies of scale as well as higher age-related health and long-term care spending. At the same time, a shrinking and ageing population reduces taxable income. Achieving fiscal consolidation at the local government level

therefore requires a strategy that explicitly takes into account differences in regional population trends.

A promising way to cope with the different pace of population ageing is to promote joint operation of local public administration among neighbouring municipalities to achieve economies of scale. The Local Autonomy Act allows municipalities to form an association specialised in a specific area of public administration. It also permits the creation of inter-jurisdictional associations between prefectures and municipalities to integrate administration across a wider area. Such cooperative efforts have begun in a wide range of local services, including collection and disposal of garbage, fire and disaster management, healthcare for persons aged 75 and older and long-term care. Joint initiatives have also been launched for the collection of outstanding tax bills. In particular, associations covering all municipalities in a prefecture were launched in Shizuoka, Kyoto (excluding Kyoto City) and Nagano. While other types of cooperation helped increase the nationwide collection rate of outstanding taxes from 20% in FY 2009 to 25% in FY 2016, the prefecture-wide cooperation approach outperformed the nationwide average by around 3-5 percentage points (Figure 2.16).

Figure 2.16. Cooperation within a prefecture improves the efficiency of municipal tax collection

Impact of wide-area associations within a prefecture on municipal coercive tax collection,[1] in 2009-16



1. Based on an ordinary least square regression of the coercive tax collection rates of 1 740 municipalities on common year dummies, individual municipality dummies and dummy variables for municipalities that joined the associations in Kyoto and Nagano prefectures. Dotted lines show 95% confidence intervals of the estimates.

Source: Ministry of Internal Affairs and Communications; and OECD calculations.

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Enhancing the efficiency of public services is essential to control local government spending. In FY 2016, the government launched the "Top Runner" programme, which made the most efficient local governments the basis for calculating local allocation tax grants (the key transfer from central to local governments). The grants are based on the unit costs achieved in local governments that carried out administrative reform in 16 services (out of a total of 23). The programme added two additional services in FY 2017. Large cities have advantages in reducing costs, for example by outsourcing and making greater use of cloud computing. Indeed, towns and villages with an average population of 30 000 did not introduce any outsourcing of back-office activities (services such as record maintenance, accounting, and counter services) while cities with a population of 500 000

or more did so for four to six activities. In jurisdictions with no outsourcing, average per capita administrative costs were 4.5 times higher (Table 2.6, Panel A). Even after controlling for a number of other relevant factors, outsourcing significantly reduces per capita administration cost, but the effect is smaller for municipalities with smaller populations (Panel B). The impact of cost reduction is estimated to reach a maximum of 5.3% in jurisdictions with a population of around 400 000.

Table 2.6. Larger cities achieved lower administrative costs through administrative reform

A. Number of outsourcings and per capita administration costs of 1 731 municipalities[1] in FY 2015

Number of outsourced back-office activities[2]	Number of municipalities	Average per capita administrative cost for back-office activities (thousand yen)	Average population (thousand persons)
0	958	1 643	30 000
1	456	1 004	65 000
2	216	984	142 000
3	63	639	275 000
4	20	514	542 000
5	16	583	497 000
6	2	363	781 000

B. Estimated impact of outsourcing on per capita administration cost[3]

Periods included = FY 2000, FY 2005, FY 2010, FY 2015: cross-sections included = 1 731

Variables[4]	Estimate	t-ratio[5]	
Constant	2.242	12.39	***
Number of outsourced tasks	**0.692**	**3.16**	***
Number of outsourced tasks * population	**-0.116**	**-2.97**	***
Number of outsourced tasks * squared population	**0.004**	**2.62**	***
Population	-4.136	-11.18	***
Squared population	0.145	7.94	***
Population density	0.286	2.16	**
Population ratio of age 75 and older	-0.277	-0.62	
Population ratio of below age 15	-1.288	-2.32	**
Per capita taxable income	0.384	3.40	***
Adjusted R^2	0.855		

1. Municipalities whose per capita administrative costs for general affairs exceeded JPY 2.5 million are excluded as outliers. Most of them are in the area affected by the Great East Japan Earthquake of 2011.
2. In 2014. Number of fully or partly outsourced tasks of processing payrolls, travel expense, welfare packages for officers, accounting service, and counter service.
3. Estimated by a panel ordinary least squares regression with fixed individual and time effects.
4. Per capita administrative cost of back-office activities, population, population density and per capita taxable income are in logarithmic scales. Considering that outsourcing of back-office activities through tendering became possible in 2006, the number of outsourced tasks takes values only in FY 2010 and FY 2015.
5. ** and *** indicate that the estimates are statistically significant at 5% and 1% levels of significance, respectively.
Source: Ministry of Internal Affairs and Communications; Cabinet Office, *Visualization Database*; and OECD calculations.

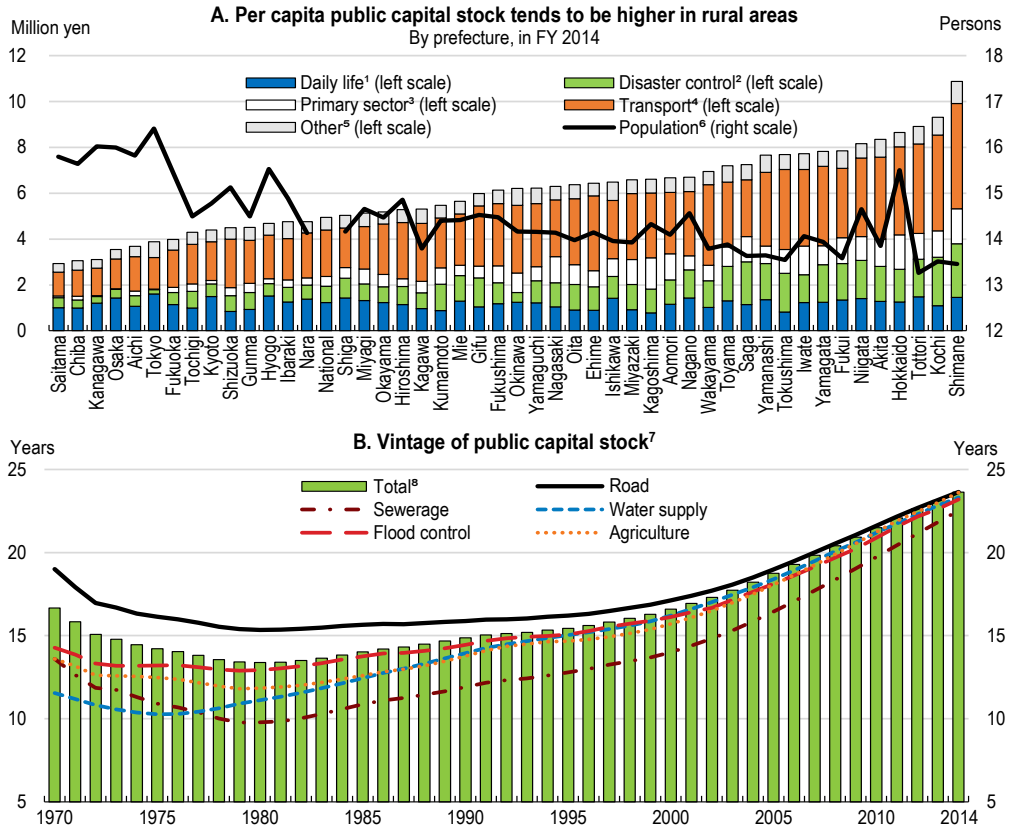
Small municipalities face disadvantages in outsourcing because their small scale of operation impedes economies of scale while making it costly to split tasks into elements that can be outsourced and those that must be reserved for themselves as part of their exercise of public authority. While the Top Runner programme was supposed to cover all 23 types of tasks in three to five years, no new tasks were added in FY 2018, leaving five tasks outside of the programme. Further expansion of the Top Runner programme is

essential to help small municipalities benefit from administrative reform. Facilitating joint implementation of reforms among municipalities would be a promising option.

