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Table of contents

Basic Statistics of Spain, 2017 ..... **8**

Executive Summary **9**

Key Policy Insights **15**

Recent macroeconomic developments and short-term prospects 22
The recovery has been robust and balanced 22
Growth is set to continue, but at a slower pace 25
Strengthening the financial system's resilience to new challenges 27
Fiscal policy to manage medium-term sustainability risks 32
Fiscal vulnerabilities need to be addressed 32
Addressing spending pressures from demographic challenges is crucial 35
Addressing medium-term challenges to well-being 39
Income and wealth inequality should be further reduced 41
There is room to make growth greener 55
Boosting productivity and trade 57
There is room to increase internationalisation further 58
Removing barriers to firm growth will help increase internationalisation 60
Migration can facilitate trade 65

References **68**

Annex. Progress in main structural reforms **75**

Thematic Chapter **79**

Chapter 1. Reducing regional disparities for inclusive growth **81**

Challenges for lagging regions 84
Regional disparities in well-being are more pronounced than disparities in income 84
Regional dispersion in labour market outcomes is high 86
Low skills can be a barrier to growth in lagging regions 88
Low productivity growth also contributes to regional disparities 90
Addressing regional disparities in labour market outcomes 93
Improving the employability of low-skilled unemployed 93
Boosting labour mobility 94
Lowering regional disparities in education outcomes 98
Improving the adaptability of workers through lifelong learning 100
Ensuring a better matching of skills with labour market needs 102
Raising the overall level of basic skills and increasing equality of opportunity 107
Boosting productivity and firm dynamism across regions 109
Reducing regulatory differences 109
Raising the ability of regions to benefit from spillovers 111
Getting the most out of decentralisation 120
Improving evaluation, coordination and sharing of best practices 120
Strengthening the fiscal framework and rules 120

References **128**

Tables

Table 1. Macroeconomic indicators and projections 26
Table 2. Shocks that could strongly impact the Spanish economy 27
Table 3. Illustrative fiscal impact of recommended reforms 34
Table 4. Past OECD recommendations on fiscal sustainability 35
Table 5. Factors associated with greater household wealth accumulation 43
Table 6. Past OECD recommendations on tax, social and labour market policies 55
Table 7. Potential impact of structural reforms on GDP per capita 62
Table 8. Past OECD recommendations on improving the business climate 66
Table 1.1. Regional differences in education outcomes 99
Table 1.2. Catch up to the national productivity frontier 112
Table 1.3. Labour misallocation according to firm age 114
Table 1.4. Regional innovation performance 117

Figures

Figure 1. The economy and employment have grown steadily 16
Figure 2. High unemployment and debt levels represent vulnerabilities 17
Figure 3. Lower labour productivity and labour utilisation both contribute to GDP per capita gaps 18
Figure 4. Boosting growth potential requires higher multifactor productivity growth 19
Figure 5. Regional dispersion in well-being is high 20
Figure 6. The recovery has been strong 22
Figure 7. Export performance has been strong 23
Figure 8. Structural factors have contributed to the changes in the current account 24
Figure 9. Exports have become more diversified 25
Figure 10. Macro-financial vulnerabilities have decreased 28
Figure 11. Capital ratios have increased, but remain low 28
Figure 12. Non-performing loans are falling, but remain high 29
Figure 13. House prices are recovering slowly and unevenly 30
Figure 14. Home bias in banks' holdings of government bonds is still high 31
Figure 15. Private sector debt is declining 32
Figure 16. High pension costs highlight the importance of a durable reduction of public debt 33
Figure 17. The old-age dependency ratio in Spain will more than double by 2050 36
Figure 18. The replacement rate for pensions in Spain remains high for those having a full career 38
Figure 19. Operating expenses of private pension systems in selected OECD countries 39
Figure 20. Well-being performance is mixed 40
Figure 21. Income inequality is high 41
Figure 22. Wealth inequality is comparatively low 42
Figure 23. Social expenditure is relatively high, but could be better targeted 44
Figure 24. Taxation remains tilted towards labour 46
Figure 25. Spain is a competitive tourism destination 47
Figure 26. The labour market remains segmented 49
Figure 27. Wage declines disproportionately affected the lowest deciles during the crisis 50
Figure 28. Gender pay gap decreases with education 51
Figure 29. The share of workers covered by firm-level collective agreements is low 52
Figure 30. Education outcomes vary by socio-economic conditions 53
Figure 31. The rate of child poverty is high 54
Figure 32. Green growth indicators: Spain 56
Figure 33. Environment-related patents are not concentrated on water 57

Figure 34. Trade performance could be enhanced further ... 58
Figure 35. Spain can improve its participation in global networks in a number of dimensions ... 59
Figure 36. The share of exporting SMEs has increased, but remains relatively low ... 59
Figure 37. Employment in SMEs is relatively high, but their productivity is low ... 60
Figure 38. Barriers to entrepreneurship are high ... 61
Figure 39. Public procurement could be better utilised ... 64
Figure 40. Spain has previously not attracted highly educated migrants ... 66
Figure 1.1. Income per capita differs across regions ... 82
Figure 1.2. Per capita income growth has become stronger in richer regions than in poorer ones ... 83
Figure 1.3. Regional disparities in income and poverty are high ... 85
Figure 1.4. Regional disparities may have implications for well-being at the country level ... 86
Figure 1.5. The dispersion of unemployment rates across regions is relatively high ... 87
Figure 1.6. Low levels of education are associated with high unemployment rates at the regional level ... 88
Figure 1.7. School performance displays large regional disparities ... 89
Figure 1.8. Some regions have low demand and supply of skills ... 89
Figure 1.9. Labour productivity is also a driver of regional disparities ... 90
Figure 1.10. There is much scope to boost the productivity of Spanish frontier firms ... 91
Figure 1.11. Investment in intangible assets is low in most regions ... 92
Figure 1.12. Regional differences in terms of the percentage of high productivity firms are high ... 92
Figure 1.13. Within-country dispersion in business survival rates ... 93
Figure 1.14. Annual regional migration rate ... 95
Figure 1.15. Burden of housing costs, especially for tenants and low-income households, is high ... 97
Figure 1.16. Potential gains to productivity from policy reforms that reduce skill mismatch ... 99
Figure 1.17. Participation in life-long learning across Europe by educational attainment ... 101
Figure 1.18. The changes in nature of jobs require new skills ... 104
Figure 1.19. There is scope to improve digital skills ... 105
Figure 1.20. Spanish firms lag in their use of key digital technologies ... 106
Figure 1.21. Grade repetition and early school leaving rates are positively related at the regional level ... 107
Figure 1.22. Education outcomes vary by socio-economic conditions ... 108
Figure 1.23. Economic regulation is relevant for firm growth ... 110
Figure 1.24. Barriers to starting a business and business birth rates at the regional level ... 111
Figure 1.25. Factors and policies to boost spillovers from the frontier ... 113
Figure 1.26. Resource misallocation is heterogeneous across Spanish regions ... 115
Figure 1.27. The share of jobs with high-performance workplace practices is low ... 116
Figure 1.28. Regions have different strengths in terms of exposure to international factors ... 119
Figure 1.29. Distribution of expenditures and revenues across levels of government ... 121
Figure 1.30. Responsibilities of regional governments are large in some areas ... 122
Figure 1.31. Vertical transfers increase dispersion of regional resources ... 124
Figure 1.32. Regional debt indicators ... 125

Boxes

Box 1. Economic priorities of the new government ... 21
Box 2. Quantifying the fiscal impact of selected policy recommendations ... 34
Box 3. Income and wealth mobility in Spain ... 42
Box 4. Selected tax reforms since 2014 ... 45
Box 5. Quantification of structural reforms ... 62
Box 6. Other recommendations on macro and structural policies ... 67

Box 1.1. Responsibilities across different levels of government 83
Box 1.2. Recent initiatives in lifelong learning 100
Box 1.3. Existing policies to boost digital skills and adoption 107
Box 1.4. Achieving good education outcomes: the case of Castille-Leon 109
Box 1.5. Firm productivity convergence in Spain 112
Box 1.6. Resource misallocation in Spain 114
Box 1.7. Reform of the regional financing system in 2009 123
Box 1.8. Recommendations 126

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Basic Statistics of Spain, 2017

(Numbers in parenthesis refer to the OECD average)

LAND, PEOPLE AND ELECTORAL CYCLE					
Population (million)	46.5		Population density per km²	93.1	(35.8)
Under 15 (%)	14.7	(17.9)	Life expectancy (years, 2016)	83.4	(80.6)
Over 65 (%)	19.4	(16.8)	Men	80.5	(77.8)
Foreign-born (%, 2016)	12.7		Women	86.3	(83.2)
Latest 5-year average growth (%)	-0.1	(0.6)	Latest general election	March	2016
ECONOMY					
Gross domestic product (GDP)			Value added shares (%)		
In current prices (billion USD)	1,314.2		Primary sector	3.0	(2.5)
In current prices (billion EUR)	1 163.7		Industry including construction	24.1	(26.9)
Latest 5-year average real growth (%)	1.9	(2.1)	Services	72.9	(70.7)
Per capita (000 USD PPP)	38.0	(43.7)			
GENERAL GOVERNMENT					
Per cent of GDP					
Expenditure[a]	41.0	(40.7)	Gross financial debt[a]	114.9	(109.9)
Revenue	37.9	(39.1)	Net financial debt[a]	81.4	(71.0)
EXTERNAL ACCOUNTS					
Exchange rate (EUR per USD)	0.885		Main exports (% of total merchandise exports)		
PPP exchange rate (USA = 1)	0.658		Machinery and transport equipment	32.9	
In per cent of GDP			Manufactured goods	14.7	
Exports of goods and services	34.1	(55.7)	Food and live animals	12.9	
Imports of goods and services	31.4	(51.3)	Main imports (% of total merchandise imports)		
Current account balance	1.9	(0.4)	Machinery and transport equipment	31.2	
Net international investment position	-85.9		Miscellaneous manufactured articles	13.5	
			Chemicals and related products, n.e.s.	13.4	
LABOUR MARKET, SKILLS AND INNOVATION					
Employment rate for 15-64 year-olds (%)	61.1	(67.7)	Unemployment rate, Labour Force Survey (age 15 and over) (%)	17.2	(5.8)
Men	66.5	(75.4)	Youth (age 15-24, %)	38.7	(11.9)
Women	55.7	(60.1)	Long-term unemployed (1 year and over, %)	7.7	(1.7)
Participation rate for 15-64 year-olds (%)	73.9	(72.0)	Tertiary educational attainment 25-64 year-olds (%)	36.4	(36.9)
Average hours worked per year	1 687	(1 759)	Gross domestic expenditure on R&D (% of GDP, 2016)	1.2	(2.3)
ENVIRONMENT					
Total primary energy supply per capita (toe, 2015)	0.0	(0.0)	CO_2 emissions from fuel combustion per capita (tonnes, 2015)	0.0	(0.0)
Renewables (%, 2015)	14.4	(9.6)	Water abstractions per capita (1 000 m³, 2016)	0.0	
Exposure to air pollution (more than 10 µg/m³ of PM2.5, % of population, 2015)	74.3	(75.2)	Municipal waste per capita (tonnes, 2016)	0.0	(0.0)
SOCIETY					
Income inequality (Gini coefficient, 2015)	0.345	(0.314)	Education outcomes (PISA score, 2015)		
Relative poverty rate (%, 2015)	15.3	(11.8)	Reading	496	(493)
Median disposable household income (000 USD PPP, 2015)	20.6	(23.2)	Mathematics	486	(490)
Public and private spending (% of GDP)			Science	493	(493)
Health care	8.8	(8.8)	Share of women in parliament (%)	39.1	(29.2)
Pensions (2013)	12.0	(9.1)	Net official development assistance (% of GNI)	0.19	(0.37)
Education (primary, secondary, post sec. non tertiary, 2014)	3.0	(3.6)			

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 the OECD.

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

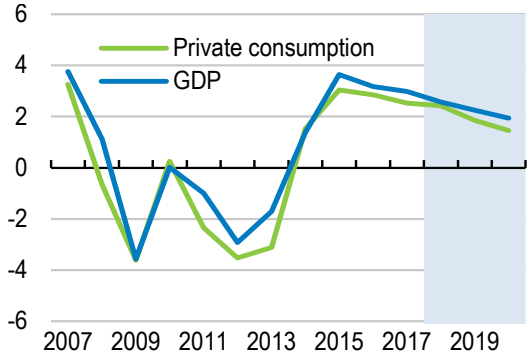
- *Spain has made a successful recovery*
- *The resilience of public finances should be increased to address medium-term challenges*
- *Bringing people back into employment and reducing regional disparities would make growth more inclusive*
- *Policies to improve competition and innovation will be key to boosting productivity growth and exports*

Spain has made a successful recovery

The strong recovery continues (Figure A). Real GDP grew by around 3% in the past three years, outpacing most other euro area economies. Past structural reforms, robust employment growth, gains in competitiveness and favourable external and financial conditions have supported economic activity. Momentum for structural reform should be maintained to improve the resilience of the Spanish economy. Current account surpluses in recent years have contributed to the reduction in Spain's external liabilities, which nevertheless remain high.

Figure A. Growth has been robust

Percentage



Source: OECD, Economic Outlook (database).

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Growth is set to continue, though at a slower pace (Table A). Growth, supported by low interest rates and robust job creation, will continue to be broad-based. The unemployment rate is expected to edge down to 12.5% in 2020, which would still be above that of the euro area and pre-crisis levels. Risks to the outlook remain sizeable. Slowing global trade growth could undermine exports. Turbulence in international markets and political uncertainty could lower private sector confidence, hampering domestic demand. On the other hand, domestic demand could prove more resilient than expected, if the slowdown in the pace of job creation is more moderate.

Table A: Economic growth is set to moderate

	2018	2019	2020
Gross domestic product (GDP)	**2.6**	**2.2**	**1.9**
Private consumption	2.4	1.8	1.5
Government consumption	2.1	1.6	1.3
Gross fixed capital formation	6.1	3.8	3.8
Exports of goods and services	1.6	2.8	4.0
Imports of goods and services	3.5	2.9	4.1
Unemployment rate	15.3	13.8	12.5
Consumer price index	1.9	1.9	1.7

Source: OECD, Economic Outlook (database).

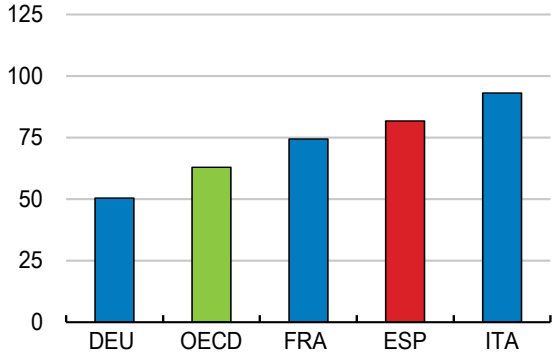
The resilience of public finances should be increased to address medium-term challenges

The public debt to GDP ratio is falling, but is high at 98%. Recent improvements have been mostly due to favourable economic conditions. As the recovery continues, the government should stick to medium-term fiscal targets to ensure a durable reduction of public debt.

The old-age dependency ratio is set to more than double by 2050. Even with the recent pension reforms, pension replacement rates for those having a full career remain above the OECD average (Figure B). The current system creates disincentives to extend working lives after the attainment of required contribution periods and penalises some who continue to work while receiving a pension.

Figure B. Pension replacement rates remain high

Net pension replacement rates: Average earners



Source: OECD (2017), Pensions at a Glance.

StatLink https://doi.org/10.1787/888933873041

There is room to further improve the fiscal framework. The introduction of debt, deficit and expenditure rules for regions in 2012 has strengthened the fiscal framework. In practice, regions only apply the deficit rule, which tends to make their expenditures pro-cyclical and does not help them converge towards their debt targets. Rules should be reinforced by making the expenditure rule the main tool to achieve sustainability in public finances. Expenditure growth should be set to achieve a regular decrease in the debt ratio towards targets set by the Stability and Growth Pact.

Bringing people back into employment and reducing regional disparities would make growth more inclusive

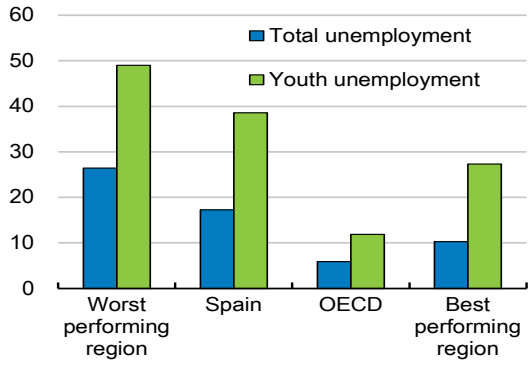
Income inequality and poverty rates are high, with regional differences. Given the high degree of decentralisation, regional policies and institutions are key to the effective implementation of national labour market and education policies, which can help lower inequalities. More effective coordination and sharing of best practices across regions would help reduce regional disparities.

More effective use of taxes and transfers would lower inequalities. Taxation remains tilted towards labour income, which penalises growth and employment. There is room to utilise less distortive environmental taxes and value-added taxes (VAT). The income and VAT bases are eroded by various exemptions and reduced rates, which are poorly targeted tools in terms of reducing income inequality. Higher environmental taxes would also have the additional benefit of lowering emissions.

Unemployment is decreasing, but remains high, especially for the youth and the long-term unemployed (Figure C). The share of active labour market spending on training remains low, which can be a barrier to the up-skilling of the labour force. While it is important to guarantee the quality of training centres, competition is also needed. Regions favour local training providers by making requirements, such as permanent establishment, mandatory. Removing such barriers could improve the efficiency of ALMPs and decrease their cost. An effective evaluation system is also needed to ensure the quality of training.

Figure C. Unemployment remains high in Spain

% of labour force in each age group, 2017



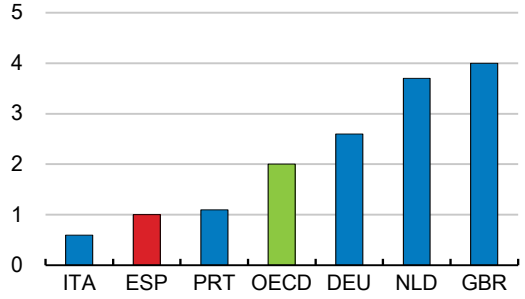
Source: OECD, Labour and Regional Statistics.

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Inter-regional migration remains low (Figure D). Lack of full portability of social and housing rights across regions, due to prior residency requirements, contributes to low labour mobility. Ensuring full portability of these benefits across regions, by providing temporary assistance either by the region of origin or the central government, should be considered. The structure of responsibilities of labour market and social policies are spread across different levels of government and regions. Introducing a single point of contact for employment and social services to provide integrated support for jobseekers would improve coordination and information sharing.

Figure D. Regional migration rates are low

Flows across TL3 regions, average 2013-2016, % of total population



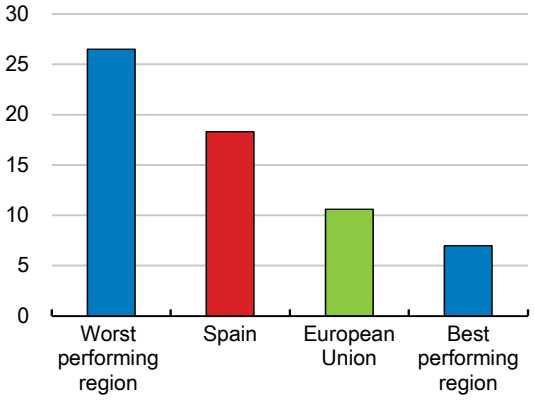
Source: OECD (2018), Regions and Cities at a Glance (database).

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Regions differ considerably in their ability to develop, attract and retain skilled labour. Skills proficiency is among the lowest across OECD countries and should be improved to meet future skill needs. Increasing the adaptability of workers, *via* lifelong learning policies better targeting the participation of low-qualified adults, is essential. Early school leaving rates are declining, but remain high and display large regional differences (Figure E). Providing individualised support to students at the risk of failing at an early stage has contributed to lower early school leaving rates in some regions.

Figure E. Early school leaving rates are high in Spain

% of the population aged 18-24 with at most lower secondary education and not in further education or training, 2017



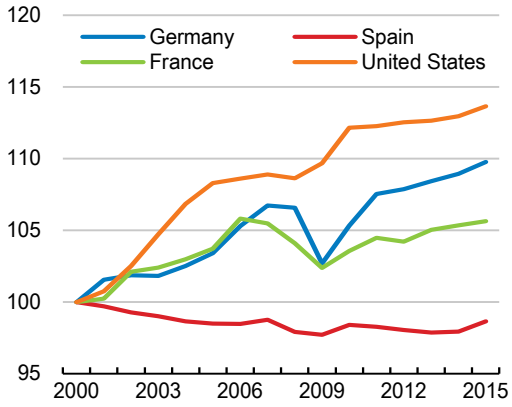
Source: Eurostat.

StatLink https://doi.org/10.1787/888933873098

Policies to improve competition and innovation will be key to boosting productivity growth and exports

There is ample room for policy to boost productivity growth, including in the best performing regions and firms. Productivity growth remains subdued (Figure F). The large productivity gap between Spanish firms and the best performing global firms suggests that policies to increase the exposure of firms to competition and innovation are needed. In addition, firms in regions with higher trade intensity, R&D expenditures and share of highly educated workers tend to have higher productivity growth.

Figure F. Multifactor productivity growth needs a boost



Source: OECD, Productivity Database.

StatLink http://dx.doi.org/10.1787/888933873117

Barriers can prevent firms from reaping the benefits of economies of scale and exporting. There are a number of regulations that depend on the size of firms in terms of employment and turnover, which can limit firm post-entry growth, and should be eliminated, as needed. Regional regulatory differences also create barriers to achieving a truly single market and firm growth, contributing to regional productivity differences.

Central and regional governments can strengthen the implementation of the Market Unity Law. The principle of national effectiveness of the Market Unity Law, which ensures that firms will not be subject to any additional requirements in other regions than their own, could be included in regional legislation. Enhanced cooperation and coordination across different levels of government is also key.

Public R&D funding and innovation promotion are shared competences between the central and regional governments, which increases the importance of coordination for successful outcomes. Innovation support is fragmented, making it harder for innovative firms to navigate the system. Efforts should continue to improve national and regional cooperation in the design and implementation of innovation policies to avoid duplication. Innovation can be made more effective through more widespread ex-post evaluation of policies and moving towards performance based funding.

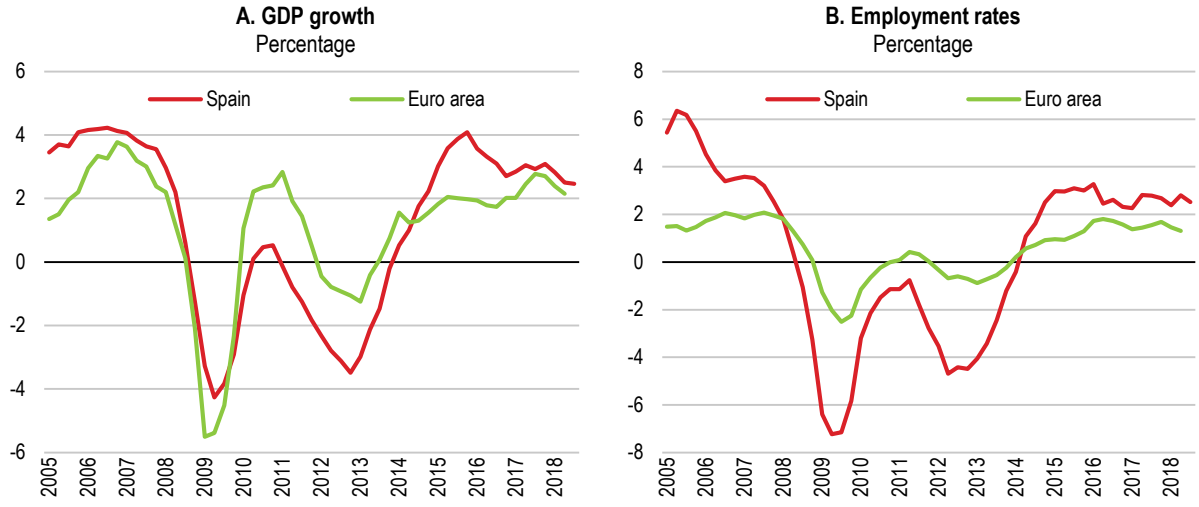
MAIN FINDINGS	KEY RECOMMENDATIONS
Framework and fiscal policies	
Structural reforms, notably in product and labour markets, have enhanced the competitiveness and resilience of the economy.	Maintain momentum for structural reforms enhancing productivity and job creation, together with continuous evaluation of reforms.
Public debt remains high, while the fiscal position has not improved as much as expected given the strength of economic activity.	Stick to medium-term fiscal targets to ensure a durable reduction of public debt. As the recovery continues, set a more ambitious fiscal consolidation path.
Taxation remains tilted towards labour, while value-added and environmental taxes are underutilised.	Abolish reduced value-added tax rates that are regressive. Increase taxation of fuels to better reflect emissions of CO_2 and other pollutants.
The design of fiscal rules for regions does not ensure a clear path of reduction in debt to targets.	Make the expenditure rule the main rule and link it to the debt ratio targets.
Population ageing will continue to put pressure on public finances.	Further extend the pensionable earnings reference period and the number of years of contributions required to gain a full pension.
Some people who combine work and pensions lose 50% of their pension payment, but do not accrue additional pension entitlements.	To increase the flexibility of combining work and pensions, do not reduce pension payments and allow additional pension entitlements to be earnt.
Improving labour market and education outcomes for lower regional disparities	
Spending on training is low.	Increase spending on training and job-search assistance.
Regions limit the entry of training providers from other regions.	Remove barriers to competition of training centres across regions.
Lack of integrated support for jobseekers lowers the effectiveness of social and labour market policies.	Introduce a single point of contact for social and employment services.
Moving to another region implies the loss of social and housing benefits due to prior residency requirements, which restricts labour mobility.	Ensure full portability of social and housing benefits across regions, by providing temporary assistance either by the region of origin or the central government.
Lifelong learning is not always targeted to low-skilled workers and individual training accounts are not utilised effectively.	Target existing financial incentives for lifelong learning opportunities to low-qualified workers and link them to individuals.
Early school leaving and grade repetition rates are high and vary by socio-economic background.	Increase individualised support to students at the risk of failing at an early stage.
Boosting productivity and internationalisation	
Regulations that depend on the size of firms can create barriers to firm growth.	Eliminate the existing regulations that depend on the size of firms, as needed.
The national effectiveness principle of the Market Unity Law, which lowers barriers to firms operating across regions, can be effective if incorporated in regional legislation.	Regions should include the principle of national effectiveness of the Market Unity Law in their legislation. Assess the compliance of new legislation at all levels of government with the principles of the Market Unity Law.
Innovation support is fragmented, which makes it harder for firms to navigate the system and can lead to duplication.	Give the recently activated R&D Public Policy Network a strong mandate to further increase coordination of regional and national innovation policies.
Innovation funding is often not tied to ex-post evaluation.	Strengthen the ex-post evaluation framework of innovation support and consider increasing performance based funding.

Key Policy Insights

- *Recent macroeconomic development and short-term prospects*
- *Strengthening the financial system's resilience to new challenges*
- *Fiscal policy to manage medium-term sustainability risks*
- *Addressing medium-term challenges to well-being*
- *Boosting productivity and trade*

The Spanish economy continues its strong and balanced growth (Figure 1). Strong employment gains have reduced unemployment and provided support to households. A wide range of structural reforms (discussed in detail in the *2017 Economic Survey of Spain)* has contributed to the recovery. The correction of imbalances continues steadily, with a higher share of trade in gross value added, lower private debt and a healthier financial system. Maintaining momentum for structural reforms, notably in labour and product markets, is key to improve the resilience of the Spanish economy to future shocks.

Figure 1. The economy and employment have grown steadily

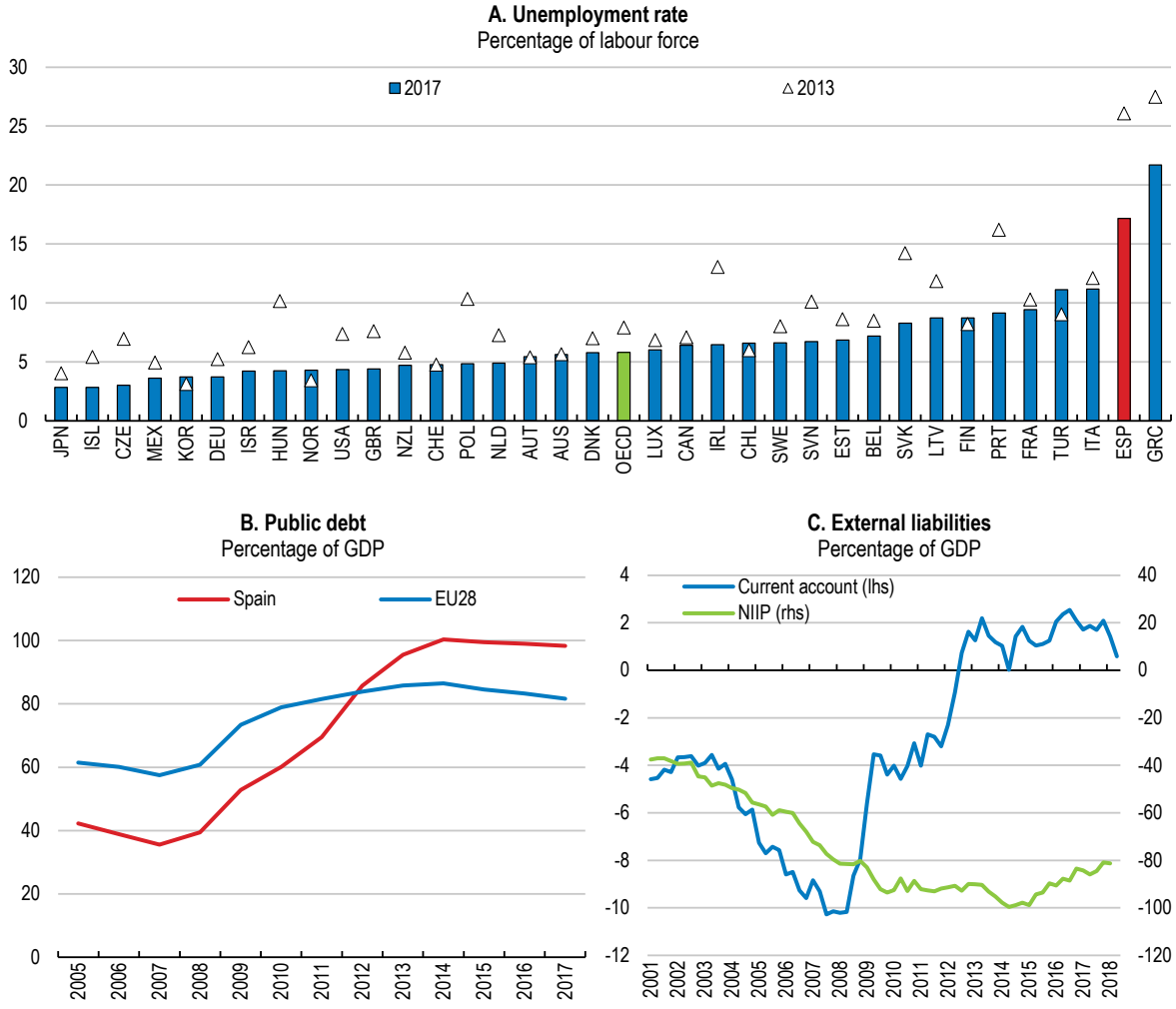


Source: OECD Economic Outlook (database), November 2018.

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However, the legacy of the crisis has not yet been fully overcome and imbalances remain. Despite large falls, the unemployment rate is still the second highest in the OECD (Figure 2, Panel A), which exacerbates inequalities and raises poverty. The labour market also remains highly segmented, with high rates of youth and long-term unemployment, and temporary contracts. After peaking at 100.4% of GDP in 2014, public debt has barely declined (Figure 2, Panel B). Population ageing implies a significant increase in age-related spending, potentially undermining fiscal sustainability. Current account surpluses in recent years have contributed to the reduction in Spain's external liabilities, but the negative net international investment position, at 80.9% of GDP in 2017, is still large in international perspective (Figure 2, Panel C).

Figure 2. High unemployment and debt levels represent vulnerabilities



Source: OECD Economic Outlook (database), Eurostat.

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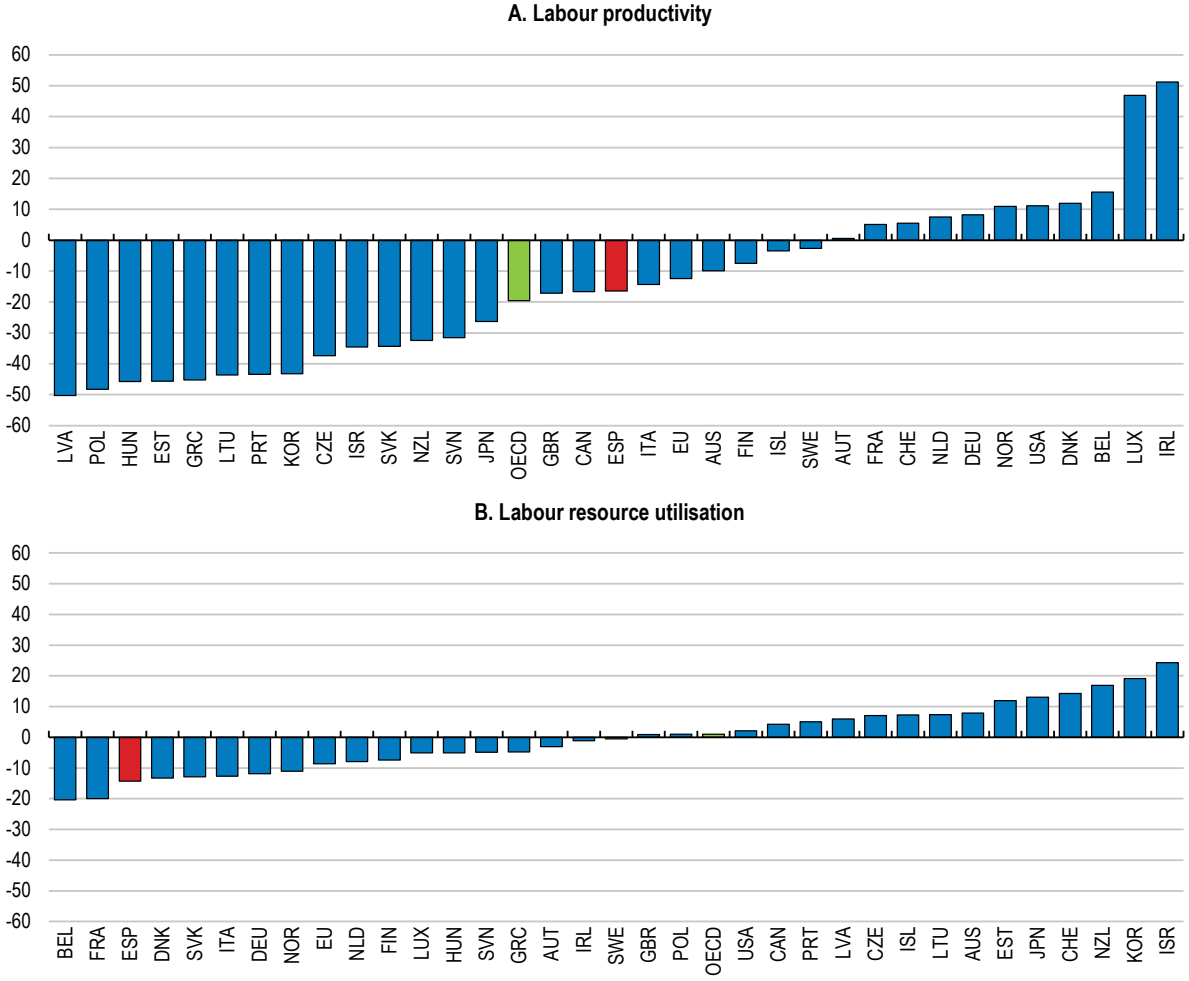
The gap in GDP per capita relative to the most advanced OECD countries remains large, reflecting differences both in labour productivity and labour utilisation (Figure 3). Significant differences in labour productivity and employment also explain regional disparities in GDP per capita (Chapter 1). Hence, future growth and well-being will hinge on a higher employment rate and productivity gains.

Labour productivity has improved in the post-crisis period, reflecting capital deepening and the reallocation of labour to more productive firms and sectors. However, multifactor productivity growth, which is more closely related to innovation, remains flat and is low in international perspective (Figure 4, Panel A). Raising multi-factor productivity is needed to maintain sustainable and inclusive growth going forward. The productivity gap between Spanish firms and the best performing global firms remains large, suggesting that policies that can increase international spillovers are key. Investment in knowledge-based capital as a share of GDP, which has been linked to productivity growth, is also low

(Figure 4, Panel B). Policies to boost innovation, digitalisation and skills will be crucial to boost growth potential and reduce regional disparities (Chapter 1).

Figure 3. Lower labour productivity and labour utilisation both contribute to GDP per capita gaps

Percentage difference vis-à-vis the upper half of OECD countries, 2017

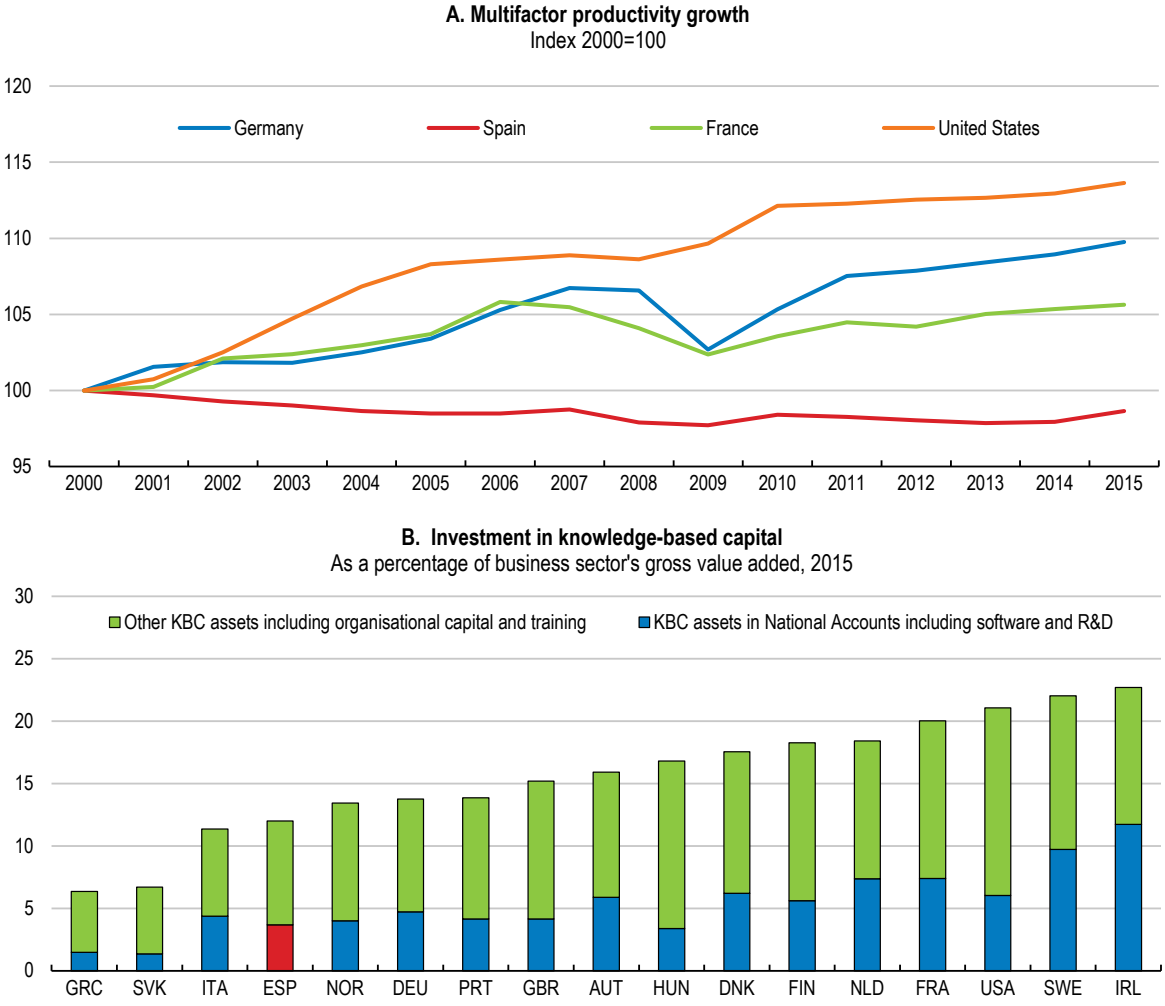


Note: Compared to the weighted average using population weights of the 18 OECD countries with highest GDP per capita in 2017 based on 2017 purchasing power parities (PPPs). Labour productivity is measured as GDP per hour worked. Labour resource utilisation is measured as the total number of hours worked per capita.
Source: OECD (2018), Going for Growth Database.

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As the recovery continues, there is renewed opportunity to ensure the benefits of economic growth are widely enjoyed. Income inequality remains above the OECD average, partly driven by the fall in the share of income going to the poorest sections of the population and consecutive years of income moderation. Labour market inequalities, including high labour market duality, and regional disparities also create challenges for inclusiveness.

Figure 4. Boosting growth potential requires higher multifactor productivity growth



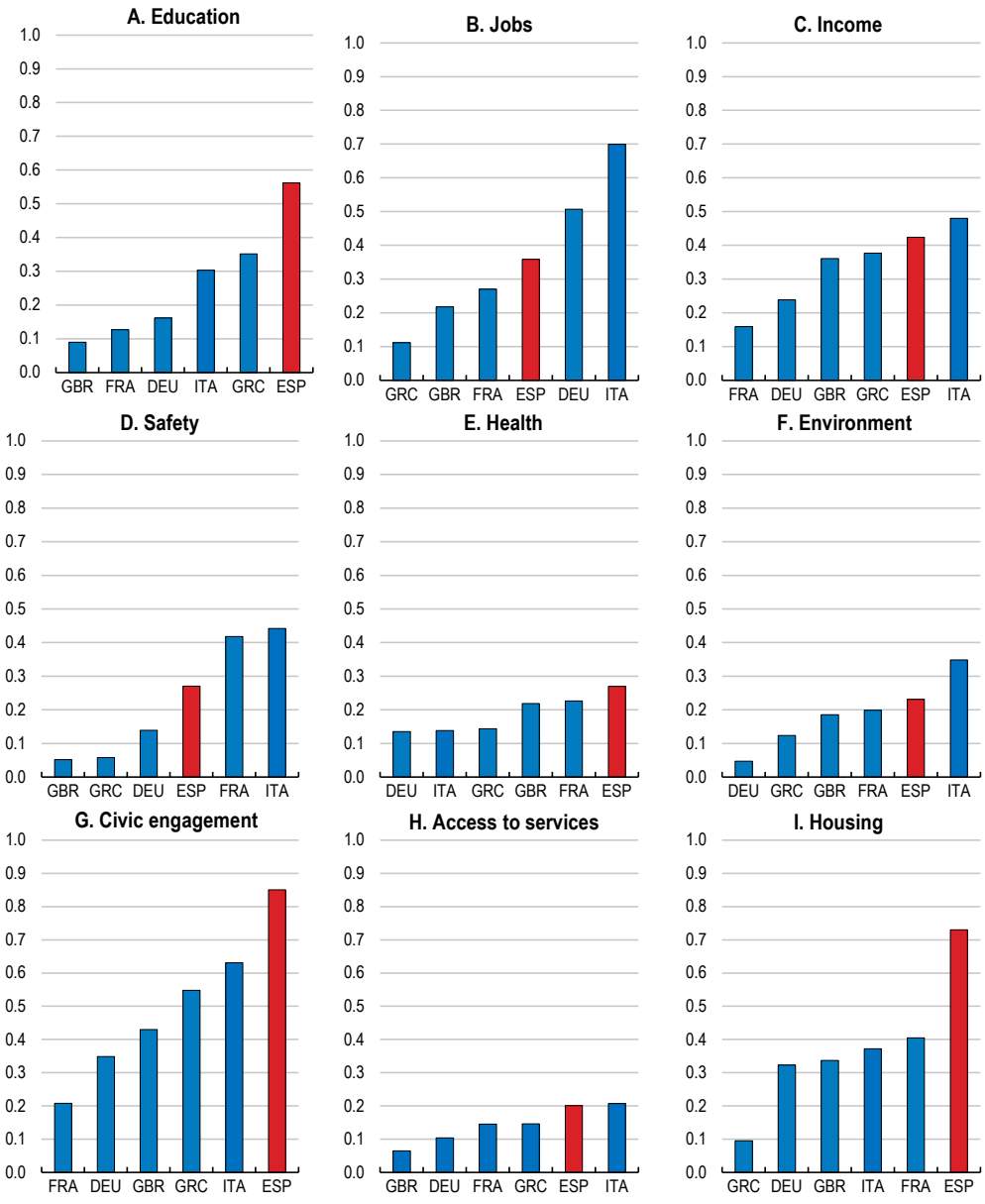
Note: KBC comprises computerised information, like software and databases; innovative property, including research and development (R&D) and new product development in financial services (among other things); and economic competencies, including firms' human and structural resources such as firm-specific training, brand equity, and organisational capital.
Source: OECD, Productivity Indicators (database), and OECD (2017), Science, Technology and Industry Scoreboard 2017: The digital transformation.

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Spain is a highly decentralised country with regards to public spending, and many public services are provided at the regional level. Hence, the success of policy reforms will depend on the ability of regions to implement them, highlighting the importance of coordination and sharing of best practices across regions in various areas. Regional dispersion in well-being is high in a number of dimensions, in particular education, civic engagement, housing, income and access to jobs (Figure 5). Accordingly, the thematic chapter analyses productivity, labour markets, skills and education from a regional perspective.

Figure 5. Regional dispersion in well-being is high

Scale 0 (lowest) to 1 (highest dispersion)



Note: The indicator measures the dispersion in the well-being index across regions within a country. For each dimension, countries with the lowest and the highest dispersion levels in the OECD take values 0 and 1.
Source: OECD, Regional Well-being Database.

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Against this background, the Survey has three main messages:

- The robust recovery provides an opportunity to keep reducing macroeconomic and financial vulnerabilities, such as high public and external debt.
- Improving the labour market outcomes of vulnerable groups and reducing some regional disparities are key to addressing medium-term challenges to well-being.

- Boosting productivity growth, which remains subdued, will require firms to be more exposed to competition and innovation.

The new Spanish government has recently outlined its economic priorities (Box 1), which should help address some of these challenges. The economic agenda focuses on combining fiscal sustainability with further promotion of inclusive growth and reducing inequalities, and the enhancement of structural reform efforts.

Box 1. Economic priorities of the new government

The economic priorities of the new government, which came to office in June 2018, are outlined as follows:

Fiscal policy: The government has revised upward the likely outcome of the 2018 fiscal deficit based on AIReF forecasts (from 2.2% to 2.7% of GDP), but expects consolidation efforts to remain close to initial plans in 2019, bringing the deficit down to 1.8% that year. The Draft Budgetary Plan 2019 sent to the European Commission in October 2018 plans to run a primary fiscal surplus and achieve a structural effort. This plan proposes a number of taxation changes, including the introduction of specific taxes on certain digital services and on financial transactions, and increases in income tax rates for high incomes and environmental excise duties. Another proposal is to redesign corporate taxation such that the effective rate on large businesses is close to the nominal rate (25%) and will not be below a certain threshold (15%).

Labour markets: Addressing youth unemployment and abuse of temporary contracts are top priorities. In July 2018, the government approved a roadmap plan for reducing job precariousness. The Draft Budgetary Plan 2019 proposes to extend early childhood education to children between 0 and 3 years old and extend father's parental leave up to 8 weeks, with an aim to improve labour market participation of women. Another proposal is to raise the minimum wage to EUR 900 gross per month.

Productivity and innovation: The government plans to promote digitalisation and internationalisation *via* lower administrative barriers and new forms of financing. The Ministry of Science, Innovation and Universities was created to bring together science, innovation and higher education policies. The Draft Budgetary Plan 2019 proposes measures for improving the innovation ecosystem, boosting private-public collaborations and addressing the issue of limited demand by the private sector for R&D loans included in the public budget.

Environment: In June 2018, the Ministry of Ecological Transition was created to bring together environment and energy policies, and more ambitious goals were set in the European Winter Package. In October 2018, a package of measures to boost transition to a low-carbon economy and to address energy poverty was approved. The top priorities are the Climate Change and Energy Transition Bill, the National Integrated Climate and Energy Plan and the Fair Transition Plan.

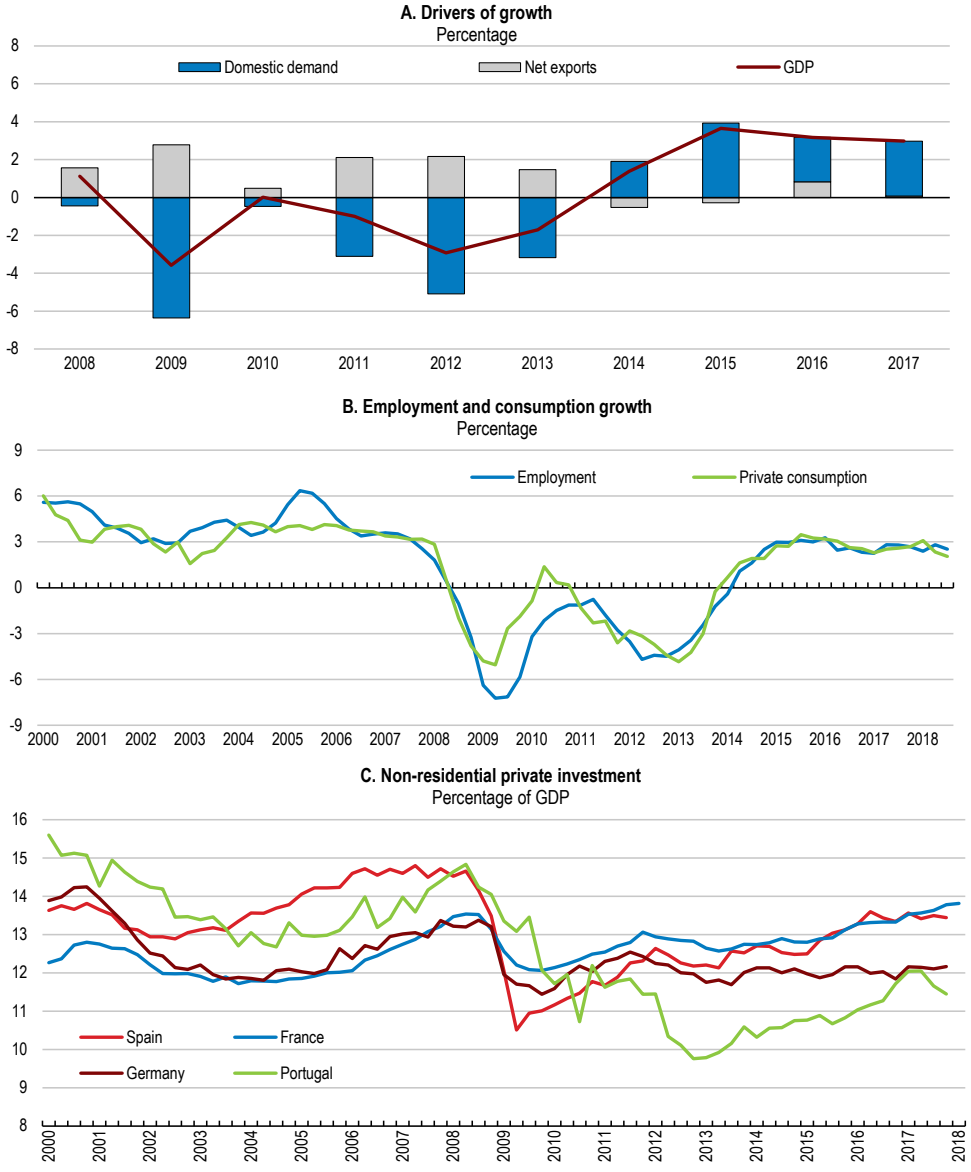
Education: Education policies, with a focus on promoting principles of equal opportunities (e.g. scholarships for low-income students), improving teacher training, modifying the evaluation framework, enhancing lifelong learning and integrating the different VET systems, are also high on the government's agenda.

Recent macroeconomic developments and short-term prospects

The recovery has been robust and balanced

The Spanish economy grew by around 3% in the past three years, outpacing most other euro area countries (Figure 1). Both external and domestic demand have contributed to growth, but the latter remains the main driver (Figure 6, Panel A). Private consumption has been particularly strong in the last few years, and employment creation and private consumption are strongly linked (Figure 6, Panel B). Business investment has picked up due to supportive financing conditions, lower corporate indebtedness and stronger confidence (Figure 6, Panel C).

Figure 6. The recovery has been strong

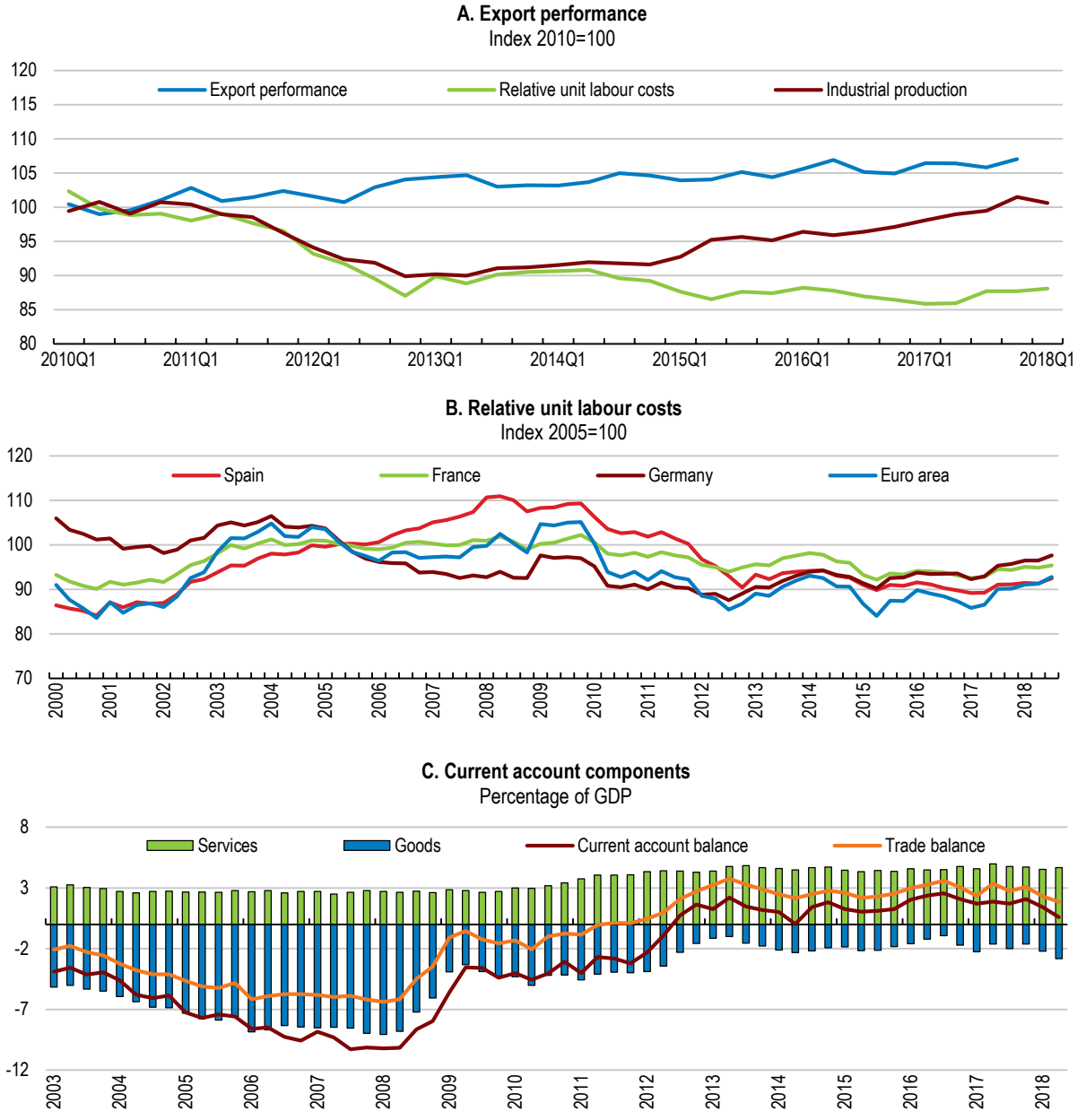


Source: OECD, Economic Outlook (database).

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Structural reform and wage moderation have led to gains in cost-competitiveness, boosting export performance (Figure 7, Panels A and B). The current account has been in surplus for five consecutive years. While all the components of the current account contributed, the improvement in the non-energy goods balance accounted for close to half of the change in the current account between 2008 and 2017 (Figure 7, Panel C). The increase in exports of non-tourist services, by 53% between 2009 and 2017, was also an important factor.

Figure 7. Export performance has been strong



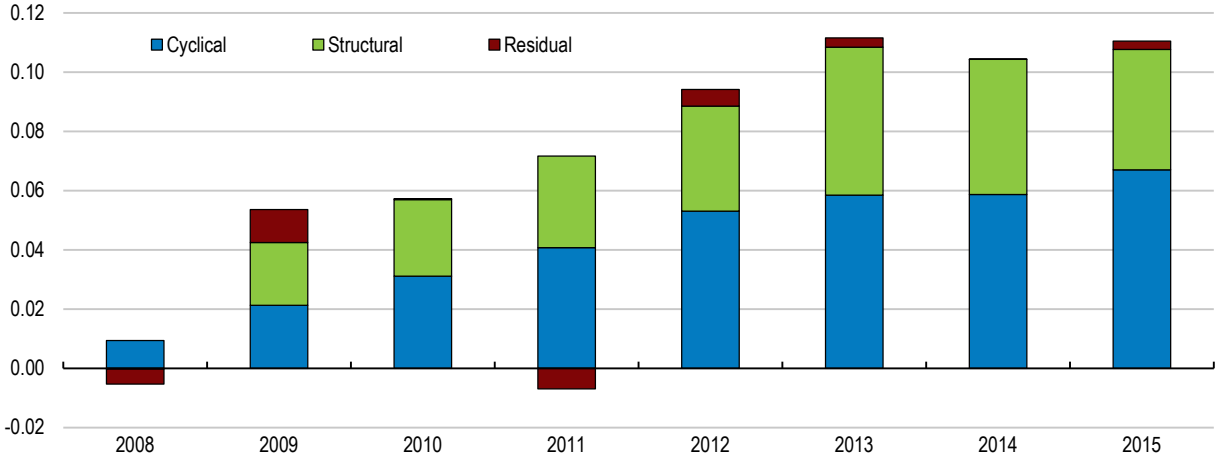
Source: OECD, Economic Outlook (database) and OECD, Main Economic Indicators.

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Although transitory and cyclical factors have contributed to the improvement of the current account, structural factors have also played a role. For example, a decomposition of the changes in the current account between 2008 and 2015 suggests that approximately 60% of the cumulated change in the current account over the period can be explained by cyclical factors such as the output gap, oil balance and financial cycle, with the remaining 40% attributable to those of a more permanent nature (Figure 8). Structural factors which contributed positively to the adjustment, in order of importance, were the structural adjustment of the fiscal deficit, ageing of the population, lower interest rates and lower growth expectations (Moral-Benito and Viani, 2017).

Figure 8. Structural factors have contributed to the changes in the current account

Decomposition of the accumulated current account adjustment, 2008 to 2015



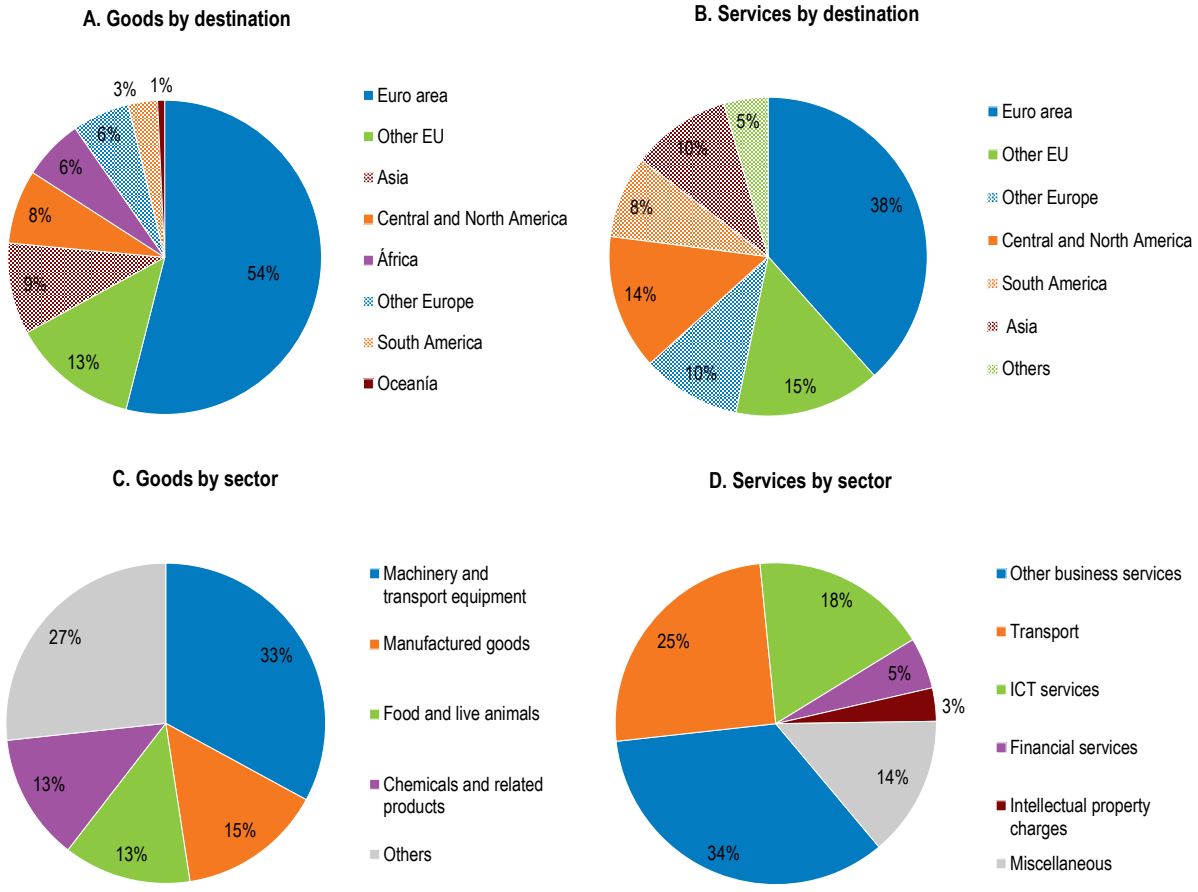
Note: Cyclical factors include the output gap, financial cycle and oil balance. Structural factors include unit labour costs, the old age dependency ratio, the institutional environment, long term interest rates, private credit, the fiscal balance and expected growth.
Source: Moral-Benito and Viani (2017).

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The structural improvement of export performance is also reflected in the increase in the number of regular exporting firms and the geographical diversification of exports. Spain has increased the geographical diversification of its exports, with 35.5% of merchandise exports and 27% of non-touristic service exports going to non-EU destinations in 2017, compared to 29.1% and 16.8%, respectively, in 2007 (Figure 9). The exports of machinery, manufactured and chemical goods have increased by 33%, on average, between 2009 and 2017. The number of regular exporters, firms that have exported for four consecutive years, has risen by 30% between 2006 and 2016. Bringing down the high external liabilities will require current account surpluses for an extended period of time. Hence, it will be important that policies foster an environment that continues to support exporting firms and increase the competitiveness of the Spanish economy.

Figure 9. Exports have become more diversified

Share of exports by sector and destination, 2017



Note: Services exclude tourism. Panel C: Others include beverages and tobacco, crude materials, mineral fuels, animal and vegetable oils, commodities and transactions and miscellaneous manufactured articles. Panel D: Miscellaneous category includes other services, construction and insurance and pension services.
Source: OECD, International Trade Statistics.

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Growth is set to continue, but at a slower pace

The current recovery is projected to continue, but growth will moderate to 2.6% in 2018, 2.2% in 2019 and 1.9% in 2020 (Table 1). Robust job creation and private consumption should continue to support each other. The unemployment rate is expected to edge down to 12.5% in 2020, which would still be above that of the euro area. Residential and business investment are set to ease gradually, but remain high. The current account will remain in surplus, but lower than in the past two years, as the contribution of external demand is expected to be neutral in 2019-20, in the context of a less favourable international environment. Despite a closing of the output gap at the end of the projection period, inflation will only slowly increase as the unemployment rate and the share of temporary employment remain high.

Table 1. Macroeconomic indicators and projections

	2015 Current prices (billion EUR)	2016	2017	2018	2019	2020
Gross domestic product (GDP)	**1,081.2**	**3.2**	**3.0**	**2.6**	**2.2**	**1.9**
Private consumption	626.0	2.9	2.5	2.4	1.8	1.5
Government consumption	208.9	1.0	1.9	2.1	1.6	1.3
Gross fixed capital formation	214.7	2.9	4.8	6.1	3.8	3.8
Housing	48.1	7.0	9.0	7.0	3.3	3.5
Final domestic demand	1,049.7	2.5	2.9	3.1	2.2	2.0
Stockbuilding[1]	6.3	-0.1	0.1	0.1	0.0	0.0
Total domestic demand	1,055.9	2.4	3.0	3.2	2.3	1.9
Exports of goods and services	356.1	5.2	5.2	1.6	2.8	4.0
Imports of goods and services	330.9	2.9	5.6	3.5	2.9	4.1
Net exports[1]	25.2	0.8	0.1	-0.5	0.0	0.0
Other indicators (growth rates, unless specified)						
Potential GDP	. .	0.3	0.4	0.6	0.8	0.9
Output gap[2]	. .	-5.6	-3.2	-1.4	0.0	1.0
Employment	. .	2.7	2.6	2.6	2.0	1.8
Unemployment rate	. .	19.6	17.2	15.3	13.8	12.5
GDP deflator	. .	0.3	1.2	0.9	1.9	1.8
Consumer price index (harmonised)	. .	-0.3	2.0	1.9	1.9	1.7
Core consumer prices (harmonised)	. .	0.7	1.2	1.2	1.6	1.7
Household saving ratio, net[3]	. .	1.8	-0.8	-1.5	-1.8	-1.9
Current account balance[4]	. .	2.3	1.8	1.0	1.0	1.0
General government fiscal balance[4]	. .	-4.5	-3.1	-2.7	-1.8	-1.2
Underlying general government fiscal balance[2]	. .	-0.8	-1.0	-1.9	-1.8	-1.8
Underlying government primary fiscal balance[2]	. .	1.5	1.2	0.2	0.1	0.0
General government gross debt (Maastricht)[4]	. .	99.0	98.1	97.7	96.5	96.0
General government net debt[4]	. .	82.8	81.2	81.2	79.7	78.0
Three-month money market rate, average	. .	-0.3	-0.3	-0.3	-0.2	0.2
Ten-year government bond yield, average	. .	1.4	1.6	1.4	1.6	1.8

1. Contribution to changes in real GDP.
2. As a percentage of potential GDP. Based on OECD estimates of cyclical elasticities of taxes and expenditures. For more details, see OECD Economic Outlook Sources and Methods.
3. As a percentage of household disposable income.
4. As a percentage of GDP.
Source: OECD (2018), OECD Economic Outlook: Statistics and Projections (database), November.

In the short-term, this growth scenario is mainly exposed to well-known factors that could affect the Spanish economy both on the upside and downside, such as growth in Europe, its main export partner, and the evolution of the euro exchange rate. A more rapid than expected increase in interest rates by the European Central Bank (ECB) could hurt growth since the share of variable rates in mortgages is high. Turbulence in international markets could lower private sector confidence. A minority government could face difficulties in pushing the national reform agenda further, which could also lower growth prospects. An increase in oil prices would create pressures on inflation. On the upside, domestic demand could prove more resilient than expected, if the slowdown in the pace of job creation is

more moderate or residential investment is higher. In addition to these risks, the Spanish economy is exposed to major internal and external shocks, such as prolonged uncertainty in Catalonia or an increase in global protectionism and a stronger-than-projected impact of Brexit (Table 2).

Table 2. Shocks that could strongly impact the Spanish economy

Shock	Possible impact
Prolonged political uncertainty in Catalonia.	Increased tensions could lower confidence and tourism. It could also divert attention from the reform process, lowering Spain's medium-term growth prospects.
Disorderly exit of the UK from the EU.	Lower foreign trade and investment, harming productivity and growth.
Renewed tension in the euro area.	Lower confidence, hampering domestic demand.
Worldwide rise in protectionism.	Lower exports and fewer new firms, harming productivity and potential growth.

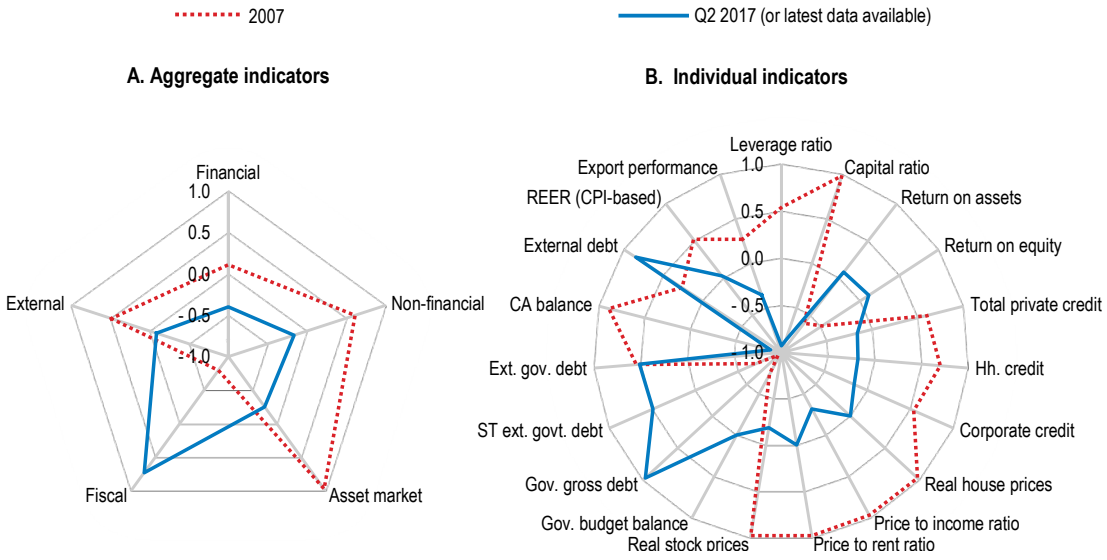
Strengthening the financial system's resilience to new challenges

Macro-financial vulnerabilities have decreased since 2007, as the financial system has gotten stronger and private sector debt has declined (Figure 10). However, vulnerabilities in terms of public and external debt have not materially diminished. Thanks to significant reforms, including the creation of an asset management company (SAREB), the restructuring of the banking sector, economic recovery and accommodative monetary policy, bank performance has improved and much progress has been made in reducing non-performing loans (NPLs) (IMF, 2017a). Large credit institutions in Spain are under the supervision of the ECB. The resolution of Banco Popular in June 2017, without negative spillovers on overall financial stability, exhibited the effective coordination between European and Spanish supervisors. It is important to continue addressing the legacies of the crisis and improve the resilience of the financial system to future challenges.

The profitability of Spanish banks has improved, and return on equity at 9.7% is now above the EU average of 6.8%, but it is still below pre-crisis levels (Figure 10). Low bank profitability remains one of the key challenges, as in other countries, driven by low interest rates and subdued lending activity, and the high level of non-productive assets on bank balance sheets (Bank of Spain, 2017 and 2018). Some banks have diversified their incomes *via* their international business to emerging markets, including Turkey. While such diversification is welcome and has benefited bank profitability during the crisis, the associated potential vulnerabilities from cross-border spillovers and exchange rate movements must be monitored closely, especially since bank capital ratios are still comparatively low (Figure 11).

Figure 10. Macro-financial vulnerabilities have decreased

Index scale of -1 to 1 from lowest to greatest potential vulnerability, where 0 refers to long-term average, calculated for the period since 2000

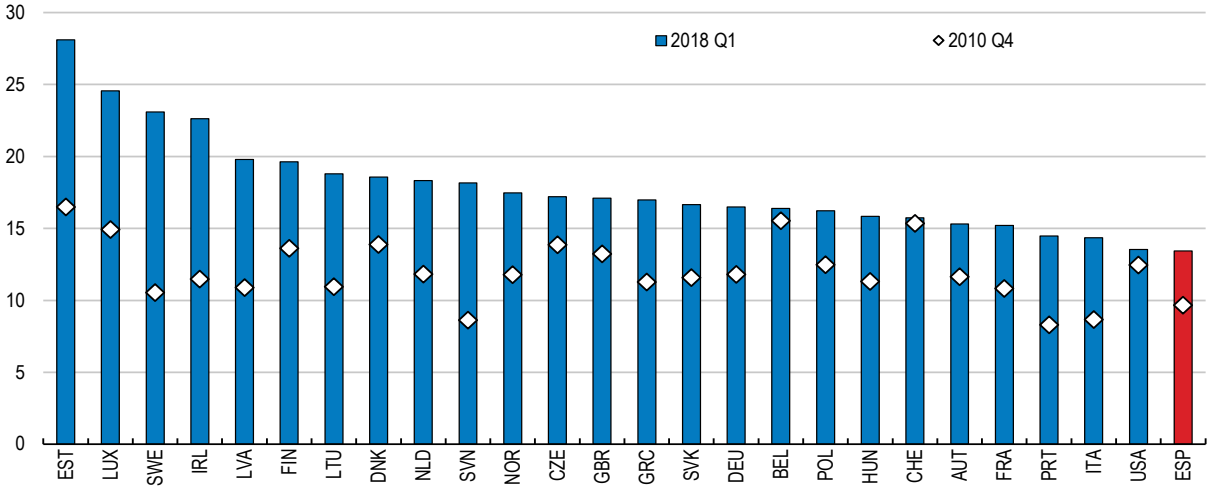


Note: Each aggregate macro-financial vulnerability dimension is calculated by aggregating (simple average) normalised individual indicators from the OECD Resilience Database. Individual indicators are normalised to range between -1 and 1, where -1 to 0 represents deviations with the observation being below long-term average since 2000 [positive deviation=>less vulnerability], 0 refers to long-term average since 2000 and 0 to 1 refers to deviations where the observation is above long-term average since 2000 [negative deviation=>more vulnerability]. Financial dimension includes: leverage ratio (inverted), capital ratio (regulatory capital) (inverted), return on assets (inverted) and loan-to-deposit ratio. Data for financial indicators is only available from Q4 2008 onwards.
Source: Calculations based on OECD (2017), OECD, Resilience Database, September.

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Figure 11. Capital ratios have increased, but remain low

Regulatory Tier 1 capital to risk-weighted assets, percentage

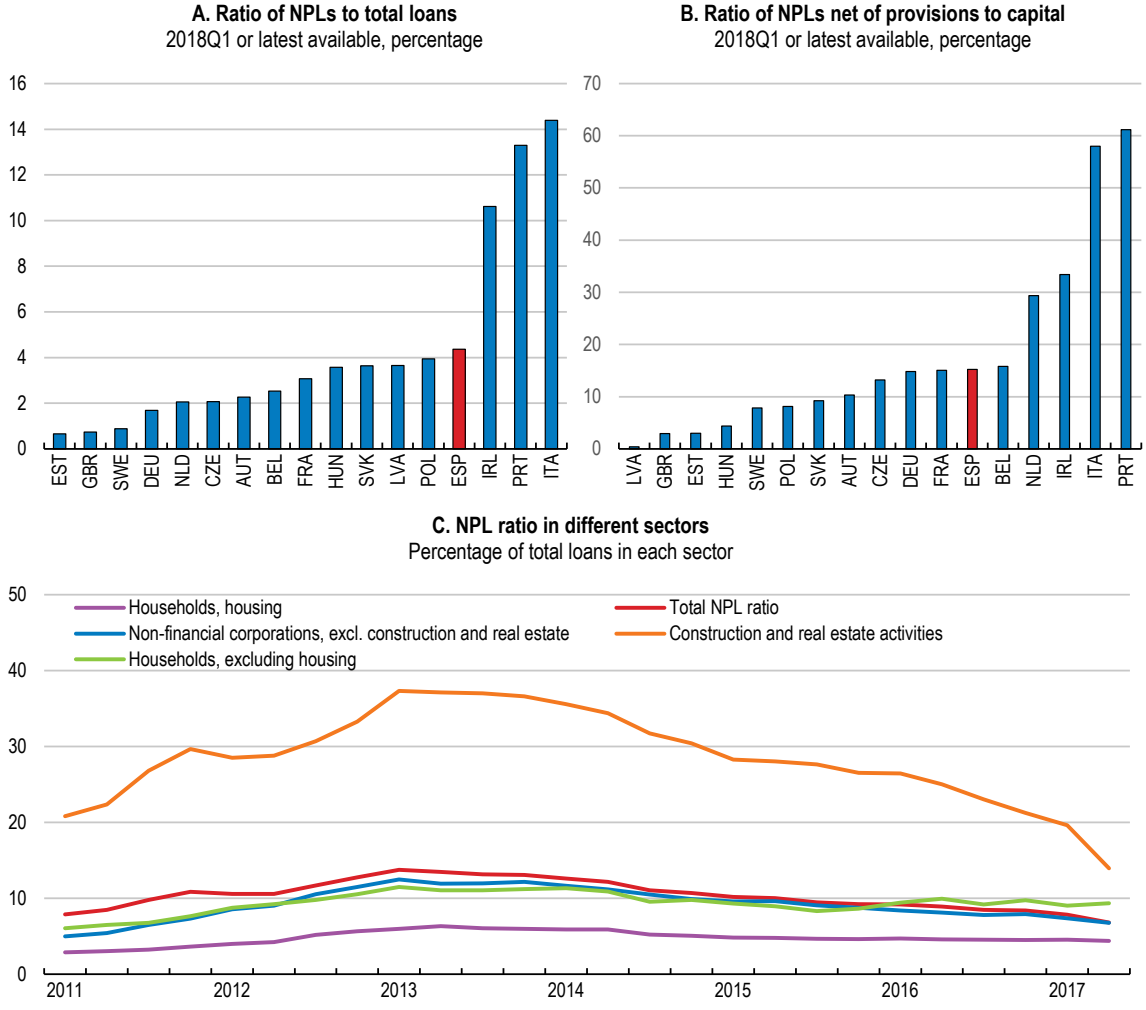


Source: IMF, Financial Soundness Indicators.

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Non-performing loans as a share of total loans continued to decline from their peak of 9.4% in 2013 and stood at 4.4% in the first quarter of 2018 (Figure 12, Panel A). In an extreme scenario where all NPLs are written off (and assuming no collaterals), Spanish banks would be adversely affected, suggested by comparatively high ratio of NPLs net of provisions to capital (Figure 12, Panel B). Furthermore, NPLs remain high for lending to small and medium-sized enterprises (SMEs), and to the construction and real estate sectors (Figure 12, Panel C). Consequently, full implementation of the ECB guidance on NPLs and additional provisioning, if needed, is key to complete the reduction of NPLs before the normalisation of monetary policy. To ensure the credibility of NPL reduction targets specified by banks and given the wide prevalence of NPLs in property-related sectors, the authorities should assess banks' strategies by using their own risk-models, including projections of property prices (IMF, 2017a). Disclosure of progress with NPL reduction should be made mandatory and failure to comply with targets should trigger transparent prudential measures.

Figure 12. Non-performing loans are falling, but remain high

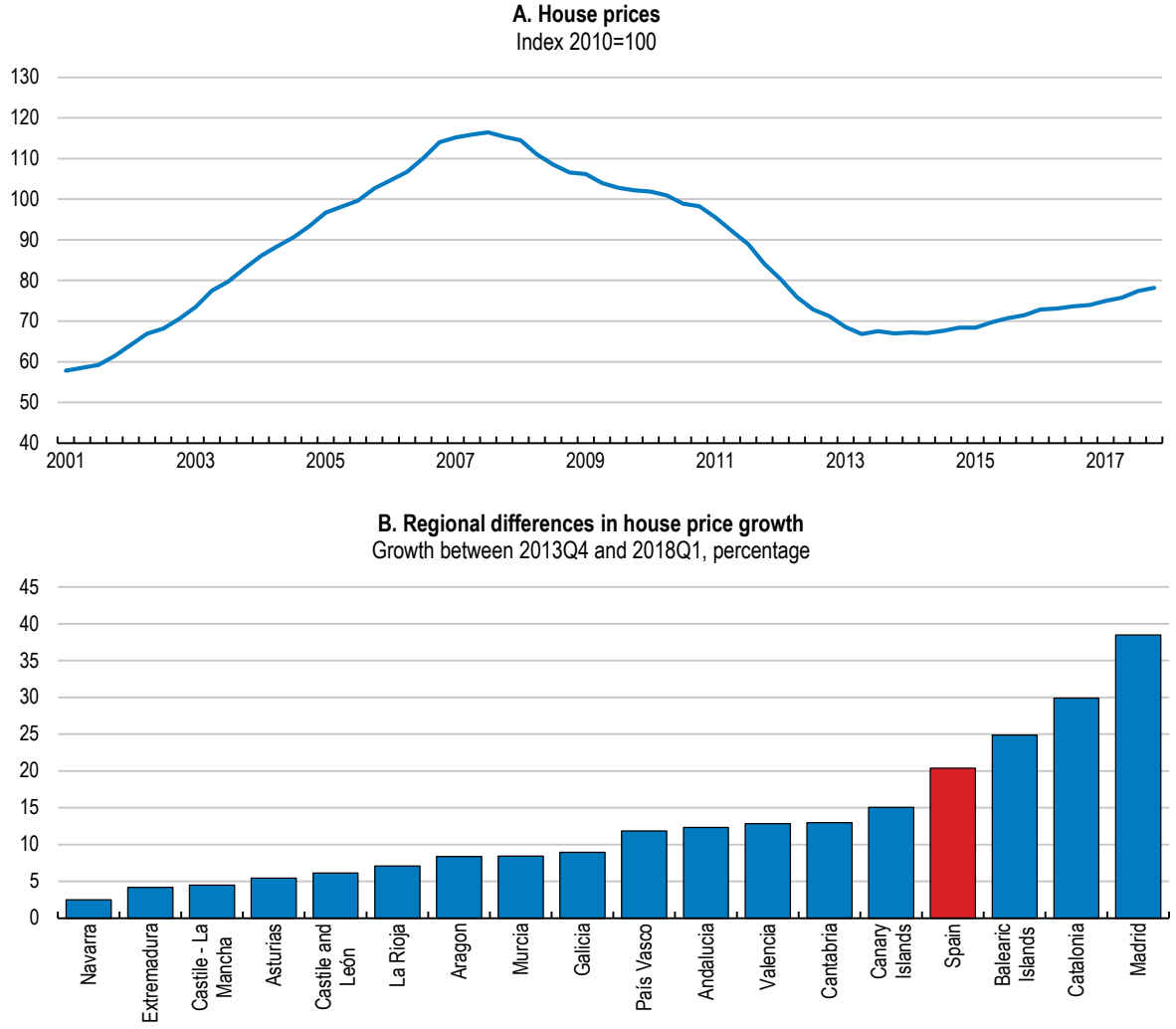


Note: Panels A and B: The precise definition and consolidation basis of non-performing loans may vary across countries. They are based on consolidated data for Spain. Panel C is based on only domestic exposures data.
Source: IMF, Financial Soundness Indicators and Banco de España, Statistical Bulletin.

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The continued recovery in housing markets can also contribute to the reduction of NPLs. House prices increased by 4.3% in 2017, but there are large regional disparities in house price developments, suggesting that geographical exposure can also affect the speed and success of resolution of bad loans (Figure 13). The recent insolvency reform has brought Spain closer to international best practices and has supported debt restructuring (Adalet McGowan, Andrews and Millot, 2017). The remaining gaps should be addressed in line with the proposed EU directive on restructuring frameworks and second chance. The creation of an experts group to implement this forthcoming EU directive is welcome. Specifically, in cases when debt forgiveness is not automatic, the period during which bankrupt entrepreneurs are required to repay past debt from future earnings should be reduced, as recommended in the *2017 Economic Survey of Spain*.

Figure 13. House prices are recovering slowly and unevenly



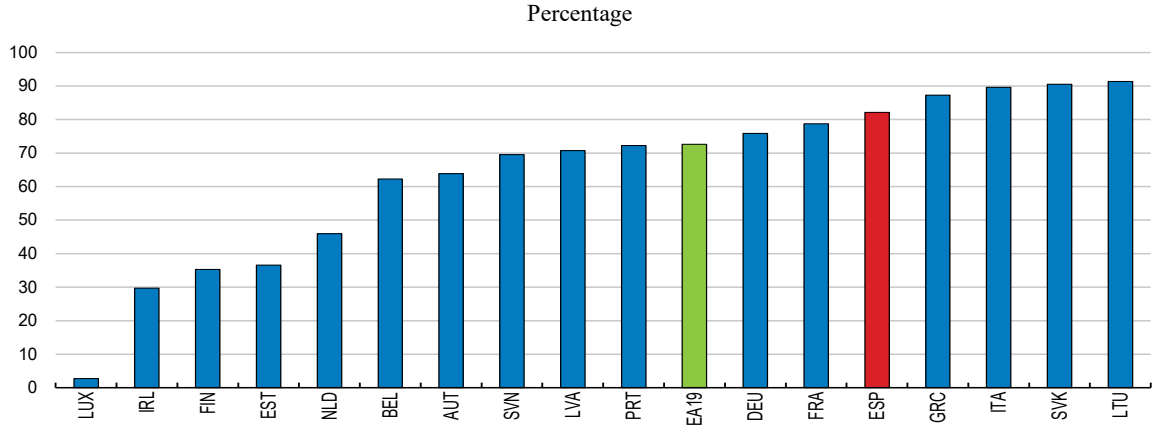
Source: OECD, Analytical House Prices Indicators (database), and INE.

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SAREB continued the reduction of its assets, but progress has been slow, and its liabilities still stand at around 4% of GDP. It recorded negative financial results in 2017 due to slower than expected recovery of real estate prices (European Commission, 2018a). While SAREB has until 2027 to fully liquidate its assets, its projected performance is highly dependent on assumptions on real estate prices and sale volumes, and hence should be monitored closely.

The risk interdependency between banks and sovereign should be part of systemic surveillance, as there is room to improve diversification in banks' portfolios, as in other euro area countries (OECD, 2018a). Indeed, the share of domestic sovereign bonds in banks' portfolios of sovereign bonds by euro area countries is relatively high (Figure 14). Furthermore, bank exposure to the sovereign through the holding of government bonds and other claims has been declining since 2012, but remains at 11% of total assets at the end of 2016, higher than its pre-crisis levels in low single digits (IMF, 2017b). Another channel of contagion risk rises from the contingent liabilities of the sovereign in the financial sector *via* the guarantees provided during the crisis, including those to SAREB.

Figure 14. Home bias in banks' holdings of government bonds is still high



Note: Share of domestic sovereign bonds in banks' portfolios of sovereign bonds issued by Euro area countries.
Source: OECD calculations based on ECB (2017), Statistical Data Warehouse.

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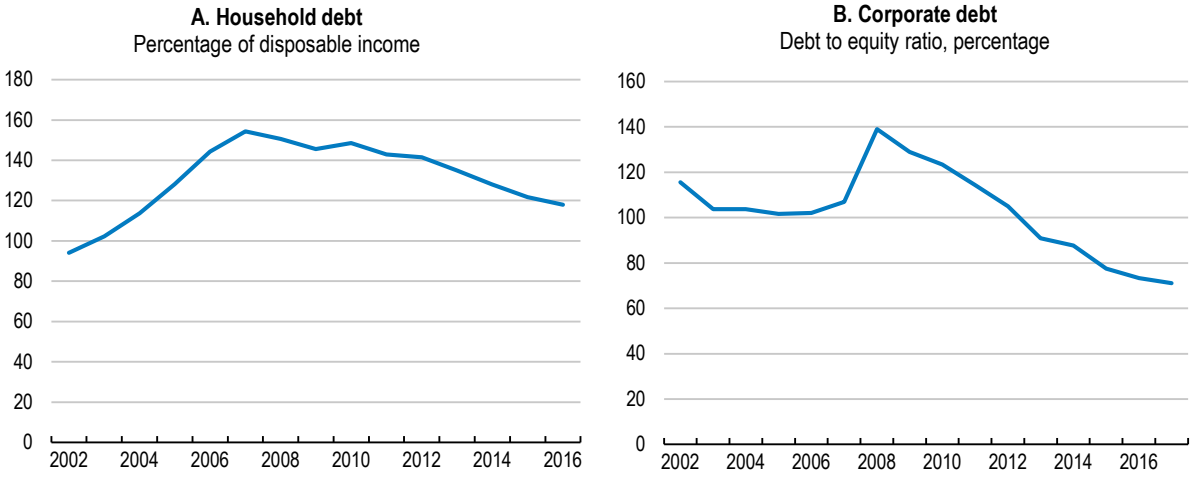
The institutional framework for financial supervision could be bolstered by the creation of a national macroprudential authority, as recommended by the European Systemic Risk Board and recently announced by the government. While the Bank of Spain is responsible for setting the countercyclical buffers, it does not have complete authority over macroprudential policies. A number of other institutions, including the National Securities Market Commission, the General Directorate of Insurance and Pensions and the Treasury, are also involved in financial supervision. While informal inter-agency coordination seems to work well, the creation of a national macroprudential authority, comprising all the different institutions and with a clear division of responsibilities, would address future potential risks. In this respect, the convening of the Financial Stability Committee in July 2018, to share information and views on the current financial outlook, was a good first step. The announcement of the creation of a national macroprudential authority in November 2018 is welcome.

The government is currently studying several initiatives to strengthen the institutional supervisory framework, such as the creation of an independent insurance and pension fund supervisory agency and an ombudsman for the protection of savers and financial investors.

Reforms in this area would strengthen competition and financial supervision, and it is important to ensure that the new institutions are allocated the necessary resources.

Corporate and household debt have continued to decline (Figure 15). Weak credit demand and higher incomes thanks to improving macroeconomic conditions have contributed to household deleveraging. Nevertheless, deleveraging needs are higher for low-income households, making them vulnerable to changes in economic and financial conditions (IMF, 2017b). The outstanding volume of credit is still decreasing, but new lending to households and SMEs has picked up. According to the latest Bank Lending Surveys, access to finance in terms of availability and cost have been improving and are close to euro area averages. Furthermore, the gap in financing costs between small and large firms has been narrowing. While credit growth remains weak, the authorities should still put in place macro-prudential tools, such as limits on loan-to-value or debt service to income, to prepare for future risks.

Figure 15. Private sector debt is declining



Note: Debt includes currency and deposits, debt securities, loans, insurance, pension, and standardised guarantees and other accounts payable.
Source: OECD, National Accounts Statistics.