Ensuring sustainability of infrastructure investment and maintenance

Achieving economies of scale is crucially important for infrastructure investment and maintenance. Public infrastructure in Japan was intensively developed until the 1990s, boosting the net public capital stock to 125% of GDP in FY 2014, by far the largest in the OECD area (Fournier, 2016). Public investment has been unevenly distributed across regions. Consequently, the public capital stock, on a per capita basis, is higher in less developed rural areas, notably in transport, disaster control and primary sectors (Figure 2.17, Panel A). In the face of increased social spending in the context of population ageing, gross public investment fell from 6.0% of GDP to 3.5% over FY 2000-07. While there has been some increase in the wake of the 2011 Great East Japan Earthquake, it has remained below 4% of GDP (Figure 2.3). Consequently, public infrastructure in Japan has aged considerably since the early 2000s (Figure 2.17, Panel B).

Figure 2.17. Public capital stock is unevenly distributed by region and is rapidly ageing



1. Public housing, sewerage, water supply and waste disposal.
2. Flood control, forest conservation and shore protection.
3. Agriculture, forestry and fisheries.
4. Road, port, airports, railroad and metro lines.
5. Urban parks, schools, cultural facilities, postal services, national forests and government offices.
6. Natural log of a thousand persons.
7. Estimated under an assumption that capital stock in each sector is disposed following a Weibull distribution. Parameter values of the Weibull distributions follow Cabinet Office (2017). The initial vintage in 1953 is calculated by assuming that the same amount of capital was invested between 1885 and 1952.
8. A weighted average of all 18 sectors.

Source: Cabinet Office (2017); Ministry of Internal Affairs and Communications; and OECD calculations.

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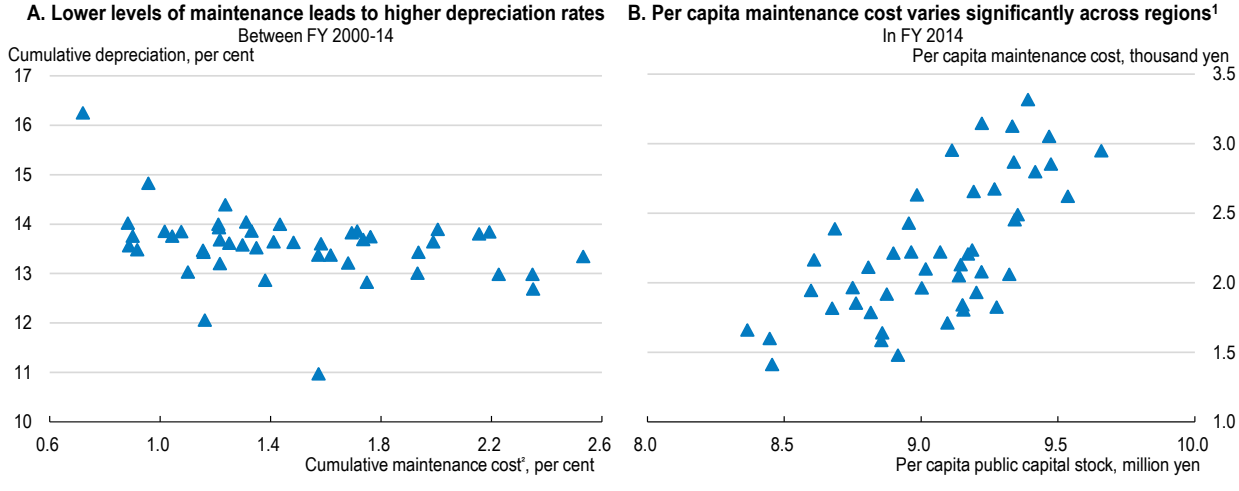
Maintenance is essential to preserve the value of public capital, as indicated by a negative correlation between maintenance spending and the depreciation rate (Figure 2.18, Panel A). Large stocks of public capital in depopulated regions intensify the fiscal burden on residents, as they bear heavier maintenance costs due to larger per capita stocks (Panel B). Per capita maintenance cost in the highest-cost prefecture is 6.7 times that in the lowest-cost prefecture, suggesting that depopulated regions cannot afford to maintain existing levels of public capital. In addition, a falling population lowers the efficiency of infrastructure operations. For example, the average unit cost of water supply is the highest for enterprises that supply less than 10 000 persons, reflecting low capacity utilisation rates and high non-revenue water ratio (water that has been produced, but is "lost" before it reaches the customer) (Table 2.7). Many small enterprises cannot cover the cost with higher prices, as local governments generally operate water supply services and municipal assemblies set the prices. Consequently, they depend on transfers from local governments. While the majority of water supply businesses service populations of less than 50 000, operational efficiency rises until population exceeds 500 000. There is thus scope for optimising operating scales through consolidation of public infrastructure.

Greater use of private finance initiatives (PFI) and public-private partnership (PPP) could contribute to increasing efficiency of infrastructure investment and maintenance in areas, such as water supply. The government launched the PFI/PPP Action Plan in 2016, which envisaged projects of JPY 21 trillion (3.8% of 2018 GDP) over FY 2013-22. Projects have met their goals in most targeted areas. The 2018 amendments of the Act on Promotion of Private Finance Initiative gave local governments incentives to introduce concessions for water supply and sewerage. In addition, the 2016 Plan encourages all prefectures and cities with populations greater than 200 000 to adopt a decree to consider introducing PPP and PFI on a priority basis. By FY 2017, 80% of them had done so and the 2018 Action Plan aims to extend this to smaller cities. The government should take account of the financial risks and contingent liabilities in pursuing PPP and PFI.

Figure 2.18. Infrastructure maintenance costs per capita are higher in less populated prefectures



1. Natural log of a thousand yen.
2. Sum of expenditures for maintenance and repair of each prefecture and municipalities in the prefecture. Converted into real terms based on the deflator for public capital stock. Natural log of a thousand yen.
Source: Cabinet Office (2017); Ministry of Internal Affairs and Communications; and OECD calculations.

StatLink http://dx.doi.org/10.1787/888933954779

Table 2.7. Public infrastructure has an optimal scale of operation

Water supply[1] in FY 2016

Supplied population	Number of enterprises	Cost per cubic meter (JPY)	Fare/Cost per cubic meter (%)	Capacity utilisation rate (%)	Non-revenue water ratio[2] (%)
Less than 10 000	229	211.2	91.9	48.0	21.1
Between 10 000 - 50 000	590	171.2	101.2	56.8	16.1
Between 50 000 - 100 000	210	162.2	106.0	59.3	12.1
Between 100 000 - 250 000	152	155.2	106.8	62.6	9.9
Between 250 000 - 500 000	74	148.3	111.2	62.0	8.7
More than 500 000	25	166.8	105.5	59.9	6.8
Total	1 280	162.4	105.8	59.9	9.7

1. Water supply businesses subject to the Local Public Enterprise Act. Simplified water supply businesses for supplied populations of 5 000 or less are not subject to the law and excluded here.
2. Water that has been produced, but is "lost" before it reaches the customer. Losses can be real losses (through leaks), theft or metering inaccuracies.
Source: Ministry of Internal Affairs and Communications; and OECD calculations.

Promoting compact cities to achieve economic, environmental and social benefits

As noted above, the 2014 amendment of the Local Autonomy Act introduced a new framework of inter-municipal cooperation that allows a core city and neighbouring small municipalities to jointly provide public services and create compact cities. Compact cities can deliver a number of economic, environmental and social benefits: *i)* lower energy consumption thanks to shorter intra-urban distances and less reliance on cars; *ii)* higher productivity due to knowledge diffusion stimulated by the high density and diversity of urban areas; *iii)* easier access to local services and jobs; and *iv)* greater efficiency of infrastructure investment and maintenance (OECD, 2012), which is particularly important in the context of an ageing society. Less reliance on cars can contribute to better health by encouraging daily exercise, as suggested by a positive correlation of walking distance per day with urban agglomeration and passenger traffic on public transport (Figure 2.19). Compact cities can better adapt to changes in public service needs and people's lifestyles in an ageing society, while expanding resources to deliver services.

The economic and fiscal revitalisation plan set a goal by FY 2020 to develop 300 master plans for compact cities, known as "location optimisation plans". While as many as 420 cities had developed plans by 2018, actual changes in population concentration are yet to happen in most cases. Realisation of the measures laid out in the plans would require inter-municipal cooperation in urban planning, notably local public transport networks. Utilisation of the new framework in the Local Autonomy Act would help in this regard.

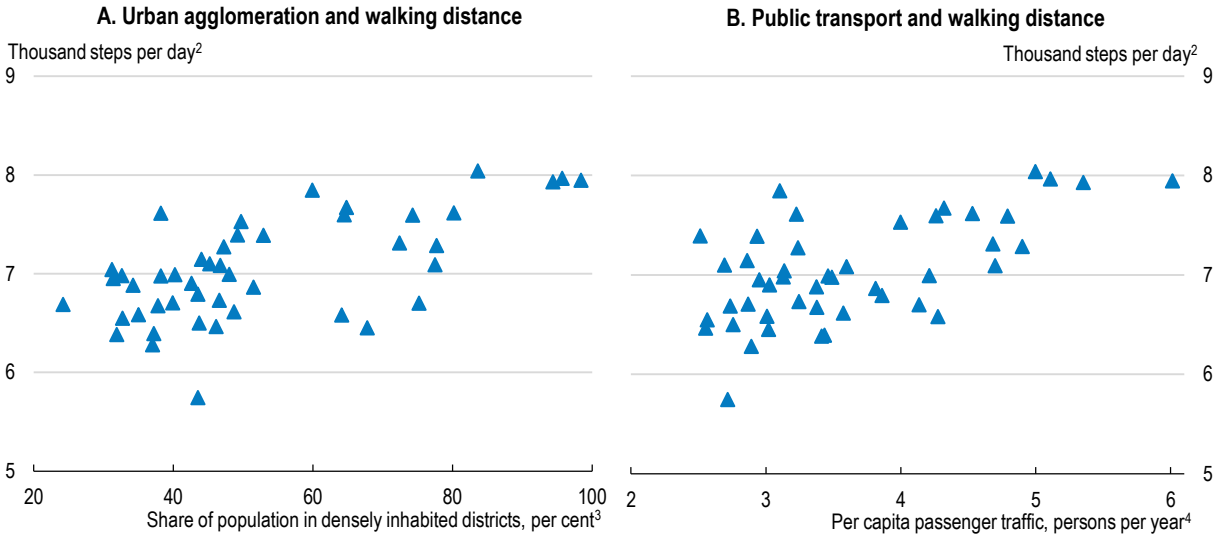
Reinforcing the institutional framework for local land-use

Promotion of compact cities requires redesigning local land-use, which is a problem due to the unidentified landowner problem. Under the Civil Code, inheritance registration of real estate is not mandatory because it is not a requirement for transferring ownership. Consequently, many land ownership transfers associated with inheritance are unregistered, making it difficult to identify the current landowners and resulting in geographical fragmentation. The government estimated that it is difficult to locate owners for 20% of Japan's land, based on a sample of 100 locations (National Land Development Council, 2017). Moreover, the ownership of 19.8% of land was registered more than 50

years ago and 26.3% more than 30 years ago, so the problem of unidentified owners could become even more serious in coming decades.

Figure 2.19. Compact cities can build exercise into daily life

In 2016 for 46 prefectures[1]



1. Excluding Kumamoto because data on steps per day is not available due to the 2016 Kumamoto earthquake.
2. Average of men and women aged 20-64, weighted by population.
3. Based on the 2015 National Census.
4. Sum of passengers of routine-run trains and transit buses, using the natural log of a thousand steps.
Source: Ministry of Health, Labour and Welfare; Ministry of Land, Infrastructure, Transportation and Tourism; Ministry of Internal Affairs and Communications; and OECD calculations.