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Fiscal policy to manage medium-term sustainability risks

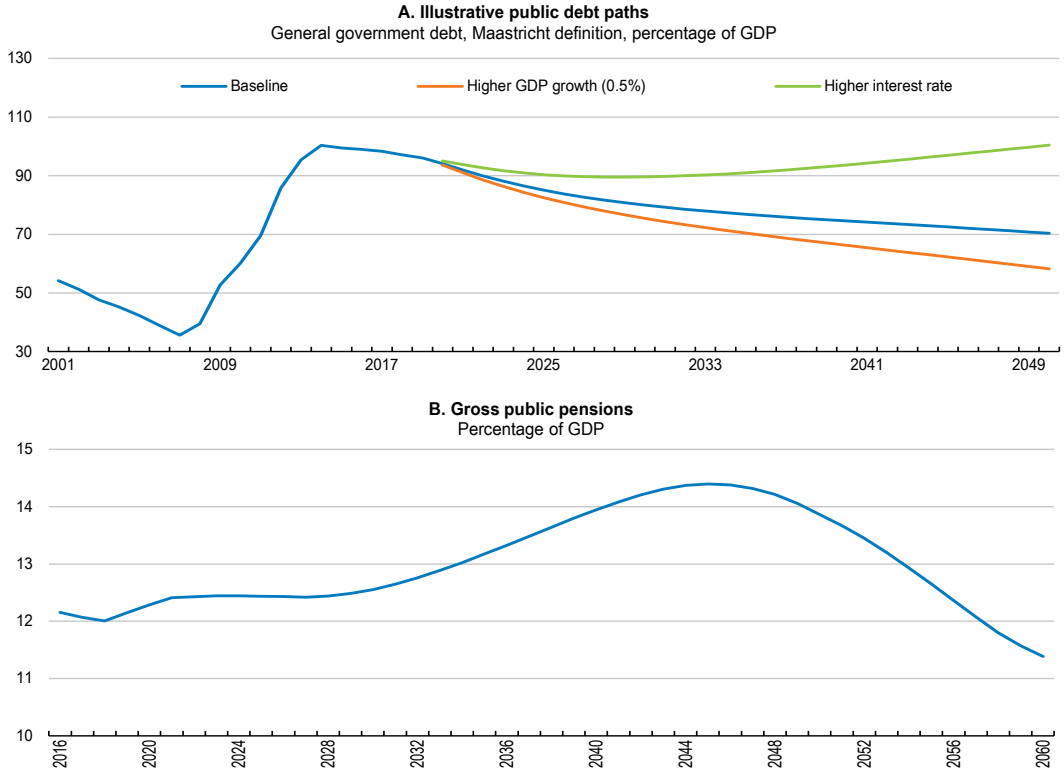
Fiscal vulnerabilities need to be addressed

Spain has been under the Excessive Deficit Procedure (EDP) since 2009, and the authorities had to balance the need for boosting employment and growth with fiscal adjustment. The fiscal deficit has declined from its peak of 10.5% of GDP in 2012 to 3.1% in 2017, which was in line with targets set by the EDP. However, the Spanish fiscal council (AIReF) estimates that the fiscal deficit in 2018 is likely to be higher than the official target (AIReF, 2018a). Based on this assessment, the government has revised upwards its deficit targets to 2.7% in 2018 (which would allow Spain to exit the EDP) and to 1.8% in 2019, although it expects consolidation efforts in 2019 to be close to what was proposed initially in the Stability Programme. The details of these consolidation measures, as stated in the Draft Budgetary Plan 2019, are outlined in Box 1.

The plans for deficit reduction in the Stability Programme 2018-21 rely on favourable macroeconomic conditions. An evaluation by the fiscal council suggested that meeting the deficit targets will be difficult without further adjustment (AIReF, 2018b). Moreover, the medium-term objective of structural balance by 2020 under European and national rules is not projected to be met without further measures (Government of Spain, 2018). It will be important to structurally strengthen the public finances to increase resilience to shocks by continuing planned consolidation efforts.

The high public debt-to-GDP ratio, at 98.3% of GDP in 2017, poses risks for medium-term sustainability. According to a baseline scenario based on OECD and government projections, public debt will gradually decline to 79% of GDP by 2030 (Figure 16, Panel A). In a positive scenario of higher growth by 0.5 percentage points, the debt-to-GDP ratio would fall further to 74%. This highlights the importance of structural reforms to boost potential growth and fiscal sustainability. However, in an adverse scenario of higher interest rates, the public debt ratio would only decline to 88% of GDP by 2030.

Figure 16. High pension costs highlight the importance of a durable reduction of public debt



Note: Panel A: The baseline uses data from the EO103 projections until 2019 and the OECD long-term projections after 2019, except for the primary surplus which is kept constant at its surplus of 1% of GDP in 2019, according to the government projections (Government of Spain, 2018). The other assumptions for beyond 2019 are an average effective interest rate of 3.2%, inflation gradually stabilising at 2% by 2020 and real GDP growth by around 1% corresponding to the potential growth rate. The "higher GDP growth" scenario assumes higher real GDP growth by 0.5 percentage points per year after 2019. The "higher interest rate" scenario assumes higher interest rate by 1 percentage point from 2019. The baseline debt projections implicitly assume that the increase in pension spending presented in Panel B, which is based on data from May 2018, is offset by balancing measures.
Source: Panel A: Calculations based on OECD Outlook: Statistics and Projections Database. Panel B: The Ageing Report (European Commission, 2018b).

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The differences across the various scenarios suggest that, as the recovery continues, the government should stick to medium-term fiscal targets to ensure a durable reduction of public debt. In the case of higher growth than projected in the baseline scenarios, more ambitious fiscal targets should be achieved. For this purpose, all windfall revenues should be used to reduce the debt ratio. Despite recent reforms, aging pressures will increase the cost of pensions as a share of GDP, which is expected to peak in 2045 (Figure 16, Panel B). Hence, the implementation of the pension reform will be key for fiscal sustainability, as discussed below, and including additional revenues, if necessary.

Government expenditures as a share of GDP peaked at 48.1% in 2012, but have been declining steadily and stood at 41% of GDP in 2017, well below the euro area average of 47.2%. While the government's focus on boosting expenditure efficiency is appropriate, new reforms on the revenue side would be welcome. Spain has a relatively low tax-to-GDP ratio and the tax system can be further reformed to promote growth and employment and reduce inequalities, which is discussed in detail below. Without offsetting measures, implementing some of the recommendations of this survey will have a slightly greater effect on expenditures than revenues, based on a back-of-the-envelope calculation of their quantitative impact (Box 2).

Box 2. Quantifying the fiscal impact of selected policy recommendations

These estimates roughly quantify the annual fiscal impact of selected recommendations in this Survey, as some of them are not quantifiable given available information or the complexity of the policy design. For example, increased support for childcare services, whose impact on GDP is quantified in Box 5, is not included due to lack of data on spending per child. The estimated effects abstract from behavioural responses that could be induced from policy changes, in line with past OECD work modelling long-term scenarios (Johansson et al., 2013).

Table 3. Illustrative fiscal impact of recommended reforms

Policy	Measure	Annual fiscal impact, % of GDP
	Additional Expenditures	
Social Security Contributions	Reduce employer social security contributions for low-wage workers hired on a permanent contract to enhance employment prospects.	0.10%
Active Labour Market Policies	Increase active labour market programme spending on training and job-search assistance. Remove regional barriers to competition of training centres.	0.05%
Education	Increase spending on education. Provide further individualised support to students at the risk of failing at an early stage. Increase evaluation of schools and teachers.	0.80%
	Additional Revenues	
Value-Added Tax	Increase VAT collection through abolishing some reduced rates.	0.40%
Environment Tax	Increase environmental taxes as a percentage of tax revenues to the average level of the OECD.	0.40%

Potential offsetting measures		
Budget balance effect associated with higher GDP induced by structural reforms highlighted in Box 5		
Increased budget balance induced by stronger GDP	The quantification of structural reforms in Box 5 is highlighted to raise GDP by 4.3% and employment ratios by 0.9 percentage points, respectively. The change in employment ratios would translate into a 0.4 percentage point improvement in the budget balance in the long-run (a 1% change in employment ratios is estimated to improve the primary balance by around 0.5 points for Spain. See OECD, 2010). Productivity improvements are assumed to be fiscally neutral in the long run according to the past OECD work modelling long-term scenarios (Johansson, et al., 2013).	0.40%

Note: The estimates are based on the following assumptions: *i)* a EUR 1000 reduction in social security contributions for workers in the bottom three income deciles, hired on a permanent contract; *ii)* an increase in ALMP spending as a % of GDP from 0.45 in Spain to the EU average of 0.51; *iii)* an increase in the annual spending on primary, secondary and post-secondary non-tertiary education per student from EUR 7 772 in Spain to the OECD average of EUR 9 302; *iv)* applying the standard VAT rate to the 50% of the tax base that is currently subjected to the reduced tax rates; and *v)* an increase in environmental taxes as a share of tax revenues from 5.6% in Spain to the OECD average of 6.5%.

The fiscal framework has been strengthened by the 2012 Law on Budgetary Stability and Financial Sustainability and the establishment of AIReF in 2013. However, there is room to improve the fiscal framework by improving the consistency of the deficit, debt and expenditure rules for regions (Chapter 1). AIReF is conducting a review of general government spending and assessing the consistency of spending with policy, impact and efficiency, with initial results expected at the end of 2018 (AIReF, 2017). This is a good step towards improving the evaluation of policies in Spain, which is not currently widespread in a number of areas. There is also an ongoing review to reform the regional financing system, which should help maximise the benefits of fiscal decentralisation (Chapter 1).

Table 4. Past OECD recommendations on fiscal sustainability

Recommendations in 2017 Economic Survey	Actions taken since 2017
Stick to medium-term fiscal targets to ensure a gradual reduction of public debt.	The government deficit declined to 3.1% of GDP in 2017, in line with targets.

Addressing spending pressures from demographic challenges is crucial

Spain faces a number of demographic challenges, which have the potential to significantly increase pressure on age-related spending, such as those related to health, long term care and pensions. In particular, population ageing is set to accelerate, with the old-age dependency ratio more than doubling between 2015 and 2050, making it the second highest projected dependency ratio in the OECD (Figure 17). Life expectancy is high and increasing, but the average age of exit from the labour market has stagnated and is more than two years below the OECD average.

While expenditures related to health and long term care are projected to increase over the coming decades, spending on pensions will remain the bulk of public age-related spending (European Commission, 2018b). Together, the pension reforms of 2011 and 2013 have the potential to help ensure the fiscal sustainability of the pension system in the long term. Changes adopted as part of the 2018 Budget may undo part of these reforms, increasing the costs of pensions somewhat, but at the same time will raise the living standards of retirees.

Notwithstanding these recent pension reforms, there remains room to: *i)* further enhance the sustainability of the pension system, *ii)* reduce incentives to retire early, and *iii)* better address the main challenges to income adequacy of those future retirees hardest hit by the crisis, which will rise due to a high and protracted period of unemployment, and labour market segmentation.

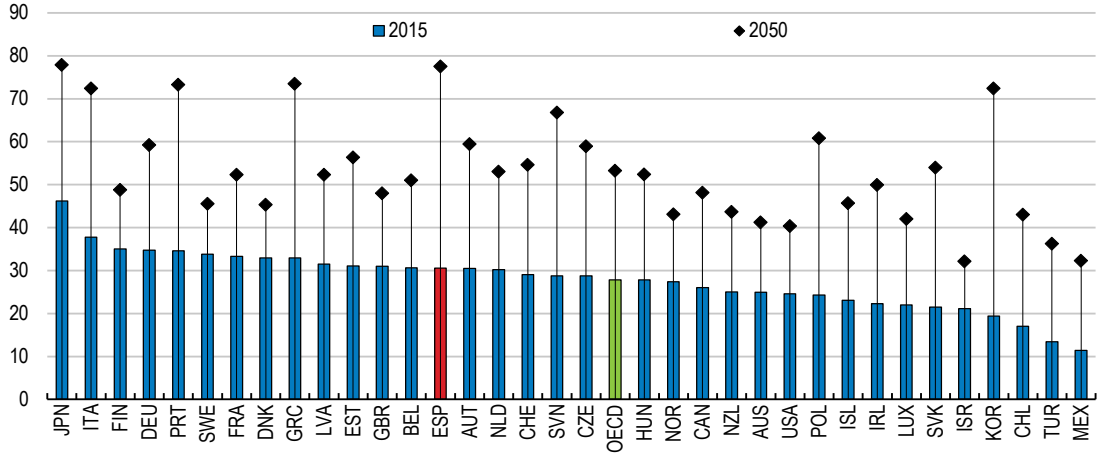
If fully implemented and sustained, the pension reforms of 2011 and 2013 will mitigate increases in public pension spending in the longer-term. Overall, the government estimates that together these reforms will result in 2.5% of GDP lower spending by 2060 than would otherwise be the case (Government of Spain, 2016). As a result, pension spending is expected to be 11.4% of GDP in 2060 (European Commission, 2018b).

The aim of the 2011 reform is to increase the effective retirement age, by raising the statutory retirement age by two years to 67. The retirement age increases by two months from 2019. The reference period used to calculate pensionable earnings will increase from 15 to 25 years in 2022. In addition, the number of years of contributions required to receive a full pension will increase from 35 to 37 and access to partial early retirement will become more difficult.

With the 2013 reform, the Sustainability Factor (SF) would gradually reduce replacement rates at the time of retirement, by automatically linking the value of new pensions to changes in life expectancy. Moreover, benefits during retirement are indexed to the Index for Pension Revaluation (IPR), which depends on the finances available for social protection, changes in the number of pensioners and changes in the average pension (in the absence of indexation).

Figure 17. The old-age dependency ratio in Spain will more than double by 2050

Number of people older than 65 years per 100 people working age (20-64)



Note: The data are based on UN data. According to Eurostat, the old-age dependency ratio (65+/20-64) would increase by 39 and 19 percentage points between 2015 and 2050 in Spain and Austria, respectively, against 47 and 29 points with UN data.
Source: OECD (2017), Pensions at a Glance.

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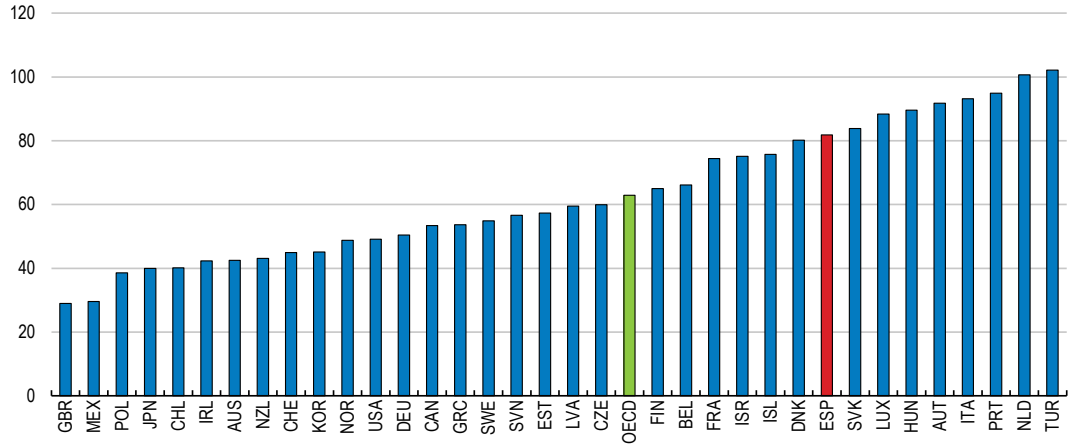
However, there are some tensions between fiscal sustainability and political feasibility, with the recent reforms leading to significant reductions in pensions over time, one of the largest projected reductions in the benefit ratio among European countries. The average benefit among all pensioners as a percentage of the average wage is projected to fall from approximately 58% in 2016 to 38% in 2070. This is due to, in particular, the 2013 pension reform and the relatively larger effect of shorter contribution periods due to long unemployment spells, compared to other EU countries (European Commission, 2018b). As part of the 2018 Budget, the introduction of the SF is now delayed until 2023 and the IPR, which would have likely limited growth in pension benefits to 0.25% per annum for several decades, will not apply in 2018 and 2019. Instead, pension benefits will increase in line with the consumer price index (CPI), or by more in the case of minimum and widowed pensions. In addition, those with monthly pensions of between EUR 600 and EUR 1200 will receive some additional support through tax credits and deductions. Pension issues, including linking indexation to CPI, wages and productivity, are currently being studied by a parliamentary committee (Toledo Pact).

The theoretical replacement rate at the time of retirement for those able to work throughout a full career would remain high, even after the implementation of the 2011 and 2013 reforms (Figure 18), suggesting further reforms may be eventually needed. To reduce incentives to retire early, a number of measures should be adopted. The system does not sufficiently acknowledge long contributory careers, penalises people with stable earnings throughout their working lives and does not incentivise extending working lives after the relevant periods of contributions have been attained. The pensionable earnings reference period should be extended further to a contributor's full career, and the number of years of contributions required to gain a full pension should be lengthened. In addition, although the previous reforms raise the statutory retirement age over time by two years, this represents only the approximate improvement in life expectancy at age 65 since 2000. The statutory retirement age should therefore eventually be linked to changes in remaining life expectancy, for example, at 65.

There are also strong disincentives to continue working for some, while receiving a full pension in Spain. In particular, apart from the self-employed under certain circumstances, the pension payments of those who continue to work beyond the statutory retirement age are reduced by 50%, additional pension entitlements are not earnt and a special 'solidarity' contribution of 8% must be paid. The effective marginal tax rate facing such people should be reduced significantly (OECD, 2017a).

Figure 18. The replacement rate for pensions in Spain remains high for those having a full career

Net pension replacement rates: Average earners, 2016



Note: The net replacement rate is defined as the individual net pension entitlement divided by net pre-retirement earnings, taking account of personal income taxes and social security contributions paid by workers and pensioners.
Source: OECD (2017), Pensions at a Glance.

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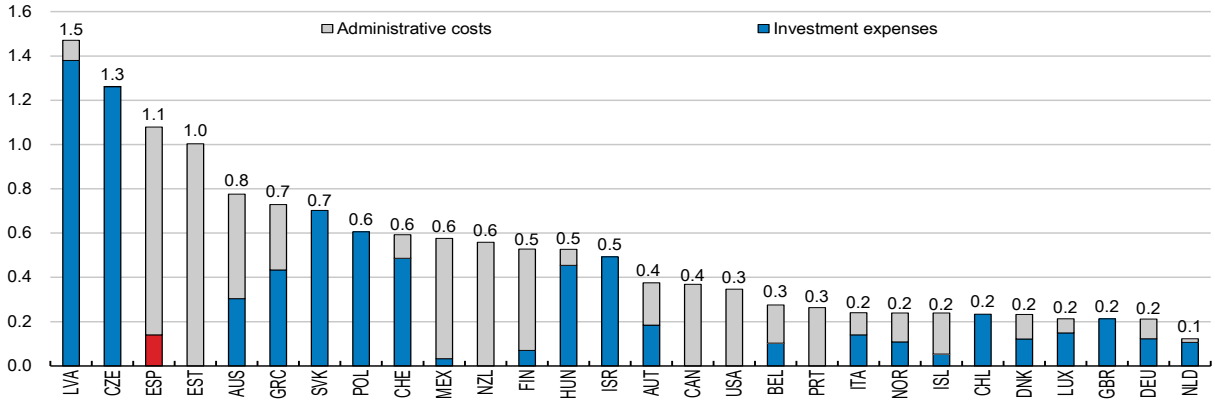
Older people in Spain currently face a significantly lower risk of poverty than younger generations. Given the protracted period of high unemployment, growing income disparities between the young and old, and the strong relationship between inequality in earnings over one's lifetime and old-age pensions in Spain, the risk of poverty in old-age is likely to increase in the future (OECD, 2015a). Enhancing labour market and education outcomes and improving productivity growth (as discussed elsewhere in this survey) can help address this issue.

In this context, care should also be taken to ensure that past pension reforms and the additional measures proposed above will not adversely affect those already hit hardest by the crisis. To this end, the minimum number of years of contributions required to qualify for a contributory pension (currently at 15) should be reduced or eliminated so that those with significantly shortened working lives may also benefit from contributory pensions (OECD, 2017b). Non-contributory pensions could also be enhanced to add a greater redistributive element to the pension system in Spain. In parallel, to offset costs and further promote labour market participation, the speed with which pension benefits are accrued during the early years of one's career (currently 50% of pension benefits are earnt during the first 15 years of work) should also be reduced.

With lower expected public pension entitlements for some in the future, those who are able will need to save more, if their standards of living in retirement are to remain similar. Higher levels of private saving would serve to mitigate risks associated with changes to public pensions in the future. The importance of one potential avenue for private saving, funded pension arrangements, has increased over time in the OECD, although some countries have moved in the other direction. Currently, as a proportion of GDP, Spain has relatively few assets invested in private pension funds, at approximately 14% of GDP in 2016. In addition, the expenses associated with saving through these vehicles are amongst the highest in the OECD (Figure 19).

Figure 19. Operating expenses of private pension systems in selected OECD countries

As a percentage of total investment, 2016



Source: OECD, Global Pensions Statistics.

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Changes that would lower fees associated with private pension schemes were announced in 2018. At the same time, a decision was taken to allow the early withdrawal of funds after ten years of contributions from tax advantaged private pension schemes. While this decision will likely make private pension schemes a more attractive instrument for investors, it may also undermine long-term savings for retirement. Additional and alternative measures should be considered to boost private savings.

Greater transparency and understanding of the impact of reforms to public pensions could help facilitate behavioural change and lift private saving (Law, 2016; Talosaga and Vink, 2014). It may be beneficial, therefore, to develop retirement income calculators and to send regular letters to people providing information about their future public pension entitlements, as was envisaged as part of the 2013 pension reform. Indeed, there is evidence of an increase in private savings after the authorities began to send out annual letters detailing individual expected pension payments in Germany (Dolls et al., 2016). In addition, membership in private pension schemes could be increased by facilitating greater choice of providers and investment options available through employers.

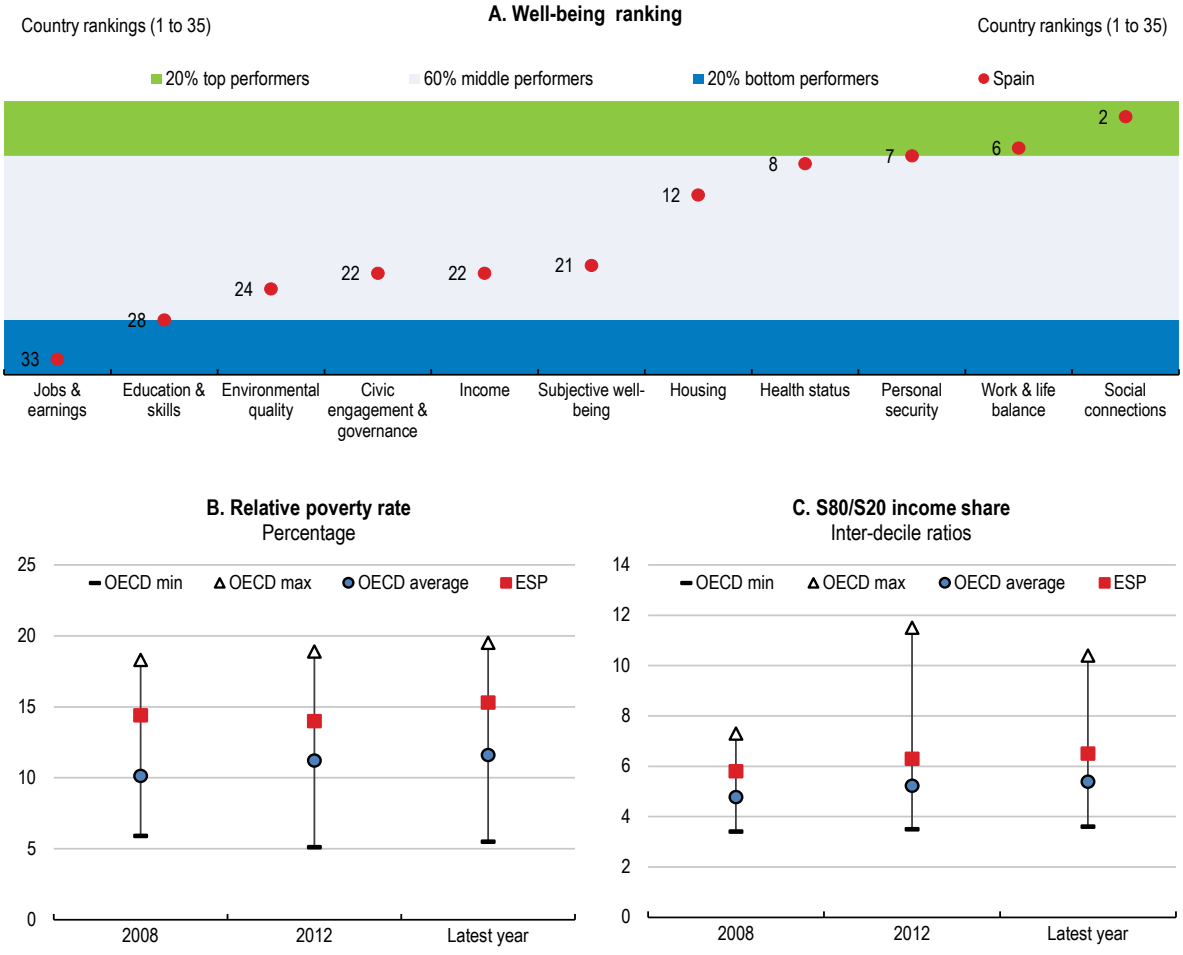
Automatic enrolment in private pension schemes upon starting a new job with the ability to later opt-out, such as in New Zealand, is another possibility. However, care should be taken in the design of such schemes. For instance, automatic enrolment in private pension schemes may help to overcome inertia and short sighted savings behaviour. However, associated financial incentives may provide poor value for money and can be regressive, primarily benefitting the already well off, and therefore may induce little additional saving over and above a similarly designed unsubsidised scheme (Law, Meehan and Scobie, 2017; Chetty et al., 2014).

Addressing medium-term challenges to well-being

The OECD's Better Life Index 2017 suggests that Spain's well-being performance is mixed (Figure 20, Panel A). Spain scores highly on a number of well-being indicators, including work-life balance and life expectancy, but problems with water quality and housing affordability are above the OECD average. Furthermore, Spain ranks amongst the lowest

in the categories of jobs and earnings (especially employment and long-term unemployment), and education and skills. Spain also faces a number of challenges to ensure inclusive growth according to the OECD Framework for Action on Inclusive Growth, which includes a selection of key indicators (OECD, 2018b). For example, poverty risk is significant with 15% of the population living in poor households in 2014, one percentage point more than in 2008 (Figure 20, Panel B). Child poverty is also significantly above the OECD average, as discussed below.

Figure 20. Well-being performance is mixed



Source: OECD, Better Life Index (database) and OECD (2018), Framework for Action on Inclusive Growth.

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Well-being inequalities also vary according to dimensions (OECD, 2017c). For example, the skill gap according to income, age and gender is not very high in international perspective. On the other hand, the gap in life satisfaction between high and low-income people is higher than in most OECD countries. Income inequality is high, with the richest 20% earning six times more than the poorest 20% in 2015 (Figure 20, Panel C), above the OECD average. Employment among young people in Spain is more than three times lower than for the middle-aged, which is much higher than for the OECD on average. Furthermore, people with a secondary education have 15% less chance of a job than people with a tertiary level of education, a larger gap than in two-thirds of OECD countries.

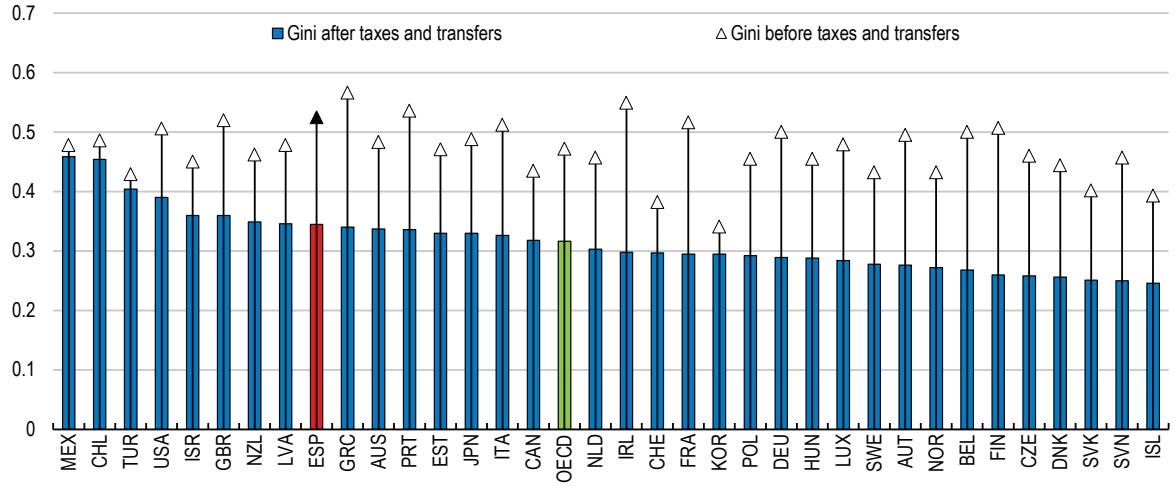
Addressing well-being challenges and income inequality requires more efficient use of tax and transfer policies and policies to improve labour market and education outcomes. There is also room to better address environmental sustainability, as discussed below.

Income and wealth inequality should be further reduced

High income and wealth inequality can harm economic growth and productivity, and limit productive investment opportunities (OECD, 2015b; OECD, 2016a). Income inequality is relatively high in Spain and it increased during the crisis, as employment fell significantly and income disparity grew (Figure 21). While wealth inequality in Spain is higher than income inequality, it is relatively low in international perspective, reflecting high rates of home ownership. The top 10% of households still holds close to half of all wealth, compared to around one fifth for the bottom 60% of households (Figure 22). Given that wealth takes time to accumulate, the recent rise in income inequality and labour market trends may lead to an even more concentrated distribution of wealth over time.

Figure 21. Income inequality is high

Gini coefficient, 2015 or latest year available

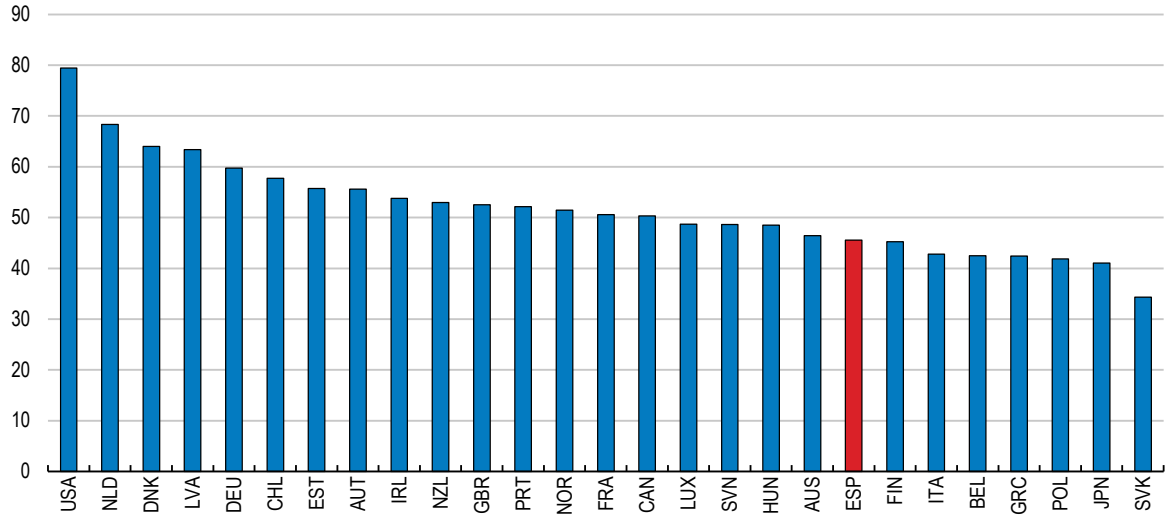


Note: The Gini coefficient has a range from zero (when everybody has identical incomes) to one (when all income goes to only one person). Increasing values of the Gini coefficient thus indicate higher inequality in the distribution of income.
Source: OECD, Income Distribution and Poverty (database), March 2018.

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Figure 22. Wealth inequality is comparatively low

Top wealth deciles share of total wealth, 2014 or latest year available



Note: Despite efforts made to ensure common treatments and classifications across countries, the measures included in the OECD Wealth Distribution Database are affected by differences that may limit their comparability. These include: *i)* differences between countries in the year when data are collected; *ii)* differences in the degree of oversampling of rich households across countries, which may affect comparisons of both levels and concentrations of household wealth; and *iii)* differences in the income concept recorded. See Balestra and Tonkin (2018) for further details.
Source: OECD, Wealth Distribution Database, March 2018.

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New analysis using household survey data shows that wealth inequality increased in Spain between 2011 and 2014, following the rapid decline in house prices (Box 3). In addition, as in other countries, income and wealth mobility also exhibit some degree of persistence, which can exacerbate inequalities. Recent evidence suggests that an important driver of the change in wealth dispersion could be differences in the performance of financial and real assets (Anghel et al., 2018).

Box 3. Income and wealth mobility in Spain

New research, using household-level data (the Survey of Household Finances constructed by the Bank of Spain), examines the mobility of households within both the income and wealth distributions over the period 2002 to 2014 (Martinez Toledano et al., 2018). While wealth inequality is low in international perspective, the results suggest that wealth inequality is greater than income inequality in Spain. Furthermore, wealth inequality is shown to have increased by more than income inequality, particularly between 2011 and 2014. There is a degree of persistence in both income and wealth mobility, although this is more pronounced at the top and bottom of the distribution.

To test the determinants of the changes in nominal net wealth, we estimate the following model:

$$\Delta NW_{it} = \alpha + \beta_1 NW_{it-1} + \beta_2 Income_i + \beta_3 X_{it-1} + D_t + \epsilon$$

where NW refers to net wealth of the household to which person *i* belongs to at time *t*; income is the average income during the two time periods; X includes a number of individual characteristics such as whether the person has a mortgage, owns a house or stocks, age and household size. The pooled specification also includes year dummies, denoted by D. The outlier observations are dropped. The results show that greater levels of net wealth accumulation are generally associated with higher levels of income, home and stock ownership (Table 5). Conversely, having a mortgage and a larger household size are associated with lower levels of net wealth accumulation.

Table 5. Factors associated with greater household wealth accumulation

Dependent variable: Change in net wealth over the specified time period

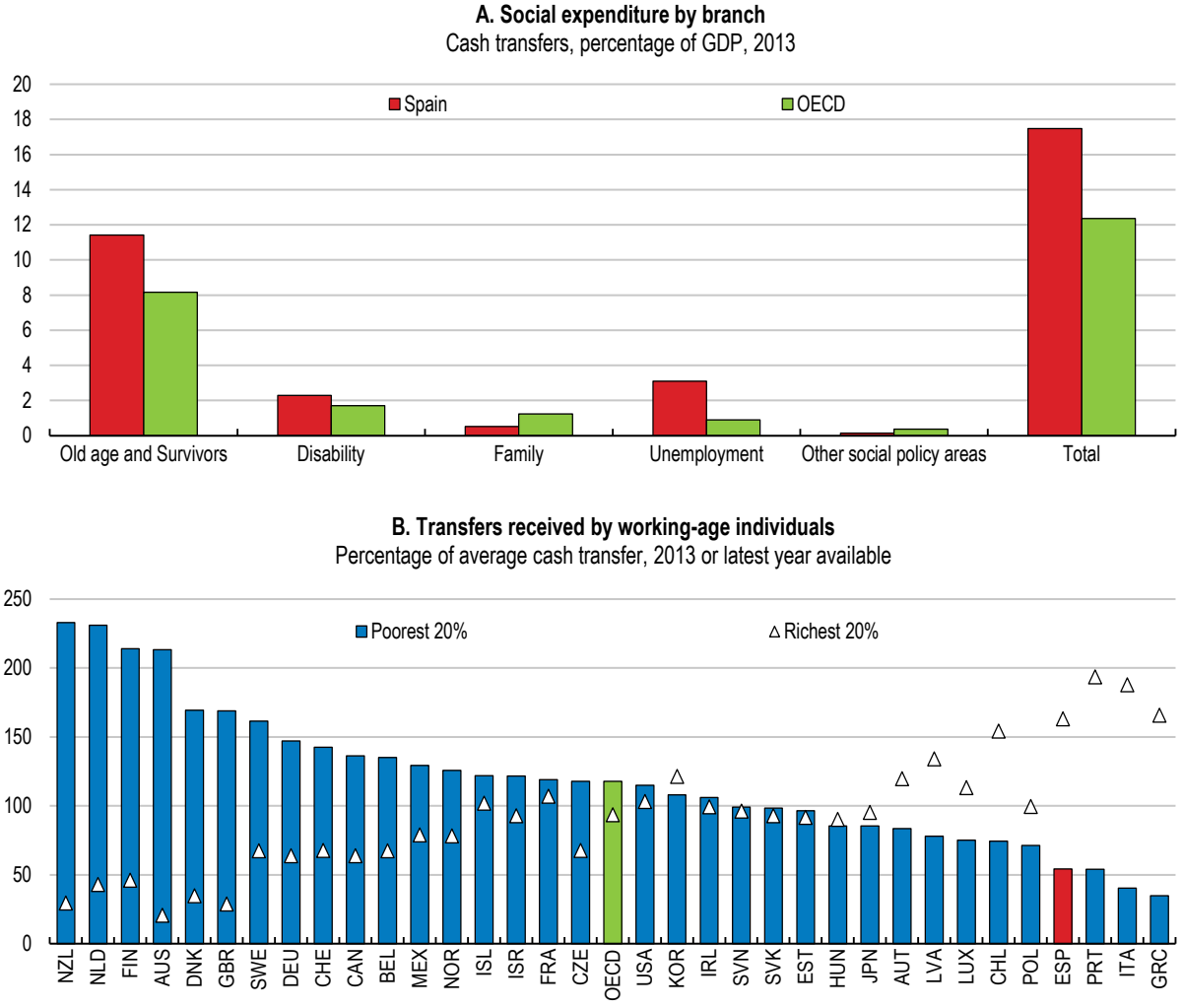
VARIABLES	Net Wealth Changes				
	2002 to 2005	2005 to 2008	2008 to 2011	2011 to 2014	Pooled
Net wealth (start of period)	-0.619***	-0.480***	-0.481***	-0.359***	-0.572***
	(-33.31)	(-117.24)	(-36.36)	(-81.26)	(-54.03)
Income	3.048***	3.122***	3.24***	1.972***	3.711***
	(60.02)	(118.47)	(62.65)	(104.46)	(85.5)
Has mortgage	-61750.2***	-40448.6***	-63218.7***	-77735.7***	-75938.8***
	(-64.25)	(-62.71)	(-50.47)	(-142.62)	(-77.28)
Owns house	106842.1***	32399.2***	11842.6***	16501.2***	33370.8***
	(49.88)	(35.74)	(5.1)	(21.47)	(16.82)
Owns stocks	14173.0***	38882.5***	6815.1***	17886.2***	46486.2***
	(7.03)	(43.71)	(3.55)	(17.82)	(29.68)
Age	7730.6***	-1895.1***	2756.5***	-621.6***	-940.6***
	(73.46)	(-22.18)	(29.08)	(-7.33)	(-10.06)
Age squared	-61.67***	36.62***	-10.83***	20.80***	24.50***
	(-76.27)	(47.88)	(-18.06)	(26.8)	(35.21)
Household size	-16633.1***	-16857.4***	-24564.9***	-1238.2***	-26807.3***
	(-47.06)	(-77.05)	(-95.99)	(-9.51)	(-126.77)
Constant	-201494.9***	5759.9*	-101620.1***	-42310.1***	
	(-58.76)	(2.5)	(-26.42)	(-18.69)	
2005 dummy					29037.1***
					(8.08)
2008 dummy					-25167.2***
					(-7.21)
2011 dummy					-48507.7***
					(-12.89)
Observations	2577	3961	3710	3049	13297

Using the tax and transfer system more efficiently and progressively

Spain has relatively high social expenditures in a number of areas (Figure 23, Panel A). However, a recent cross-country study using household level micro-data suggests that transfers in Spain are relatively poorly targeted (Causa and Hermansen, 2017). Indeed, low-income households receive less cash transfers than higher-income ones, with those in the bottom 20% of the income distribution receiving only around 55% of the average payment across all families, compared to the top 20% receiving over 60% more than the

average family (Figure 23, Panel B). Furthermore, a number of tax exemptions in Spain tend to be regressive (Haugh and Martinez-Toledano, 2017).

Figure 23. Social expenditure is relatively high, but could be better targeted



Note: Public social cash transfers in Panel B are at the household level, adjusted for household size. Income groups refer to disposable incomes.
Source: OECD, Social Expenditure Database, April.

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A number of reforms were undertaken since 2014 with an aim to make the tax system more progressive and conducive to growth and job creation, including changes to corporate and labour taxes (Box 4). In 2013, the tax deduction for house purchases was removed. The tax wedge on labour was reduced by exempting income up to EUR 14 000 and lowering personal income tax on incomes between EUR 14 000 and EUR 17 000 in 2018. However, considerable room for improvement remains in terms of both redistribution and efficiency. Globalisation and digitalisation also bring new challenges in terms of tax policies (OECD, 2018c). In this context, Spain is engaging with other OECD governments in the OECD/G20 Base Erosion and Profit Shifting Project to discuss solutions to the tax challenges arising

from digitalisation, as well as the European Union regarding its proposals from March 2018 for new directives in this area.

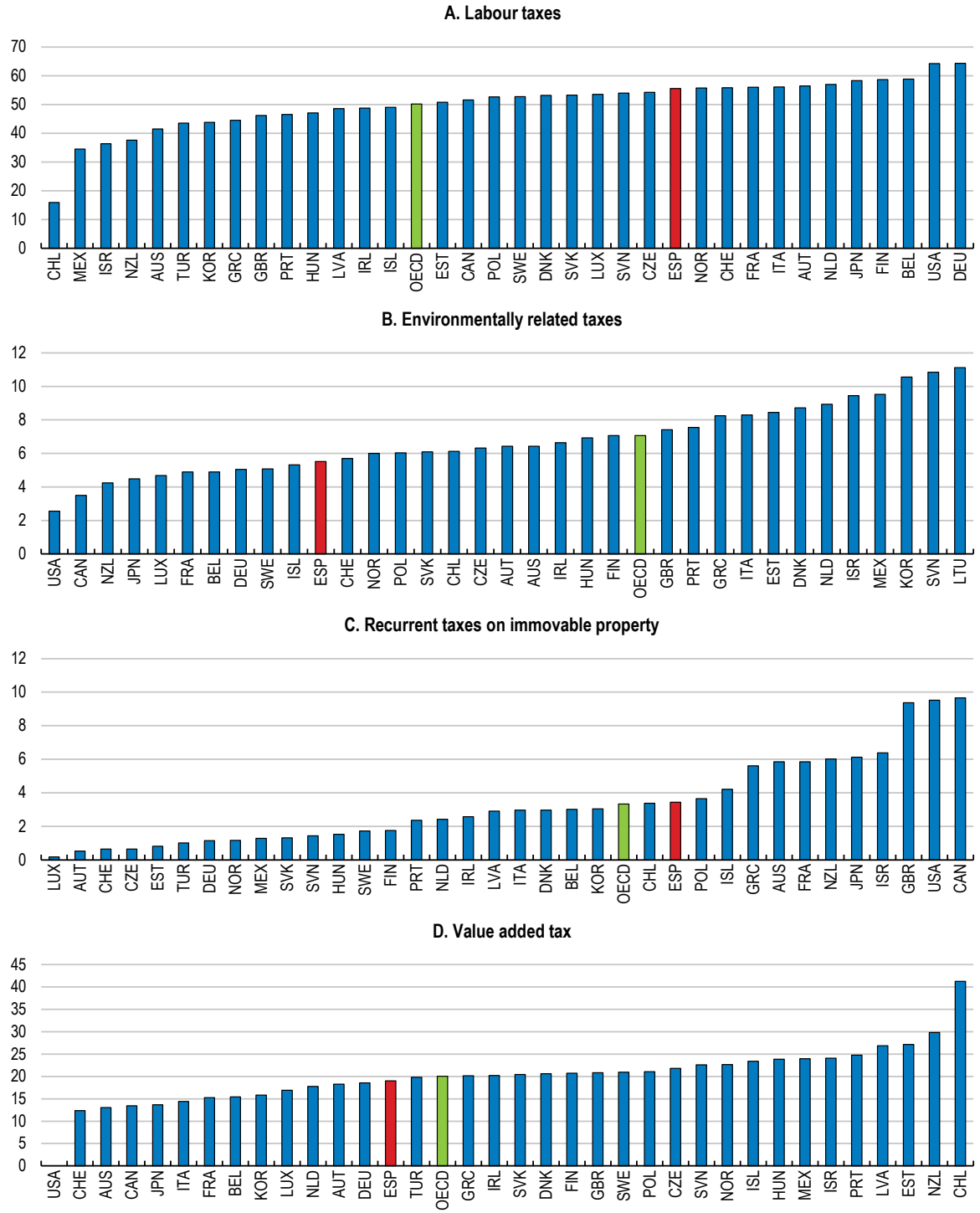
Box 4. Selected tax reforms since 2014

- The 2014 tax reform reduced the statutory income tax rates, in particular, for low-paid workers and simplified different deductions on labour earnings, reducing the tax wedge and the tax burden on labour.
- Social security contributions for employers were temporarily reduced between February 2015 and August 2016, by exempting the first EUR 500 of the salaries of workers employed on new permanent contracts for two years.
- The standard corporate income rate was reduced from 30% in 2014 to 25% in 2016. In December 2016, a number of measures were introduced to broaden the corporate income tax base affecting large companies, including limiting the extent to which companies can deduct past losses.
- Excise taxes on tobacco and alcohol were increased in 2016.
- In 2017, a new electronic VAT filing system for invoices was introduced.
- The tax wedge on labour was reduced by exempting income up to EUR 14 000 and lowering personal income tax on incomes between EUR 14 000 and EUR 17 000 in 2018.

Taxation remains tilted towards labour income, which penalises growth and employment (Johansson et al., 2008), while environmentally-related taxes and value-added taxes (VAT), in particular, are somewhat underutilised (Figure 24). In order to encourage the hiring of low-wage workers on a permanent contract, reviewing existing incentives would be useful. For example, a reduction in employer social security contributions targeted toward low-wage workers hired on a permanent contract, as recommended in the *2017 Economic Survey of Spain,* could be considered and would provide a win-win in terms of both inequality reduction and economic growth (Akgun, Cournède and Fournier, 2017). The introduction of such a measure would benefit from an evaluation of its effectiveness, along with other measures that support hiring.

Figure 24. Taxation remains tilted towards labour

Taxes as a percentage of total tax revenues, 2016



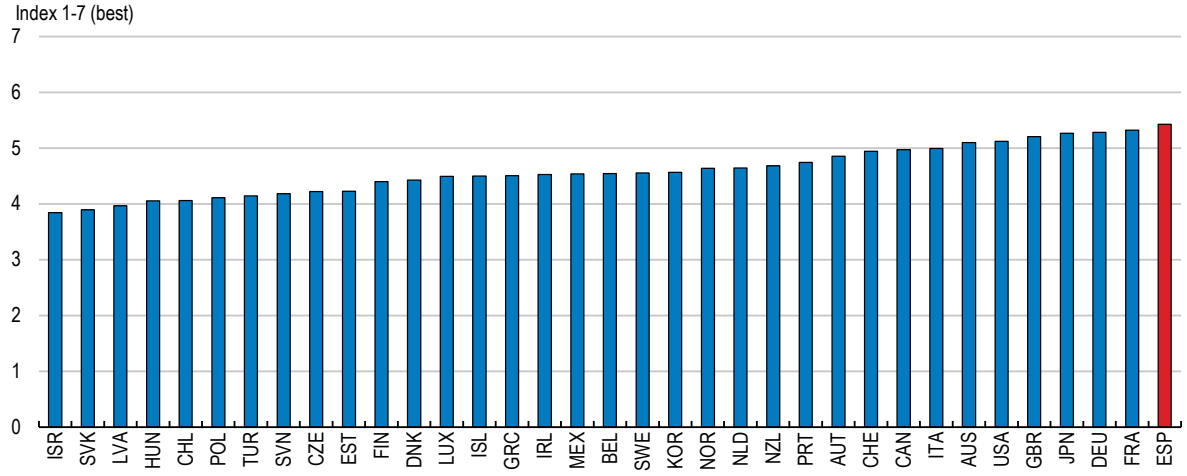
Note: OECD average is calculated as a simple average of the presented countries.
Source: OECD (2018), OECD Tax Statistics and Green Growth Indicators (databases).