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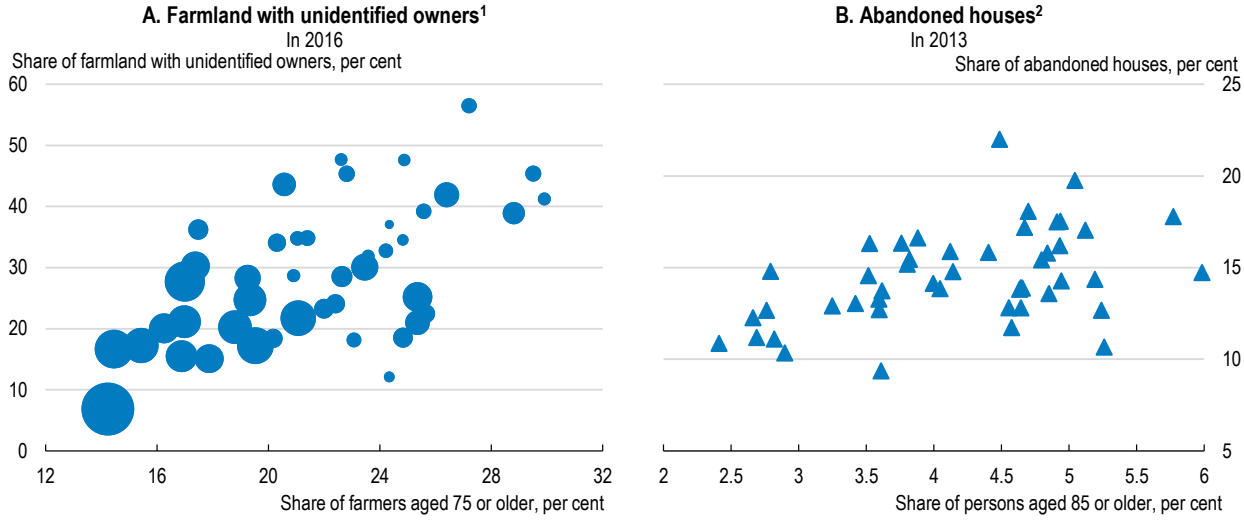
The difficulty of locating landowners poses obstacles to changing land use in both rural and urban areas. For example, it impedes the consolidation of farmland in rural areas, which is essential to strengthen the competitiveness of the agricultural sector, as it is dominated by many small-sized plots that are farmed by part-time farmers (OECD, 2013). According to a government survey, 20.9% of farmland was confirmed or thought to be unregistered in 2016 (Ministry of Agriculture, Forestry and Fisheries, 2016). Leasing those farmlands to full-time farmers is costly, notably in the case of communal farmlands, as the Civil Code requires a majority agreement of co-owners for a five-year lease. The share of unclaimed farmland is higher in regions with older farmers, and such regions lag behind in farmland consolidation (Figure 2.20, Panel A).

In urban areas, unclaimed land and an increasing number of abandoned houses hinder redevelopment, since municipal governments cannot dispose of houses without their owners' permission. Moreover, abandoned houses expose their neighbours to a risk of collapse. The share of abandoned houses is higher in prefectures with older populations, suggesting that the issue could become more serious as population ageing advances further (Figure 2.20, Panel B). In addition, many municipalities encounter troubles even in fundamental administrative tasks such as taxation (Box 2.1).

Figure 2.20. Landowners are more difficult to locate in more aged regions



1. Farmland whose owners are recorded in the registration book, but are confirmed to be dead or impossible to locate because they have moved. Each bubble represents one of Japan's 47 prefectures and its size represents the share of farmland that is intensively used by large-scale, full-time family farmers and corporate farmers.
2. Each triangle represents one of Japan's 47 prefectures.
Source: Ministry of Agriculture, Forestry and Fisheries; Ministry of Internal Affairs and Communications; and OECD calculations.

StatLink http://dx.doi.org/10.1787/888933954817

Japan has taken measures to cope with these problems. For example, the 2014 Act on Special Measures Concerning Unoccupied Houses gives municipal governments a subrogation right to dispose of abandoned houses through a summary procedure without intermediate applications or delays. In addition, the 2018 amendment of the Act on Promotion of Improvement of Agricultural Management Foundation facilitates leasing of communal farmland when some owners are difficult to locate by allowing a twenty-year lease based on a majority agreement, instead of a five-year lease under the Civil Code. A 2018 law allows prefectural governors to expropriate unutilised lands for public works and to create land-use rights for public purposes when landowners are difficult to locate.

In addition, the government launched the Basic Policy to Promote Countermeasures to the Unidentified Landowners Problem in 2018. *First*, it requires legislative action by 2019 to strengthen registrars' authority to correct registrations that lack precise records of landowners' names and addresses. *Second*, it calls for drastic reform of the land ownership framework by 2020, including the legal responsibility of landowners, improvement of the inheritance registration system, perhaps by making it mandatory, and the creation of a procedure to waive land ownership. *Third*, it also calls for measures to facilitate cadastral surveys and the reconciliation of information in the land ownership registry book and residence registration records, which are collected separately by the national and municipal authorities. Integrated management of land ownership records is critically important (Yoshihara, 2018). The government should move promptly to implement all of these measures, focusing on the procedure for waiving landownership and establishing clearly defined custodianship of abandoned lands, which the existing Civil Code does not provide.

Box 2.1. The scope of Japan's unidentified landowner problem

According to a survey conducted by a non-profit research institution, many municipalities face serious problems associated with locating landowners (Tokyo Foundation, 2016). An anonymous questionnaire was sent in 2016 and received responses from slightly more than half of the property tax authorities in 1 718 cities, towns and villages in Japan, plus the Tokyo Metropolitan Government. Their answers show how widespread the problems are:

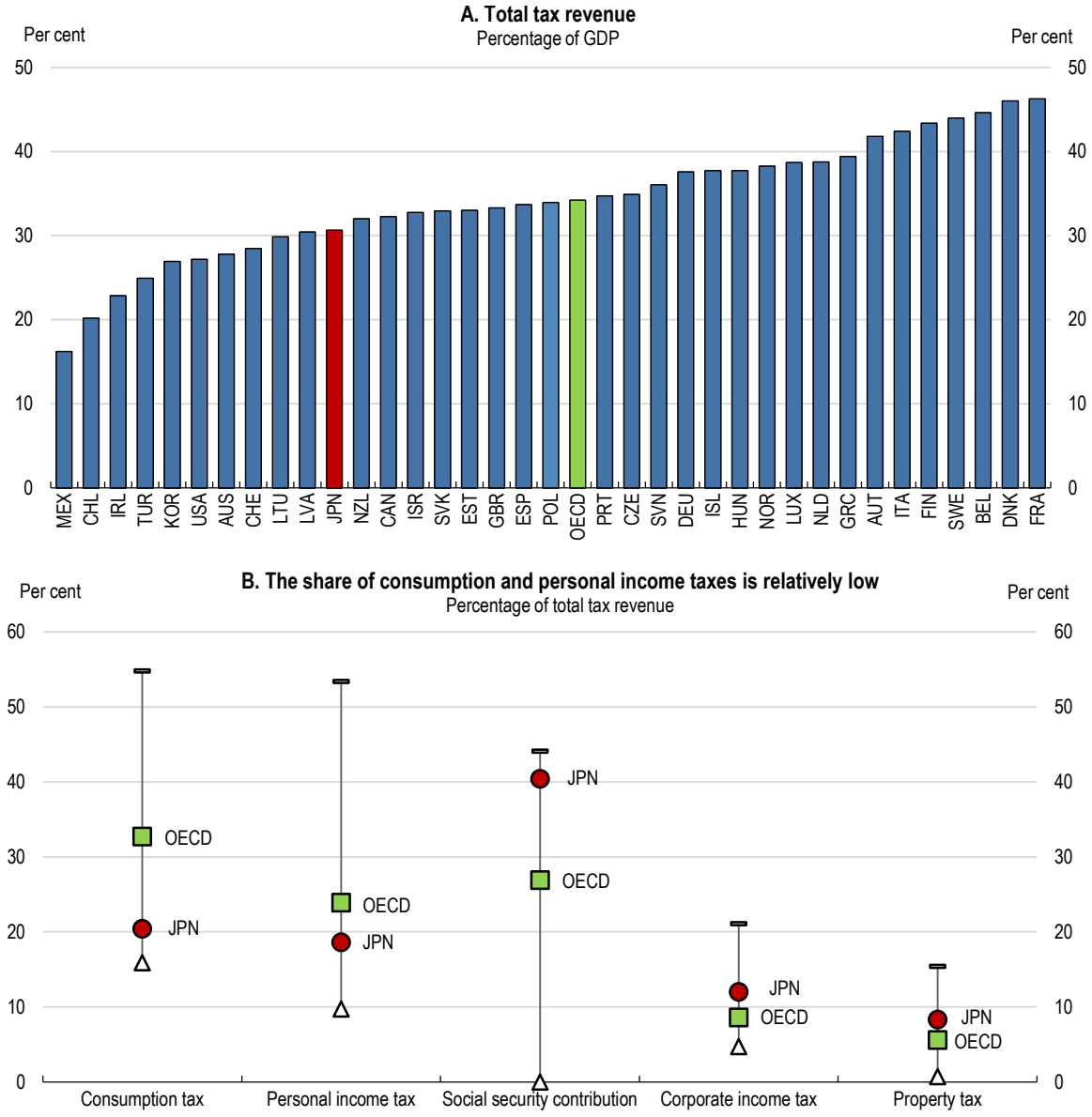
- 62.7% of municipalities had encountered problems related to difficulties in locating landowners.
  - 54.7% faced troubles in taxation of immobile properties.
  - 28.5% found dangers posed by abandoned houses.
  - 26.8% found damage to land.
  - 15.1% faced impediments to public works.
- 82.8% of municipalities were uncertain about how many deceased residents are still subject to taxation. Family members of the deceased often pay the tax, even though they are not the registered owners.
  - Less than 1% confirmed that they do not follow such a practice.
  - 16.4% reported that such practices exist. According to their answers, 6.5% of those subject to taxation are already dead.
- 86.7% of municipalities expected that taxation on deceased residents would increase in the future for two reasons:
  - 45.2% cited an increase in unregistered inheritance.
  - 18.1% cited the difficulty in recognising deaths of landowners who live in other municipalities.
- 22.5% of municipalities had experienced a suspension of taxation. In 77.2% of those cases, the difficulty was locating landowners.

Raising revenue and removing disincentives to employment

Boosting government revenue from its relatively low level should be an essential element of a strategy to achieve fiscal sustainability, particularly as demographic pressures will make it difficult to reduce the level of spending. Social insurance contributions and taxes rose from 25.8% of GDP in 2000 to 30.6% in 2017 but remained below the OECD average of 34.0% (Figure 2.21, Panel A). The lower share reflects smaller contributions from taxes on consumption and personal income (Panel B). In contrast, the shares of social security contributions, corporate income tax and property tax in total tax revenue are above the OECD average. Measures to raise revenue should take account of the rising share of elderly, who are projected to exceed 38% of the population by 2050. It is essential to increase the share of economically active persons to help finance social security by eliminating distortions in the tax system that discourage employment, while enhancing its redistributive function to achieve an optimal tax mix.

Figure 2.21. Japan's tax and social security burden is relatively low

In 2017 or latest year available



Source: OECD Revenue Statistics database.

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Further hikes in the consumption tax are needed

A greater role for the consumption tax would improve intergenerational equity, as the elderly would bear more of the tax burden. Indeed, a person born in 1940 receives 16.4% of lifetime earnings in net transfers, while one born in 2010 pays 12% (OECD, 2017b). In addition, the consumption tax is a relatively stable revenue source and is less harmful for economic growth, as it imposes fewer distortions on employment and investment. As noted above, a fiscal consolidation of between 5% and 8% of GDP after achieving a primary balance is necessary to reduce the government debt ratio. Achieving this through

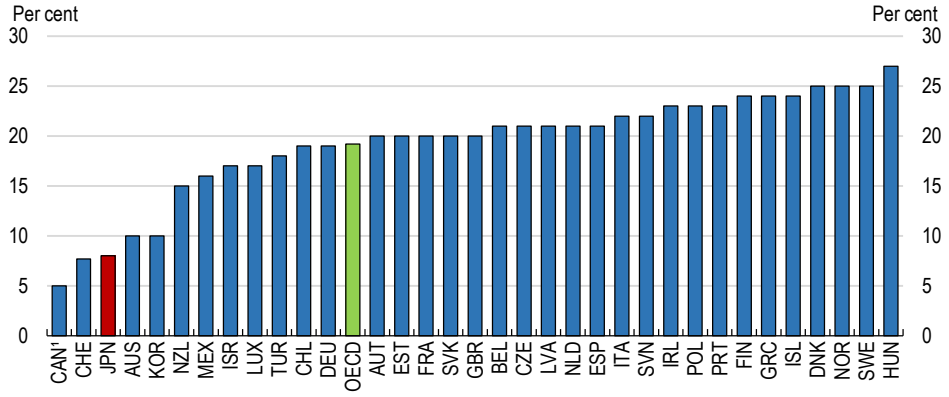
consumption tax hikes alone would require boosting the rate by 10 to 16 percentage points. Consequently, the rate would have to rise from 10%, which would be the third lowest in the OECD, to between 20% and 26%, exceeding the OECD average of 19% (Figure 2.22). In any case, hikes in the consumption tax rate should be gradual to limit their economic impact. In sum, a VAT is the most appropriate tax for raising revenue in Japan. In addition, raising excise duties on alcohol and cigarettes, which also helps enhance health and reduce healthcare spending, would be a good source of additional revenue.

Japan's single consumption tax rate has been effective in raising revenue. However, an increase in the consumption tax rate above the OECD average would require policies to prevent low-income households from falling into poverty. With the planned increase in the rate to 10% in 2019, the government intends to introduce multiple rates in an effort to soften the regressive impact. However, multiple tax rates are not an effective approach as most of the benefits go to high-income households (OECD, 2018e). The revenue foregone by introducing a lower rate for food and beverages, excluding alcoholic beverages and restaurants, would be better used for a cash transfer programme that compensates low-income households for the consumption tax they have paid. For example, an earned income tax credit (EITC) better targets government assistance on those in need, as well as encouraging their labour force participation.

In addition to failing to promote income equality, a multiple-rate consumption tax limits revenue gains, thus requiring an even higher standard rate. An 8% rate for food and beverages would reduce tax revenue by JPY 1.1 trillion (0.2% of GDP), requiring a standard rate of 10.4% to offset it. Introducing multiple VAT rates has additional drawbacks. *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 (2017 *OECD Economic Survey of Japan*). In sum, a stronger welfare system targeted at those in need is better than introducing a consumption tax system with multiple rates.