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Value added tax bases in Spain are eroded by various deductions, exemptions and reduced rates, which are poorly targeted tools in terms of reducing income inequality and poverty. While some reduced rates on VAT, such as those on basic food and other necessities, benefit relatively poorer people, they remain insufficiently targeted, and other reduced VAT rates tend to benefit richer households instead (OECD, 2016b). The authorities should reassess the merits of such reduced VAT rates, particularly in the context of potentially more efficient and better targeted tools for income redistribution through the transfer system. Reduced VAT rates in Spain have supported the competitiveness of the tourism sector. However, Spain is now the most competitive tourism destination in the OECD (Figure 25), which suggests reduced VAT rates to promote tourism may no longer be necessary and that there is scope to raise tax revenues in other areas related to tourism.

Figure 25. Spain is a competitive tourism destination

Travel and tourism competitiveness index, 2017



Note: The Travel and Tourism Competitiveness Index measures "the set of factors and policies that enable the sustainable development of the travel and tourism sector, which in turn, contributes to the development and competitiveness of a country".
Source: World Economic Forum.

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With the growing importance of the sharing economy (including businesses such as AirBnB), it is important that businesses operating in this area are placed on an equal footing in terms of taxation and regulation, with more traditional ones. Between 2010 and 2014, the number of foreign tourists staying in rented homes increased by 59.7% to 7.4 million. However, Barcelona City Council identified a high rate of homes used for tourism that did not comply with the relevant laws, with potential consequences for tax collection in 2016. In 2018, tax regulations to place information commitments on digital platforms to clearly identify accommodation owners who use them were introduced. This is a welcome step and further efforts to ensure tax compliance within the sharing economy should be continued.

After the introduction of a 100% tax credit, effectively reducing all taxpayers' wealth tax liabilities to zero in 2008, net wealth taxes were reinstated as a temporary fiscal consolidation measure, but have been maintained since then. These taxes raised revenues of approximately 0.2% of GDP in 2016 (OECD, 2018d). Net wealth taxes can be used to redistribute income from the wealthy, if they are based on total net wealth, and if they have

an exemption level that is high enough to exclude the savings of individuals undertaken to smooth consumption over their lifetimes (life-cycle saving) of everyone except the most wealthy. Wealth taxes can also encourage the productive use of capital and tax revenues that could have evaded income tax in the first place.

At the same time, wealth taxes may be seen as a tax on income that has already been taxed and could discourage the savings of those people to whom they apply. In addition, they can be costly to administer, discourage residency and can distort portfolio choices when certain assets are exempt (OECD, 2018d). Hence, all the implications of resorting to wealth taxes should be carefully reconsidered.

Inheritance taxes are considered less distortionary since they are levied only once, a large part of inheritances are unplanned and the taxation of most life-cycle saving is avoided (OECD, 2014). Greater use of inheritance taxes have been found to be less distortive and detrimental to growth than other taxes (Akgun, Cournède and Fournier, 2017). There is scope to enhance the role of inheritance taxes in some regions in Spain, particularly as wealth inequalities, though relatively low, have increased somewhat in recent years (Box 3).

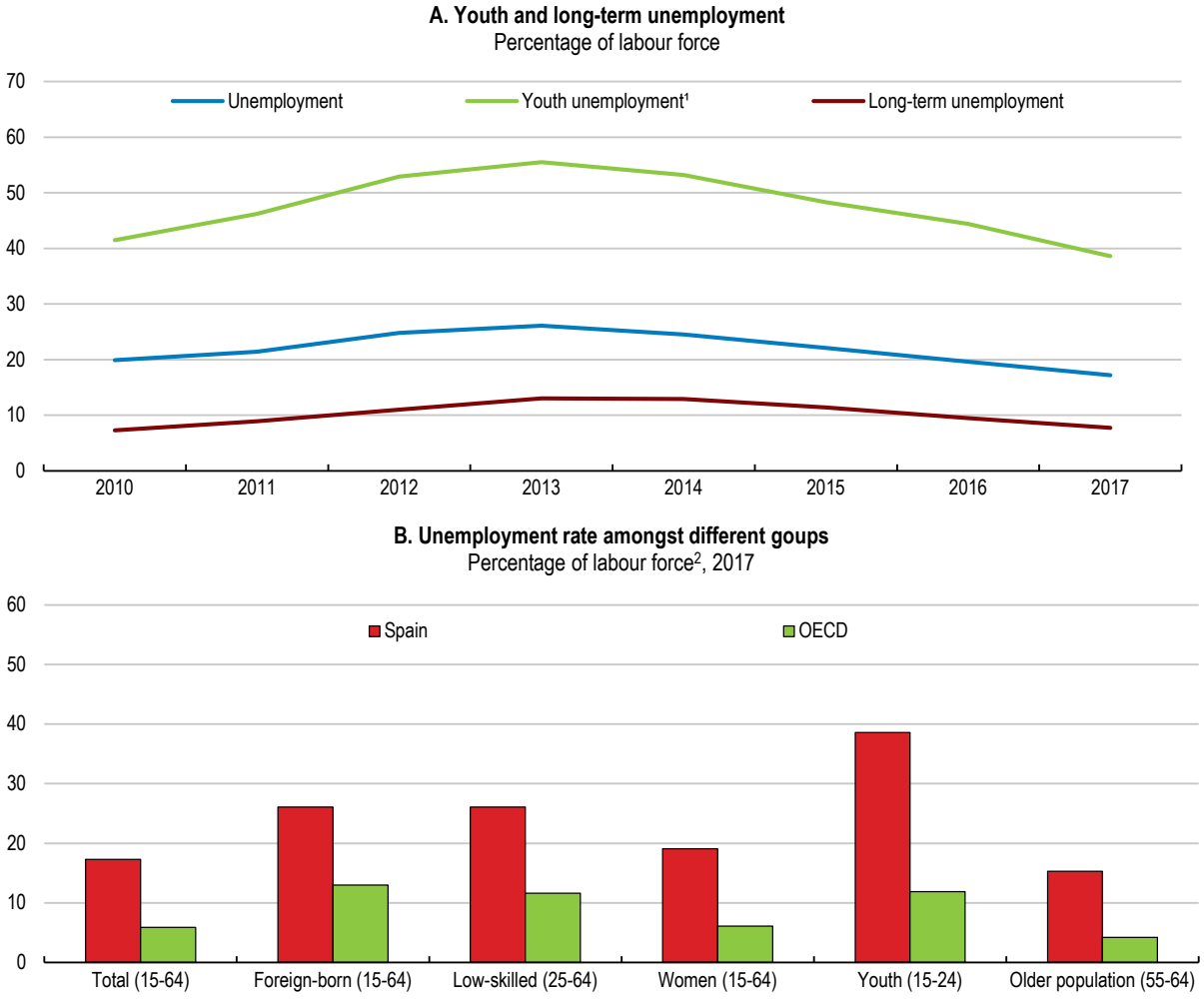
While it makes sense to have tax allowances that avoid taxing the majority of people with small inheritances, some Spanish regions have substantially reduced the tax on transfers between spouses and descendants. For example, from 2018, children and spouses can each receive EUR 1 million free from inheritance tax in Andalusia. By contrast, in France, only EUR 100 000 are exempt from inheritance tax in the case of children (median wealth per adult in Spain falls significantly below this level). Tax allowances granted for inheritance taxes for the most wealthy should be reconsidered. To avoid a race to the bottom between regions and issues of "fictitious tax residence", the central government could coordinate with regions to set minimum inheritance tax rates or a maximum exemption level.

Addressing remaining challenges in labour markets

Labour markets continue to improve, thanks to wage moderation and past labour market reform. The unemployment rate is gradually falling from its peak of 26% in 2013, but remains high at 15% in the third quarter of 2018 (Figure 26, Panel A). The unemployment rates of disadvantaged groups are all higher than those in the OECD on average (Figure 26, Panel B). Despite significant decreases, the youth unemployment rate (54% in 2014 to 38.6% in 2017) and the long-term unemployment rate (12.9% in 2014 to 7.7% in 2017) remain among the highest in the European Union. The still wide prevalence of temporary and part-time workers creates vulnerabilities and contributes to inequalities. The crisis also had an uneven effect on wages, with the strongest adjustment in the lowest deciles, exacerbating inequalities (Figure 27). The wages in the lowest deciles are benefiting from the recovery, but they are still below their pre-crisis levels. The reduction of income tax in the 2018 Budget, and the 4% and 5% rises in the minimum wages in 2018 and 2019, respectively, will also benefit workers with lower incomes.

The sharp increase of unemployment during the crisis had also a structural dimension (European Commission, 2016). For example, 31% of the decline in employment during the recession was due to lower labour matching (Boscá et al., 2017). Although there has been a structural improvement in the labour market since 2013, high long-term unemployment, skill mismatch and low labour mobility could prevent structural unemployment from falling to pre-crisis levels (Chapter 1).

Figure 26. The labour market remains segmented



1. As a percentage of 15-24 year-olds labour force.
2. As a percentage of labour force in each age group.
Source: Eurostat and OECD.

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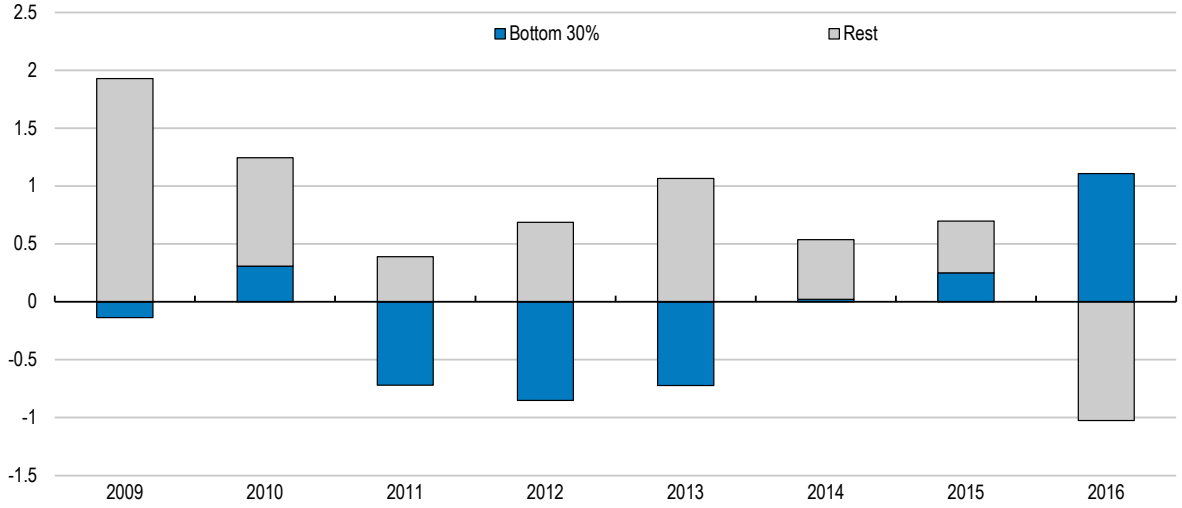
High youth unemployment remains a key challenge in Spain. To address the low professional skills and lack of recent work experience of some unemployed youth, the Youth Employment and Entrepreneurship Strategy has provided financial incentives for firms and training. Furthermore, the Youth Guarantee was reformed in December 2016 to simplify the registration process, with positive results in terms of higher number of registrations. The share of young beneficiaries still in employment six months after has also increased from 38% to 51% (European Commission, 2018c).

The Budget for 2018 introduced a new wage complement of EUR 430 for those youth who sign training and learning contracts (*Contrato de Formación y aprendizaje*), allowing them to acquire working experience and training. Nevertheless, the number of youth who is not in education, employment or training remains high at 17.7% in 2017. An effective implementation of the measures targeted at youth, including the Youth Guarantee, requires

effective upskilling. To address this, the capacity of the Public Employment Services (PES) to develop and implement more personalised action plans should be enhanced.

Figure 27. Wage declines disproportionately affected the lowest deciles during the crisis

Contribution to wage growth by deciles, percentage



Source: INE (2018), Labour Force Survey (database).

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High long-term unemployment may be eroding skills and lowering social inclusion. Recent analysis finds that the long-term unemployed tend to be older and less educated, and have lower work experience. High job-searching time emerges as the main barrier to the transition from long-term unemployment to employment (Bentolila et al., 2017). Tailored active labour market policies have proven to be the most cost-effective measure to overcome barriers that hinder the re-employment of the long-term unemployed (Card, Kluve and Weber, 2015). In 2016, the *Programa de Acción Conjunta para la Mejora en la Atención de Desempleados de Larga Duración*, which includes additional funding for employment agencies to support this group, was introduced. Improving regional coordination of social and labour market policies and higher inter-regional mobility, would also help (Chapter 1).

In 2014, individuals who were inactive, unemployed or underemployed represented 45% of the working age population. The main barriers to moving into the labour market are low education or professional skills, total and current work experience and scarce job opportunities (Fernandez et al., 2018). Furthermore, these barriers are unequally distributed across groups or regions, suggesting that the correct identification of the needs of each unemployed person remains key. Hence, a profiling tool, as planned in the Activation Strategy 2017-20, should be implemented in order to adapt activation programs to the specific needs of the unemployed and abandon 'one-size-fits-all' formulas.

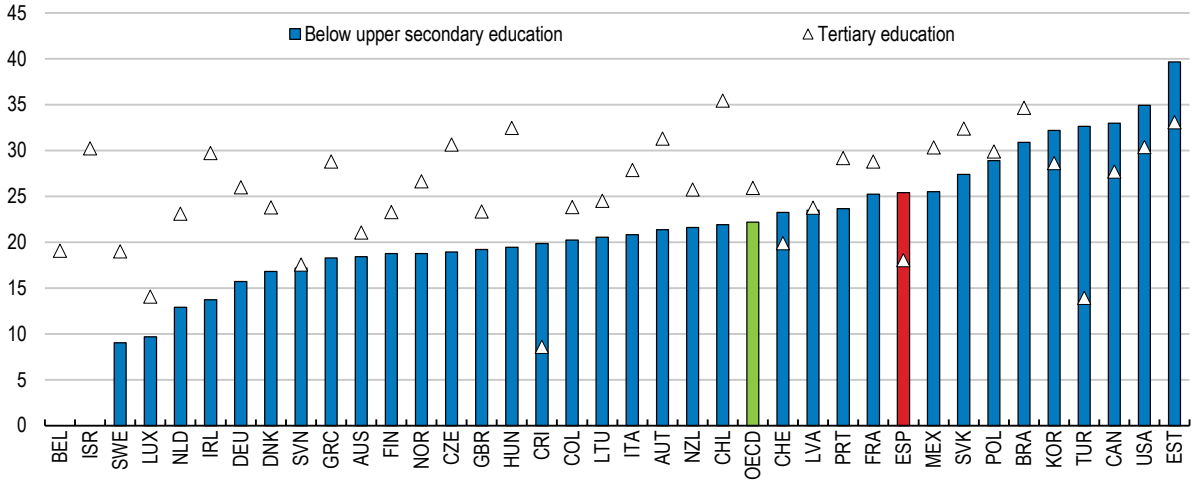
While the share of temporary workers is lower than its pre-crisis peaks, it remains high at 27% in 2017, notably higher than the EU average of 14%. The share of temporary contracts due to involuntary reasons, 91.4% in 2016, is also much higher than the EU average of 60.7% (Felgueroso et al., 2017). One way to reduce labour market duality is to pursue a greater convergence of termination costs between permanent and temporary contracts,

as recommended in the *2017 Economic Survey of Spain.* Firms may also use temporary contracts to reduce severance payments and social security contributions, which necessitates good regulation and supervision to avoid abuse of temporary jobs. The recent measures, including the new legal framework for labour supervisors and increased resources, have delivered positive results. The number of temporary contracts under investigation increased by 21% between 2015 and 2016, resulting in 22% of them being transformed into indefinite contracts (European Commission, 2018c). The efforts to fight against the abuse of temporary contracts should continue. In July 2018, the new government approved an action plan for 2018-20, which increased the resources and staff for labour inspection, which is welcome.

Despite much progress in the last two decades, the gender gap still exists in a number of dimensions, including an average gender pay gap of around 11% and a high prevalence among women of temporary and involuntary part-time employment. The gender pay gap also varies with the level of education, reaching 25% for those with below upper secondary education, above the OECD average of 22% (Figure 28). The gender convergence in unemployment rates observed in recent years is due to the cyclical downturn disproportionately worsening male labour market outcomes and is unlikely to persist, except for the long-term unemployed (De La Rica and Rebollo Sanz, 2015).

Figure 28. Gender pay gap decreases with education

Gender gap (percentage) in mean full-time, full-year earnings, by levels of education, 25-64 year olds, 2015 or latest year



Note: Data for France and Italy refer to 2013, and for Canada, Finland, Luxembourg, the Netherlands, Poland, Spain and Lithuania to 2014.
Source: OECD, Family Database.

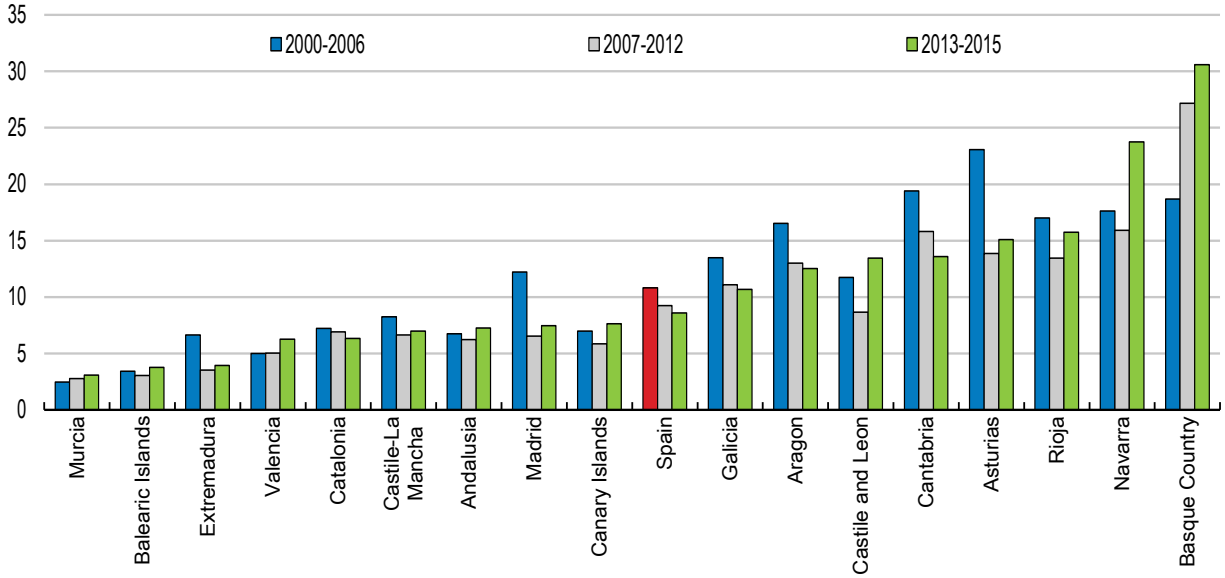
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While the share of children aged 3 and over enrolled in formal childcare is around 90%, only around 34% of children under the age of 3 use formal childcare services, which is around the EU average (Conde-Ruiz and De Artíñano, 2016). As inequality in the division of domestic tasks is high in Spain, extending the length of early childhood education to children between 0 and 3 years old could improve the labour market participation of women. The Budget 2018 introduced an annual EUR 1 000 subsidy to working parents with children under the age of 3. Fostering flexible work arrangements, which are scarce

in Spain, *via* regional and firm-level agreements, would also contribute to the higher employment of women.

The 2012 labour market reform increased the flexibility of labour markets by introducing the priority of firm-level agreements over those at the sector and regional level. Firm-level agreements tend to have more clauses linking wage and productivity growth, compared to sectoral agreements. Such clauses can help prevent the re-emergence of a divergence of wages and productivity, which lowered competitiveness before the crisis. Recent OECD research suggests that this change moved Spain closer to an organised decentralised system, as in some other continental European countries. Such a system allows sector-level agreements to set broad framework conditions but leave detailed provisions to firm-level negotiations. Coordinated systems, including those characterised by organised decentralisation, should contribute to both higher labour market flexibility and employment growth than fully centralised and decentralised systems (OECD, 2018e). Maintaining this flexibility aspect of the reform is thus critical to avoid excessive firing of workers when the next crisis hits. The global financial crisis showed that countries using flexible arrangements within firms (e.g. including temporarily lower working hours or benefits), such as Germany, had a significantly less marked increase in unemployment, despite a similar fall in activity. In 2015, only 7% of workers were covered by firm-level agreements, slightly below the 2007 level and the use of such agreements is uneven across regions (Figure 29). One explanation for this could be that the cost of negotiating an agreement is more burdensome for smaller firms. Including such productivity clauses more in sectoral agreements could help overcome these high costs.

Figure 29. The share of workers covered by firm-level collective agreements is low



Source: Ministry of Employment and Social Security, "Estadística de convenios colectivos de trabajo".

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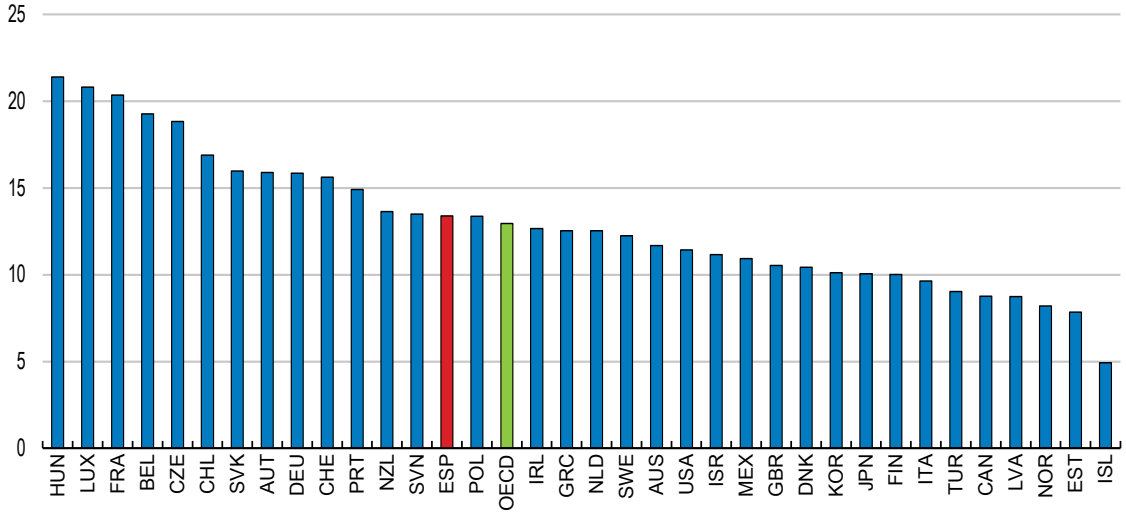
Improving education and skills

Higher educational attainment and skills can lead to better employment prospects and wages (OECD, 2014). In Spain, the gap between the unemployment rate of those with tertiary education and less than upper secondary education, at around 14%, is higher than the EU average of 10%. Furthermore, the quality of the workforce's skills is low and skill mismatch is high, contributing to low productivity (Chapter 1). Policies should focus on improving the skills of workers *via* lifelong learning and providing skills matching future labour market needs (OECD, 2018f; OECD, 2015c). Improving the quality of teaching through better university and on-the-job training for teachers, as recommended in the *2017 Economic Survey of Spain,* would also help boost skills.

Despite significant improvements over the past years, the early school leaving rate remains among the highest in the OECD, at 18.3% in 2017, and Spain has the second highest grade repetition rate in the European Union. The increased likelihood of grade repetition among disadvantaged students compared with their advantaged peers, and after taking performance into account, is amongst the highest in the OECD (OECD, 2016c). Furthermore, the percentage of variance in science performance explained by socio-economic background is relatively high (Figure 30). Recent OECD analysis also suggests that in terms of intergenerational social mobility, Spain performs poorly, particularly in terms of education (OECD, 2018g).

Figure 30. Education outcomes vary by socio-economic conditions

Percentage of variance in science performance explained by socio-economic background



Source: OECD (2016), PISA 2015 Results (Volume II): Policies and Practices for Successful Schools, OECD Publishing.

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Reducing inequality of opportunity in education would be one of the main drivers to improve inclusiveness and reduce intergenerational inequality, as discussed in detail in Chapter 1. Increasing individualised support to students at the risk of failing at an early stage would benefit especially disadvantaged students with parents with low levels of education. Enhancing incentives for the mobility of well-qualified teachers across schools and regions is another way to increase equality of opportunities in lagging regions (Chapter 1). Finally, increasing the provision of early childhood education for those between the

ages of 0 to 3 would not only boost labour participation of women (see above), but also improve future skill formation, especially for children from disadvantaged backgrounds.

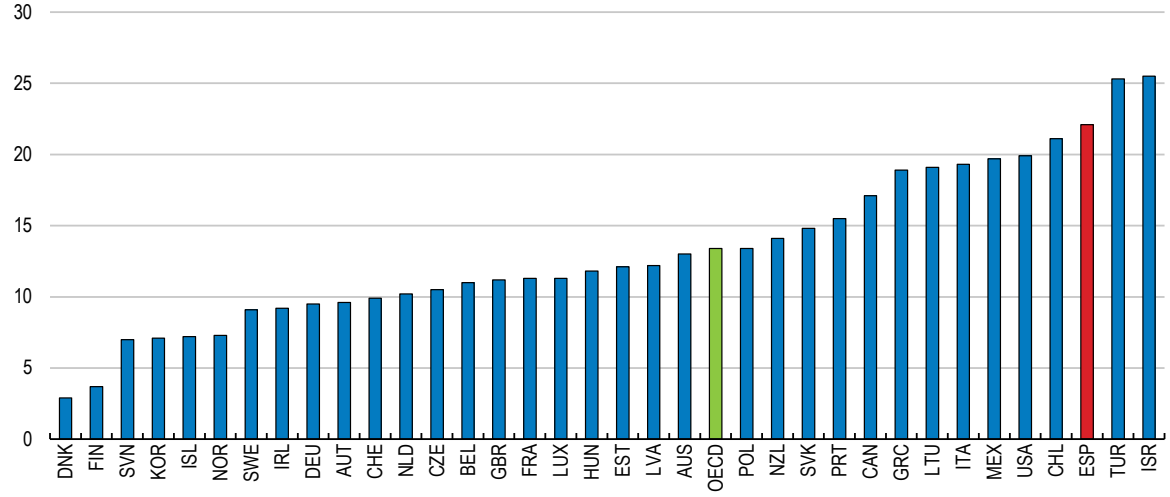
Reducing child poverty

The rate of child poverty increased sharply in Spain during the financial crisis to 22%, significantly above the OECD average of 13% (Figure 31). The risk of poverty is especially high for children living in migrant and single parent families. In addition, 8 out of 10 school-age poor children suffer material deprivation in a number of areas, including housing and educational opportunities. Addressing high rates of material deprivation will require coordinated joint action in health, education and housing policies. A High Commissioner of Child Poverty was recently created and a Child Poverty Plan was launched to help reduce child poverty, which is a key objective of the new government.

Child poverty is closely related to the deterioration in parents' employment conditions, with the proportion of poor children where one parent is not in work all year increasing from 34% in 2006 to 60% in 2014. Hence, employment policies to create conditions that are conducive to parents finding a job will be key to address child poverty. In this context, stronger coordination between employment and social services is needed to provide effective transitions between social support schemes and employment (Chapter 1). At the same time, the development of affordable after-school services for school-age children can help parents, especially mothers, to maintain employment (Thevenon et al., 2018). The share of school-age children covered by such services at 8% is well below the OECD average of 29%. Increasing the amount and coverage of cash benefits for families with children, as recommended in the *2017 Economic Survey of Spain,* would also help.

Figure 31. The rate of child poverty is high

Percentage, 2015 or latest year



Note: Share of children (0-17) with an equivalised post-tax and transfer income of less than 50% of the national annual average equivalised post-tax and transfer income.
Source: OECD, Income Distribution Database.

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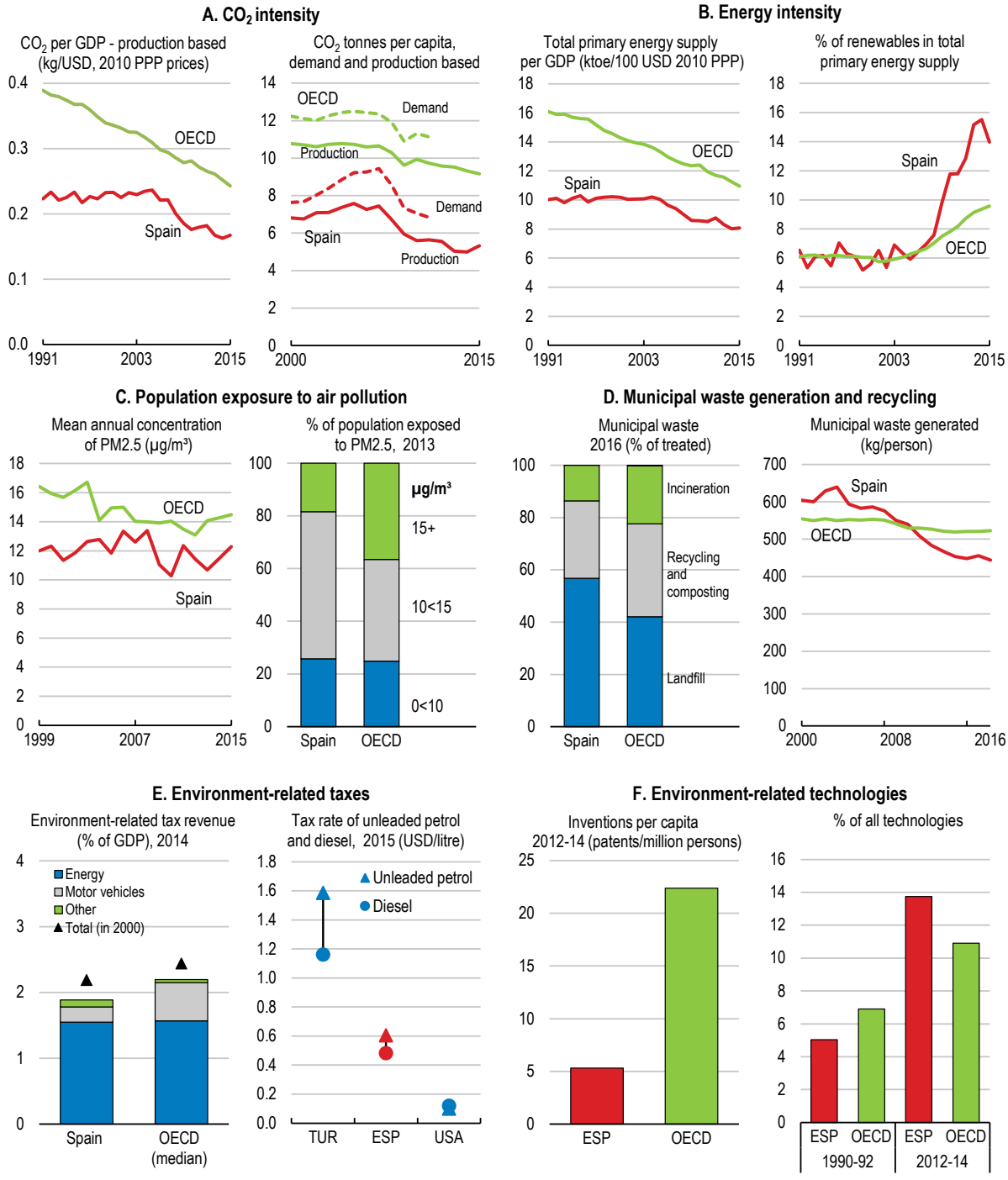
Table 6. Past OECD recommendations on tax, social and labour market policies

Recommendations in 2017 Economic Survey	Actions taken since 2017
Increase the amount and coverage of the regional minimum income support programmes and of cash benefits for families with children.	No action taken.
Increase the efficiency of regional public employment services by employing profiling tools and specialisation of counsellors, increasing resources and staff-to-job seeker ratios, and improving coordination to provide integrated support for jobseekers via a single point of contact for social and employment services and assistance.	Spanish Employment Activation Strategy 2017-2020 includes the implementation of profiling tools, but they have not been implemented yet. Additional funds for employment agencies is provided in the *Programa de Acción Conjunta*. Only the Basque Country has effectively created a single point of contact for social and employment services.
Request gradually increased representativeness of business associations when allowing the extension of collective agreements.	No action taken.
Reduce employer social security contributions for low-wage workers on permanent contracts.	No action taken.
Enhance the efficiency of the tax system by abolishing poorly-targeted personal income tax exemptions, regressive reduced value added (VAT) rates, and increasing environmental taxes.	Excise taxes on tobacco and alcohol were increased. The tax wedge on labour was reduced by exempting income up to EUR 14 000.

There is room to make growth greener

Spain's emissions of greenhouse gases (GHG) per unit of GDP remain below the OECD average, and are declining, but at a pace lower than that in the OECD. Furthermore, per capita emissions ceased to fall in 2014, as the economy began to recover. Performance in a number of areas has improved, with energy use and air pollution less than the OECD average (Figure 32). Spain was once a relatively poor performer in generation of household waste, but levels of waste have now been declining for some years, falling below the OECD average. However, Spain remains less successful than many countries in making use of waste either by recycling or recovering energy in incineration. In fact, landfill remains the main treatment method for municipal waste and its share has increased in recent years.

Figure 32. Green growth indicators: Spain



Source: OECD (2018), Green Growth Indicators (database).

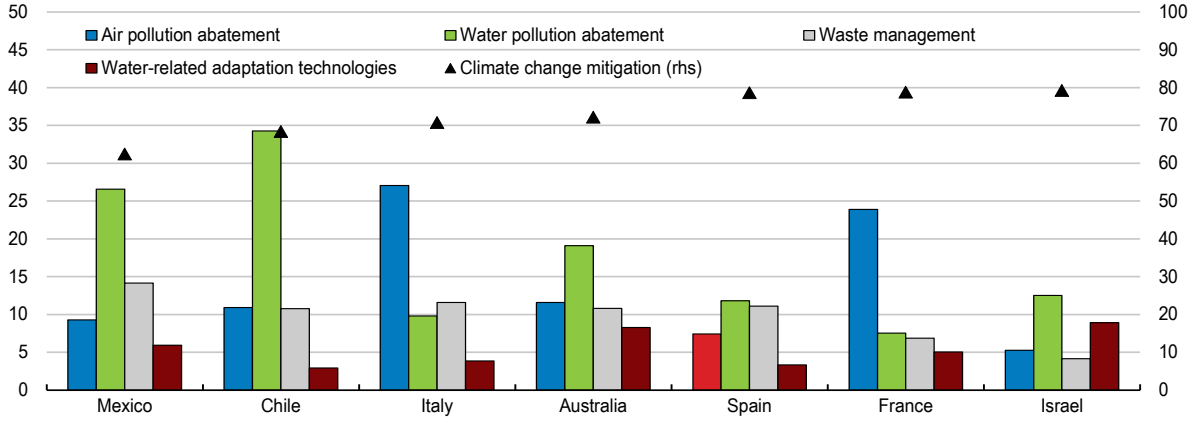
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Spain has one of the highest levels of water stress in the OECD (OECD, 2017d). In particular, as per capita precipitation is relatively low, total water use as a share of available water is very high. As climate change proceeds, improving techniques for managing water

supply will become increasingly important. Greater use of water price signals, as recommended in the *2017 Economic Survey of Spain,* would help to generate better incentives. This should be complemented by improved water governance by widening participation of stakeholders in river basin authorities to include more scientists and improving the efficiency of water supply and treatment services by benchmarking regulation of water utilities (Fuentes, 2011). Despite a high share of patents in environment-related technologies, patents tend to be concentrated on climate change mitigation, in line with the large recent increase in the use of renewables. Relatively few patents are related to water, compared to some other key water-scarce countries (Figure 33). This suggests that further investment and research in this area may be warranted.

Figure 33. Environment-related patents are not concentrated on water

Patent applications by technology domain as a share of environment-related applications, 2010-14 average



Source: OECD (2017), Green Growth Indicators (database).

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Spain continues to have considerable scope to make the tax system more environmentally friendly. In particular, Spain raises less revenue as a share of GDP and revenues from environment-related taxes than the OECD average (Figure 24 and Figure 32, Panel E). For example, there remains room to raise tax rates on fuel for road transport, particularly with respect to diesel. Despite having higher emissions, the tax rate on diesel is lower than the tax rate on petrol, which lowers its retail price relative to petrol and encourages consumers to buy diesel cars (OECD, 2017d). Taxation of fuels should be reformed to better reflect emissions of CO_2 and other pollutants.

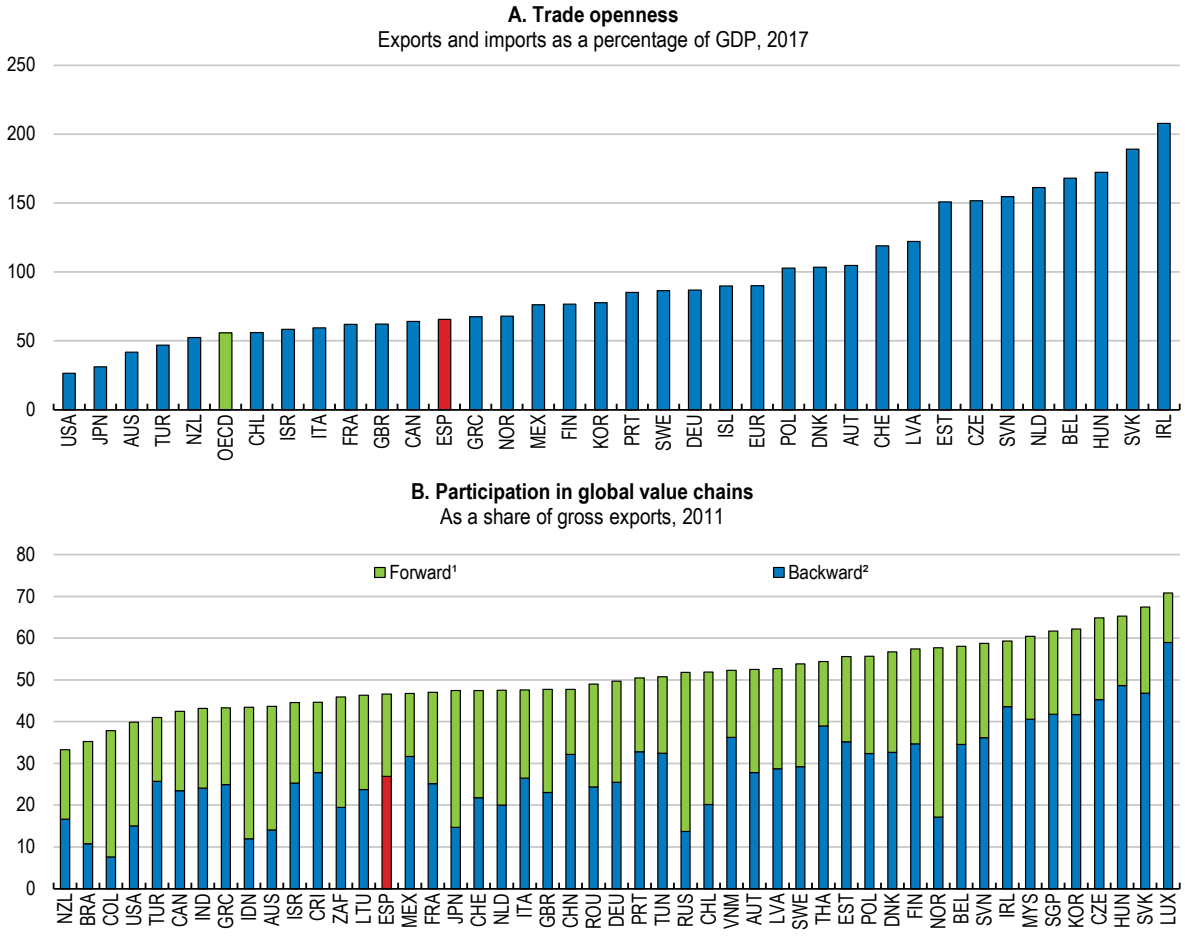
Boosting productivity and trade

International trade, investment and participation in global value chains (GVCs) can contribute to higher productivity growth (Keller and Yeaple, 2009; Baldwin, 2011; Benkovskis et al., 2017; OECD, 2017e). As is the case in other countries, exporting firms consistently display higher productivity than non-exporting firms, with Spanish exporters enjoying a productivity premium of around 40% on average over the period 2001 to 2010 (Martin Machuca and Rodríguez Caloca, 2011; Berthou et al., 2015). Furthermore, there is evidence that Spanish exporters were more resilient than non-exporters to the effects of the recent crisis, faring better during and after the crisis on a number of dimensions, including output, productivity, wages and likelihood of survival (Eppinger et al., 2018).

There is room to increase internationalisation further

Exports as a share of GDP increased from 26% in 2007 to 33% in 2017, but remain below the average of euro area countries at 48%. Similarly, trade openness, defined as exports and imports as a share of GDP, at 65%, is well below the EU average of 90% (Figure 34, Panel A). Furthermore, Spain's participation in GVCs, measured as the combination of backward and forward integration of its exports, is relatively low. That is, the extent to which imported inputs are used in exports, and exported goods and services of Spain are used as imported inputs to produce other countries exports, respectively, is low (Figure 34, Panel B).

Figure 34. Trade performance could be enhanced further



1. The indicator provides the share of exported goods and services used as imported inputs to produce other countries' exports.
2. The indicator measures the value of imported inputs in the overall exports of a country (the remainder being the domestic content of exports).
Source: OECD, National Accounts and International Trade Statistics.

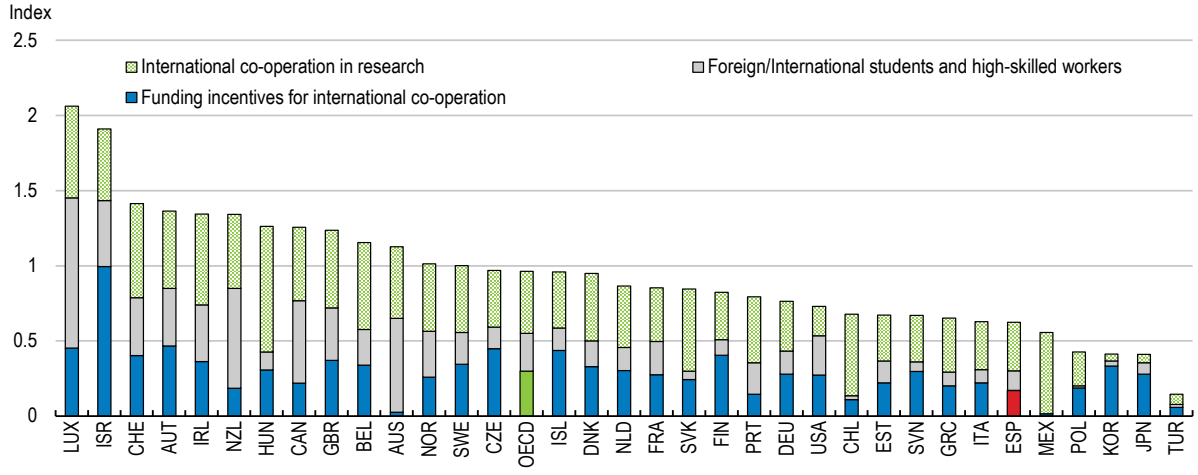
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Spain does not score well according to an indicator that measures countries' potential to be part of global education, innovation and research networks, which can boost GVC participation and trade performance (OECD, 2017f) (Figure 35). Hence, the internationalisation strategy adopted in 2017, which encompasses a number of these

dimensions, is welcome. The Strategy also has some specific initiatives targeted at small and medium-sized enterprises (SMEs), since the share of exporting SMEs remains low, despite recent increases (Figure 36).

Figure 35. Spain can improve its participation in global networks in a number of dimensions

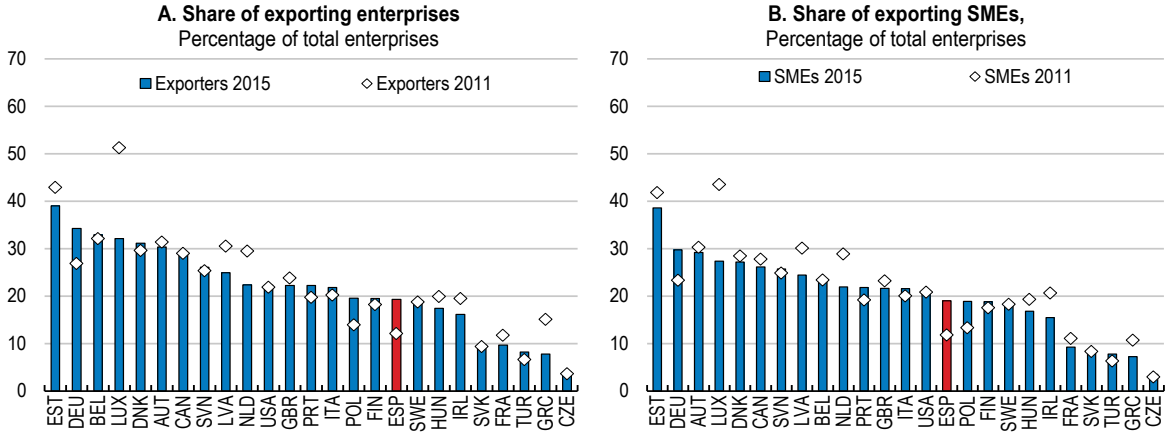
A synthetic indicator ranging from 0 to 3 (higher value indicates more integration)



Note: International co-operation for research and innovation, measured by international co-authorship, international co-inventions, and the international mobility of scientific authors. Foreign/international students and high-skilled workers, measured by the share of international and foreign students enrolled in tertiary education and the share of foreign-born doctorate holders. Funding incentives for international co-operation, measured by government expenditure on R&D, the share of government R&D expenditure financed from abroad, and the share of business R&D expenditure financed from abroad.
Source: OECD, Skills Outlook 2017 (database).

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Figure 36. The share of exporting SMEs has increased, but remains relatively low



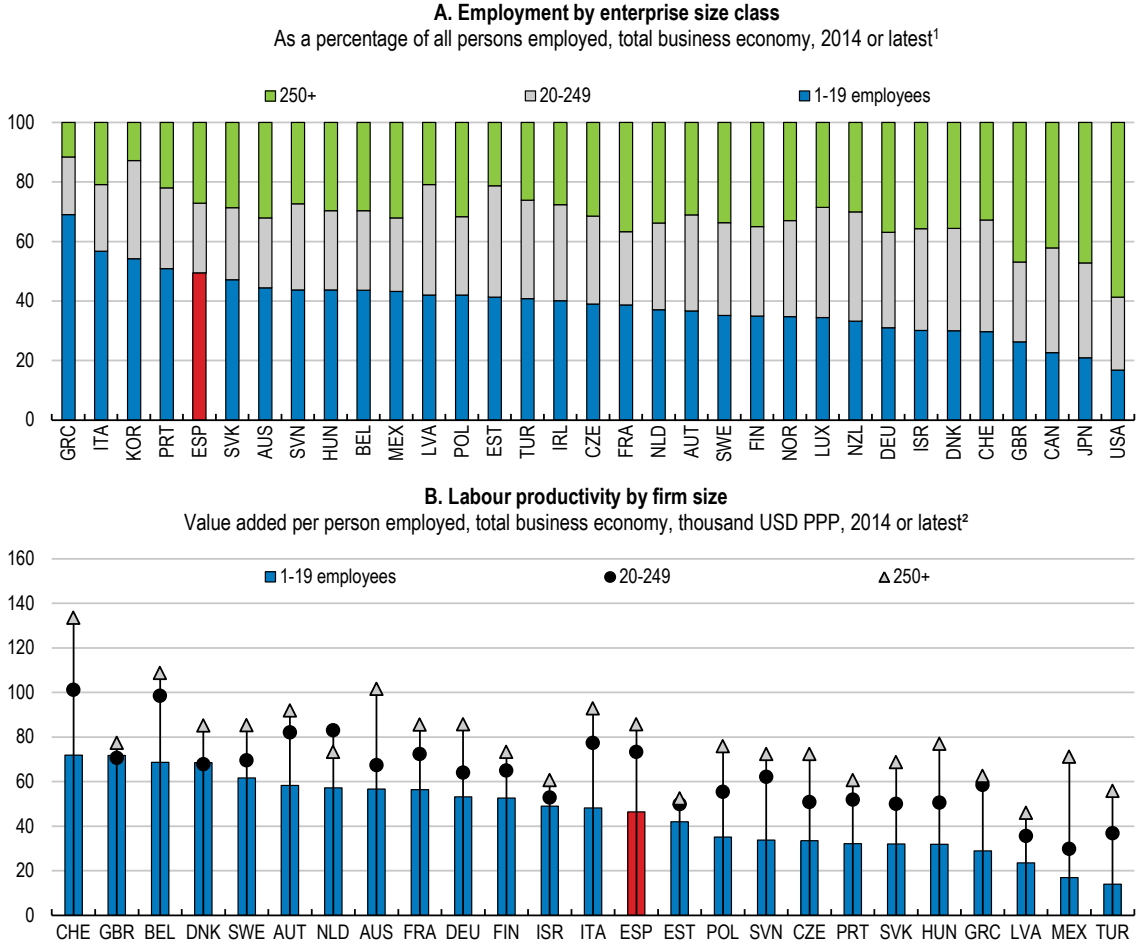
Note: Data for Belgium, Sweden, Turkey, the United Kingdom and the United States refer to 2014.
Source: OECD (2017), Entrepreneurship at a Glance.

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Removing barriers to firm growth will help increase internationalisation

SMEs in Spain constitute a large proportion of total firms and account for a relatively high share of total employment (Figure 37, Panel A). However, as in other countries, small firms in Spain tend to have much lower levels of productivity than large firms (Figure 37, Panel B). Furthermore, during the crisis, the average size of SMEs declined markedly. In 2016, for SMEs in the Spanish non-financial business economy, value added remained 22.8% below the pre-crisis level and employment 20.8% lower than in 2008.

Figure 37. Employment in SMEs is relatively high, but their productivity is low



1. 2015 for CAN, ISR, NZL. 2013 for MEX. For AUS: 20-49 refers to 20-199, 250+ refers to 200+. Data for USA, JPN, CAN, ISR, KOR do not include non-employers.
2. 2013 for ISR and MEX. Data for Switzerland correspond to value added per employee. Data for Mexico refer to establishments. Data for the United Kingdom exclude small unregistered businesses; these are businesses below the thresholds of the value-added tax regime and/or the "pay as you earn (PAYE)" (for employing firms) regime. Data for Switzerland exclude enterprises with less than 3 persons employed.
Source: OECD (2017), Entrepreneurship at a Glance 2017.

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While trade can facilitate spillovers, firms need to reach a sufficient scale in terms of size and productivity to compete in international markets and participate in GVCs (Criscuolo and Timmis, 2017). In Spain, post-entry growth of start-ups (after two years) is low in international perspective, which can be a reflection of barriers to firm growth

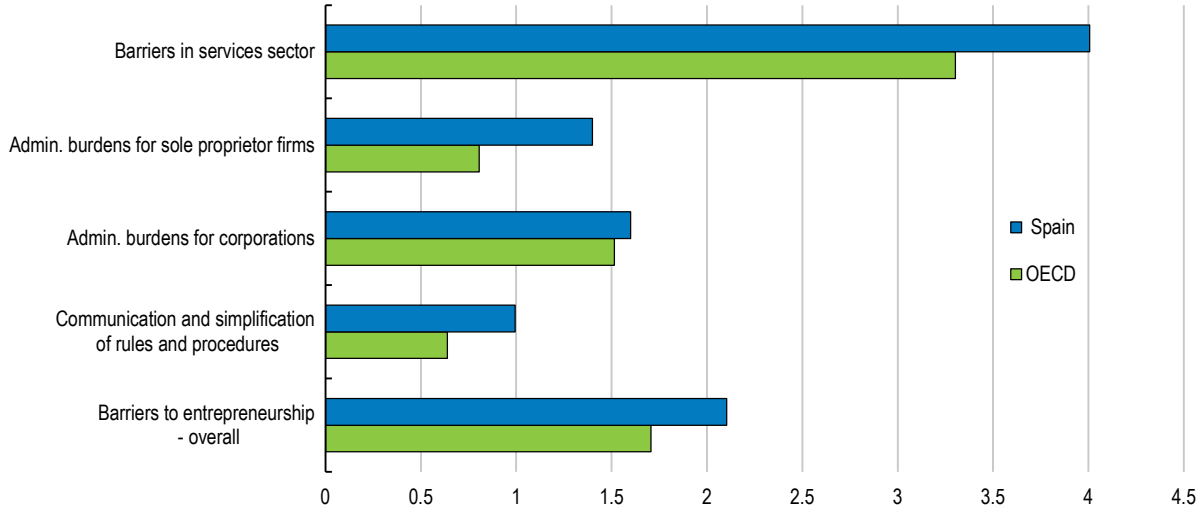
(OECD, 2017g). Improved access to finance by SMEs *via* better SME bond and loan securitisation, as recommended in the *2017 Economic Survey of Spain*, would enable the upscaling of SMEs and improve productivity. For instance, the government could introduce risk sharing mechanisms, such as providing guarantees to SME bond funds that purchase either loans securitised by banks or smaller bonds issued directly by small firms. Policies that impede product and labour market flexibility can also restrict the ability of SMEs to grow by hampering the reallocation of resources.

Boosting competition and reducing regulatory barriers

A sound regulatory framework that supports efficient resource allocation and fosters competition, innovation and entrepreneurship is vital to increase productivity and promote firm growth. Improved corporate governance, simplified corporate taxes, bankruptcy reform and increased efficiency of the business registry have improved ease of doing business (Ministry of Economy, 2017). Spain's ranking increased from 33 in 2016 to 28 in 2017 according to the World Bank Doing Business Indicators. While the overall stringency of product market regulations is close to the OECD average, some barriers to entrepreneurship remain (Figure 38). OECD analysis of the impact of structural reforms suggests that reforms in these areas could improve performance and boost productivity (Box 5).

Figure 38. Barriers to entrepreneurship are high

Index scale of 0-6 from least to most restrictive, 2013



Source: OECD, Product Market Regulation Database.

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According to the 2015 Regional World Bank Doing Business indicators, there are also large regional differences in a number of areas, including barriers to starting a business. Indeed, regions where it is easier to start a business tend to have higher firm birth rates, suggesting that harmonising ease of entry could increase business dynamism. In this context, effective implementation of the Market Unity Law, which aims to improve business regulations across regions to create a truly single market, is key (Chapter 1).

Size-contingent regulations, that is, regulations which depend on the size of firms (often in terms of employment or turnover), can create barriers to post-entry growth

(González Pandiella, 2014). For example, such size-contingent labour laws in France are associated with significant distortions to the firm size distribution and deadweight losses of above 5% of GDP (Garicano, Lelarge and Reenen, 2013). Similar distortions to the firm size distribution were observed in Spain during the period 1999 to 2007 (Almunia and Lopez Rodriguez, 2014).

A recent review by the government of horizontal state regulations identified more than 130 size-contingent regulations relating to both employment and turnover levels, concentrated around 250, 50 and 10 workers, and EUR 10, 6 and 2 million, respectively. These thresholds should be phased out and eliminated, as needed, and the creation of new regulatory thresholds should be limited. In cases where this is not possible, it would be preferable that any threshold related instead to a firm's age, with little rationale for assisting old small firms given the evidence that young as opposed to small firms are the most important for job creation (Haltiwanger, Jarmin and Miranda, 2013).

Box 5. Quantification of structural reforms

This box quantifies the effect of some structural reforms for Spain based on the OECD's most recent quantification framework set out in Égert and Gal (2017). Some tax measures considered in Box 2, will also affect employment and output, but are not able to be quantified here. The effects are derived from a range of time-series cross-country reduced-form panel regressions on a sample of OECD countries. The estimated effects are allowed to vary across countries as a result of differences in factor shares, the level of the employment rate and a country's demographic composition. The approach is illustrative and results should be interpreted with care. A breakdown of the effect on GDP per capita based on Égert and Gal (2017) suggests that these measures will raise employment by 0.9 percentage points over 10 years, which will have a positive impact on the budget balance (See Box 2).

Table 7. Potential impact of structural reforms on GDP per capita

	Total effect on GDP per capita		
	5 year effect	*10 year effect*	*Long-term effect*
Product market regulations			
Barriers to entrepreneurship	1.2%	1.4%	1.4%
Innovation			
Business R&D	0.1%	0.2%	0.5%
Labour market policies			
Active labour market policies	0.1%	0.3%	0.8%
Increase support for childcare services	0.3%	0.5%	0.6%
Trade openness			
Higher exports and imports as a % of GDP	0.4%	0.7%	1.0%
	2.2%	3.1%	4.3%

Note: Calculations are based on a 10% policy change scenario, which corresponds to lowering the PMR indicator for barriers to entrepreneurship from 2.1; increasing business R&D as a percent of GDP from 2.1%; increasing ALMP spending per unemployed as a share of GDP per capita from 19.2%, increasing spending on childcare as a share of GDP from 0.8% and increasing the share of exports and imports as a share of GDP from 32%. Trade openness can be enhanced *via* a higher skilled workforce and greater participation in global research and innovation networks, which can't be quantified directly.

Some entry barriers in the legal, architect and engineering professions remain and professional services are significantly less productive in Spain than in other European countries (OECD, 2017d). This raises costs to other firms, including SMEs, reducing their returns on investment and expansion, as well as their competitiveness in international markets. Analysis for the European Union over the period 2008 to 2011 suggests that less strict regulations in professional services would improve allocative efficiency and reduce the observed larger-than-average profitability, and economic rents inherent in this sector, through intensified business dynamics (Canton, Ciriaci and Solera, 2014). The pending reform of the liberalisation of professional services has been delayed for some time, but should be adopted. The reform aims to improve the functioning and governance of professional bodies, and benefit final consumers through increased competition, higher quality, lower prices and improved customer protection.

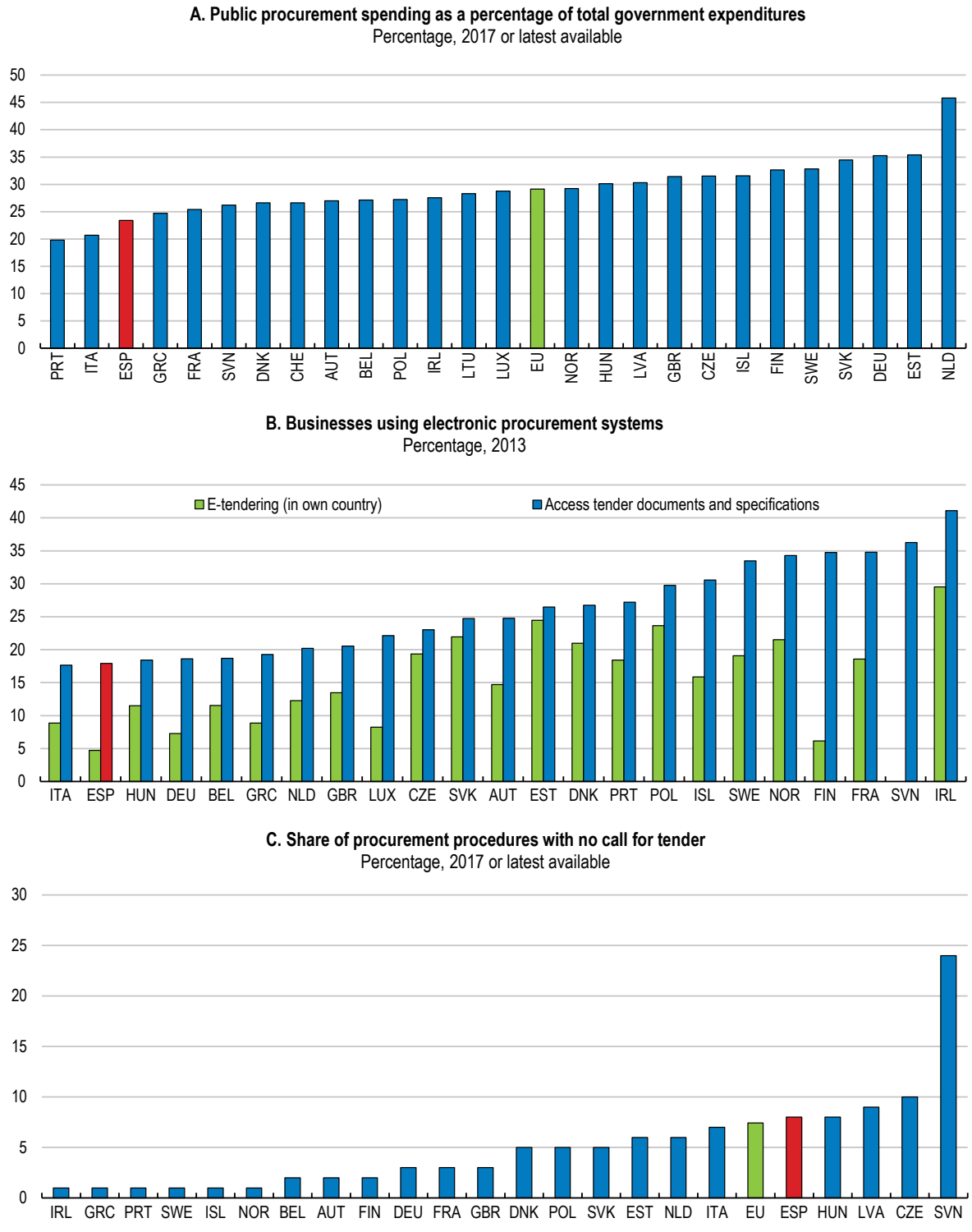
Improving public procurement

Public procurement as a share of government expenditures and the number of businesses using electronic procurement systems are relatively low in Spain (Figure 39, Panels A and B). The share of public procurement with no call for tender has fallen from 12% in 2016, but remains high at 8% in 2017 (Figure 39, Panel C). Healthy competition in public procurement can reduce costs to the public and enhance incentives to innovate and the quality of goods and services. Indeed, evidence suggests that reported innovation rates are significantly larger for companies that are involved in procurement contracts, which can boost productivity (Appelt and Galindo-Rueda, 2016). Furthermore, in 2017, only 28% of contractors in public procurement were SMEs in Spain, well below the EU average of 52%. Hence, a level playing field in public procurement can foster the growth of SMEs and enhance the efficient allocation of resources.

The Public Procurement Law, which was passed in 2017 and came into effect in 2018, significantly improves the public procurement system in Spain. Procedures have been simplified for contracts below a certain size, which should facilitate greater participation from SMEs, and transparency has been enhanced. In line with the EU directive, an innovation partnership procedure has been introduced with the aim of developing new innovative products or work for subsequent purchases. Greater emphasis is placed on quality when awarding contracts, which is beneficial to firms offering innovative products and services that may initially have higher costs or longer pay back periods. Awarding bodies are given the power to present evidence of tender collusion to the National Commission on Markets and Competition, which should enhance competition in public procurement. In March 2018, electronic public procurement became mandatory. The share of procurement with no call for tender is also expected to be reduced.

The effective implementation of this reform will depend on continued improvement in a number of areas. Better training of procurement bodies and officials, and enhanced incentives for fulfilling efficient, open and competitive purchases would be beneficial, as these are currently limited. Governance could be improved by providing supervisory and regulatory bodies powers beyond making non-binding recommendations. Access to information about past tenders and losing bids would also be beneficial to make assessments and comparisons with current tenders. Budgeting of rewards or penalties linked to contract outcomes would improve incentives to firms. In addition, guidelines should be further developed on what constitutes evidence of collusion to ensure consistent application of this aspect of the new public procurement law and to avoid the possibility of unintentionally discouraging, or raising costs to participation in public procurement.

Figure 39. Public procurement could be better utilised



Source: OECD, Government at a Glance (database); and European Commission, Single Market Scoreboard.

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Fostering innovation

Innovation is key to foster MFP and remain internationally competitive in an increasingly globalised world, which requires strong investment in R&D and innovation. Gross domestic expenditures on R&D as a share of GDP is low in Spain, at around half the OECD average. As the economic recovery continues, it will be important to boost public R&D expenditures, which can have spillover effects on firm innovation. At the same time, higher coordination of regional and national innovation policies and wider use of evaluation, as discussed in detail in Chapter 1, would help enhance innovation performance.

Despite a generous R&D tax credit system, business R&D as a share of GDP is low in Spain at 0.6% in 2016, well below the OECD average of 1.6%. The marginal tax subsidy rate for profit-making firms at 0.33 is above the median OECD rate. While the rate for new loss making firms is lower, even after the government made the scheme more attractive for younger and less profitable firms by allowing the credits to be partly refundable and carried forward, it is also above the OECD median (OECD, 2018h).

Due to complex procedural requirements, however, firms make limited use of the system and consequently, most public support to business innovation is direct. While new firms are able to certify their activities, there is significant cost and time involved, which may be a particular disincentive for SMEs. The government should continue to streamline the system, lower associated costs and publicise how to apply for credits, as recommended in the *2017 Economic Survey of Spain*.

Migration can facilitate trade

Through their ability to speak languages, navigate legal systems and draw on social and commercial networks in their countries of origin and destination, migrants can play an important role in facilitating trade by reducing the associated transaction costs (Gould, 1994; Rauch, 1999; Law, Genç and Bryant, 2013). To the extent that these transactions costs are fixed, they may be particularly difficult to overcome for SMEs, which can benefit most from migrants to boost their trade and productivity performance. A 10% increase in immigrants may be expected to increase the volume of trade by about 1% in Spain (Peri and Requena, 2009), with a similar positive relationship at the regional level (D'ambrosio and Montresor, 2017). In addition, migration, particularly of high-skilled individuals, may provide a more direct link to the global productivity frontier, enhancing knowledge diffusion and innovation.

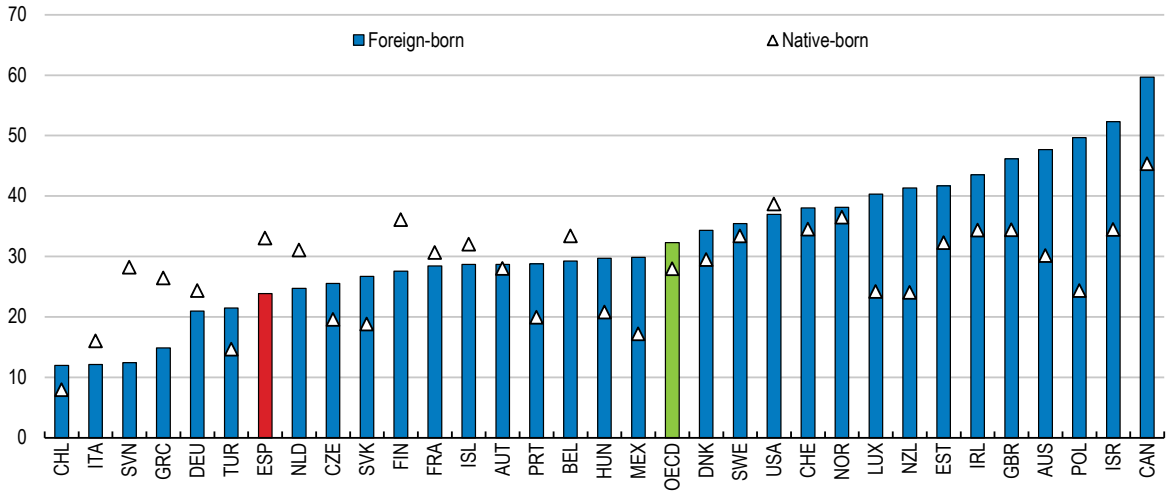
Labour migration flows are currently relatively low, as the substantial immigration of pre-crisis years subsequently reversed, with net immigration of foreign nationals returning to positive figures for the first time only in 2015 (OECD, 2017h). Nevertheless, the stock of migrants living in Spain is now approximately six million people, originating mainly from Europe and Latin America. Migrants are less educated than the native-born population (Figure 40) and are overrepresented in terms of temporary employment. On the other hand, emigration flows increased after the crisis and have been greater than internal migration flows for a number of years. Consequently, the stock of Spanish emigrants living abroad is now over 1.3 million people, with available data suggesting recent emigrants are young, with relatively high levels of education (Arango, 2016).

The government already makes efforts to attract and integrate migrants in Spain, for example, through encouragement to learn Spanish and the development of education programs to facilitate the integration of students from a migrant background. Policies could be enhanced to better integrate past and future immigrants into Spanish society and the

labour market, as well as keeping in closer touch with the Spanish diaspora. Diaspora policy could be reviewed to ensure it can address the changing characteristics of recent emigrants.

Figure 40. Spain has previously not attracted highly educated migrants

Percentage of the highly educated among corresponding population, 15-64 year-olds, 2015 or latest year



Note: Highly educated people with tertiary education attainment at levels 5 and 6 (ISCED-97).
Source: OECD (2017), OECD Science, Technology and Industry Scoreboard 2017: The digital transformation.

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Table 8. Past OECD recommendations on improving the business climate

Recommendations in 2017 Economic Survey	Actions taken since 2017
Continue to implement the Market Unity Law and adopt the professional services reform.	The ruling of the Constitutional court declared unconstitutional the principle of national effectiveness contained in the law, but the other principles remain intact and operational. The requirement to analyse the impact of new central legislation on the Market Unity Law was introduced. No action taken in relation to the professional services reform.
Partially reallocate funds from loans to R&D grants to projects and researchers based on performance and international peer review.	No action taken.
In cases when debt forgiveness is not automatic, reduce the period during which bankrupt entrepreneurs are required to repay past debt from future earnings.	No action taken.
Set up small and medium enterprises (SME) bond funds with guarantees provided both by government and SME companies.	The state-owned bank, ICO approved a new SME securitisation programme in June 2017.

Box 6. Other recommendations on macro and structural policies

Financial and fiscal policies

Financial stability

- Create a national macro-prudential authority, including the main supervisory institutions, with clear division of responsibilities.
- Introduce macro-prudential tools, such as limits on loan-to-value and debt service to income.

Taxation

- Reconsider tax allowances granted for inheritance taxes for the most wealthy.

Pensions

- Link the statutory retirement age to life expectancy at retirement.
- Facilitate greater choice of both pension scheme providers and investment options available through employers.

Structural policies

Labour and education

- In order to encourage the hiring of low-wage workers on a permanent contract, review existing incentives and consider reducing, for example, employer social security contributions for these workers.
- Introduce a profiling tool to adapt active labour market programmes to the needs of individual workers.
- Increase the provision of early childhood education to children between the ages of 0 and 3.
- Further develop affordable after-school services for school-age children in order to help parents maintain employment.

Competition and innovation

- Make greater use of rewards and penalties, linked to contract outcomes, to improve incentives to firms that participate in public procurement.
- Streamline the R&D tax credit system and publicise how to apply for credits.

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Annex. Progress in main structural reforms

This annex reviews action taken on recommendations from previous Surveys since the March 2017 Survey.

Recommendations in previous *Surveys*	Actions taken
A. Public Finance	
Stick to medium-term fiscal targets to ensure a gradual reduction of public debt.	The government deficit declined to 3.1% of GDP in 2017, in line with targets.
Enhance the efficiency of the tax system by abolishing poorly-targeted personal income tax exemptions, regressive reduced value added (VAT) rates, and increasing environmental taxes.	Excise taxes on tobacco and alcohol were increased. The tax wedge on labour was reduced by exempting income up to EUR 14 000.
B. Labour market and social policies	
Increase the amount and coverage of the regional minimum income support programmes and of cash benefits for families with children.	In 2018, within the framework of the fight against child poverty, the government provided an additional credit of EUR 5.2 million to guarantee the basic right of food, leisure and culture of the children in cases of social vulnerability during school holidays and other non-school periods (VECA plan).
Increase the efficiency of regional public employment services by employing profiling tools and specialisation of counsellors, increasing resources and staff-to-job seeker ratios, and improving coordination to provide integrated support for jobseekers via a single point of contact for social and employment services and assistance	The Spanish Employment Activation Strategy 2017-2020 includes the implementation of profiling tools, but they have not been implemented yet. Additional funds for employment agencies are provided in the *Programa de Acción Conjunta*. Only the Basque Country has effectively created a single point of contact for social and employment services.
Request gradually increased representativeness of business associations when allowing the extension of collective agreements.	No action taken.
Reduce employer social security contributions for low-wage workers on permanent contracts.	No action taken.
Revise and streamline different social benefits at national and regional levels to improve their targeting and effectiveness.	The Spanish Fiscal Council is conducting an analysis on the efficiency of subsidies as a first step to reform.
Phase out slowly the Renta Mínima de Inserción, the most common income support scheme, when beneficiaries return back to work and earn wages.	No action taken.
To further reduce duality, if necessary, pursue a greater convergence of termination costs between permanent contracts and temporary contracts.	No action taken.
Extend the coverage of the standard unemployment benefit to precarious workers, reducing the minimum required contribution periods.	No action taken.
C. Education reform	
Improve the quality of teaching through better university and on-the-job training for teachers.	No action taken.
Promote the VET system and adult education programmes to help the unemployed and those in need to gain relevant skills.	The Royal Decree 694/2017 extends and regulates in detail the main aspects of the Law 30/2015, focused on VET for employment.
Use national standardised tests widely in primary and secondary education.	No action taken.
Improve attractiveness of basic and secondary VET by increasing the share of mandatory workplace training and facilitating pathways to dual and higher level VET.	In recent years, the number of centers, students and firms engaged in VET have increased notably.
Continue the development and modernisation of Vocational Education and Training (VET). Expand dual VET and ensure skills meet firms' needs by fostering a greater role of employers in training students and designing curricula.	The implementation of the 2013 reform of the education and training system (LOMCE), which aimed at more school autonomy and development of VET, has been completed in 2018, except for changes to the evaluation framework.

D. Productivity and business climate	
Continue to implement the Market Unity Law.	The ruling of the Constitutional court declared unconstitutional the principle of national effectiveness contained in the law, but the other principles remain intact and operational. The requirement to analyse the impact of new central legislation on the Market Unity Law was introduced.
Adopt the professional services reform.	No action taken in relation to the professional services reform.
Partially reallocate funds from loans to R&D grants to projects and researchers based on performance and international peer review.	No action taken.
In cases when debt forgiveness is not automatic, reduce the period during which bankrupt entrepreneurs are required to repay past debt from future earnings.	No action taken.
Set up small and medium enterprises (SME) bond funds with guarantees provided both by government and SME companies.	The state-owned bank, ICO approved a new SME securitisation programme in June 2017.
Increase public and private funding for innovative firms at the seed and early start-up phases.	In 2018, the contract with European Investment Fund, which was originally signed in 2016, to provide access to finance for innovative companies was extended for two years and the amount increased by 30%.
Require commercial banks to publish prominently the right of SMEs to demand a standardised credit assessment.	According to Law 5/2015, banks are obliged to inform their customers about the right to a credit assessment in loan contracts.
Increase the emphasis of the state-owned bank, ICO, on providing funding through second-floor facilities for commercial bank loans to new and innovative companies.	In 2017, in its new Strategic Plan, ICO expanded the scope of "FondICO Global" to pay special attention to technological innovation.
Provide more specific programmes to entrepreneurs, such as financial education of SMEs' entrepreneurs on options and processes for raising equity finance.	The Spanish Institute for Foreign Trade, ICEX, extended its advisory financial services to companies in 2017.
Establish clear guidelines for the participation of public creditors in corporate debt restructuring processes to make them more effective.	No action taken.
Refocus ICEX, Spain agency to promote FDI, on targeting key investors rather than investment in specific sectors.	ICEX has started shifting its focus on financial investors, including sovereign wealth funds, venture capital firms or business angels.
E. Environmental sustainability	
To encourage better allocation of capital and investment decisions by improving pricing signals reform taxation of fuels so that the tax per unit is based on the amount of emissions and other pollutants per unit.	No action taken.

Thematic Chapter

Chapter 1. Reducing regional disparities for inclusive growth

Spain is a highly decentralised country, making the effective implementation of national reforms dependent on regional policies. Better data collection and policy analysis at the regional level and more effective coordination across regions are needed to improve the effectiveness of policies. Some regional disparities are high and need to be reduced. High regional dispersion in education and job outcomes, compounded by low inter-regional mobility, emerge as key drivers of regional inequalities in income and well-being. Lifelong learning programmes that take into account regional specific needs would help foster regional skills and attract firms to lagging regions. Ensuring full portability of social and housing benefits across regions, by providing temporary assistance either by the region of origin or the central government, would improve inter-regional mobility. At the same time, barriers to achieving a truly single market limit productivity growth of regions, including the most advanced. Reducing regulatory barriers and better innovation policies would boost productivity. Effective intergovernmental coordination bodies and a well-designed interregional fiscal equalisation system will be key to ensuring that regions have the incentives to implement policies for inclusive growth.

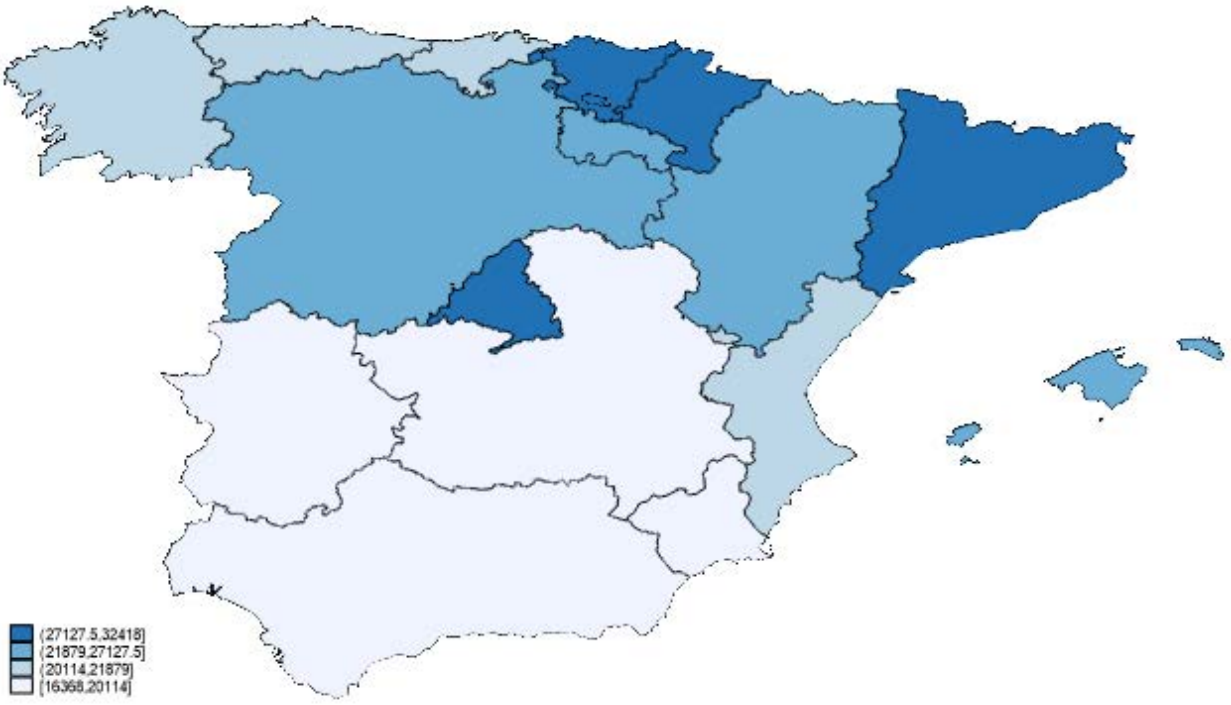
Ensuring the benefits of growth are spread widely requires a strong focus on greater convergence of regions in terms of income and well-being. There is some evidence that the gap in per capita income across regions has slightly narrowed in the last three decades in Spain (Puente, 2017). Nevertheless, GDP per capita in the best performing region was around double that in the worst performing region in 2016 (Figure 1.1). Furthermore, the Great Recession has contributed to the slowing down of regional convergence in terms of GDP per capita in OECD countries in general, but especially those hit hard by the crisis (OECD, 2018a). Regions were catching up between 2000 and 2007, but this was reversed during the crisis in Spain (Figure 1.2). While this trend was partly cyclical and is slowly improving, persistent regional differences in a number of dimensions beyond income remain.

Spain is one of the most highly decentralised countries in the OECD with regards to public spending and many public services are provided at the regional level (Box 1.1). Furthermore, the timely and effective implementation of national reforms will depend on regional policies and institutions.

This chapter assesses regional disparities in a number of dimensions and discusses policies at the national and regional level to enhance the productive and employment capacities of lagging regions.

Figure 1.1. Income per capita differs across regions

2016

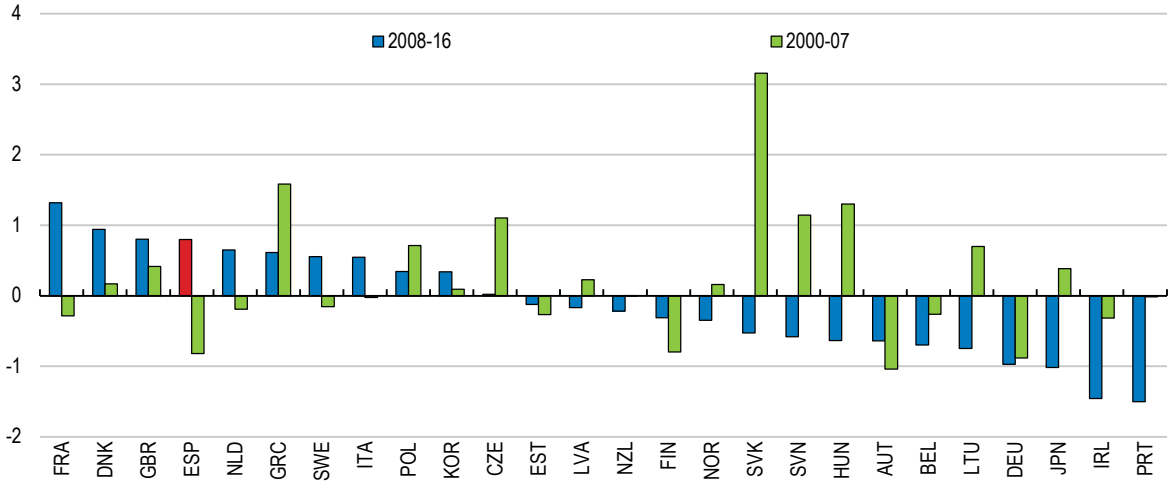


Note: A darker shade corresponds to a higher value.
Source: OECD (2018), Regional Economy Statistics.

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Figure 1.2. Per capita income growth has become stronger in richer regions than in poorer ones

Average annual growth of the GDP per capita gap between the richest 20% and the poorest 20% of TL3 regions, percentage



Source: OECD (2018), Regional Economy Statistics.

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Box 1.1. Responsibilities across different levels of government

Spain has a three-tier system with central, regional and local governments. There are 17 self-governing autonomous regions, 2 autonomous cities, 50 provinces and more than 8119 municipalities. The map of competences is regulated in the Spanish Constitution and while some are exclusively managed by the central government, most of them are shared between the central and regional governments. Specifically, the central government passes basic legislation and regions regulate and implement their own laws. As a general rule, all responsibilities not expressly attributed to the central state can be devolved to regions. Some of the policies covered in this Survey have the following distribution of competences:

- The central government designs the legislative framework for unemployment benefits and establishes general objectives of active labour market policies (ALMPs) at the national level. Regions implement and develop ALMPs, while the central government administers and funds the unemployment benefit system.
- Social security allowances, including pensions, and contributions paid by workers and firms are the responsibility of the central government.
- Education is a shared competence, with the central government defining the overall structure of the education system and other general elements such as the requirements for teachers. Meanwhile, regions enjoy a high degree of budgetary and organisational autonomy. For example, they decide on teachers' salaries, the creation of new schools, the budget for schools and its allocation among schools, and the placement of principals and teachers.

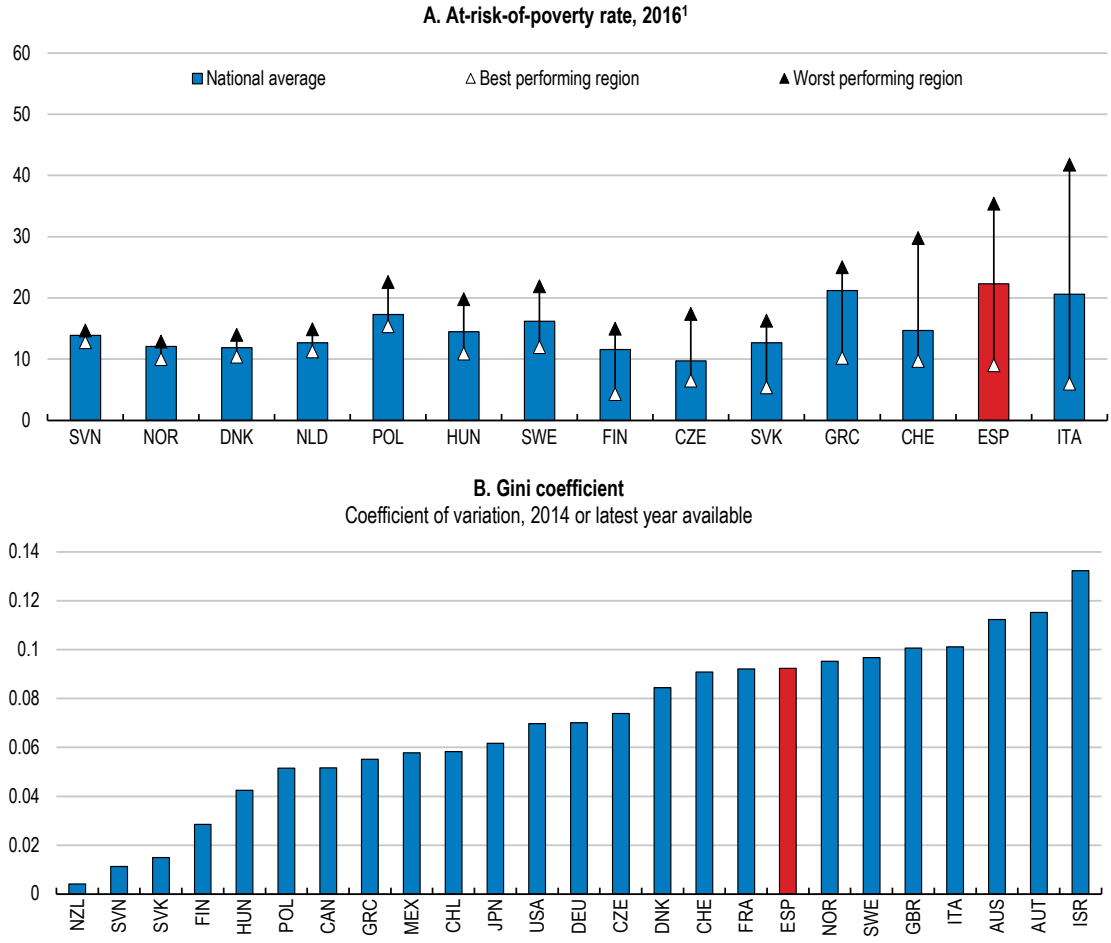
- The long-term care legal framework is defined by the central government, but it has budgetary dependence on regions.
- Minimum income benefits and social inclusion policies are under the responsibility of regions, but they are implemented by local authorities.
- Health is a shared competence, with the central government defining the main framework in national laws, but leaving the provision of the public service and the regulation of key aspects, such as human resources or number of centres, to regions.
- The main goals of housing policy are defined in a multi-annual plan by the central government, but regions and local entities establish priorities and define requirements for entitlements. For example, regions and local governments decide the number of social houses, the allocation of funding, and the requirements to privatise social housing services and to track users of social housing.
- Research is a shared competence, with the central government responsible for promotion and general coordination and the regions setting up their own R&D policies and instruments.

Challenges for lagging regions

Regional disparities in well-being are more pronounced than disparities in income

Making growth more inclusive remains a challenge in Spain (OECD, 2017a). A regional breakdown suggests that disparities are relatively high in terms of inequality and poverty rates. The inter-regional difference of the relative poverty rates (60% of the median income) between the lowest and highest regions in Spain at 25% is large (Figure 1.3, Panel A). The Gini coefficient across regions also varies from 0.05 to 0.26. According to another measure of regional disparities, controlling for the average level of the Gini coefficient, inter-regional differences in income inequality are also relatively high (Figure 1.3, Panel B).

Figure 1.3. Regional disparities in income and poverty are high



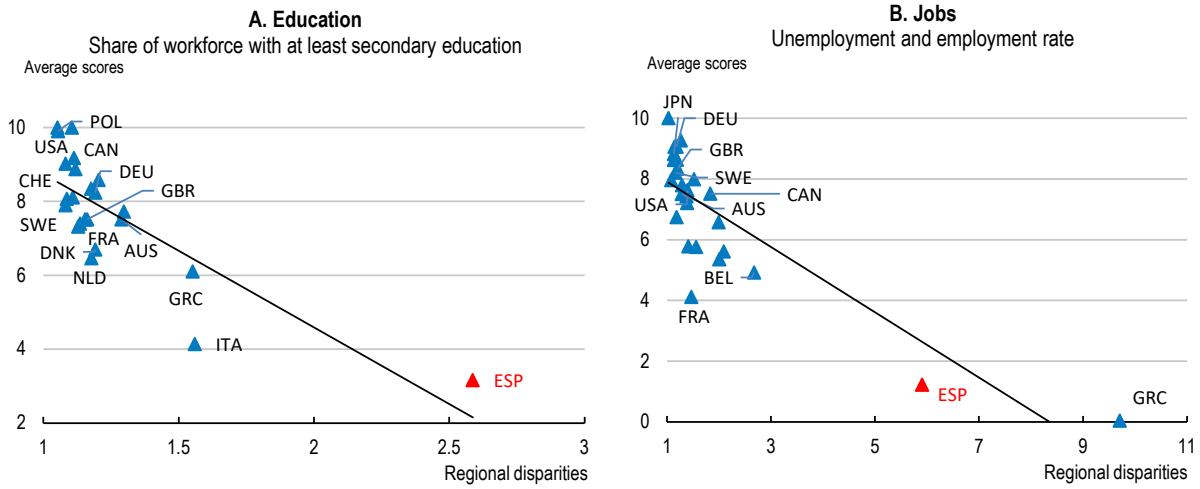
1. At-risk-of-poverty rate is defined as the share of people with an equivalised disposable income below the risk-of-poverty threshold, which is set at 60% of the national median equivalised disposable income.
2. The Gini coefficient is calculated for household disposable income after taxes and transfers, adjusted for differences in household size. The coefficient of variation is defined as the ratio of standard deviation to the mean.
Source: Eurostat and OECD, Regional Well-being Database.

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Higher regional disparities in a number of dimensions may be linked to lower well-being scores overall at the country level on average across OECD countries (OECD, 2014). Compared to other OECD countries, the regional disparities in Spain are especially important in terms of jobs and education (Figure 1.4). These are areas where Spain also ranks relatively low at the country level in international comparison, which motivates the focus of the chapter on labour market and education policies.