Figure 2.22. Japan's consumption tax rate is relatively low

Standard VAT rates in 2018



1. In Canada, provinces can levy a consumption tax on top of the federal tax, making it higher than Japan's 8%.
Source: OECD (2018a).

StatLink http://dx.doi.org/10.1787/888933954855

Broadening the personal income tax base and reducing labour supply distortions

Personal income tax revenue in Japan is low as more than half of personal income is exempted by a range of deductions applicable to both married and single households (Table 2.8). Reducing the wage income deduction, the largest deduction at 30.4% of gross personal income before taxes, is a key to broadening the tax base. The generous deduction for employees is intended to equalise the tax burden on employees and the self-employed, who tend to avoid a significant share of their tax liability (OECD, 2017b). As the Social Security and Tax Number System ("My Number"), which was introduced in 2016, increases transparency of the self-employed, the rationale for the deduction weakens. However, the take-up rate of the My Number cards was only 11.5% of the population as of July 2018. A survey found that the major reasons for not getting an identification card are: *i)* do not see the need (58%); *ii)* have other personal identification documents (42%); and *iii)* worry about leaks of personal information (27%) (Cabinet Office, 2018). Further steps to make the My Number cards more convenient and useful would help increase their use.

Table 2.8. Japan's personal income tax deductions are more generous than in other countries

Per cent of gross income before taxes in 2017

A. Married household with two children with one worker earning the average wage

	Basic deduction	Spouse deduction	Child-rearing deduction	Deduction for social security contributions and income taxes	Wage income deduction	Other	Total deduction
Japan	7.3	7.3	0.0	14.4	30.4	0.0	59.4
OECD	6.0	1.7	4.9	7.0	1.9	1.7	23.2

B. Single household earning the average wage

	Basic deduction	Spouse deduction	Child-raring deduction	Deduction for social security contributions and income taxes	Wage income deduction	Other	Total deduction
Japan	7.3	0.0	0.0	14.4	30.4	0.0	52.1
OECD	4.6	0.0	0.0	7.0	1.9	1.3	14.7

Source: OECD (2018d).

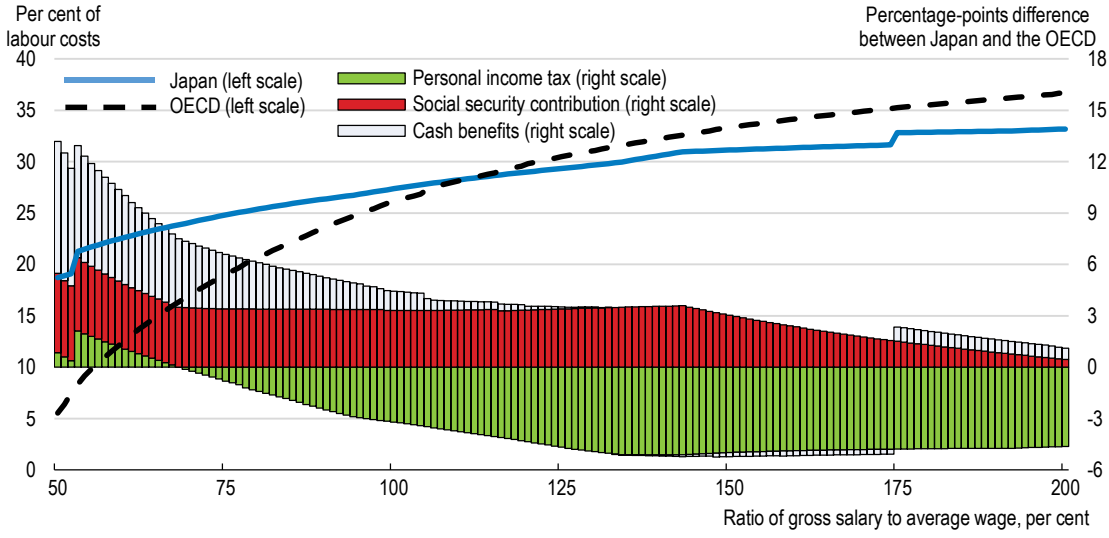
Moreover, the wage-income deduction will tend to bias workers' choices toward salaried jobs against other work options. In 2020, Japan will address this issue by cutting the deduction by JPY 100 000 (USD 890) for all salaried workers and lowering its maximum amount to JPY 1.95 million (USD 17 355). Meanwhile, the basic deduction that applies to all taxpayers rises from JPY 380 000 to JPY 480 000. In the longer term, the wage-income deduction should be reduced further and turned into a tax deduction whose value is independent of a taxpayer's income.

Another important deduction is for spouses, which exempts JPY 380 000 (USD 3 382) from the main earner's taxable income if the second earner's income is below a ceiling. This deduction has encouraged second earners, primarily married women, to reduce working time to keep their income below the threshold (Chapter 1). Moreover, the deduction primarily benefits higher-income households. In 2018, the government raised the ceiling from JPY 1.03 million to JPY 1.5 million (USD 13 350) and the deduction is

no longer available to households in which the primary earner has an income of more than JPY 12.2 million (USD 108 580).

Figure 2.23. Japan's tax wedge is high for low-income households

The tax wedge[1] is shown by the lines and the bars show its components relative to the OECD average in 2017



1. For a one-earner married couple with two children, calculated as the difference between labour costs and the sum of personal income tax, employee and employer social security contributions minus cash benefits received by the employee. The positive bar for cash benefits for lower-income households means that cash benefits are less generous than the OECD average, contributing to a higher effective tax rate than the OECD average.
Source: OECD Taxing Wages database.

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Reforming deductions beneficial to high-income households would help restore the redistributive function of the personal income tax. Under the current tax system, the tax wedge in Japan is relatively flat across the income distribution and significantly higher than the OECD average for low-income families with children (Figure 2.23). Social security contributions, which are higher than the OECD average for low-income families, contributes to the high tax wedge. Another factor is cash benefits, which are less focused on low-income families than in the OECD area. Japan's personal income tax system is most generous for households with earnings 1.4 times higher than average. From 2020, the basic deduction is subject to an income restriction, The system could be made more progressive by replacing the deductions focused on high-income households with a tax credit targeting lower-income households, which would slightly increase the tax burden on the upper half (2015 *OECD Economic Survey of Japan*). In addition, the focus of cash benefit programmes should shift toward lower-income households.

Another factor limiting the redistributive impact of Japan's tax system is the public pension deduction, which covers nearly half of pension benefits. Japan will reduce the deduction by JPY 100 000 (USD 890) across the board from 2020, with a deduction cap for pension income exceeding JPY 10 million and a further reduction of the deduction for pensioners who have other income exceeding JPY 10 million. With the rise in the basic deduction by the same amount, the universal reduction of the pension deduction will improve neutrality of the personal income tax system with regard to the elderly's decision to work. On the other hand, only 3 000 pensioners will be subject to the deduction cap,

while 200 000 exceed the cap on other income. There appears to be further scope to limit the pension deduction in order to strengthen the redistributive function of the tax system.