Figure 1.4. Regional disparities may have implications for well-being at the country level

2017 or latest year available



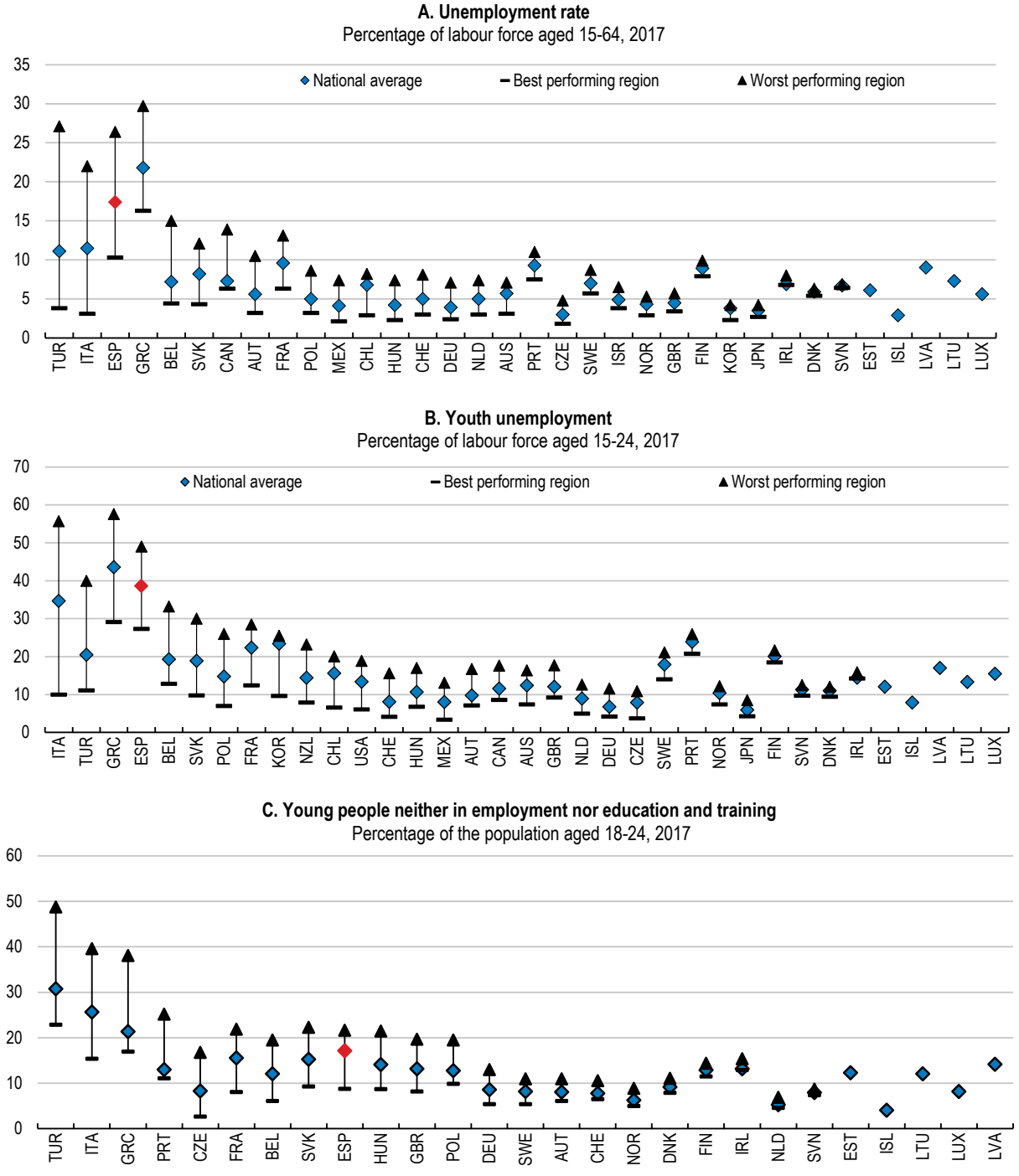
Note: The regional disparities scores on the x axis are computed as the score of the top 20% of regions divided by the scores of the bottom 20%, where a higher score refers to higher disparities. The average scores on the y axis are average country values for education and jobs, scaled to a score between 1 and 10, where higher values indicate a higher share of workforce with at least secondary education in Panel A and a combination of employment and unemployment rates in Panel B.
Source: OECD, Regional Well-being Database.

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Regional dispersion in labour market outcomes is high

Regional dispersion in unemployment rates, as measured by the gap between unemployment rates in the best and worst performing regions, is the third highest in the OECD (Figure 1.5, Panel A). Regional disparities in youth unemployment rates and the share of youth that is neither employed nor in education and training (NEET) are also high (Figure 1.5, Panels B and C). Improving the labour market outcomes of the youth will require effective policies that will increase the flexibility of labour markets, *via* higher decentralisation of collective agreements and internal flexibility of firms. Policies to improve their skills and educational attainment will also be key, as high rates of youth NEET are related to a large number of dropouts in compulsory education.

Figure 1.5. The dispersion of unemployment rates across regions is relatively high



Note: Countries are ranked according to the range of differences between regions.
Source: OECD, Regional Statistics Database and Eurostat.

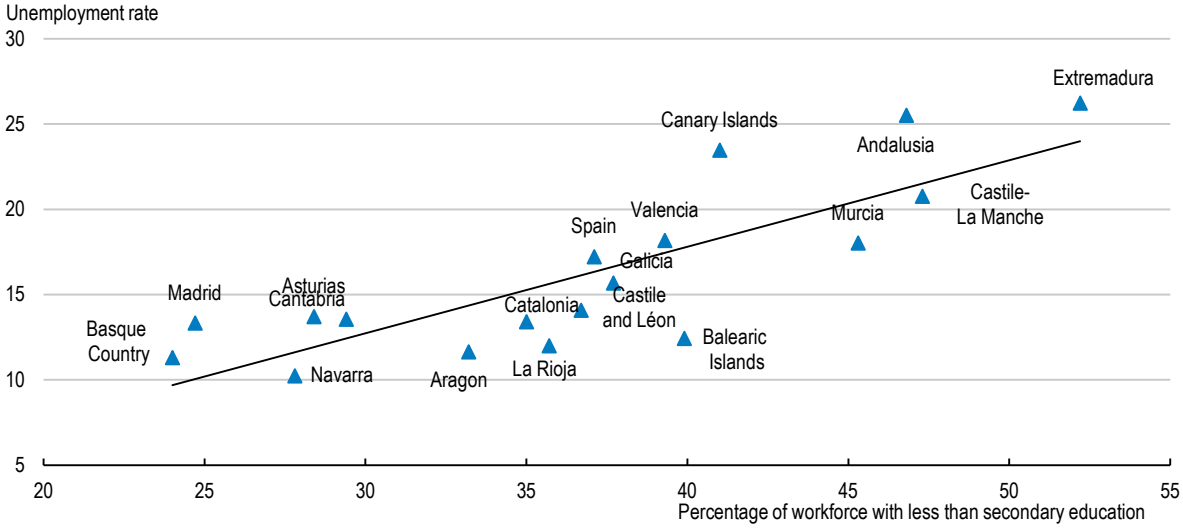
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Higher educational attainment and skills can lead to better employment prospects and wages (OECD, 2017a). In Spain, the gap between the unemployment rate of those with

tertiary education and less than upper secondary education at around 14% is higher than the EU average of 10%. There is also a positive relationship between unemployment rates and the share of the labour force with less than secondary education at the regional level (Figure 1.6). The relationship between qualification and skills and employment becomes even more important in a world economy changing by globalisation and digitalisation, highlighting the need for policies to upskill the labour force *via* policies such as lifelong learning.

Figure 1.6. Low levels of education are associated with high unemployment rates at the regional level

2017



Source: INE (2018), Labour market statistics, September.

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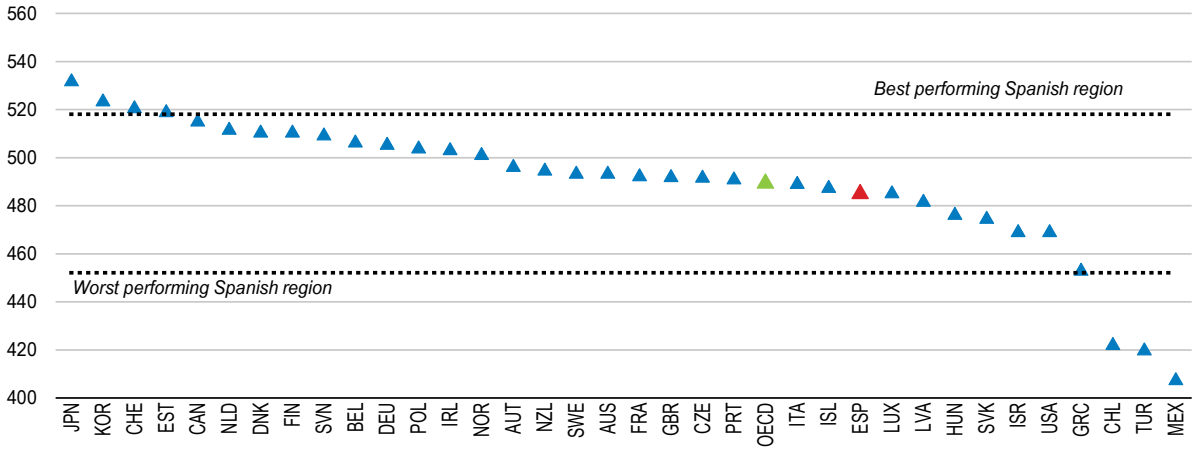
Low skills can be a barrier to growth in lagging regions

While there has been an increase in educational attainment over the past two decades across regions, regions differ considerably in their ability to develop a skilled labour force. For example, the mean mathematics score according to PISA shows that while best performing regions in Spain are close to the performance in best performing OECD countries, the worst performing regions perform close to the worst performing OECD countries (Figure 1.7). Furthermore, the impact of socio-economic background on education outcomes is significantly different across regions.

As skills and jobs become increasingly globalised and digitalised, some regions can be left behind as workers and firms become concentrated in fewer places. While such a concentration can bring agglomeration benefits, it can also have adverse effects of increasing regional inequalities. Comparing the supply of skills (the percentage of people with post-secondary education) and the level of skills demanded for local jobs (the share of medium and high-skilled occupations) shows that there is a high demand and supply of skills, i.e. a high skills equilibrium, in some regions, while both the demand and the supply of skills are low in a number of regions (Figure 1.8) (OECD, 2016a).

Figure 1.7. School performance displays large regional disparities

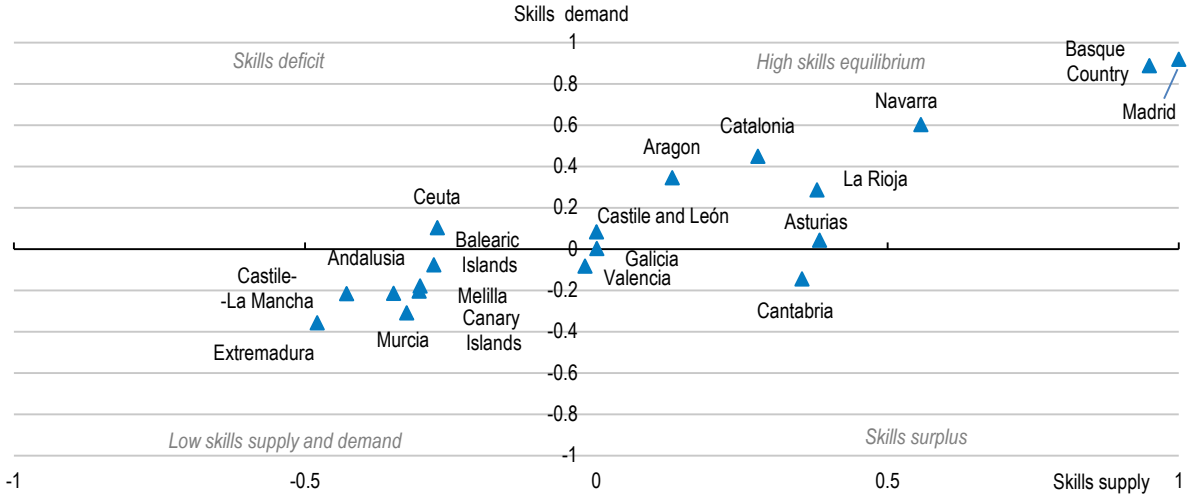
Mean PISA scores in mathematics, 2015



Source: OECD (2016), PISA 2015 Results (Volume I): Excellence and Equity in Education.

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Figure 1.8. Some regions have low demand and supply of skills



Note: The level of skills supply is the percentage of people with post-secondary education. The demand for skills is a composite index combining the percentage of the population holding medium- and high-skilled occupations (International Standard Classification of Occupations categories 1,2,3,6 and 7) and productivity (GVA per worker). See (OECD, 2016a) for more details.
Source: OECD (2016), Job Creation and Local Economic Development.

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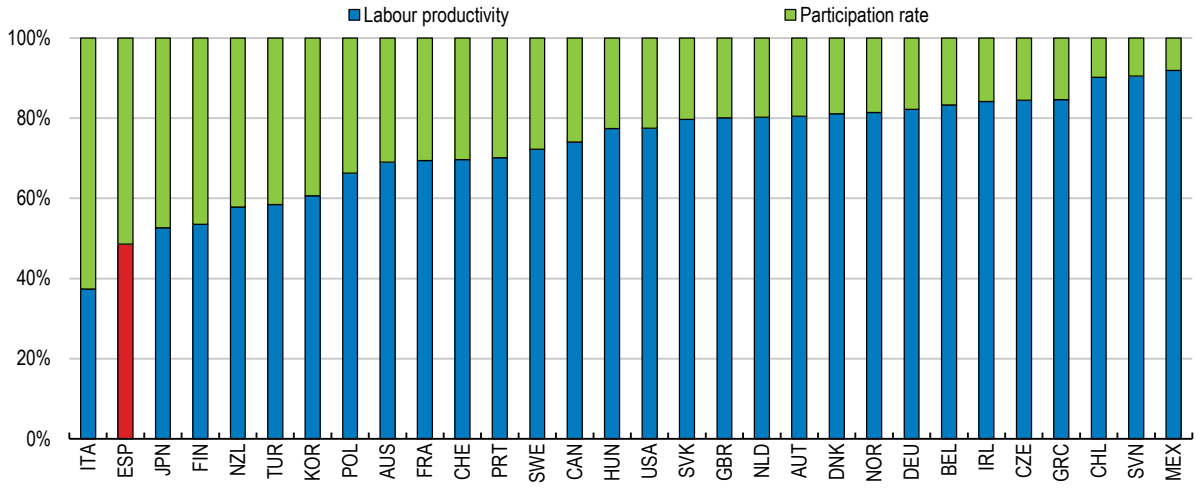
In regions with low levels of skill supply and demand, there may be less incentive to invest in upgrading skills, given the scarcity of high-skilled jobs. At the same time, firms may have little incentive to move to higher-skilled production and services, knowing that the local workforce does not have the level of skills required to fill these types of jobs, contributing to low productivity. Hence, boosting growth in lagging regions will depend on both higher firm productivity and worker skills.

Low productivity growth also contributes to regional disparities

Decomposing changes in GDP per capita into changes in labour productivity and the participation rate suggests that productivity is the main driver of regional inequalities in many OECD countries (Blöchliger, Bartolini and Stossberg, 2016). Indeed, across the OECD, the gap within countries between the top 10% regions with the highest labour productivity and the bottom 75% has grown on average by almost 60% over the last two decades (OECD, 2016b and 2016c). In Spain, regional disparities are equally driven both by productivity and employment (Figure 1.9). Most of the reduction in regional differences in labour productivity has been driven by capital accumulation, while there is a lack of convergence in multifactor productivity (MFP) (Puente, 2017; Mas, Pérez and Quesada, 2009).

Figure 1.9. Labour productivity is also a driver of regional disparities

Coefficient of variation of each factor, contribution to total variation



Note: The variation of regional GDP per capita is decomposed into the contributions of labour productivity (GDP per worker), and participation rate, which includes labour resource utilisation (those employed as a share of the active working population) and the activity rate (per cent of the active working population in total population).
Source: Estimates based on OECD (2016), "Regional economy", OECD Regional Statistics (database); Blöchliger et al., 2016.

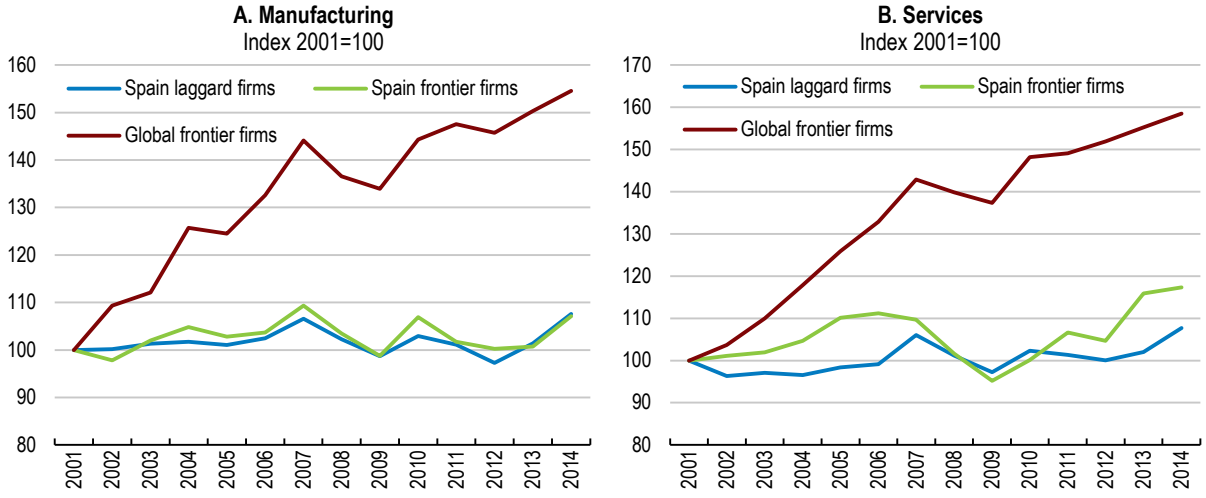
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Barriers to economies of scale can hold back productivity growth of regions and firms

While labour productivity dispersion across regions is relatively low in international perspective, the catch-up of lagging regions to the rest masks a problem of low dynamism of Spain's best performing (frontier) regions (OECD, 2018a). There is a need to improve the dynamism of frontier regions, which might be better equipped to reap the benefits of new technologies and agglomeration effects. At the same time, in order to reduce regional disparities, policies to facilitate the diffusion of technologies from national best performing firms and regions to laggards will be key (OECD, 2015). In this context, gaps in infrastructure and weak links between urban and rural areas, which is an important barrier to reducing regional disparities in many countries, is less of an issue in Spain, where institutional barriers are more important.

The fact that frontier regions are not dynamic in Spain can be partly explained by the relatively low productivity performance of best-performing (frontier) Spanish national firms, whose productivity gap with the global frontier firms remains high (Figure 1.10). This could partly be a reflection of regional regulatory differences and misallocation of resources, which prevent the most productive firms from growing in size, expanding across regions and reaping the benefits of economies of scale. At the same time, the productivity performance of Spanish frontier and laggard firms has been similar, especially in the manufacturing sector, reflecting that lagging firms in Spain tend to converge to the productivity levels of best performing national firms (Law, 2018).

Figure 1.10. There is much scope to boost the productivity of Spanish frontier firms



Note: The frontier is defined as the top 5% most productive firms for each 2-digit industry and year, based on value-added labour productivity.
Source: OECD calculations based on ORBIS. See (Andrews, Criscuolo and Gal, 2016) for further details on methodology.

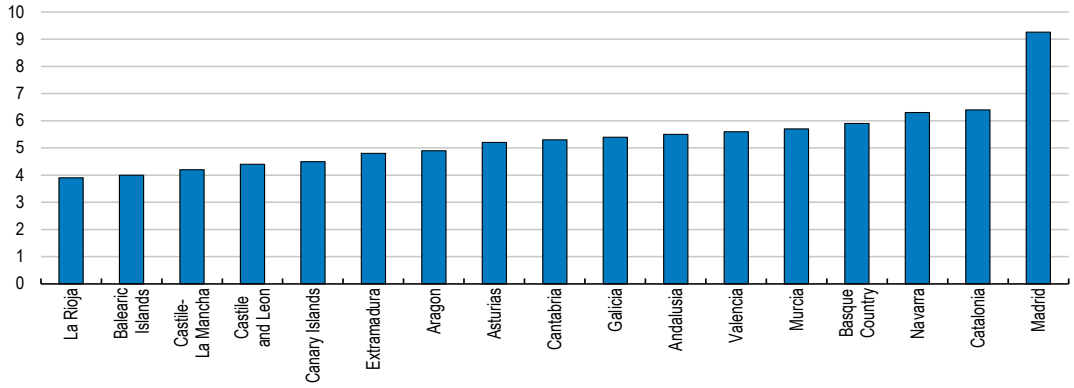
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Lack of an environment conducive to productivity growth in lagging regions

Regions in Spain differ in their relative strengths and initial conditions, which can already be linked to existing differences in labour productivity, suggesting that regions with worse initial conditions could converge to best practices. For example, investment in intangible capital as a share of GDP, which has been linked to productivity growth (Andrews and Criscuolo, 2013; Siedschlag, Lawless and Ubaldo, 2017), is higher in regions with a higher share of frontier firms (Figure 1.11 and Figure 1.12, Panel A). In turn, regions with a higher share of frontier firms tend to be those with the highest regional productivity performance (Figure 1.12, Panel B). These links and the persistence of the regional shares of high productivity firms over time suggest that regional characteristics may be a factor in determining firm performance and productivity.

Figure 1.11. Investment in intangible assets is low in most regions

Share of GDP, 2013

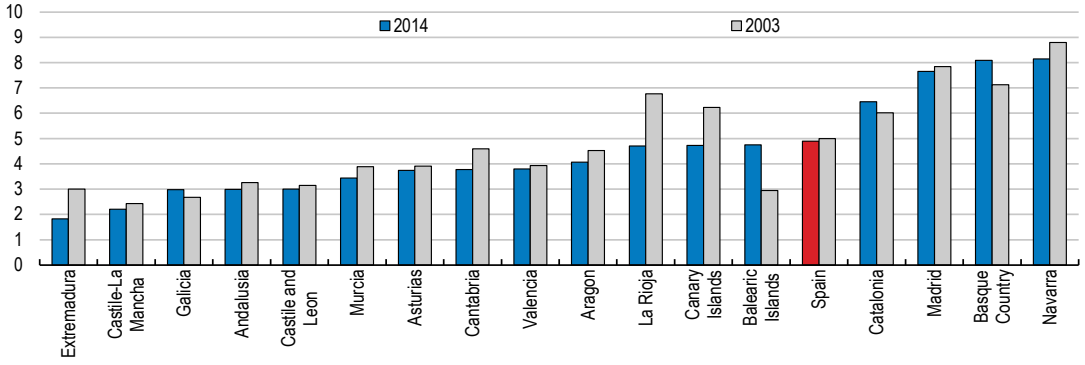


Source: Cotec Foundation for Innovation-Ivie, Intangible assets: database for Spain and its autonomous communities (1995-2014), April 2017. Database available at: http://informecotec.es/activos-intangibles/.

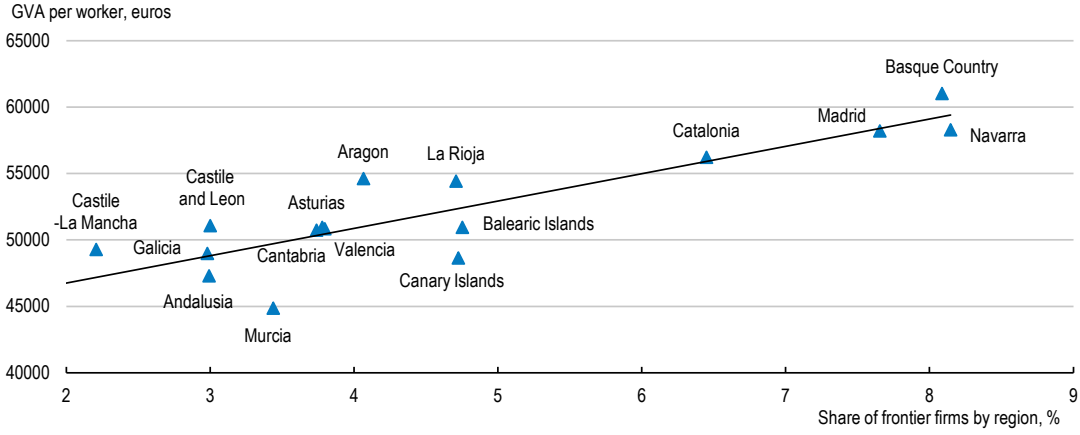
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Figure 1.12. Regional differences in terms of the percentage of high productivity firms are high

A. The number of national frontier firms as a percentage of all firms in a region, 2014



B. A higher share of frontier firms is associated with higher productivity, 2014



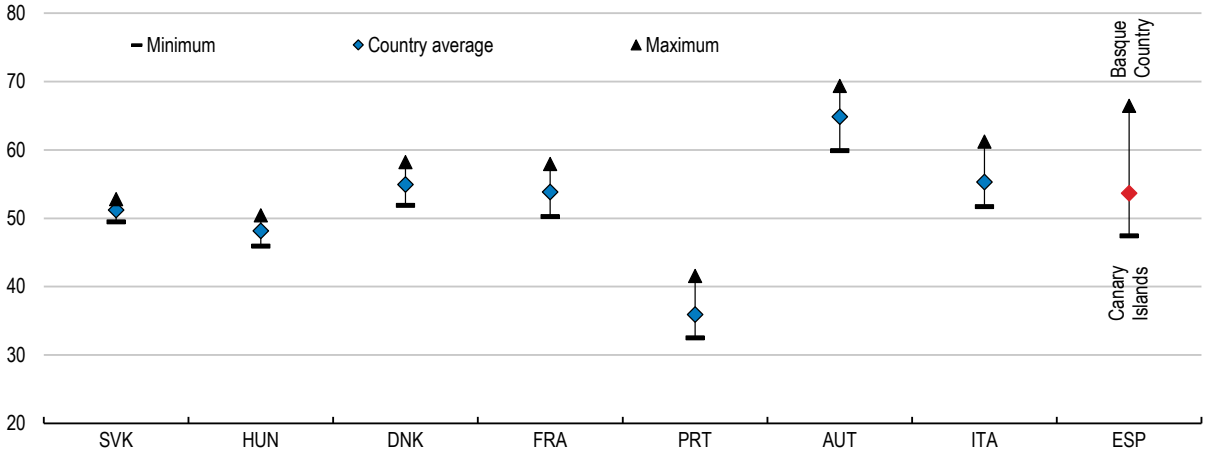
Note: The frontier is defined as the top 5% most productive firms for each 2-digit industry and year, based on value-added labour productivity.
Source: OECD calculations based on ORBIS.

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The location of entrepreneurial activity depends on regional characteristics such as costs and access to services and skilled labour (Fritsch, 2008). Spain is one of the countries with the highest regional dispersion in terms of firm birth and death rates as well as employment creation by enterprise births (OECD, 2017b). Spain also displays a high degree of inter-regional dispersion in firm survival rates, defined as three years after firm birth. For example, the best-performing region in Spain, the Basque Country, experienced the same survival rate of 65% as the best-performing region amongst the OECD regions for which data are available (Figure 1.13), while the ratio was 45% in the worst-performing region in Spain. The wide within-country variation suggests that the conditions for firms to become more productive are not evenly distributed across regions.

Figure 1.13. Within-country dispersion in business survival rates

TL2 regions, 2014 (or last available year), percentage



Note: Survival rates measure the number of firms created in year t-3 which are still active at time t (three-year survivors/births t-3). 2014 or last available year. Countries are ranked according to the range of difference between regions in the survival rates of all firms.
Source: OECD (2018), Regional Business Demography Database.

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Addressing regional disparities in labour market outcomes

Improving the employability of low-skilled unemployed

The provision of active labour market policies (ALMPs) is the responsibility of regions, while the central government establishes general objectives of ALMPs at the national level. Hence coordination and information sharing is paramount to their success. Recent initiatives, such as *Programa de Aprendizaje Mutuo,* which aim to share best practices across regions, are limited, but a step in the right direction. The overall resources of public employment services are well below that in other OECD countries and staff-to-job seeker ratios are low. Increasing the efficiency of public employment services by higher staff-to-job seeker ratios and better specialisation of counsellors, as recommended in the *2017 Economic Survey of Spain,* would improve the effectiveness of ALMPs. Making these policies effective requires an efficient allocation of funding across regions.

Regional differences in unemployment rates have put pressure on the resources of regional public employment services in an asymmetric level. The funding for ALMPs have recently

switched from being based on the number of employed to a number of performance indicators. This results-oriented system could lead to more transparency and more efficient use of resources. However, its success hinges on the correct design of the indicators, which must capture elements beyond the quantity and proportion of jobseekers benefitting from the services provided. For example, Australia assesses the success of employment agencies by the duration of the new employment, which serves as a proxy to the efficient matching of skills and jobs. Regular evaluations and readjustment of indicators should be continued in order to ensure that indicators are effectively measuring the degree to which the ultimate goals are being achieved.

Traditionally, a significant share of ALMPs has been skewed to employment incentives such as hiring subsidies for the unemployed, which can be costly and ineffective when they are not well targeted to the most vulnerable groups (OECD, 2018b and 2017c). Meanwhile, only 24% is spent on training and re-skilling, which stands close to the OECD average, despite skill mismatch being among the highest in the OECD.

Preliminary assessments suggest that in 2013-2015, activation policies have been more effective than in 2011-2013, especially for job-search assistance and professional guidance for the long-term unemployed (García Pérez, 2017). Hence, spending on training and job-search assistance should be prioritised, and be accompanied by continued evaluation. The Spanish Employment Activation Strategy (2017-20) reinforces the focus on multiannual planning and evaluation, which is needed to improve the effectiveness of policy changes and the efficiency of spending.

Regions, which control the bulk of spending in training (72% in 2016), also have a key role in increasing the effectiveness of ALMPs. According to the complaints to the Market and Competition Commission made under the Market Unity Law, regions discriminate in favour of local providers of training programs and limit entry by making requirements, such as permanent establishment and previous experience in the region, mandatory. Such restrictions can limit competition, increase the cost and reduce the quality of the programmes offered in a region. To improve the efficiency of ALMPs, regions must explicitly remove any barriers in their legislation that impedes competition among providers of training programs.

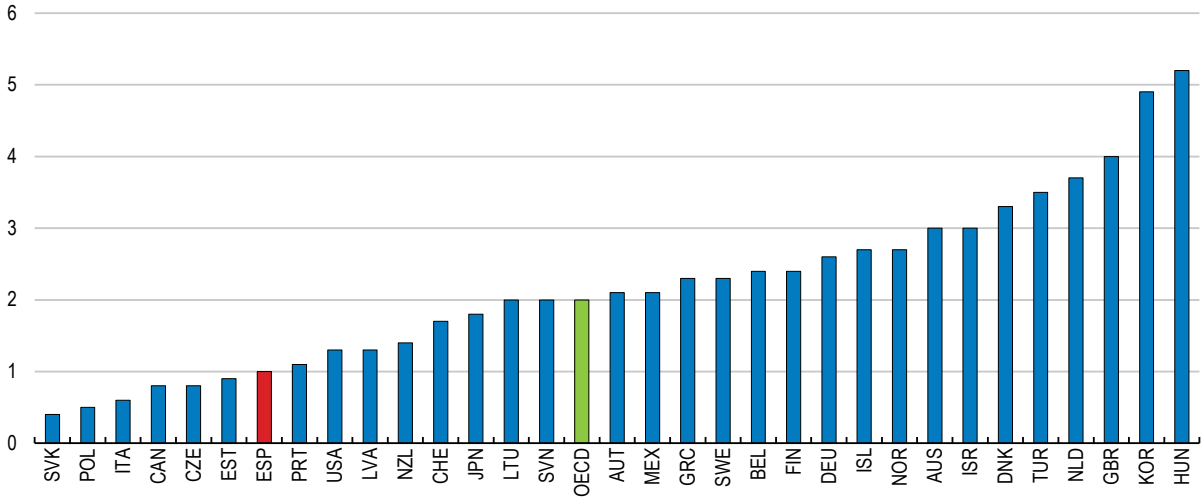
Boosting labour mobility

Mobility of workers is relatively low in Spain, with annual regional migration rates at 1%, which is below the OECD average of 2% (Figure 1.14). Greater mobility of workers could also help regions adjust to shocks. While there is evidence of migration of workers from regions with shrinking industries to those with growing ones in Germany, Korea and the United States, migration from weaker to better performing regions is low in Spain (OECD, 2017d). Spanish evidence also suggests that workers who have moved to better performing regions experience productivity gains that can benefit their region of origin in the case of return migration (De Roca and La Puga, 2017).

The high persistence of regional differences in unemployment rates have been linked to low cross-regional migration in Spain (Jimeno and Bentolila, 1998; Izquierdo et al., 2005). Despite an increase in regional differences in unemployment rates during the crisis, around 15% of Spanish aged 18 to 64 moved between 2007 and 2012.

Figure 1.14. Annual regional migration rate

Flows across TL3 regions, average 2013-2016, % of total population



Note: OECD average is the average of the 32 countries. Average 2013-2016, otherwise available years: Germany, Latvia and United Kingdom 2012-2015; Italy, 2011-2013; Greece, 2012; Slovenia and the United States, 2009-2011; the Netherlands, 2008-2010.
Source: OECD (2018), Regions and Cities at a Glance (database).

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Better integrating labour market and social policies

Stronger coordination between employment and social services is key to providing effective transitions between social support schemes and employment, given the multiple barriers that the unemployed might face (OECD, 2017c; Fernandez et al., 2018). For example, participation in minimum income schemes in the Basque Country required recipients to participate in ALMPs. Such a direct link between passive and active policies may have contributed to the low negative impact of minimum income schemes on the transition to employment (De La Rica and Gorjón, 2017).

Improving coordination to provide integrated support for jobseekers *via* a single point of contact for social and employment services and assistance would improve the effectiveness of such policies. The structure of responsibilities of labour market and social policies are also spread across different levels of government, which makes cooperation between the central and regional governments essential for their effectiveness. The sharing of best practices across regions should be increased to facilitate their implementation in regions with higher needs.

Despite the existence of a number of mechanisms to enhance cooperation across regions and between authorities at different levels, there are gaps in the sharing of information, which can lower the effectiveness of policies and the integration of active and passive policies. To address some of these gaps, the authorities announced the launch of the 'social card' to include all non-contributory benefits received regardless of its source (national, regional or local). This is a step in the right direction that should be implemented immediately and could be extended to other services provided by Public Employment Services, such as the active labour programmes the individual is enrolled in.

Barriers to inter-regional transition of the entitlements of recipients and disparities in the coverage of income benefit schemes could also restrict regional mobility (Ayala et al. 2016). The decision to move to a region with higher employment opportunities can be adversely affected by uncertainty regarding the potential loss of social benefits. The creation of a Basic Catalogue of Social Services in 2013, which includes all services regions must provide, is a good initial step to reduce information asymmetries. A comprehensive 'map of social benefits', which includes all regional benefits, would deliver a better understanding of the system to potential beneficiaries. This information should be utilised to ensure the portability of social rights across regions in a transparent manner.

In many cases, having access to social and housing benefits requires previous residence, which could expose beneficiaries to long periods without assistance if they decide to move, and restrict labour mobility. Providing temporary assistance to those who move across regions, either by the region of origin or the central government, should be considered to achieve full portability of these benefits across regions. This is especially important in the case of minimum income guarantee schemes, which are designed, financed and evaluated at the regional level. Around 80% of recipients of such schemes have only reached the first stage of secondary education or below, suggesting that non-transferability of benefits across regions can disproportionately affect less-educated individuals, who are already less likely to move. This could be combined with a general evaluation of these schemes, which tend to provide minimal support and are not targeted well, with a view to increase the amount and coverage of the effective ones (OECD, 2017c).

Making housing more flexible and affordable

Policy interventions in housing markets may affect geographical and, in turn, labour mobility and could give rise to misallocation of labour (Andrews, Caldera Sánchez and Johansson, 2011; van der Vilst et al., 2002). For example, high owner-occupation rates may be associated with an increase in the unemployment rate due to lower mobility (Oswald, 1999). The withdrawal of deductibility from income tax of mortgage payments in 2013 has reduced the tax advantage of home ownership in Spain, but the rate of home ownership at 77.8% in 2016 is among the highest in the OECD. The association of home ownership rates and labour mobility may have been further exacerbated due to the severe crisis and the sharp drop in house prices (Palomares-Linares and Van Ham, 2016), and the asymmetric changes in house prices across regions, as discussed below.

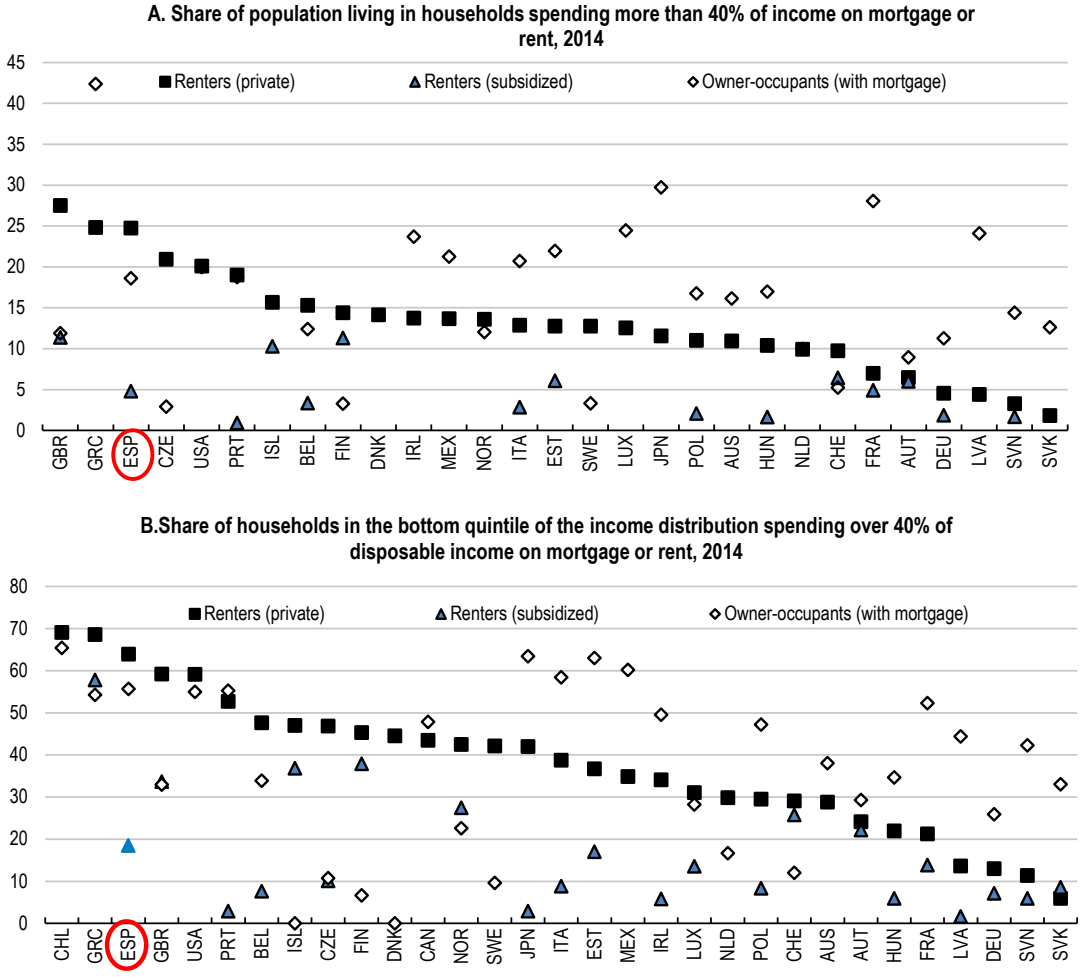
High transactions costs (e.g. stamp duties, registration fees, etc.) may create lock-in effects in the housing market (Van Ommeren and Van Leuvensteijn, 2005). Transactions costs, which remain above the OECD average in Spain, have been associated with higher skill mismatch (Adalet McGowan and Andrews, 2015; Caldera Sánchez and Andrews, 2011). Simulations show that reducing transaction costs in Spain to the minimum level in the OECD may be associated with a reduction in the probability of mismatch by around 0.2 percentage points, implying potential gains to labour productivity of 1.6 percentage points (Adalet McGowan and Antona San Millán, 2018). Other policies that are associated with lowering skill mismatches are discussed below.

A large and flexible rental market is also key, since stringent rental regulations may lower residential construction and reduce the mobility of incumbent tenants (Sims, 2007; Lind, 2001) and reinforce homeownership bias. In 2013, changes in regulation increased legal certainty for the tenant and reduced restrictions in contracts favouring agreements between parties over legal statutory duties. Furthermore, arbitration bodies to handle disputes between landlord and tenants were created in some regions, as recommended in the *2014*

Economic Survey of Spain. Extending these to all regions would improve the flexibility of the rental market. The government recently launched a study to analyse the barriers in the rental market and an inter-ministerial working group was created to improve rental market regulation, which is welcome.

Housing affordability can be a barrier to the mobility of workers, especially for young and low-income ones. The affordability of private rental markets is amongst the lowest in the OECD, with more than a quarter of private market tenants overburdened by rent costs in Spain (Salvi del Pero et al., 2016) (Figure 1.15, Panel A). Low-income households – those in the bottom quintile of the income distribution – are more likely to be overburdened by housing costs (Figure 1.15, Panel B). After the crisis, rents have increased disproportionately more in big cities and urban areas, and regions where employment opportunities are higher. The National Housing Plan 2018-21 includes house allowances for the youth and low-income families. While it rightly focuses on the most vulnerable, the redistributive effect may be limited in areas where demand is high and supply scarce, as subsidies could lead to increases in rental prices.

Figure 1.15. Burden of housing costs, especially for tenants and low-income households, is high



Source: OECD, Affordable Housing Database.

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Social housing in Spain has traditionally been tilted towards ownership rather than rental properties. This might have contributed to lower mobility due to restrictions to prevent potential misuse of social housing, such as impediments for selling off or renting the property for a number of years. The new government plans to reorient the Housing Plan more towards public and rental housing, with a plan to promote a park of 20 000 public housing units in four years.

The authorities recently announced subsidies to increase the stock of rental houses at capped prices aimed at low-income families. Means-testing to track changes in eligibility conditions should be made regularly and households above eligibility thresholds encouraged to move out by aligning their rents to market prices. Housing programmes are mostly run by the regional and local governments. Hence, to facilitate inter-regional labour mobility, it is important that regions mutually and automatically recognise beneficiaries from other regions and share information on the availability of housing-related benefits in other regions.

Lowering regional disparities in education outcomes

Human capital is a robust determinant of regional growth across the OECD and Spain (OECD, 2016c; Kerimoglu and Karahasan, 2011; OECD, 2009), but regional disparities in education outcomes are high in Spain (Table 1.1). Increasing the quality of education would improve the employability of the labour force in lagging regions and should be complemented with policies to raise job quality in regions with low-skilled jobs. A higher-skilled workforce would also make lagging regions more attractive for firms. Policies should focus on improving the skills of workers, better matching skills to future and regional labour market needs, and reducing inequality of opportunity.

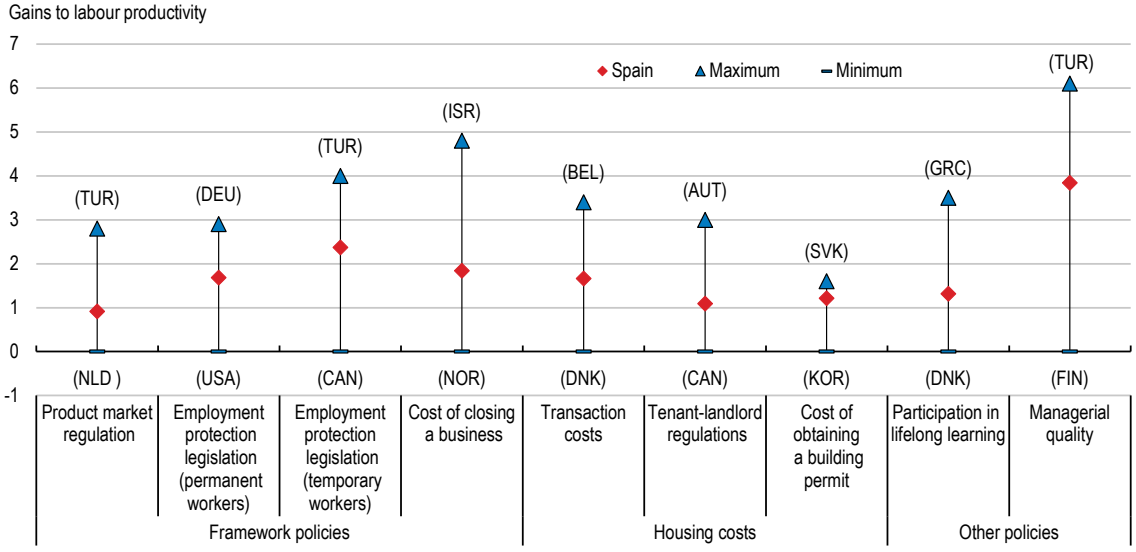
The incidence of skill mismatch, defined as the share of workers reporting a mismatch between their existing skills and those required for their job, at 33% is amongst the highest in the OECD, with significant regional differences (Adalet McGowan and Antona San Millán, 2018). A wide range of policies can help reduce skill mismatch and boost productivity in Spain, including more flexible product and labour market policies and housing policies. Promoting lifelong learning could yield large gains in terms of reducing skill mismatch and boosting productivity, which should be a priority for regions with low skills (Figure 1.16).

Table 1.1. Regional differences in education outcomes

	Share of students with science proficiency at Level 1 or below	Share of students with reading proficiency at Level 1 or below	Share of students with mathematics proficiency at Level 1 or below	Difference in science performance of migrants and natives, after accounting for socio economic status
	2015	**2015**	**2015**	**2015**
Andalucia	25.4	22.4	30.2	32
Aragon	14.2	14.2	17.1	48
Asturias	16.4	16.3	20.6	30
Balearic Islands	20.4	19.1	25.0	31
BasqueCountry	20.2	17.4	19.5	38
Canary Islands	23.8	21.1	35.9	**10**
Cantabria	17.3	14.9	19.4	37
Castile and Leon	**10.2**	**9.0**	**14.6**	35
Castille-La Mancha	16.2	14.9	21.4	28
Catalonia	15.7	15.4	17.7	42
Valencia	15.8	14.4	20.3	**15**
Extremadura	24.3	23.0	27.0	**24**
Galicia	13.4	13.3	18.6	36
La Rioja	17.0	18.1	**16.4**	46
Madrid	**12.2**	**10.8**	16.5	32
Murcia	21.1	19.4	27.9	31
Navarra	**11.9**	**11.2**	**12.1**	26
OECD	21.2	20.1	23.4	31

Note: The top 3 performing regions in each category are in bold and shaded in blue. If the performance of the region is below the OECD average, it is shaded in orange.
Source: OECD, PISA 2015.