Corporate income and capital taxation to promote inclusive growth

Japan reduced its combined (national and local government) corporate income tax rate from 37% in FY 2013, the second highest in the OECD, to 29.74% in FY 2018. The rate is still higher than the OECD average of 23.7%. The FY 2018 tax reform included measures to encourage wage hikes and promote investment to boost output growth. Given the complexity of corporate income taxes, which vary with company size, there is scope to further simplify them to promote investment and growth (OECD, 2018b).

Raising taxes on capital gains and dividends at the personal shareholder level would boost revenue and enhance the progressivity of the tax system. The effective personal income tax rate peaks at slightly below 30% for those with an income between JPY 50 million and 100 million (USD 890 000), and then falls to 17%. This decline reflects the lower tax rate on capital gains, which are concentrated among the highest-income earners. Raising the tax rate for capital gains and dividends from 20% to 25% would boost revenue by about 0.1% of GDP, while improving income redistribution.

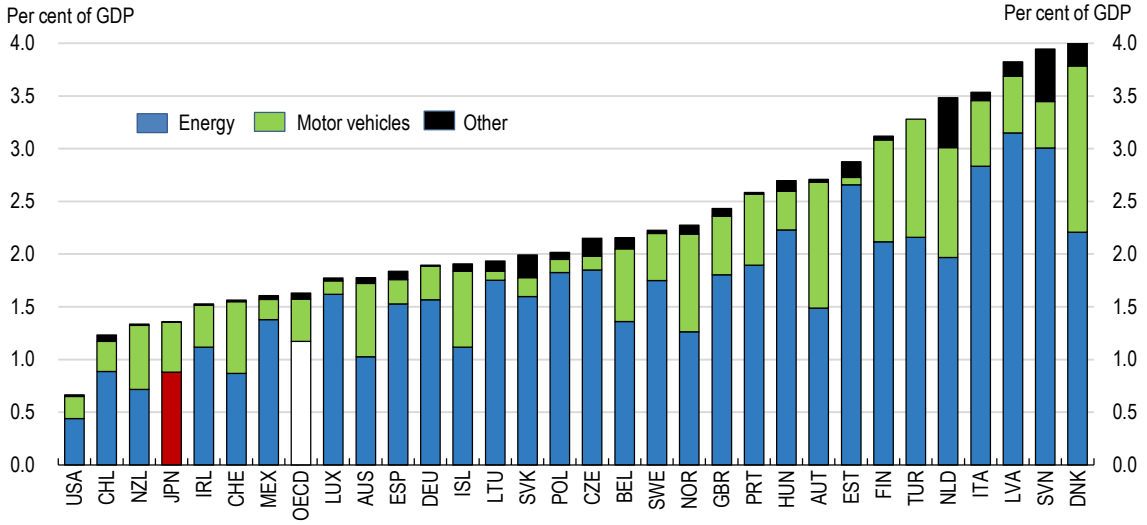
To reduce wealth inequality, a capital income tax is most effective when accompanied by well-designed wealth taxes, such as those on property and inheritances. As it is levied on an accrual basis, a wealth tax can capture deferred or unrealised capital gains, which are difficult to tax under realisation-based income taxation. Of the forms of wealth taxation, an inheritance tax has advantages over a recurrent tax on net wealth. Inherited wealth is taxed only once and when it is in the hands of the recipient rather than the donor. Moreover, an inheritance tax has lower administrative costs (OECD, 2018f). Japan strengthened the inheritance tax in 2015 by reducing the deduction and enhancing the progressivity of tax rates. The number of donors whose bequests were taxed nearly doubled from 56 000 in 2014 to 106 000 in 2016, which accounts for 8% of the deceased. Further broadening this tax base would contribute to equality as well as increasing revenue.

Increasing the use of environmental taxation

The closure of the nuclear power plants following the 2011 Great East Japan Earthquake resulted in a rise in the carbon intensity of Japan's energy mix. Japan's intended Nationally Determined Contribution aims to cut the country's emissions by 26% from 2013 levels by 2030 through a comprehensive approach that promotes energy efficiency and greater use of low-carbon energy sources, such as nuclear and renewable energy. Raising environmentally-related taxes would boost revenue while helping to reduce GHG emissions and achieve other environmental objectives, such as improving air quality. While Japan has taken steps by introducing a CO_2 tax on selected energy products in 2012, environmentally-related taxes were only 1.4% of GDP, the fourth lowest in the OECD in 2016 (Figure 2.24).

Figure 2.24. Environmentally-related taxes are low in Japan

Per cent of GDP in 2016



Source: OECD (2018c).

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Main policy recommendations to meet fiscal challenges in a rapidly ageing society

Key recommendations

- Develop a comprehensive fiscal consolidation plan covering specific spending cuts and tax increases, including a further gradual rise of the consumption tax, to ensure fiscal sustainability.
- Take long-term care out of hospitals and shift its focus to home-based care.
- Promote greater use of generic drugs by making them the standard for reimbursement by health insurance.
- Raise the co-payment rate of the elderly for health and long-term care services by establishing the ability-to-pay principle through an effective system for assessing income and assets.
- Step up the promotion of the joint provision of local public services and infrastructure across jurisdictions and the development of compact cities.
- Remove distortions in tax and social benefit systems, such as the spousal deduction, that discourage labour force participation, while increasing the coverage of firm-based social insurance.
- Gradually raise the pension eligibility age above 65 to maintain a sufficiently high replacement rate while taking measures to expand senior employment.

Further recommendations

- Improve the fiscal framework, including taking measures to insulate assessment of macroeconomic and fiscal forecasts and the monitoring of fiscal plans from normative policy-making responsibility.
- Shift the tax mix by reducing the share of social security contributions and increase the share of taxes on consumption and personal income.

- Reduce long-term care insurance coverage by focusing preventive care on effective programmes and removing unnecessary services for those with less severe care needs.
- Improve the effectiveness of health check-ups and health guidance to lengthen the healthy life span.
- Develop measures to balance healthcare supply and demand at local levels, including through the application of different medical service fees by prefecture.
- Enhance the Basic Pension's role of providing income security for the elderly, while focusing the Basic Livelihood Protection Programme on the working-age population and introducing an earned income tax credit.
- Promote greater use of private pension plans to complement public pension programmes.
- Make the inheritance registration system mandatory and integrate management of land ownership records to improve the institutional framework for land-use and address the problems of unidentified owners and abandoned houses.
- Raise taxes on personal capital income to increase the effective tax rate on high-income earners, accompanied by a further broadening of the inheritance tax.
- Increase the coverage of firm-based social insurance and ensure better compliance with the public pension schemes.