Figure 1.16. Potential gains to productivity from policy reforms that reduce skill mismatch



Note: Estimates are based on: *i)* logit regressions of probability of mismatch controlling for age, marital and migrant status, gender, education, firm size, contract type, a dummy for working full-time and working in the private sector; and *ii)* OLS regressions of labour productivity on skill mismatch.
Source: OECD calculations, based on Adalet McGowan, M and D. Andrews (2015).

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Improving the adaptability of workers through lifelong learning

Lifelong learning has a key role to play in helping workers cope with technical progress by raising skill levels and reducing skill mismatches. In turn, higher skills can contribute to increasing social mobility, attracting firms to lagging regions and improving productivity. Lifelong learning is important in Spain since skill proficiency is among the lowest across OECD countries and forecasts of future skill needs suggest that the labour market will require a significant increase in the number of workers with high qualifications (CEDEFOP, 2015).

Participation in lifelong learning in Spain, at 9.9% in 2017, is below the EU average of 10.9% and the EU average target of 15% set by the Education and Training 2020 framework (Figure 1.17, Panel A). A number of recent initiatives could support participation in lifelong learning, but it is too early to assess their effect (Box 1.2). It is important to ensure that the provided training are of high quality, of relevance to labour market needs and target those who would benefit the most from further training.

There is room to improve the targeting of the available financial resources for training. Survey-based evidence suggests that financing is not considered to be a main barrier to participation in Spain, with only around 8% of adults citing funding as an obstacle, which is below the EU average of 13% (European Commission, 2015). An important source of financing of formal training for the employed and unemployed in Spain is the professional training levy (*Cotización para formación profesional*), which both employers and workers contribute to. However, the levy funds are often used for mandatory workplace training (e.g. health and safety), rather than to address skill needs, suggesting a need to reorient publicly-subsidised training for the employed and unemployed to skills and qualifications which are in high demand (OECD, 2018b).

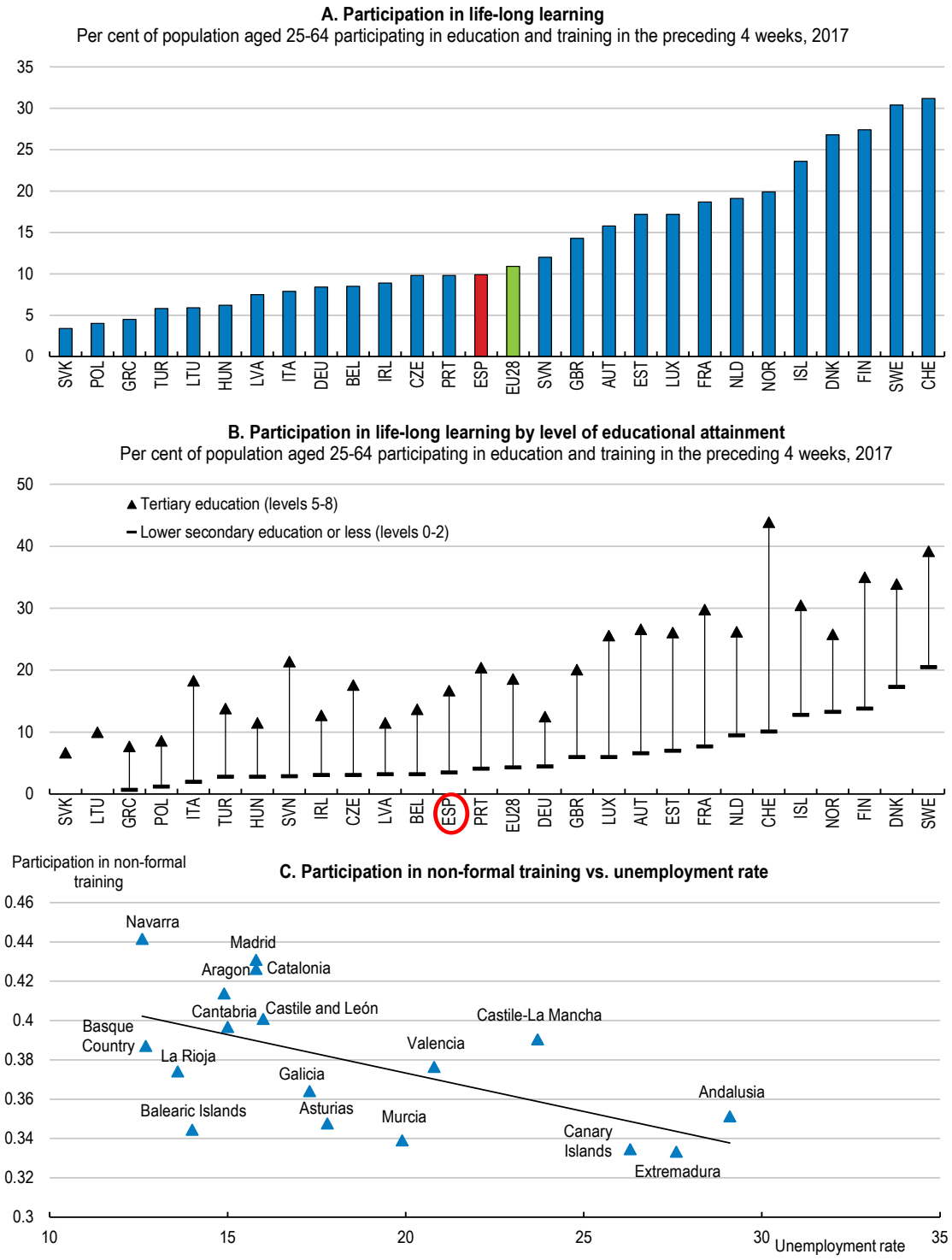
Box 1.2. Recent initiatives in lifelong learning

The Lifelong Learning Strategic Plan 2014-20, in collaboration with regional and local educational authorities, aims to improve access and flexibility, boost participation and improve the quality of lifelong learning opportunities. The Plan provides access to distance formal education and to obtain credentials in secondary education, and resources, such as online learning portals.

In 2015, two measures were proposed to promote lifelong learning for workers: training leave and individual training accounts (*Cuenta Formación*). In July 2015, the social partners agreed to work together in the establishment of the single training account for all workers, the definition of a new training needs catalogue in enterprises, and a better evaluation of the delivered professional training. The Chambers of Commerce are getting progressively involved in the scheme at national and regional level to encourage participation by local businesses, but the low capacity of small and medium-sized enterprises (SMEs) to absorb trainees can be a barrier.

Similar to other countries, the likelihood of participation in lifelong training is higher for employed, younger, more educated and native individuals in Spain (Felgueroso, 2017). International evidence suggests that funding targeted at vulnerable groups may partly boost participation by those adults who need it most (Rubenson and Desjardins, 2009). This should be an important priority, given that the participation of low-qualified adults at 3.5% remains low (Figure 1.17, Panel B).

Figure 1.17. Participation in life-long learning across Europe by educational attainment



Note: In Panel B, countries are ranked according to the participation rate in lifelong learning by those with lower secondary education level or less. Levels refer to the International Standard Classification of Education (ISCED).

Source: Eurostat, INE, Labour Force Survey, and OECD Regional Statistics.

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Financial incentives tend to be geared towards jobs and training centres, rather than individuals in Spain. While this can contribute to ensure that any additional training is more likely to meet specific labour market needs, subsidies for individuals could work better when targeting vulnerable groups. In Spain, the recently introduced individual training accounts (*Cuenta Formación*) are used to keep track of training participation and qualifications over the course of workers' careers, but often are not tied to funding, as in other countries (OECD, 2018b). Financial incentives for lifelong learning opportunities targeted at low-qualified workers that are linked to individuals rather than jobs should be introduced.

Assistance with childcare, transport and access to social services can increase participation in lifelong learning (Benseman, Sutton and Lander, 2005). The most common barriers to participation in lifelong learning in Spain are family responsibilities (31%) and conflicts with work schedules (17%), which are higher than the EU average of 17% and 14%, respectively. The former could partly explain the lower incidence of participation of women in informal training activities (Chlon-Dominczak and Lis, 2013). Between 2007 and 2012, participation rates in informal training by women decreased, while those of men increased, widening the gender gap in such training (Calero and Escardibul, 2015). Extending the provision of childcare to children between the ages of 0 and 3 and long-distance learning opportunities (see below) could help improve gender equality in participation in lifelong learning.

Digitalisation provides opportunities for improving the flexibility of lifelong learning, but strategies for lifelong learning do not fully integrate the use of digital technologies in Spain (European Commission, 2015). Regional differences in both digital skills and infrastructure can lead to differences in the utilisation of long distance lifelong learning programmes. Households' broadband access varies across regions in Spain, which could lower the effectiveness of such initiatives (OECD, 2016b). Efforts to boost access to digital networks in lagging regions and reducing regional disparities in the ability to use digital technologies, as discussed below, should be continued.

Ensuring a better matching of skills with labour market needs

Training vouchers

Participation in non-formal training is low in regions where unemployment rates are high (Figure 1.17, Panel C). In 2017, training vouchers for the unemployed, allowing them to fund training programs of their choice, was approved. Training vouchers increase the freedom of choice of participants, which should improve the matching between participants and training centres. However, lack of knowledge on labour market needs and the associated wage premium, and the performance of different training providers could lower their effectiveness (Barnow, 2009). International experience suggests that a number of design features could be useful. For example, Korea provides guidance on the use of vouchers towards skills that are high in demand to improve employment outcomes, and in Estonia, vouchers can only be used on training programmes in areas of labour market or skill needs (Felgueroso, 2017; OECD, 2018b).

The implementation of the training vouchers will be the responsibility of regional governments, which is welcome, since matching training to labour market needs works best if a regional approach is taken. For example, in Finland, training courses are purchased through public procurement by regional centres of economic development, whose choice of courses to purchase is based on estimated regional labour market needs (OECD, 2017e).

Regional programmes should use counsellors to give guidance to the unemployed on the use of training vouchers, providing individualised support in line with the specific profile of the participant and consider linking the choice of training programmes to local labour market needs. Given that these subsidies could create deadweight costs, regular ex-post evaluations should be carried out.

Vocational education and training

Vocational education and training (VET) is important to lowering youth unemployment and early school leaving rates, and facilitating the transition of young people from education to work. The development and modernisation of VET should be continued, as recommended in the *2017 Economic Survey of Spain*. The new government has made this a top priority and developed a Strategic Plan for VET, which is welcome. Specifically, the plan includes extensions of initiatives and training modalities to obtain VET diplomas (e.g., dual VET, distance and online learning VET, offers of modular programmes), improvements to the recognition of the competences acquired through pathways other than formal training (e.g., the accessibility to the procedures for the accreditation of basic skills for adults), update of continuous training of VET teachers (e.g., promotion of the specialised training-company work placement and further implementation of innovative training methodologies) and increased initiatives to boost national and international teacher mobility.

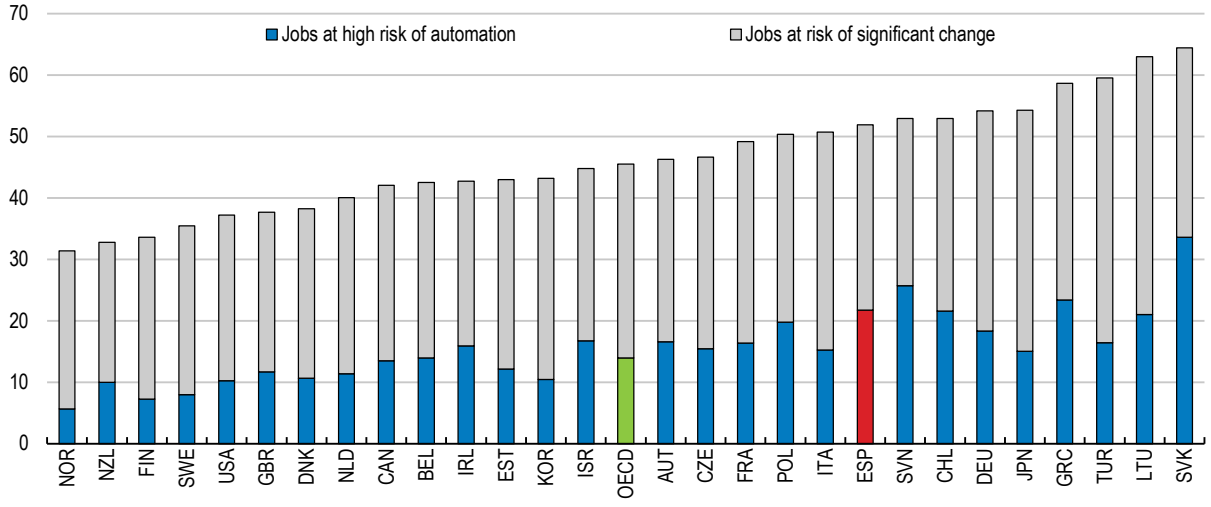
The dual VET system is a crucial part of aligning skills of young people with the needs of employers. The ability of employers to influence the design of curricula is key to ensure that the skills being developed are in line with their needs and introduces flexibility to the system. However, there are regional differences in the implementation of the on-the-job training component, which can introduce the risk that the skill-signalling power of these qualifications is reduced (OECD, 2018b). This could be a reflection of the regional differences in the number of firms providing dual VET (OECD, 2017c). Hence, the involvement of firms in the design of such programmes should be balanced with introducing minimum standards on the practical part of these programmes.

Boosting digital skills

Increased information and communications technology (ICT) adoption has contributed to the polarisation of jobs away from middle-skilled jobs and into low-and high-skilled jobs across OECD countries, including in Spain (OECD, 2017f; Oesch and Rodriguez Menes, 2011). However, automation, unlike other waves of technological progress, is expected to disproportionately affect low-skilled jobs, placing downward pressure on wages and can have large implications for inclusiveness (Nedelkoska and Quintini, 2018; Dauth et al., 2017). The percentage of workers in jobs at high risk of being automated in the next 15-20 years at 21% in Spain is higher than the OECD average of 14% (Nedelkoska and Quintini, 2018) (Figure 1.18).

Figure 1.18. The changes in nature of jobs require new skills

Percentage of workers in jobs at high risk of being automated or in jobs facing significant change



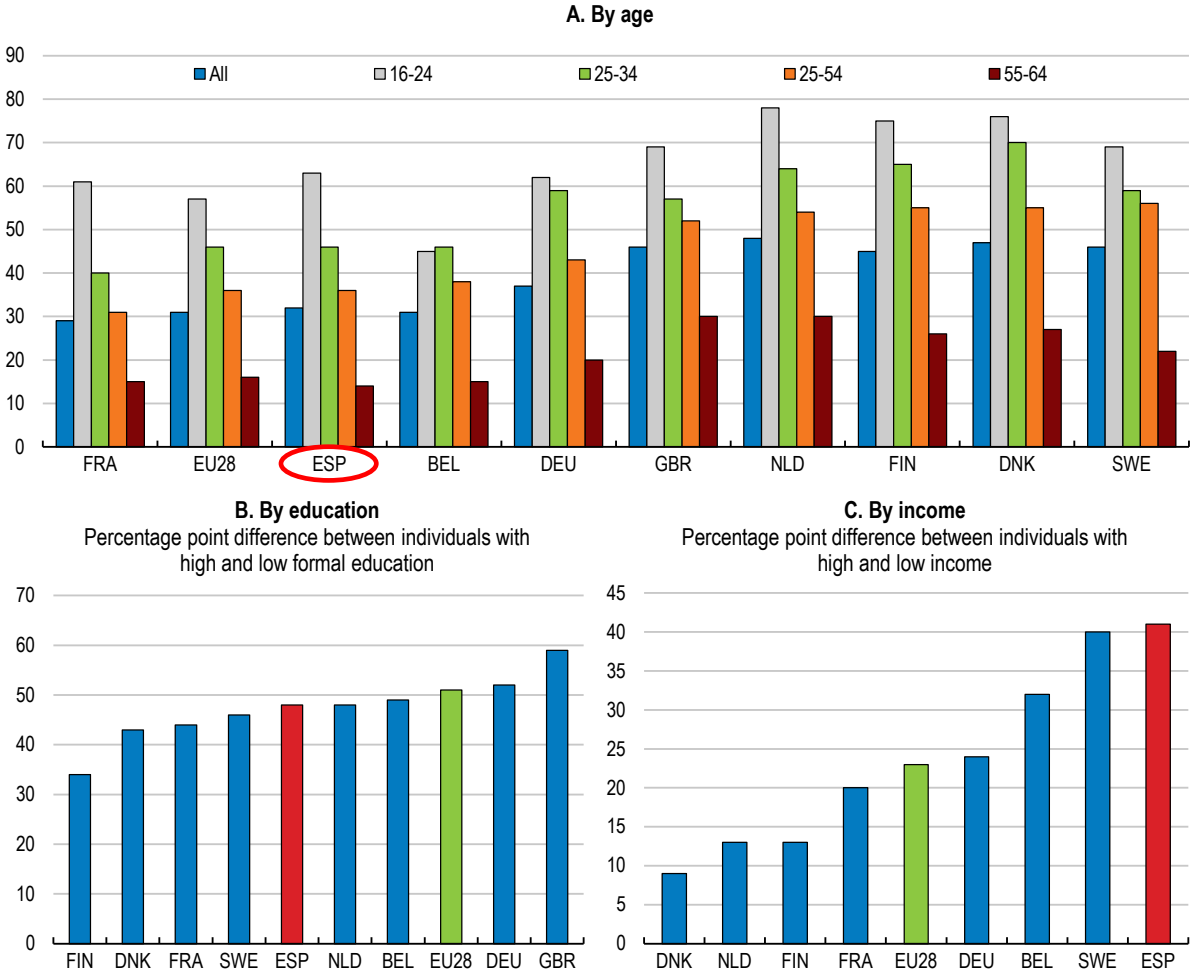
Note: Jobs are at high risk of automation if the likelihood of being automated is at least 70%. Jobs are at risk of significant change if the likelihood of being automated is between 50 and 70%.
Source: Nedelkoska, L. and G. Quintini (2018), "Automation, skills use and training", *OECD Social, Employment and Migration Working Papers*, No. 202, OECD Publishing, Paris.

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According to Eurostat's Digital Skills Survey, only 32% of working age Spanish had "above-basic" digital skills in 2017, which is around the EU average, but below some peer countries. Furthermore, young, high-qualified and high-income individuals tend to have a higher level of digital skills (Figure 1.19). While these patterns are also observed in other peer countries, the differences in digital skills by income are starker in Spain. In Nordic countries, even people with low education display relatively high levels of acquaintance with digital technologies. This is in line with other evidence, which shows that the gap in internet use by educational attainment is relatively high in Spain (OECD, 2017g). Targeting training in digital skills to low-qualified and low-income individuals would help address these disparities.

Figure 1.19. There is scope to improve digital skills

% of respondents claiming to have basic digital skills

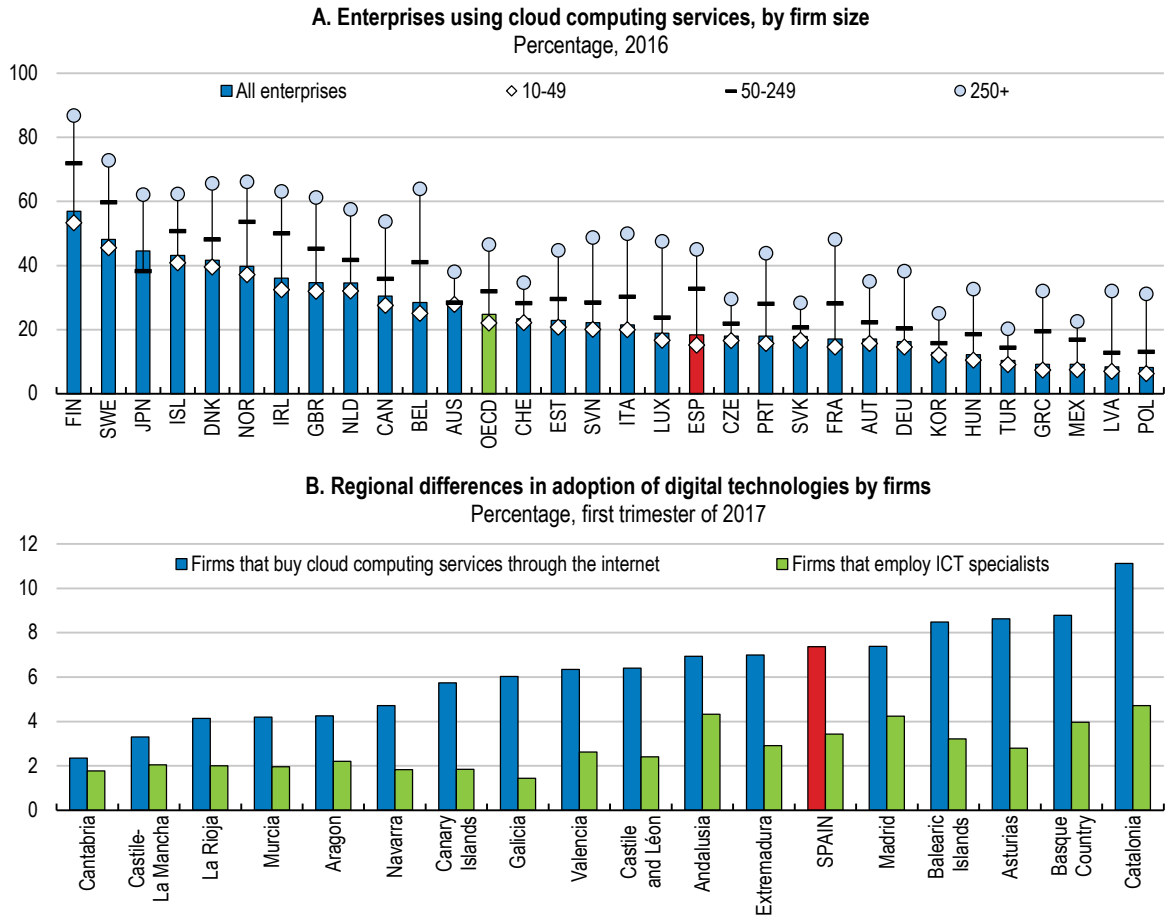


Note: In Panel C, high income refers to individuals living in a household with income in the fourth quartile and low income refers to individuals living in a household with income in the first quartile.
Source: Eurostat.

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The adoption of digital technologies by firms is relatively low in Spain, with significant regional differences (Figure 1.20). Changes due to digitalisation can increase regional inequalities, with new jobs created in places other than where they have been destroyed and where skills are available (Berger and Frey, 2016). Low levels of ICT use by firms can be associated with a lack of firm dynamics, as digital transformation lowers entry barriers and facilitates reallocation (Calvino and Criscuolo, 2018). International evidence suggests that managerial quality, the availability of digital skills and low levels of skill mismatch boost digital technology adoption (Andrews, Nicoletti and Timiliotis, 2018). Hence, policies in a number of these areas, as discussed elsewhere in the chapter, would help.

Figure 1.20. Spanish firms lag in their use of key digital technologies



Note: Cloud computing refers to ICT services used over the Internet as a set of computing resources to access software, computing power, storage capacity and so on. Data refer to manufacturing and non-financial market services. OECD data are based on a simple average of the available countries.
Source: OECD (2017), OECD Digital Economy Outlook 2017 and INE.

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Recent evidence links firm adoption of digital technologies across Spanish regions with the regional share of young people, highlighting the complementarities between the demand and supply of digital skills (Cámara and Ruiz Sánchez, 2017). A number of individual initiatives exist to improve digitalisation, but they should be evaluated and streamlined to develop a comprehensive strategy (Box 1.3). Such a strategy should aim at helping workers to navigate the implications of the digital transformation for jobs and creating the right infrastructure and framework conditions for firms to adopt digital technologies. The government is currently working on the new Digital Strategy for Smart Spain, which should ensure complementarities between the availability of skills and the needs of firms, especially at the regional level, given regional differences.

Box 1.3. Existing policies to boost digital skills and adoption

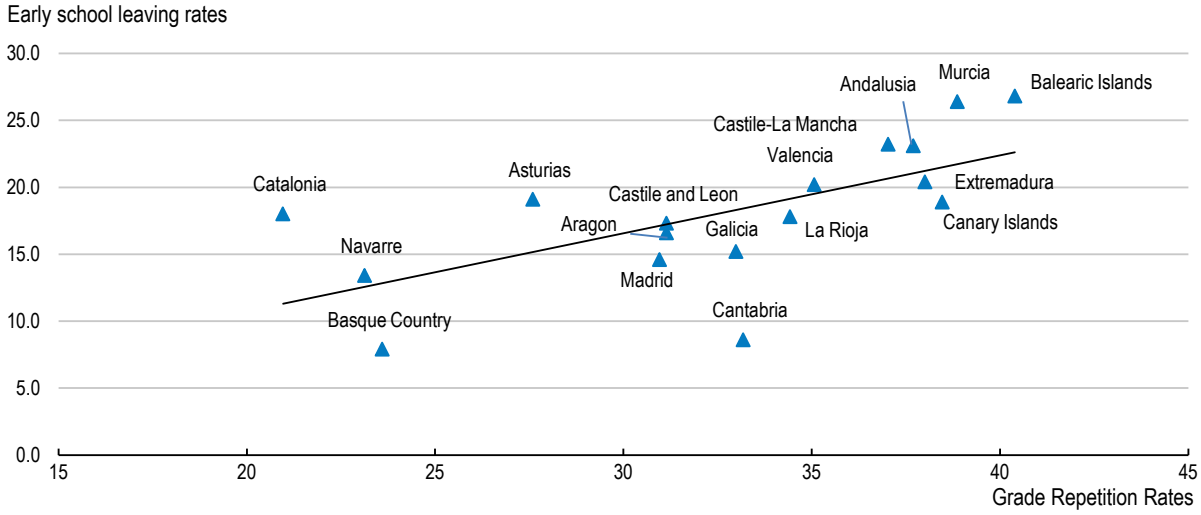
In 2015, an industrial strategy (*Industria Conectada 4.0)* to encourage the use of digital technologies in firms, which provides manufacturing firms with the information (on-line self-diagnostic tool), guidance (consulting service) and financing they may require in adopting digital technologies, was introduced. In 2017, two initiatives (*Asesores Digitales* and *Oficinas de Transformación Digital*), which provide advisory services to SMEs in the digital transformation of their activities, were launched.

There are also a number of public and private initiatives to develop training programmes aimed at young people to improve digital skills. Measures were also taken to improve the digital competencies of teachers *via* the Digital Skills and Competence Framework and the development of open online courses, including in ICT skills.

Raising the overall level of basic skills and increasing equality of opportunity

Despite significant improvements over the past years, the early school leaving and grade repetition rates remain high, which increases the risk of school drop-outs, lowers attainment expectations and weighs on education costs (OECD, 2012a). From a regional perspective, higher grade repetition rates are associated with higher early leaving rates (Figure 1.21).

Figure 1.21. Grade repetition and early school leaving rates are positively related at the regional level



Source: OECD (2016), PISA 2015 Results (Volume II): Policies and Practices for Successful Schools (database); and Eurostat (2018), Early leavers from education and training (database).

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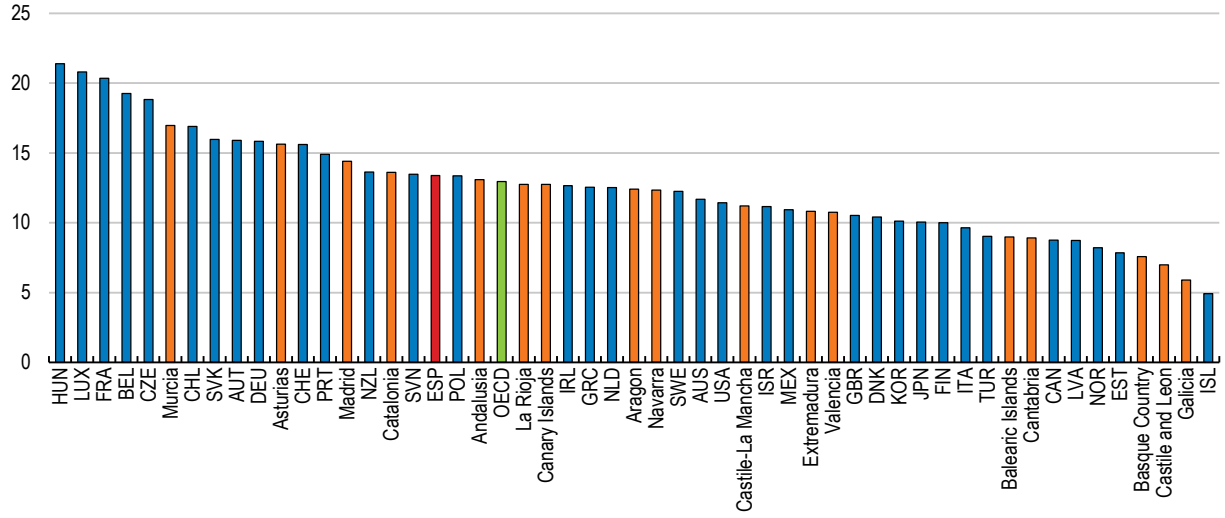
Lowering early leaving rates at the regional level, with a special focus on teacher training and evaluation and individual student support, which are among the drivers of successful schools in well-performing regions, will be essential. For example, there is evidence that early intervention, additional instruction and individualised learning can lower grade repetition rates, as was the case in Finland (Välijärvi and Sahlberg, 2008). However, the

percentage of students enrolled in schools where staff helps with homework is 35% in Spain, well below the OECD average of 60%. Reversing the culture of grade retention by raising teacher awareness of the consequences and setting specific targets to hold schools accountable, as was the case in France in 2008, would also help.

The increased likelihood of grade repetition among disadvantaged students compared with their advantaged peers, and after taking performance into account, is amongst the highest in the OECD (OECD, 2016d). Furthermore, the percentage of variance in science performance explained by socio-economic background displays large regional differences (Figure 1.22). For example, Castille-Leon, which has good education outcomes for disadvantaged students, has focused on individualised help, early detection of learning difficulties and initial evaluation of basic abilities (Box 1.4). Individualised support time, as was done in France in 2016, but targeted at students at the risk of failing, should be introduced. This can be complemented with the use of national standardised tests widely in primary and secondary education, as recommended in the *2017 Economic Survey of Spain,* to identify students in need. The new government is developing a renewed scholarship system to improve equality of access to education, including increased resources and a special focus on students from disadvantaged backgrounds, which should also contribute to lower early school leaving rates.

Figure 1.22. Education outcomes vary by socio-economic conditions

Percentage of variance in science performance explained by socio-economic background



Source: OECD (2016), PISA 2015 Results (Volume II): Policies and Practices for Successful Schools, OECD Publishing.

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While disadvantaged public schools tend to have smaller classes and/or smaller student-teacher ratios than advantaged public schools, there is a lack of clear allocation of the most qualified and experienced teachers to the most challenging schools (OECD, 2018c). In Japan and Korea, there are policies to ensure that high-quality teachers go to disadvantaged schools, *via* formal and informal schemes to ensure that teachers periodically change schools, and extra incentives, such as additional salary, less instruction time and the ability to choose their next school (OECD, 2018d). Improving incentives for the mobility of

well-qualified teachers across schools and regions is another way to spur growth and increase equality of opportunity in lagging regions.

Box 1.4. Achieving good education outcomes: the case of Castille-Leon

While Castille-Leon is not among the wealthiest regions, with a GDP per capita below the national level, it achieves good education outcomes. According to PISA results, students from the region have a high overall performance (above 500 points) in reading, mathematics and science. To help students perform well regardless of their socioeconomic status, the region has developed programmes to provide primary students with support during school hours and extracurricular lessons to help with preparation for exams. Continuing professional development for teachers has also been encouraged *via* a network of 'training and innovation' centres.

Ensuring that teacher and principal appraisal is fully part of a strong assessment and evaluation framework is key to improving education outcomes, but Spain lacks a formal national teacher appraisal system (OECD, 2016d). Each region is responsible for the appraisal of its teachers, but PISA findings suggest that teachers in Spain have few opportunities to receive appraisal. According to school principals' reports, only 32% of students are in schools where the principal observes lessons (compared to the OECD average of 81%), and only 27% of students are in schools where peer reviews are utilised (compared to the OECD average of 66%). There are also large regional differences, with 71% of students in schools where the principal observes lessons in Catalonia, compared to 10% in Extremadura. Since regional authorities will play a lead role in school evaluation, it is important that they develop the capacity to fulfil these tasks.

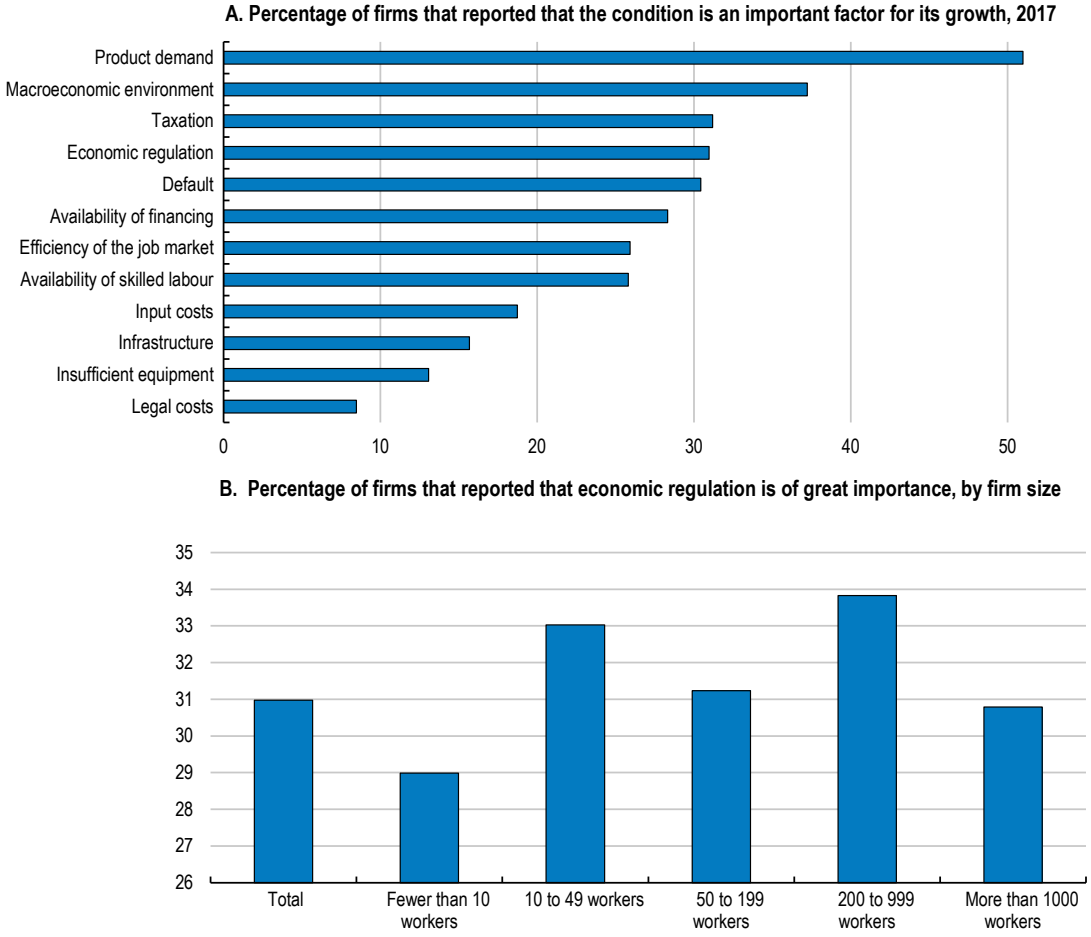
Boosting productivity and firm dynamism across regions

Boosting overall productivity growth and reducing regional disparities in productivity will depend on three key factors. First, reducing regulatory differences to create a uniform market will enable economies of scale and improve the efficiency of allocation of resources. Second, increasing synergies between regions in terms of innovation policies, and the international exposure of lagging regions would make the environment conducive to productivity growth in lagging regions. Finally, low productivity growth, even in the most productive (frontier) regions, suggests that factors to enable the catch-up of Spanish firms to the international frontier, such as higher managerial quality and lower skill mismatch, are also important.

Reducing regulatory differences

Regulatory differences across regions can create implicit entry barriers, prevent economies of scale and agglomeration effects, *via* an effectively smaller market size and limit potential productivity gains. According to the Business Environment Survey, economic regulation is an important factor for firm growth capacity, especially for medium-sized companies (Figure 1.23). Despite recent improvements to the economic regulatory environment, in 2017, only 6% of firms reported that the changes in economic regulations had a favourable impact on their business, while 17% affirm that the resources dedicated to red tape with all levels of government have increased.

Figure 1.23. Economic regulation is relevant for firm growth



Source: INE, Business Environment Survey.

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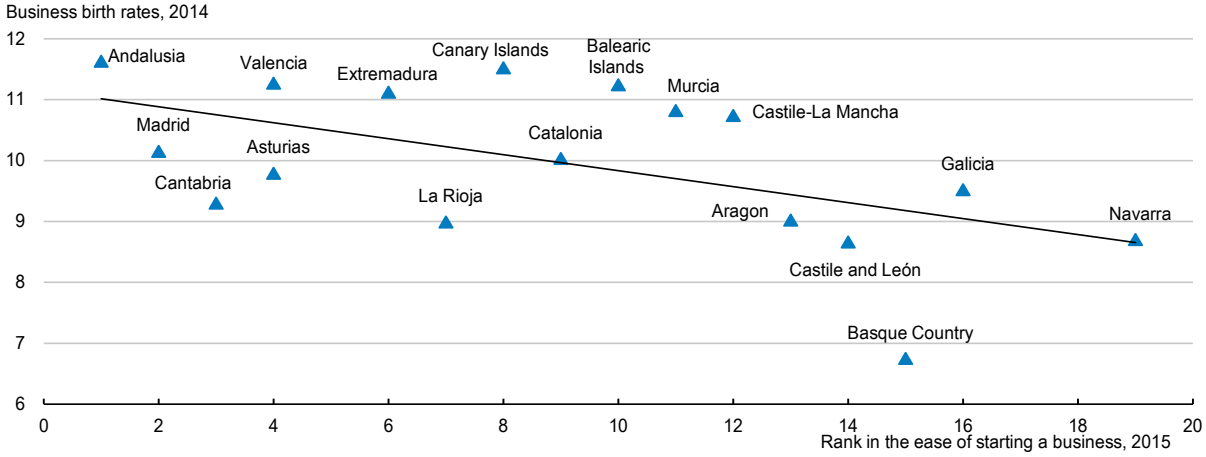
The Market Unity Law, which aims to tackle conflicts stemming from overlapping regulations, is a step in the right direction to create economies of scale. In 2017, the Constitutional Court declared that one of the main principles of the Law, that of national effectiveness, cannot be incorporated in national legislation due to the distribution of competences, while the other main principles remain intact. The principle of national effectiveness implies that economic agents in a region will not be subject to any requirements different than those they are already subject to in their region of origin.

It is important to continue to implement the remaining principles of the Market Unity Law and increase its transparency, and avoid creating uncertainty about the economic environment. The authorities estimate that the removal of the national effectiveness principle may have a cost of 0.7% and 0.9% on GDP and employment, respectively (Government of Spain, 2018). This legal principle could still be achieved, if incorporated in regional legislation. Some regions have already included this principle in their sectorial legislation, which is seen as an example of good practice for the application of the Market Unity Law (Secretaría del Consejo para la Unidad de Mercado, 2017). Cooperation across different levels of government must also be enhanced to guarantee the effective implementation of the Law.

The central government has the legal mandate to systematically analyse that any new law legislated by the central government does not violate the Market Unity Law. The requirement of such an impact analysis should be extended to existing laws. Furthermore, some regions (e.g. Madrid) have already introduced a similar mandate to assess the effects of their actions on the implementation of the Market Unity Law. The remaining regions should adopt a similar approach. Furthermore, complaints about possible violations of the Law have been uneven across regions, suggesting that information is disseminated better in some regions. Having an information campaign to raise awareness of the Law, could improve its implementation and start yielding results in terms of increased inter-regional activity of firms.

A 2015 Regional World Bank Doing Business study shows that there are significant regional differences according to four criteria: starting a business, dealing with construction permits, getting electricity and registering property. The ranking of regions across the different criteria vary, suggesting that there is room to adopt the best performer's regulations, allowing lagging regions to catch up. For example, regions where it is easier to start a business tend to have higher enterprise birth rates, suggesting that moving to best practices can increase business dynamism (Figure 1.24). While having a high ratio of start-ups is desirable, it is also important to ensure an environment that allows innovative ones to survive. Hence, the harmonisation of ease of entry should be complemented by measures to facilitate the allocation of resources to most productive uses, as discussed below.

Figure 1.24. Barriers to starting a business and business birth rates at the regional level



Source: World Bank, Doing Business Database and OECD, Regional Business Demography Database.

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Raising the ability of regions to benefit from spillovers

Productivity growth, *via* more effective learning from the global frontier, is supported by a policy framework that promotes efficient resource allocation and is a positive function of its degree of international connectedness, ability to allocate skills efficiently and investments in knowledge based capital, including managerial capital and R&D (Saia, Andrews and Albrizio, 2015). Spain lags behind in a number of these structural factors and policies, including skill mismatches, managerial quality and innovation policies (Figure 1.25). An analysis of the catch up of lagging firms in Spain to the national productivity frontier shows that firms that are located in regions with greater trade intensity,

higher R&D expenditures and share of highly educated workers tend to experience faster rates of productivity growth (Box 1.5).

Box 1.5. Firm productivity convergence in Spain

To examine whether lagging firms in Spain catch up to the national productivity frontier, a model is estimated where a firm's productivity growth depends on its distance to the productivity frontier, that is, the size of the gap between the productivity of a laggard firm and that of the productivity frontier for its industry, and the growth of the productivity frontier (Law, 2018). Specifically:

$$\Delta \ln MFP_{ijt} = \alpha + \beta_1 ln\left(\frac{MFP_j^F}{MFP_i}\right)_{t-1} + \beta_2 \Delta lnMFP^F{}_{jt} + \delta_j + \delta_t + \epsilon_{ijt}$$

where *i* refers to firms, *j* refers to industry and *t* refers to time. MFP and MFP^F denote the multifactor productivity levels of non-frontier (laggard) firms and frontier firms in an industry, respectively. Time and industry fixed effects are captured by δ_t and δ_j. β_1 measures the speed of productivity convergence and will be positive if the productivity growth of laggard firms is faster than the productivity growth of firms at the frontier. The model is also extended to include firm characteristics (age and size) as well as regional characteristics (trade intensity, the share of highly educated workers and the ratio of R&D expenditures to regional GDP).

Table 1.2. Catch up to the national productivity frontier

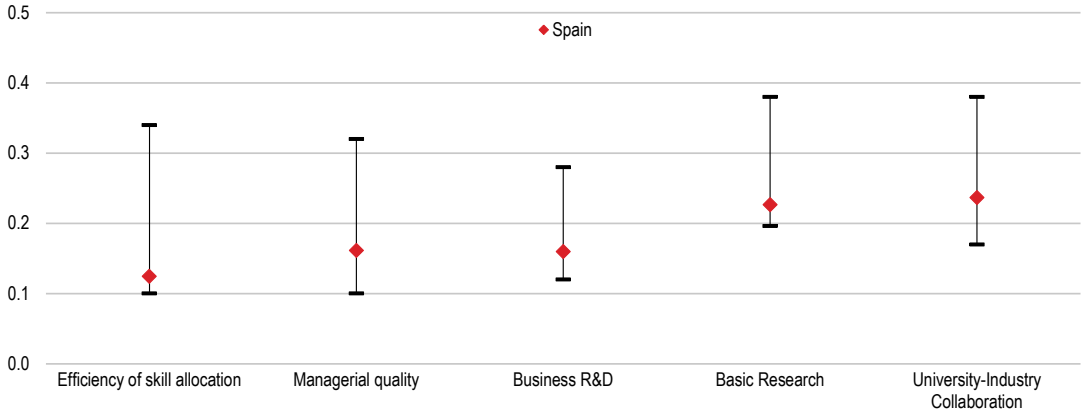
Dependent variable: Firm MFP growth, 2000-15

VARIABLES	(1)	(2)	(3)	(4)
Distance to frontier	0.33539***	0.21096***	0.34097***	0.21720***
	(0.000)	(0.000)	(0.000)	(0.001)
Change in the frontier	0.47660***	0.44522***	0.48335***	0.44506***
	(0.005)	(0.005)	(0.005)	(0.005)
Lag of MFP growth		-0.23272***		-0.22932***
		(0.001)		(0.001)
Lag of change in the frontier		0.02412***		0.01661***
		(0.005)		(0.005)
Firm age			0.00220***	0.00124***
			(0.000)	(0.000)
Firm size			0.00220***	0.00014***
			(0.000)	(0.000)
Trade intensity			0.00074***	0.00048***
			(0.000)	(0.000)
Share of highly educated in employment			0.00209***	0.00159***
			(0.000)	(0.000)
Share of R&D in GDP			0.01167***	0.00654***
			(0.001)	(0.001)
Industry Fixed Effects	YES	YES	YES	YES
Year Fixed Effects	YES	YES	YES	YES
SDBS Weights	YES	YES	YES	YES
Observations	4,273,249	3.362,724	4,008,123	3,533,941
AdjR2	0.1369	0.1465	0.1367	0.1478

Results suggest that laggard firms, on average, converge to their respective industries' productivity frontier. In addition, older and larger firms tend to experience faster rates of productivity growth, in line with cross-country studies (Andrews, Criscuolo and Gal, 2015). Laggard firms in regions with higher trade intensity, R&D expenditures and share of highly educated workers also have higher productivity growth (Table 1.2).

Figure 1.25. Factors and policies to boost spillovers from the frontier

Estimated annual frontier spillover associated with a 2% point increase in MFP growth at the global frontier by different levels of public policy settings, percentage points



Notes: The chart shows how the sensitivity of MFP growth to changes in the frontier growth varies with different levels of each variable. The diamond refers to the estimated frontier spillover effect associated with a 2% MFP growth at the frontier for Spain. The range indicates the country with the lowest (highest) value for the given structural variable or policy in a given reference year.
Source: OECD calculations based on Saia et al. (2015).

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Improving allocation of resources

A dynamic economy needs the ability to reallocate resources from less to more productive firms and from declining to growing industries, but studies have highlighted the importance of resource misallocation as a source of the productivity slowdown, especially in Spain (Gopinath et al., 2017; Gamberoni, Giordano and Lopez-Garcia, 2016; García-Santana et al., 2016). Recent OECD analysis suggests that the decline in the efficiency of labour allocation in Spain during the crisis disproportionately affected young firms (Box 1.6). Such misallocation of resources might have lowered business dynamism and contributed to the low dynamism of even frontier firms and regions.