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Annex 2.1. Long-term debt sustainability analysis

The evolution of gross debt as a share of GDP (d) depends on the primary balance as a share of GDP (pb) and on the difference between the nominal interest rate and the growth rate of nominal GDP (g) (assuming no sales or purchases of assets):

$$d_t = -pb_t + \frac{1 + r_t}{1 + g_t} d_{t-1} \,.$$

The baseline case in Figure 2.1.1 below (and in Figure 2.7 in the main text) illustrates the debt dynamics implied by the government's economic and fiscal projections, assuming no fiscal consolidation measures are taken over 2021-60. The debt ratio is calculated under the following assumptions, which are summarised in Table 2.1.1:

- Economic growth, long-term interest rates and public spending through 2020 follow *OECD Economic Outlook,* No. 104. The gap between the nominal interest rate and the growth rate of nominal GDP is 1.6 percentage points, close to the historical average of 1.5 points over 1970-2017.
- The assumptions of economic growth and the long-term interest rate for 2021-27 are based on the "Economic Growth Achieved Case" in the Cabinet Office's *Economic and Fiscal Projections for Medium to Long Term Analysis* (Cabinet Office, 2019). Those for 2028-60 are based on "Case A" in the Ministry of Health, Labour and Welfare's *Actuarial Valuation of Employees' Pension Insurance and the National Pension in FY 2014*, which assumes that total factor productivity growth reaches 1.8% and a rise in labour force participation moderates a decline in hours of labour input to 0.3%, while inflation stays at 2.0%. Case A is compatible with the "Economic Revitalization Case" in the Cabinet Office projections (Cabinet Office, 2014) (Table 2.1.1, Panel A).
- Spending on public pensions, healthcare and other social spending through 2040 is based on the projected spending as shares of GDP in the *Outlook of Social Security Toward 2040: A Reference for Discussion* by the Cabinet Secretariat and other agencies (Cabinet Secretariat et al. 2018). For the period 2041-60, the assumptions are based on the Fiscal System Council's *Long-term Estimations of Japanese Finance* by the Fiscal System Council, 2018 (Table 2.1.1, Panel B).
- Other public spending and revenue are assumed to remain constant as a share of GDP over 2020-60.

In the baseline simulation, the debt ratio reaches 560% of GDP in 2060. The underlying government healthcare spending projections are based on current per capita benefit levels by age, taking changes in the demographic structure into account. This approach is in line with those of the European Commission and the OECD. To gauge the impact of population ageing, a "no ageing-pressure" scenario assumes that healthcare benefits and other social security benefit as shares of GDP are fixed at their 2020 levels. In this scenario, gross debt rises to 455% of GDP in 2060.

To see the impact of recent reforms, a "cost-pressure" scenario assumes that healthcare spending through 2060 linearly increases toward the level projected in 2013, assuming no stepped-up policy action to curb spending pressure (de la Maisonneuve and Oliveira Martins, 2013). The debt ratio then rises to 603% by 2060 (Annex Figure 2.1.1).

Table 2.1.1. Assumptions underlying the long-term debt simulations

A. Macroeconomic assumptions

Average over the period, per cent

	Nominal economic growth rate	Real economic growth rate	Inflation rate	Nominal interest rate
2021-27	3.4	2.0	1.4	1.8
2028-60	3.4	1.4	2.0	5.0

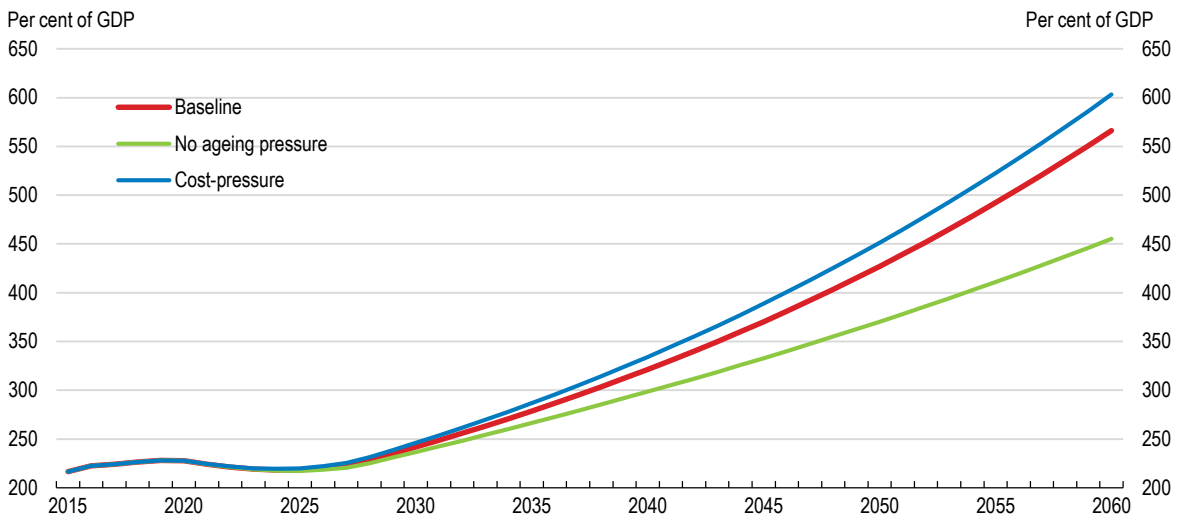
B. Spending and revenue assumptions

Per cent of GDP

	Public pension benefit	Healthcare spending		Other social security benefits	Other public spending	Tax and social security contributions
		Baseline scenario	Cost-pressure scenario			
2020	9.8	9.0	9.2	2.6	15.5	34.3
2025	9.1	9.4	9.8	2.7	15.5	34.3
2040	9.2	11.0	11.8	2.8	15.5	34.3
2060	9.5	13.7	14.5	2.8	15.5	34.3

Source: Cabinet Secretariat, Cabinet Office, Ministry of Finance, and Ministry of Health, Labour and Welfare (2018) ; Fiscal System Council (2018); Cabinet Office (2019); Ministry of Health, Labour and Welfare (2014); de la Maisonneuve and Oliveira Martins (2013); OECD Economic Outlook database; and OECD calculations.

Figure 2.1.1. Long-term gross government debt simulations



Source: OECD calculations.

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Japan's current economic expansion is its longest of the post-war era, with per capita output growth nearly matching the OECD area since 2012. However, the expansion has peaked and global uncertainties weigh on the outlook. Growth is projected to continue at a moderate rate, supported by expansionary monetary policies and fiscal measures to offset the 2019 consumption tax rate hike. Notwithstanding rising female participation, labour shortages are intensifying, reflecting Japan's shrinking and ageing population, thus underlining the importance of labour market reform. Traditional labour practices, such as seniority-based wages and mandatory retirement, are poorly suited to the era of 100-year lives. Comprehensive reforms, including abolishing the right of firms to set mandatory retirement and removing obstacles to female employment, are essential. Population ageing also puts further upward pressure on public social spending and government debt, which relative to GDP is already the highest ever recorded in the OECD area. Japan needs a comprehensive fiscal consolidation plan covering specific spending cuts and revenue increases to ensure fiscal sustainability. It is essential to contain the rise in health and long-term care spending, while expanding the joint provision of local public services across jurisdictions and developing compact cities in the context of depopulation.

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