One measure of low efficiency of resource allocation is the share of zombie firms, defined as firms older than ten years which persistently fail to cover their interest payments from current earnings for three consecutive years. According to the Bank of Spain, the share of zombie firms has declined from 10% in 2013 to 7% in 2016, partly driven by the cyclical recovery. Insolvency reform reducing barriers to firm exit and restructuring has also contributed (Adalet McGowan, Andrews and Millot, 2017). Nevertheless, empirical analysis suggests that even controlling for cyclical factors, zombie firms can be a barrier to the growth of more productive firms in Spain (Adalet McGowan and Antona San Millán, 2018). Furthermore, the prevalence of zombie firms displays some regional differences,

which could be expected given the heterogeneity of region-specific regulations and labour market outcomes (Figure 1.26, Panel A). It could also reflect regional differences in the efficiency of the judicial system which could yield uneven results in the implementation of insolvency reform across regions (García-Posada and Mora-Sanguinetti, 2015).

Box 1.6. Resource misallocation in Spain

To test the sensitivity of firm employment growth with respect to lagged firm MFP, we estimate the following model:

$$Employment\ growth_{ist} = \alpha + \beta_1 MFP_{ist-1} + \beta_2 MFP_{ist-1} * Trend_t + \beta_3 MFP_{ist-1} * TrendSQ_t + \beta_4 Firm\ controls_{ist-1} + \delta_s + \delta_t + \epsilon_{ist}$$

where employment growth is the change in employment for firm *i*, in industry *s*, at time *t*; MFP denotes a measure of firm-level multifactor productivity which is a deviation from the industry-year average to control for MFP differences across industries; trend is a simple linear time trend and trendSQ is a quadratic trend; firm controls include dummies for firm age (YOUNG=1 if age<6) and firm size.

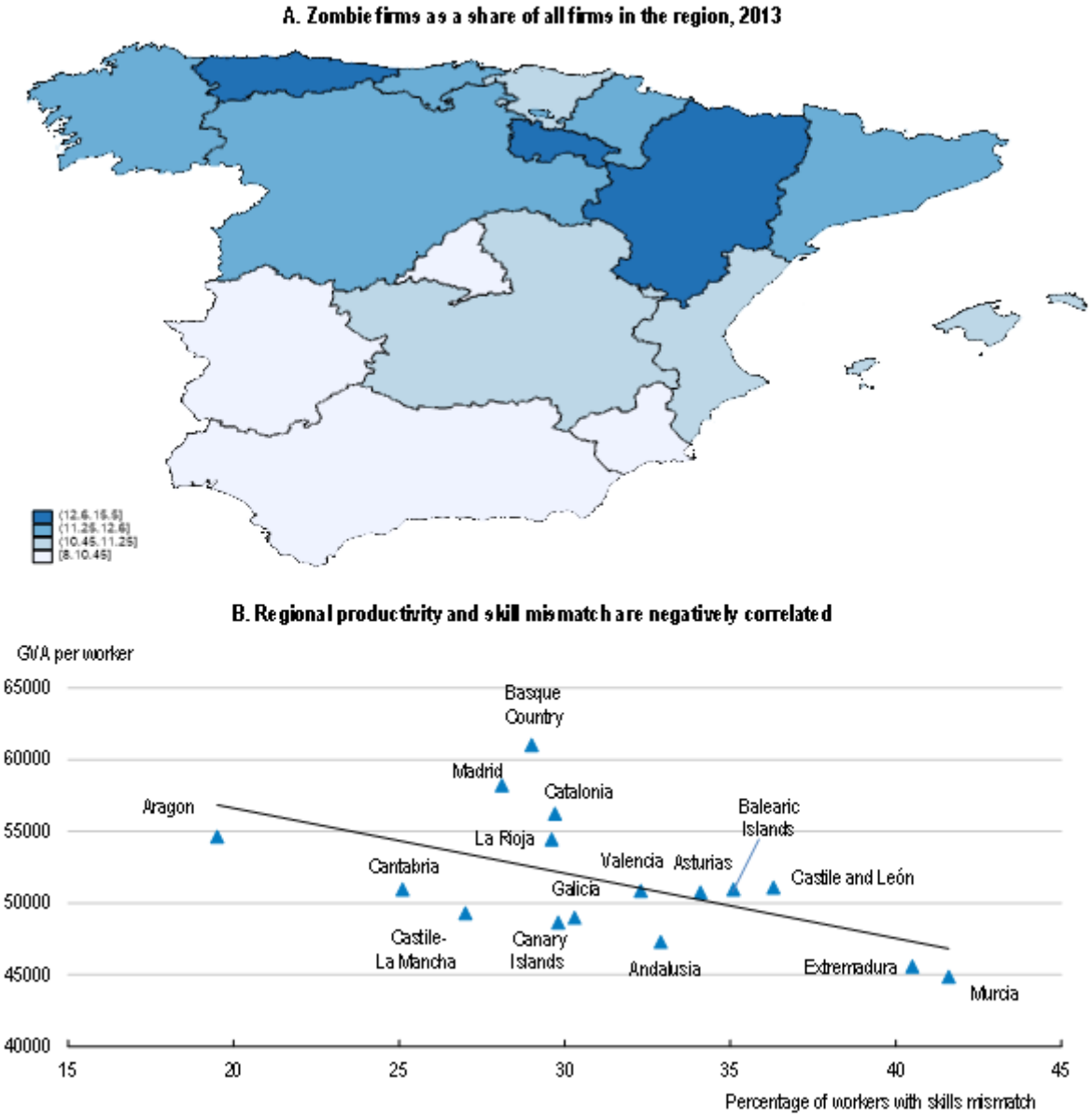
The baseline analysis shows that firms with higher than average productivity are able to attract more labour, indicating resource reallocation is – on average – productivity-enhancing in Spain (Adalet McGowan and Antona San Millán, 2018). The interaction terms of lagged firm MFP with the trend and trend square capture the variation in the responsiveness of labour to firm productivity over time. Differentiating between the effect of labour misallocation according to firm age (via interacting the main variables with a young or mature dummy) shows that young firms disproportionately suffered from misallocation of labour, during the crisis, although this trend is reversing (Table 1.3).

Table 1.3. Labour misallocation according to firm age

Dependent variable: employment growth, 1998-2014

VARIABLES	(1)	(2)
MFP_{t-1} X YOUNG	0.08813***	0.10251***
	(0.001)	(0.003)
MFP_{t-1} X Time Trend X YOUNG		-0.00285***
		(0.001)
MFP_{t-1} X Time Trend Squared X YOUNG		0.00012***
		(0.000)
MFP_{t-1} X MATURE	0.08307***	0.08750***
	(0.000)	(0.002)
MFP_{t-1} X Time Trend X MATURE		0.00175***
		(0.000)
MFP_{t-1} X Time Trend Squared X MATURE		-0.00016***
		(0.000)
Firm age and size controls	YES	YES
Industry Fixed Effects	YES	YES
Year Fixed Effects	YES	YES
Observations	5,287,269	5,287,269
AdjR2	0.0539	0.0541

Figure 1.26. Resource misallocation is heterogeneous across Spanish regions



Note: Panel A: A darker shade corresponds to a higher value. Panel B: It should be noted that OECD, Survey of Adult Skills is not completely representative across regions and the results on skill mismatch should be taken with some caution.
Source: Calculations based on ORBIS, OECD Survey of Adult Skills and OECD, Regional Database.

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Skill mismatch, another measure of labour misallocation, is also heterogeneous across Spanish regions, with potential implications for regional productivity (Figure 1.26, Panel B). A number of policies can address skill mismatches. For example, higher investment in managerial skills can lower skill mismatch as better managers will be more effective at matching the competencies of a worker to those required by a job, developing new work

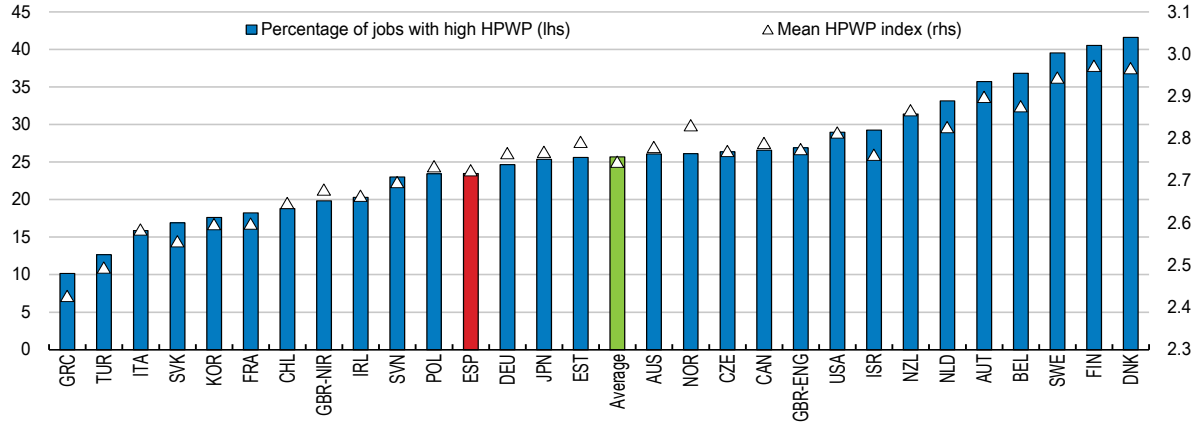
practices to more effectively integrate new technologies, internally reallocating mismatched workers to different positions or sending them to training.

The World Management Survey ranks Spain relatively low in terms of managerial quality, especially for small firms. Higher managerial quality in large firms can lower skill mismatches by ensuring that under-skilled workers get the right training. Indeed, in 2016, only 29.4% of firms with between 5 and 9 workers detected training needs among employees, compared to 87.7% of firms with more than 499 workers (Ministry of Employment, 2016). Good managerial practices would be diffused more effectively by lowering barriers to the mobility of talented managers within the labour market and encouraging skilled immigration. Reforms that increase competitive pressures, as discussed above, would also increase managerial quality.

High-performance work practices (HPWP), which include work organisation, such as team work, autonomy, job rotation and applying new learning and management practices such as training practices and flexibility in working hours, are linked to high skill use in the workplace (OECD, 2016e), but the share of jobs with HPWP is relatively low in Spain (Figure 1.27). Policies that have been successfully used to stimulate the use of HPWP such as attributing (competitive) grants to assist (targeted) firms with their implementation as in New Zealand and the Netherlands, developing business coaching programmes for SMEs (New Zealand), or supporting the establishment of management and entrepreneurs' networks to disseminate the adoption of good practices as in Finland could be considered (OECD, 2016e).

Figure 1.27. The share of jobs with high-performance workplace practices is low

Share of jobs with high HPWP and mean HPWP score



Note: High Performance Work Practices (HPWP) include aspects of work organisation (team work, autonomy, task discretion, mentoring, job rotation, applying new learning) and management practices (employee participation, incentive pay, training practices and flexibility in working hour). High HPWP refers to when the HPWP is above the top 25th percentile of the pooled distribution.
Source: OECD (2016), Employment Outlook.

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Enhancing innovation performance

Gross domestic expenditures on R&D relative to GDP is low in Spain at around half the OECD average and business R&D investment at 0.6% in 2016 is well below the OECD average of 1.6%. Furthermore, Spain experienced one of the largest reductions in

government funding for R&D among OECD countries over the period 2008-15, with a decline of nearly 30% in real terms (OECD, 2017g). Another issue is low levels of execution of some parts of the public R&D budgets, due to limited demand from private firms and complex management procedures.

The innovation performance of the Spanish business sector still lags behind the OECD and the EU median in several dimensions, such as patenting and R&D activity. Going forward, a critical challenge for improving competitiveness and economic growth and drawing more benefits from globalisation will be improving the innovation capacity of the business sector and the general innovation framework. This requires effective policies at the regional level. Indeed, there is evidence that regional factors such as the degree of cooperation and the skill of the labour force affect the innovation and exporting performance of firms (López-Bazo and Motellón, 2013a and 2013b). Recent evidence suggests the economic crisis limited the ability of regional innovation policies to boost business R&D investment (Cruz-Castro et al., 2018).

An important feature of innovation in Spain is the role of regions in innovation policy and its heterogeneous performance (Table 1.4). R&D funding and innovation performance is a shared competence between regions and the central government, which increases the importance of coordination for successful outcomes. Around 40% of patents and business expenditure are concentrated in the top 20% of regions. While concentration of innovation activity is expected in more productive regions, it could limit the ability of firms to adopt new and existing technologies from regional and national frontier firms. For example, evidence from the United Kingdom shows that investing in R&D can lift the productivity of lagging regions (Kierzenkowski, Gal and Fulop, 2017).

Table 1.4. Regional innovation performance

	R&D expenditure (% of GDP), 2013	Business R&D (% of GDP), 2013	Higher education R&D (% of GDP), 2013	R&D personnel (% of total employment), 2013	Share of labour force with tertiary education, 2014	Employment in knowledge intensive services (% of total employment), 2014	% of innovating firms, 2014-16	GVA per worker, 2015
Andalusia	1.0	0.4	**0.4**	1.6	29.7	34.9	25.1	65536
Aragon	0.9	0.5	0.2	1.8	38.3	33.9	30.1	75690
Asturias	0.9	0.5	0.3	1.8	44.6	35.3	24.5	70316
Balearic Islands	0.3	0.0	0.2	0.7	29.3	31.6	22.5	70602
Basque Country	**2.1**	**1.6**	**0.4**	**3.3**	**51.3**	**37.0**	29.7	**84548**
Canary Islands	0.5	0.1	0.2	0.8	29.2	32.1	25.5	67395
Cantabria	0.9	0.3		1.6	41.4	36.0	20.9	70595
Castile and León	1.0	0.6	0.3	1.8	37.0	34.4	25.5	70786
Castile-La Mancha	0.5	0.3	0.2	0.8	30.0	35.3	23.7	68281
Catalonia	1.5	0.9	**0.4**	2.3	39.4	35.4	**32.9**	77894
Extremadura	0.8	0.2	**0.4**	1.2	29.8	**36.9**	23.4	63157
Galicia	0.9	0.4		1.8	37.2	33.7	27.5	67862
La Rioja	0.8	0.4		2.0	39.4	31.4	30.7	75421
Madrid	**1.8**	**1.0**	0.3	**2.8**	**49.0**	**47.7**	**31.1**	**80658**
Murcia	0.8	0.3	**0.4**	1.5	29.2	28.4	27.4	62160
Navarra	**1.8**	**1.2**		**2.7**	**45.7**	34.1	27.8	**80766**
Valencia	1.0	0.4	**0.5**	1.7	33.6	30.5	**32.3**	70463

Note: Top three regions in each category are shaded in blue. Gross value added (GVA) per worker is in thousand USD, constant prices, PPP.
Source: OECD, Regional Database.

The regions have a large role in designing and executing innovation policy, but innovation support is fragmented, which makes it harder for innovative firms to navigate the system and can lead to duplication (ERAC, 2014). The new National Plan for Science, Technology and Innovation 2017-20 combines information on all support schemes from different institutions, which can be a good starting point to make information on existing opportunities more transparent and more easily accessible.

When developing a regional innovation strategy, regions should be aware of what the neighbouring regions are doing as inter-regional collaboration *via* complementary strategies could deliver additional knowledge spillovers (OECD, 2017h). Recent policies such as the reactivation of the R&D Public Policy Network (REDIDI) to create synergies in the implementation of national and regional smart specialisation strategies are welcome. Efforts should continue to improve national and regional cooperation in the design and implementation of innovation policies to avoid duplication.

Improving the ex-ante and ex-post evaluation framework of research and innovation policies can help provide better incentives for research performance. At the national level, the new State Research Agency for managing research funding of some projects and human resource programs uses ex-ante evaluation. However, quality, impact and efficiency of all public funding of research are not systematically assessed with comparable methodologies, especially at the regional level (Fernandez-Zubieta, Ramos-Vielba and Zacharewicz, 2018). The Severo Ochoa Centres of Excellence and Maria de Maeztu Units of Excellence programmes are examples of good practice of international evaluation of funding programmes. To increase the efficiency of innovation spending and the quality of innovation, the ex-post evaluation framework should be strengthened and an increase in performance based funding of research should be considered. This should be complemented with encouraging greater scale and specialisation of universities and research organisations, by extending the application of international peer review and by providing more career opportunities for highly qualified researchers, as recommended in the *2014 Economic Survey of Spain*.

Innovation cooperation across firms and between firms and research institutions can have positive externalities on firm innovation performance (Badillo and Moreno, 2014; D'Agostino and Moreno, 2017). Reinforcing policy instruments promoting cooperation between firms and research institutions and encouraging research commercialisation and technology transfer is key to boosting spillovers. With the rise of digitalisation, several OECD countries are encouraging the development of ICT clusters which facilitate science-industry interactions and interactions between industries and across regions (OECD, 2016f). In 2018, *Spain Cluster,* which will reinforce the role of business innovation in the era of digital transformation, will be launched. Ensuring that this initiative has a strong regional dimension could improve its effectiveness.

Although basic research results in significantly larger knowledge spillovers than applied research, private research effort is geared towards applied research, given that the output of basic research is freely available to the public (Akcigit, Hanley and Serrano-Velarde, 2013). Higher public spending on basic research enhances the ability of economies to learn from new innovations at the global frontier (Saia, Andrews and Albrizio, 2015), but basic research as a share of GDP at 0.27 in Spain is lower than the OECD average of 0.42. Assuming a 2% acceleration in MFP growth in the frontier economy, annual MFP growth is estimated to be around 1.5 percentage points higher in Spain, if it increased its share of basic research to 0.5% of GDP (Figure 1.25). Hence, it is also important to ensure that innovation policies do not favour applied research over basic research.

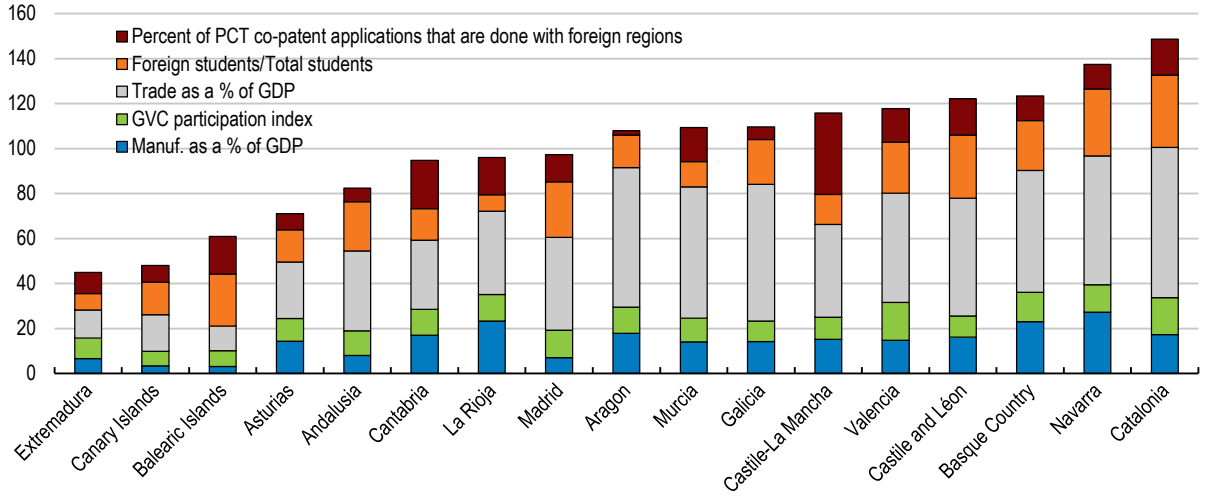
Boosting international spillovers

International exposure can enhance the capacity of economies to capitalise on new technologies developed abroad, learn from the global frontier and can be shaped by a number of factors such as exposure to trade and FDI and migration (OECD, 2015). For example, Spanish firm-level studies show that the impact of cooperation on innovation performance with external partners is larger than national ones, indicating that firms tend to benefit more from interaction with international partners as a way to access new technologies (Badillo and Moreno, 2014). However, international cooperation is low in Spain (OECD, 2017g).

Greater regional participation in global value chains (GVCs) can help address disparities both in employment and productivity. GVC integration varies strongly across regions in OECD countries, with the share of value-added produced within GVCs as a share of total value added fluctuating by around 10 percentage points across regions within a country. The variation is especially large in Spain (OECD, 2018a). Recent OECD evidence suggests that greater integration of regional economies into GVCs is associated with an increase of regional productivity and employment rates (OECD, 2017d). Hence, policies to increase internationalisation of Spanish firms can help boost productivity.

While some type of specialisation across regions is necessary to achieve economies of scale and exploit comparative advantage, regions can benefit from greater exposure to international factors. This is especially important given that Spanish frontier firms are lagging significantly behind global frontier ones. The exposure of regions to international factors varies across a number of dimensions such as manufacturing as a share of GDP, trade as a share of GDP, GVC participation, the share of foreign students and the share of international co-patenting (Figure 1.28). In 2017, an internationalisation strategy was developed at the national level in consultation with regions and the private sector. Regions should use this framework to follow best practices and exploit their unique strengths.

Figure 1.28. Regions have different strengths in terms of exposure to international factors



Note: Data refer to 2011, 2015 or 2017, depending on the variable.
Source: OECD, Regional Database, Ministry of Education and INE. GVC calculations based on data provided by Los, B. and W. Chen (2016), "Global Value Chain Participation Indicators for European Regions", Report for the OECD, No. December 2016. See Thissen, Lankhuizen and Los (2017) for details.

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Getting the most out of decentralisation

Decentralisation can have an effect on economic activity and well-being through a number of channels. A high degree of decentralisation, if well-designed with a clear and balanced assignment of responsibilities, can help ensure that resources are utilised efficiently to meet local needs (OECD, 2016g). However, the lack of consistent and reliable information on regional policies and outcomes, effective coordination mechanisms across different levels of government and evaluation systems can reduce the benefits of decentralisation. The ability of regions to implement policies effectively to reduce regional disparities will also depend on their fiscal position.

Improving evaluation, coordination and sharing of best practices

The government recently announced allocation of funds to regional employment offices based on evaluations according to pre-defined performance indicators to improve the effectiveness of ALMPs (see above). It would be useful to extend policy evaluation at the regional level to other areas. As lagging regions might not always have the resources or expertise to evaluate the implementation of their policies, this would require greater inter-regional cooperation. While there are some informal arrangements already in place, the creation of an independent National Evaluation Agency, which would regularly evaluate regional policies, identify best practices and provide policy guidance for adoption in other regions, could be considered to boost domestic spillovers.

A greater use of benchmarking of services could also create competitive pressures and improve the quality of services provided at the regional level, especially given low geographical mobility in Spain. In decentralised countries, benchmarking is more likely to be successful, if it is collaborative rather than based on "naming and shaming" and if it is complemented by information sharing (Phillips, 2018).

There is room to improve the utilisation of sectoral conferences by increasing their synergies with the proposed improvements to evaluation and sharing of best practices. Sectoral conferences are the most important policy coordination tool across government levels in Spain, which bring together regional authorities and the central government ministry for a given area (OECD, 2017i and 2017j). One of the main aims of the Reform of the Spanish Public Administration (CORA) in 2012 was to eliminate overlap between different levels (central, regional, local) of the Spanish public administration. This has delivered good results in some areas. For example, coordination in the area of health was enhanced *via* an e-health system and the creation of a health card database (OECD, 2016h). While some regional disparities in health outcomes remain, these are small in international perspective (OECD, 2016b).

Strengthening the fiscal framework and rules

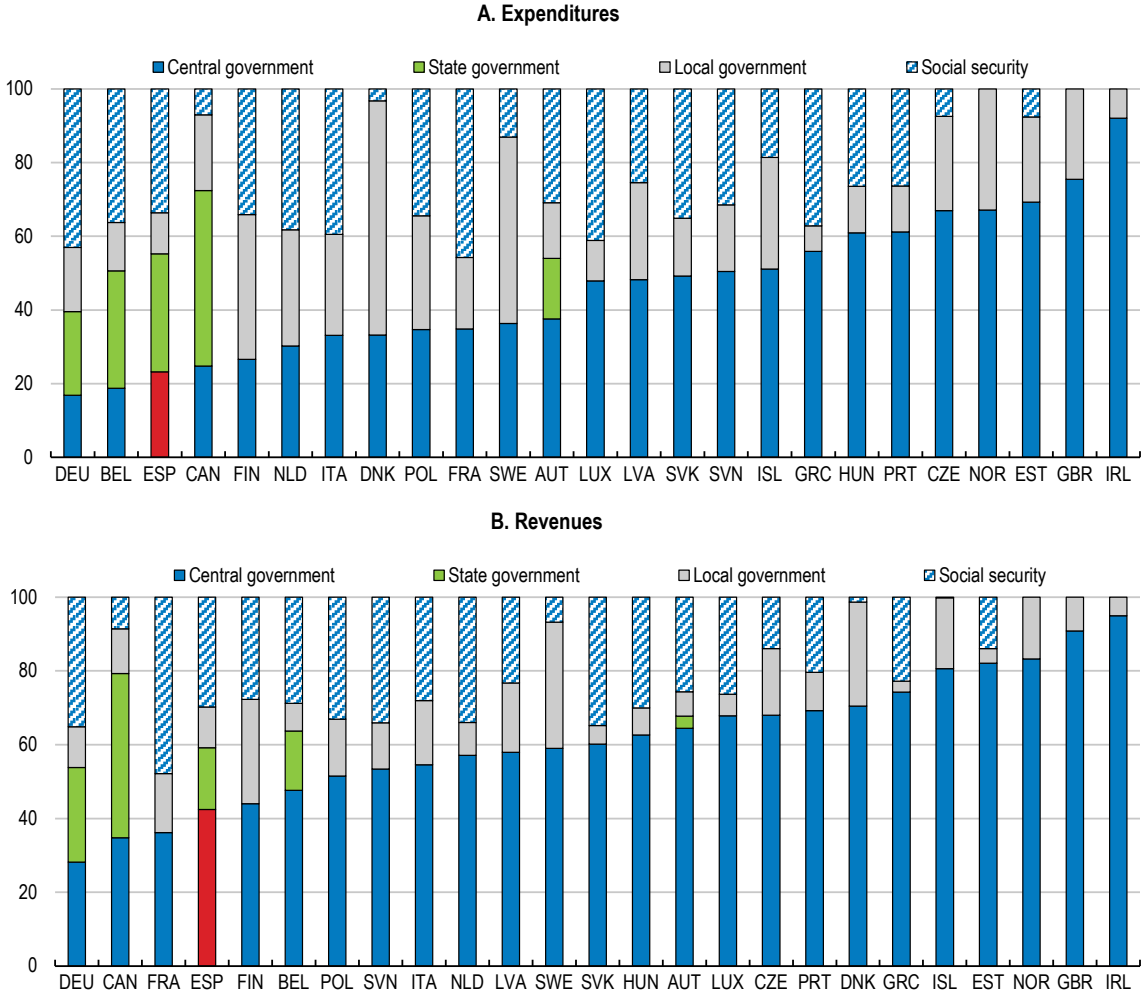
The outcomes of decentralisation in terms of growth, inclusiveness and fiscal performance depend on the design of the various fiscal federalism features, their implementation and on subnational capacity (OECD, 2018e). In this context, reforming the regional financing system, increasing the consistency of fiscal rules and dealing with the regional debt legacy from the crisis are key in Spain.

High degree of fiscal decentralisation

Spain is a highly decentralised country in terms of expenditures and revenues. In 2016, regional and local government expenditures as a share of total general government

spending stood at 43% (Figure 1.29, Panel A). At around 28%, decentralisation in terms of revenues is high in international comparison, though it is lower than decentralisation in terms of spending – as is the case in most countries (Figure 1.29, Panel B). Regions receive a certain percentage of revenues collected: 50% of the personal income tax and 50% of value-added tax revenues, 58% of excise taxes on tobacco, alcohol and petrol and 100% of revenues from the tax on electricity and certain means of transport. They have autonomy over the wealth tax, inheritance and gift tax, tax on capital transfers, gambling tax and vehicle excise tax.

Figure 1.29. Distribution of expenditures and revenues across levels of government



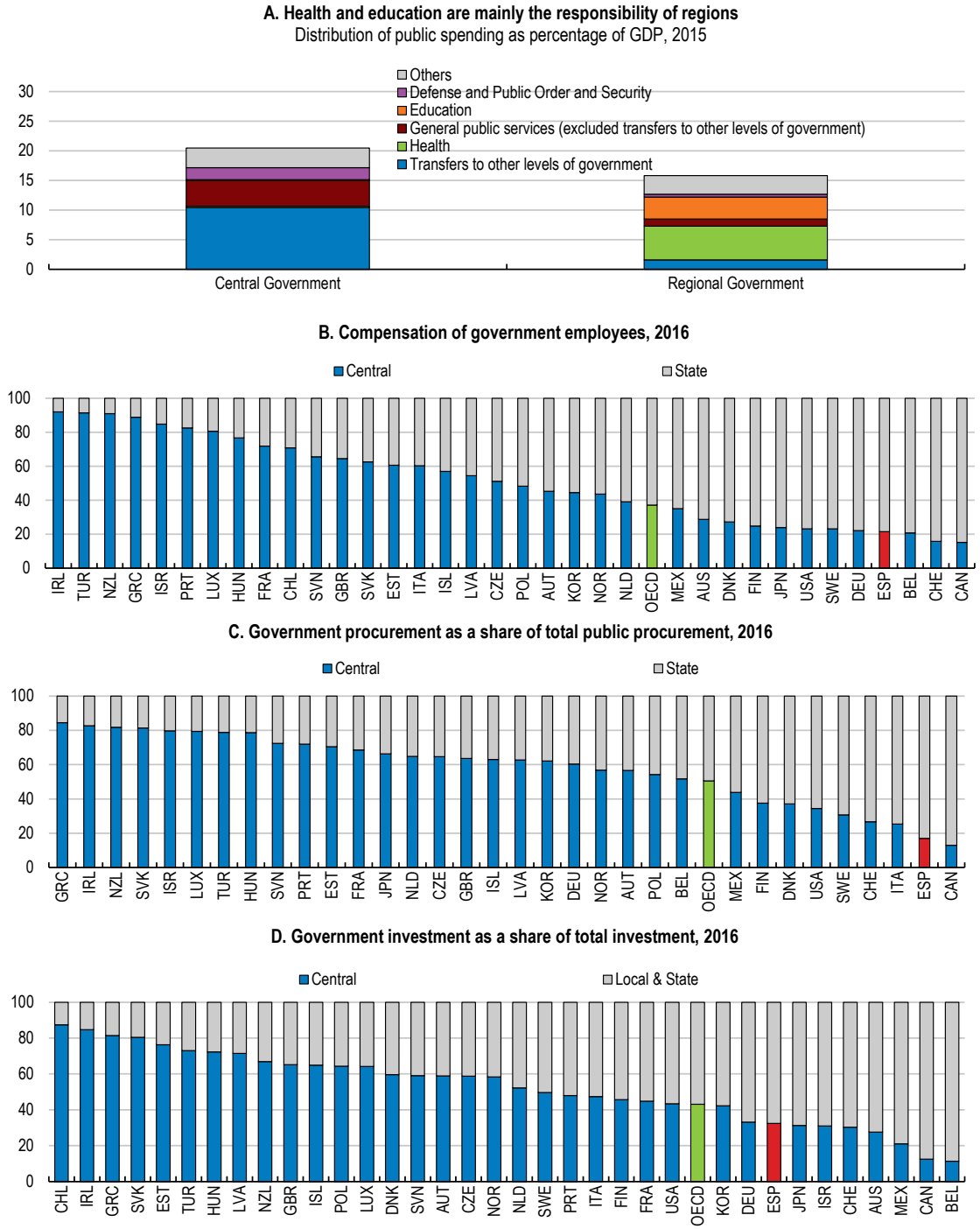
Note: The revenues data exclude transfers between levels of government in order to see the contribution of each sub-sector in general government total revenues, which are consolidated at this level. However, data on the structure of revenues at the central, state and local levels include transfers between levels of government.
Source: OECD (2017), Government at a Glance 2017 (database).

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Regional governments are responsible for a number of expenditures, such as healthcare and education, whose benefits go beyond local needs, highlighting the importance of efficiency of spending at the regional level, but also co-responsibility across levels of government (Figure 1.30, Panel A). Regional governments also account for a large percentage of government employees and public procurement (Figure 1.30, Panels B and C). Hence, they

can affect competition and labour markets, for example, by setting wage levels that reflect regional conditions and needs. Finally, sub-national governments carried out 68% of public investment in 2016 (Figure 1.30, Panel D).

Figure 1.30. Responsibilities of regional governments are large in some areas



Source: The General Comptroller of the State Administration (IGAE), OECD (2018), Subnational governments in OECD countries: Key data (brochure).

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Reforming the regional financing system

The regional financing system is based on the principles of tax autonomy, co-responsibility, sufficiency and solidarity. The common system applies to all regions except Navarra and the Basque Country, which have the *foral* system, giving them a higher degree of autonomy, including in revenue collection. Co-responsibility is achieved through tax autonomy, while the solidarity principle through equalisation transfers to ensure that each region receives the same resources relative to its adjusted population. The sufficiency principle requires that all regions have sufficient resources to deliver services with a minimum level of quality. The system was reformed in 2009, partly to address asymmetric shocks due to population growth (Box 1.7) (OECD, 2012b).

Box 1.7. Reform of the regional financing system in 2009

The reform consisted of the following elements:

Reform of the equalisation system: The new system provides partial equalisation *via* different funds (see below). The regions' needs are now re-evaluated and adjusted yearly, following the evolution of actual needs (mainly in response to population changes), and thus ultimately adjusting the regions' relative shares.

Creation of four specific funds: The Fund to Guarantee Public Services is divided among the regions according to adjusted population criteria, i.e. population weighted by age group, area of the region, dispersion of the population in the region, island status, etc. This fund is adjusted yearly, taking into account the evolution of these variables. The Global Sufficiency Fund provides sufficient resources for the rest of the devolved responsibilities, and guarantees that there are no net losers due to the reform. The Competitiveness Fund allocates resources to those regions whose funding per head is under the national average or their fiscal capacity. The Cooperation Fund aims to help the less dynamic regions (which had fallen behind either economically or in population growth), thus helping to reduce growth discrepancies among regions.

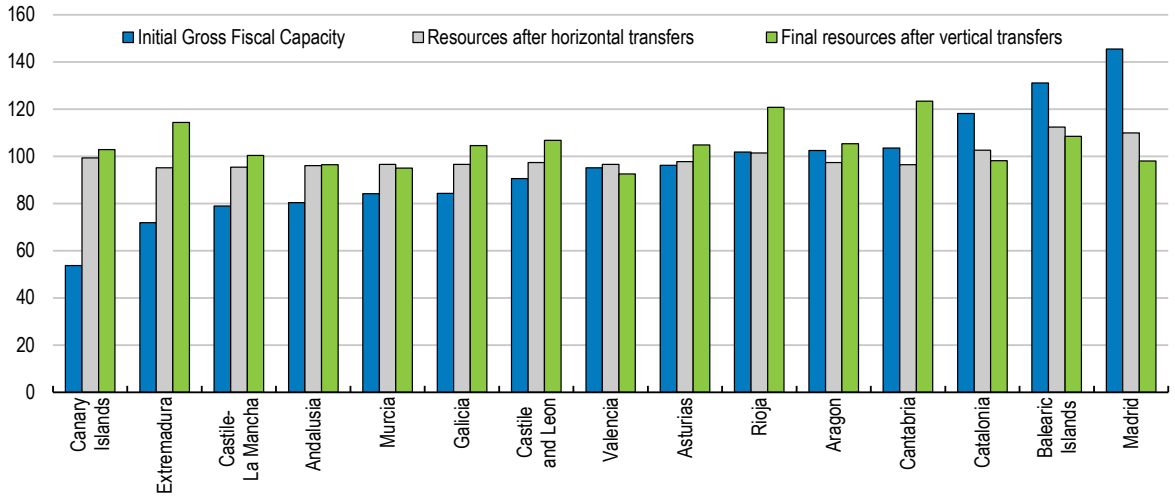
A rise of the share in taxes: The shares of the regions were raised for personal income tax (from 33% to 50%), value-added tax (from 35% to 50%), and excise taxes (from 40% to 58%). Of these taxes, 75% are allocated to the Fund to Guarantee Public Services and the remaining 25% are allocated to the regions where they were generated.

Source: (OECD, 2012b).

While the equalisation system reduces regional disparities on average, the system has become less effective over time (OECD, 2013). Equalisation transfers across regions are based on four different funds (Box 1.7). The horizontal equalisation mechanism, the Guarantee Fund, reduces regional dispersion in terms of financing per adjusted head, while keeping the initial ordering of the regions. Vertical transfers, *via* three funds of Sufficiency, Cooperation and Competitiveness, are distributed after and are based on a large number of criteria, which can be conflicting (De La Fuente, Thöne and Kastrop, 2016). They increase dispersion of revenues per head across regions compared to the post-horizontal fund distribution and lead to a ranking that is uncorrelated with the initial ranking of regions according to their tax capacity (Figure 1.31).

Figure 1.31. Vertical transfers increase dispersion of regional resources

Resources per adjusted population at different stages in the implementation of the financing system, 2015



Source: De la Fuente (2013), updated with data for 2015 from de la Fuente (2017).

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The reform of the regional financing system is currently under discussion. An Experts Committee released a report in July 2017, which proposes to maintain the horizontal equalisation fund, but to modify the vertical levelling funds to reduce regional revenue dispersion and decrease the number of funds. Currently, a number of committees are working on a proposal, which will then have to be submitted for agreement at the political level.

The design of a well-functioning regional financing system is difficult as different criteria can have trade-offs. However, increasing the transparency of and simplifying the system could have the dual outcome of achieving an efficient system, which is also politically feasible. Specifically, the system could be simplified by lowering the number of fiscal interregional equalisation funds and streamlining their objectives. Furthermore, previous reforms have been based on the premise that no regions would lose revenues relative to the status quo, which tends to reproduce existing inequalities and increase the complexity of the system (Lago-Peñas, Fernández-Leiceaga and Vaquero-García, 2017). While the no-loss clause can be justified in the short-run to give regions time to adjust, it should not be permanent and a transition period of special allocations, which are progressively withdrawn, should be used.

Improving fiscal rules

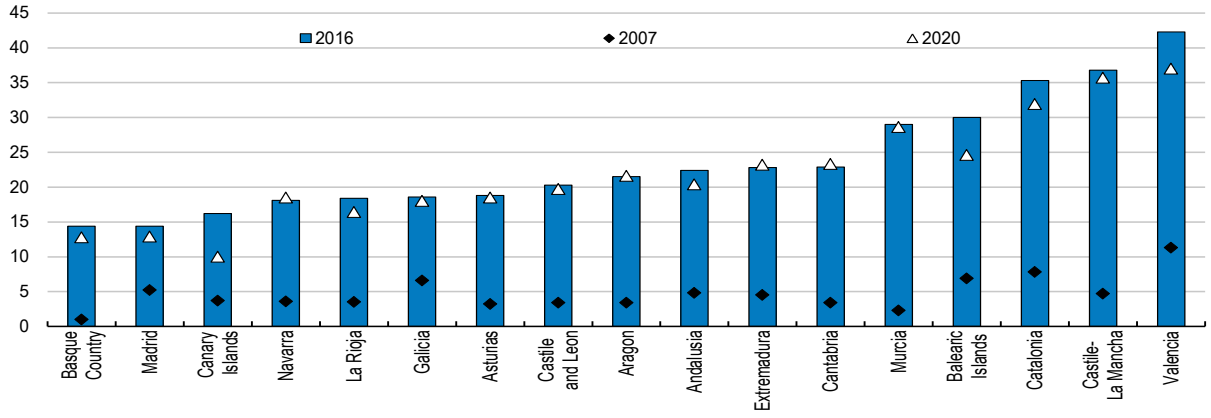
Over the last fifteen years, the use of tax autonomy has varied across taxes and regions (AIReF, 2016). For example, regions have generally tended not to use their normative powers to raise personal income taxes, on average (European Commission, 2017). The financial incentives for regions to use tax power over ceded taxes they control can generally be superseded by the incentives not to increase the tax burden of their region. Indeed, regions have relied on the capital transfer tax and stamp duty to raise additional revenues rather than the personal income tax during the crisis (Ruiz Almendral, 2012). The incentives of regions to use their tax autonomy could be strengthened *via* improvements to the fiscal rules and framework and addressing the legacy of the crisis.

In 2012, the Organic Law of Budgetary Stability and Financial Sustainability (LOEPSF) established fiscal rules for sub-national governments (SNG) in terms of expenditure ceilings, deficits and debt. In particular, SNGs are to achieve structurally-balanced budgets from 2020, increases in expenditures may not exceed medium-term GDP growth (calculated over ten years) and debt may not exceed 13% of regional GDP for each region. Mechanisms enabling the central government to monitor sub-central finances and corrective and preventative measures were also introduced. The latter includes the possibility of sanctions, the automatic adjustment of regional expenditures in specific cases of non-compliance and the imposition of adjustment measures by the central government.

The legacy of the crisis is an important aspect of regional fiscal conditions. Regional debt increased substantially and according to the LOEPSF, it should fall below the 13% threshold in 2020, which is projected for only three regions (Figure 1.32). Some regions also lost market access during the crisis and a Regional Liquidity Fund was created in 2012 to provide emergency liquidity, with some fiscal, financial and informational conditionality. In 2015, extraordinary funds were turned into a Regional Financing Fund to allow regions to benefit from the lower borrowing costs of the central government. It is important that all regions go back to market funding, which should help reduce moral hazard and increase fiscal compliance. The government recently took two initiatives in this area. First, regions which fulfil certain fiscal and financial requirements, including submitting a three year debt plan to the central government, can now go to market funding. Second, the central government and regions have agreed to refinance regions' structural short-term debt to long-term.

Figure 1.32. Regional debt indicators

Per cent of national GDP



Source: AIReF (2017), Debt Monitor 2017.

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The consistency of the three rules included in the LOEPSF could be strengthened to make the fiscal framework stronger. For example, having expenditure growth following GDP growth does not guarantee the return to a balanced budget in case of a deficit. Depending on the level of the deficit, the debt ratio may not return to target, or decrease at a very slow pace. Recently, cyclical conditions have helped regions meet deficit targets, which are uniform across regions. The debt rules are designed without taking into account the initial debt level of the regions and are derived from the deficit rule. This makes the debt rule less operational and it should be reinforced with a design that can map a clear path of debt

reduction to targets in the medium run. The expenditure rule should be the main tool to achieve the sustainability of public finances. Expenditure growth should be set to a pace which allows a regular decrease in the debt ratio towards target. For example, the expenditure rule could be made stricter by region-specific convergence margins, dependent on the gap between the current debt level and the target.

The introduction of regional fiscal rules, notably a stronger focus on the expenditure rule, should help lower the sensitivity of regional fiscal conditions to the cycle and reduce regional debt, if enforced correctly. Until recently, the use of sanctions has been rare, despite recommendations made by the Fiscal Council to the central government to apply sanctions to regions. One reason for the lack of activation of preventative measures has been the legacy of the crisis. As the economy is now in the recovery phase, it will be important to stick to medium-term fiscal targets to ensure a durable reduction of public debt at all levels of government. To help achieve this, the circumstances leading to the activation of measures to prevent non-compliance should be better defined and a pre-determined time frame (with some escape clauses) to correct non-compliance could be introduced.

Box 1.8. Recommendations

Addressing regional disparities in labour market and education outcomes

Key recommendations

- Increase spending on training and job-search assistance. Remove barriers to competition of training centres across regions.
- Introduce a single point of contact for social and employment services.
- Ensure full portability of social and housing benefits across regions, by providing temporary assistance either by the region of origin or the central government.
- Target existing financial incentives for lifelong learning opportunities to low-qualified workers and link them to individuals.
- Increase individualised support to students at the risk of failing at an early stage.

Other recommendations

- Lower transaction costs on buying and selling of houses to boost labour mobility.
- Regularly use means-testing to track changes in eligibility conditions in social housing.
- Link the choice of training voucher programmes to local labour market needs and provide guidance to workers through tailored guidance.
- Set minimum standards for the work-based learning part of the dual vocational education and training system across regions, while ensuring that they are designed in line with regional needs.
- Increase evaluation of schools and teachers in regions where they are rare.
- Improve incentives for the mobility of well-qualified teachers across schools and regions.
- Target training and education in digital skills to less-educated and low-income individuals, whose jobs might be more at risk of automation.

Boosting productivity and business dynamism across regions

Key recommendations

- Regions should include the principle of national effectiveness of the Market Unity Law in their legislation. Assess the compliance of new legislation at all levels of government with the principles of the Market Unity Law.
- Give the recently activated R&D Public Policy Network a strong mandate to further increase coordination of regional and national innovation policies.
- Strengthen ex-post evaluation framework of innovation support and consider increasing performance based funding.

Other recommendations

- Increase public awareness of the Market Unity Law through information campaigns.
- Encourage employers to adopt high performance workplace practices to improve skill use at work, for example through business coaching programmes.

Getting the most out of decentralisation

Key recommendation

- Make the expenditure rule the main rule and link it to the debt ratio targets.

Other recommendations

- Enhance cooperation and coordination across regions and between regions and the central government.
- Consider the creation of a National Evaluation Agency to evaluate policies at the regional level regularly. Make greater use of benchmarking to better identify best practices.
- Simplify the regional financing system by lowering the number of fiscal interregional equalisation funds and streamlining their objectives.
- Use a transition period of special allocations to give regions which might lose revenues time to adjust to the reform of the regional financing system.
- Better define the activation of measures to prevent non-compliance with fiscal rules. Consider introducing a pre-determined time frame (with some escape clauses) to correct non-compliance.

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The Spanish economy continues its strong growth, thanks to past structural reforms, robust employment growth and accommodative macroeconomic policies. However, the legacy of the crisis has not yet been fully overcome and imbalances remain. The robust recovery provides an opportunity to keep reducing macroeconomic and financial vulnerabilities, such as high public and external debt. The resilience of public finances should be increased to address medium-term challenges, including spending pressures from demographic changes. Income inequality is high and displays regional differences in Spain. More effective use of taxes and transfers, bringing people back into employment and reducing regional disparities would make growth more inclusive. Improving productivity growth, which remains subdued, will require firms to be more exposed to competition and innovation. Policies to improve education and skills will deliver results not only in terms of productivity growth, but also better employment prospects and wages. Spain is a highly decentralised country, making the effective implementation of national reforms dependent on regional policies. More effective coordination and cooperation across different levels of government are needed to improve the effectiveness of policies.

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